

Democratic Services

Guildhall, High Street, Bath BA1 5AW

Telephone: (01225) 477000 *main switchboard*

Direct Lines - Tel: 01225 394452 Fax: 01225 394439

Web-site - www.bathnes.gov.uk

Date: 24th November 2015

E-mail: Democratic_Services@bathnes.gov.uk

To: All Members of the Cabinet

Councillor Tim Warren	Leader of the Council and Conservative Group Leader
Councillor Liz Richardson	Cabinet Member for Homes and Planning
Councillor Patrick Anketell-Jones	Cabinet Member for Economic Development, Conservative Deputy Group Leader Bath
Councillor Charles Gerrish	Cabinet Member for Finance and Efficiency, Conservative Deputy Group Leader North East Somerset
Councillor Vic Pritchard	Cabinet Member for Adult Social Care and Health
Councillor Anthony Clarke	Cabinet Member for Transport
Councillor Martin Veal	Cabinet Member for Community Services
Councillor Michael Evans	Cabinet Member for Children's Services

Chief Executive and other appropriate officers
Press and Public

Dear Member

Cabinet: Wednesday, 2nd December, 2015

You are invited to attend a meeting of the **Cabinet**, to be held on **Wednesday, 2nd December, 2015 at 4.00 pm** in the **Council Chamber - Guildhall, Bath**.

The agenda is set out overleaf.

Yours sincerely

Jack Latkovic
for Chief Executive

The decisions taken at this meeting of the Cabinet are subject to the Council's call-in procedures. Within 5 clear working days of publication of decisions, at least 10 Councillors may signify in writing to the Chief Executive their wish for a decision to be called-in for review. If a decision is not called-in, it will be implemented after the expiry of the 5 clear working day period.

If you need to access this agenda or any of the supporting reports in an alternative accessible format please contact Democratic Services or the relevant report author whose details are listed at the end of each report.

This Agenda and all accompanying reports are printed on recycled paper

NOTES:

1. **Inspection of Papers:** Any person wishing to inspect minutes, reports, or a list of the background papers relating to any item on this Agenda should contact Jack Latkovic who is available by telephoning Bath 01225 394452 or by calling at the Guildhall Bath (during normal office hours).
2. **Public Speaking at Meetings:** The Council has a scheme to encourage the public to make their views known at meetings. They may make a statement relevant to what the meeting has power to do. They may also present a petition or a deputation on behalf of a group. Advance notice is required not less than two full working days before the meeting (this means that for meetings held on Wednesdays, notice must normally be received in Democratic Services by 4.30pm the previous Friday but Bank Holidays will cause this to be brought forward).

The public may also ask a question to which a written answer will be given. Questions must be submitted in writing to Democratic Services at least two full working days in advance of the meeting (this means that for meetings held on Wednesdays, notice must normally be received in Democratic Services by 4.30pm the previous Friday but Bank Holidays will cause this to be brought forward). If an answer cannot be prepared in time for the meeting it will be sent out within five days afterwards. Further details of the scheme can be obtained by contacting Jack Latkovic as above.

3. **Details of Decisions taken at this meeting** can be found in the minutes which will be published as soon as possible after the meeting, and also circulated with the agenda for the next meeting. In the meantime details can be obtained by contacting Jack Latkovic as above.

Appendices to reports are available for inspection as follows:-

Public Access points - Reception: Civic Centre - Keynsham, Guildhall - Bath, The Hollies - Midsomer Norton. Bath Central and Midsomer Norton public libraries.

For Councillors and Officers papers may be inspected via Political Group Research Assistants and Group Rooms/Members' Rooms.

4. Recording at Meetings:-

The Openness of Local Government Bodies Regulations 2014 now allows filming and recording by anyone attending a meeting. This is not within the Council's control.

Some of our meetings are webcast. At the start of the meeting, the Chair will confirm if all or part of the meeting is to be filmed. If you would prefer not to be filmed for the webcast, please make yourself known to the camera operators.

To comply with the Data Protection Act 1998, we require the consent of parents or guardians before filming children or young people. For more information, please speak to the camera operator

The Council will broadcast the images and sound live via the internet www.bathnes.gov.uk/webcast An archived recording of the proceedings will also be available for viewing after the meeting. The Council may also use the images/sound recordings on its social media site or share with other organisations, such as broadcasters.

5. **Attendance Register:** Members should sign the Register which will be circulated at the meeting.

6. THE APPENDED SUPPORTING DOCUMENTS ARE IDENTIFIED BY AGENDA ITEM NUMBER.

7. **Emergency Evacuation Procedure**

When the continuous alarm sounds, you must evacuate the building by one of the designated exits and proceed to the named assembly point. The designated exits are sign-posted.

Arrangements are in place for the safe evacuation of disabled people.

8. **Officer Support to the Cabinet**

Cabinet meetings will be supported by the Senior Management Team.

9. **Recorded votes**

A recorded vote will be taken only when requested by a member of Cabinet.

Cabinet - Wednesday, 2nd December, 2015

in the Council Chamber - Guildhall, Bath

A G E N D A

1. WELCOME AND INTRODUCTIONS

2. EMERGENCY EVACUATION PROCEDURE

The Chair will draw attention to the emergency evacuation procedure as set out in the Notes

3. APOLOGIES FOR ABSENCE

4. DECLARATIONS OF INTEREST

At this point in the meeting declarations of interest are received from Members in any of the agenda items under consideration at the meeting. Members are asked to indicate:

(a) The agenda item number in which they have an interest to declare.

(b) The nature of their interest.

*(c) Whether their interest is **a disclosable pecuniary interest** or an **other interest**, (as defined in Part 2, A and B of the Code of Conduct and Rules for Registration of Interests)*

Any Member who needs to clarify any matters relating to the declaration of interests is recommended to seek advice from the Council's Monitoring Officer or a member of his staff before the meeting to expedite dealing with the item during the meeting.

5. TO ANNOUNCE ANY URGENT BUSINESS AGREED BY THE CHAIR

6. QUESTIONS FROM PUBLIC AND COUNCILLORS

Questions submitted before the deadline will receive a reply from an appropriate Cabinet member or a promise to respond within 5 days of the meeting. Councillors may ask one supplementary question for each question they submitted, up to a maximum of two per Councillor.

7. STATEMENTS, DEPUTATIONS OR PETITIONS FROM PUBLIC OR COUNCILLORS

Councillors and members of the public may register their intention to make a statement if they notify the subject matter of their statement before the deadline. Statements are limited to 3 minutes each. The speaker may then be asked by Cabinet members to answer factual questions arising out of their statement.

8. MINUTES OF PREVIOUS CABINET MEETING (Pages 9 - 14)

To be confirmed as a correct record and signed by the Chair

9. CONSIDERATION OF SINGLE MEMBER ITEMS REQUISITIONED TO CABINET

This is a standard agenda item, to cover any reports originally placed on the Weekly list for single Member decision making, which have subsequently been the subject of a Cabinet Member requisition to the full Cabinet, under the Council's procedural rules

10. MATTERS REFERRED BY POLICY DEVELOPMENT AND SCRUTINY BODIES

This is a standing agenda item (Constitution rule 14, part 4D – Executive Procedure Rules) for matters referred by Policy Development and Scrutiny bodies. The Chair of the relevant PDS Panel will have the right to attend and to introduce the Panel's recommendations to Cabinet.

11. SINGLE MEMBER CABINET DECISIONS TAKEN SINCE PREVIOUS CABINET MEETING (Pages 15 - 22)

This report lists Cabinet Single Member decisions taken and published since the last Cabinet meeting.

12. PLACEMAKING PLAN FOR BATH AND NORTH EAST SOMERSET (Pages 23 - 32)

This report seeks Cabinet approval of the Pre-submission Draft Placemaking Plan for public consultation prior to submission to the Secretary of State for examination.

NOTE: Given the large file size of the pre-submission draft B&NES Placemaking Plan it can be only viewed on Council's website at <http://www.bathnes.gov.uk/services/planning-and-building-control/planning-policy/placemaking-plan/placemaking-plan-pre>.

13. SPEND OF COMMUNITY INFRASTRUCTURE LEVY INCOME (Pages 33 - 36)

The B&NES Community Infrastructure Levy (CIL) came into effect in April 2015 and the process for determining spend of the CIL income was agreed by Cabinet in July 2015.

14. YOUR CARE, YOUR WAY: OUTLINE BUSINESS CASE, MARKET TESTING & SERVICE OUTCOMES (Pages 37 - 96)

The Your Care, Your Way community health and care services review programme has four key phases. The analysis and planning phase was completed in May 2015, the Programme then progressed into its current design phase. The key focus of this stage was to develop and formally consult on a set of commissioning intentions that set out the overarching strategy, outcomes framework and potential models on which service design could be based.

Before commissioners can progress to developing the service delivery model during the next phase, there are a number of key outcomes that form the body of this report and will need to be considered by Governing Bodies, which are Council Cabinet and BaNES CCG Board:

- a) The analysis of consultation findings that set out what our community has told us about our plans as detailed in September Cabinet report "Proposals to Review Community Services Consultation Document".
- b) The findings of our market engagement with providers and our proposed methodology to market test and contract in order to develop a process to identify the most capable providers for future service delivery.
- c) The outline financial planning process that will set out the factors that will impact funding going forwards and the principles against which the funding envelope will be derived.

15. ESTABLISHMENT OF A LOCAL PROPERTY AND DEVELOPMENT COMPANY (Pages 97 - 118)

The establishment by the Council of a local authority wholly owned company (the Company) to develop, deliver, own and manage property as well as new development on a case by case basis using either Public Works Loan Board (PWLB) funding or external financing dependent which is the most viable option.

The company will initially focus on the refurbishment of existing properties suitable for residential lettings. Consideration will also be given, on a case by case basis to the delivery of new build property developments, if deemed financially viable.

16. LOCAL FLOOD RISK MANAGEMENT STRATEGY (Pages 119 - 540)

The Flood and Water Management Act 2010, makes Bath and North East Somerset Council a Lead Local Flood Authority and as such the Council is responsible for managing flood risk from surface water, groundwater and ordinary watercourses in the area. Under provisions in the Act, the Council must develop, maintain, monitor and apply a Local Flood Risk Management Strategy (and assist in the management of local flood risk).

17. ADOPTION OF THE BATH AND NORTH EAST SOMERSET COUNCIL GREEN SPACE STRATEGY (Pages 541 - 546)

Bath and North East Somerset Council's Parks service has recently completed a review of the Council's Green Spaces Strategy. The review is designed to provide an assessment of both current open space and any surpluses or deficiencies in open spaces throughout the district. The findings of the review will help inform the policies within the B&NES Placemaking Plan, establish local provision standards and create an up to date evidential basis that can be maintained and used to aid the implementation of the policies and the provision of open spaces, during the life of the plan period.

The findings of this study have been drawn upon by the Parks Service to develop a set of nine objectives to guide the development and management of our open space assets until 2029.

NOTE: Given the large file size for these reports they can be viewed online as a series of pdf documents at:

<http://www.bathnes.gov.uk/services/sport-leisure-and-parks/parks-green-spaces-information/green-space-strategy-review>

The Committee Administrator for this meeting is Jack Latkovic who can be contacted on 01225 394452.

Protocol for Decision-making

Guidance for Members when making decisions

When making decisions, the Cabinet/Committee must ensure it has regard only to relevant considerations and disregards those that are not material.

The Cabinet/Committee must ensure that it bears in mind the following legal duties when making its decisions:

- Equalities considerations
- Risk Management considerations
- Crime and Disorder considerations
- Sustainability considerations
- Natural Environment considerations
- Planning Act 2008 considerations
- Human Rights Act 1998 considerations
- Children Act 2004 considerations
- Public Health & Inequalities considerations

Whilst it is the responsibility of the report author and the Council's Monitoring Officer and Chief Financial Officer to assess the applicability of the legal requirements, decision makers should ensure they are satisfied that the information presented to them is consistent with and takes due regard of them.

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BATH AND NORTH EAST SOMERSET

CABINET

These minutes are draft until confirmed as a correct record at the next meeting.

Wednesday, 4th November, 2015

Present:

Councillor Tim Warren	Leader of the Council and Conservative Group Leader
Councillor Patrick Anketell-Jones	Cabinet Member for Economic Development, Conservative Deputy Group Leader Bath
Councillor Charles Gerrish	Cabinet Member for Finance and Efficiency, Conservative Deputy Group Leader North East Somerset
Councillor Liz Richardson	Cabinet Member for Homes and Planning
Councillor Vic Pritchard	Cabinet Member for Adult Social Care and Health
Councillor Anthony Clarke	Cabinet Member for Transport
Councillor Martin Veal	Cabinet Member for Community Services
Councillor Michael Evans	Cabinet Member for Children's Services

39 WELCOME AND INTRODUCTIONS

The Chair welcomed everyone to the meeting. The Chair thanked Councillor Marie Longstaff for her time as the Cabinet Member for Homes and Planning and welcomed Councillor Liz Richardson as the new Cabinet Member for Homes and Planning.

40 EMERGENCY EVACUATION PROCEDURE

Senior Democratic Services Officer drew attention to the evacuation procedure as set out in the Agenda.

41 APOLOGIES FOR ABSENCE

There were no apologies for absence.

42 DECLARATIONS OF INTEREST

There were none.

43 TO ANNOUNCE ANY URGENT BUSINESS AGREED BY THE CHAIR

There was none.

44 QUESTIONS FROM PUBLIC AND COUNCILLORS

There were 20 questions from Councillors.

[Copies of the questions and responses, including supplementary questions and responses if any, have been placed on the Minute book at Democratic Services and are available on the Council's website.]

45 STATEMENTS, DEPUTATIONS OR PETITIONS FROM PUBLIC OR COUNCILLORS

David Redgewell, on behalf of the South West Transport Network, expressed his concerns that the Planning Committee, despite the Outline permission retaining a public transport corridor the detail consent, had removed the sustainable transport corridor TR09 (protected in the core strategies of BANES and Mendip Councils) which could prevent reuse of the railway line in the future between Radstock and Frome. South West Transport Network also supported Bathampton Park & Ride Site B.

A full copy of the statement has been placed on the Minute book at Democratic Services and is available on the Council's website.

Sally Collins (Vice Chairman of Marksbury Parish Council) presented a petition, with 90 signatures, asking for a provision of a light controlled pedestrian crossing for the A39 at Marksbury. Sally Collins read out a statement where she described the size of the village of Marksbury and expressed her concerns about the volume and speed of traffic through the village. Sally Collins concluded her statement by urging the Council to provide a safe crossing, a safer route to the Marksbury School and to connect community in the village.

A full copy of the statement has been placed on the Minute book at Democratic Services and is available on the Council's website.

The Chair thanked Sally Collins for the petition and informed the meeting that petition, along with enclosed DVD and other documents would be sent to the relevant department within the Council for response.

Colin Currie said that housing in Radstock and area had increased without adequate infrastructure. Colin Currie expressed his concern on traffic congestion in Radstock and suggested that railway would ease traffic pressure. Colin Currie concluded the statement by inviting the Council to resolve railway issue or Radstock and Kilmersdon would not benefit from economic regeneration.

Charles Draper (Chairman of the Bathwick Estate Residents Association) spoke about the need for a new pedestrian (toucan) crossing on Bathwick Street. Charles Draper pointed out that there was heavy traffic through Bathwick Street and there is a huge gap from Cleveland Bridge to the next crossing hence the need for additional crossing.

46 MINUTES OF PREVIOUS CABINET MEETING

RESOLVED that the minutes of the meeting held on Wednesday 9th September 2015 be confirmed as a correct record and signed by the Chair.

47 CONSIDERATION OF SINGLE MEMBER ITEMS REQUISITIONED TO CABINET

There were none.

48 MATTERS REFERRED BY POLICY DEVELOPMENT AND SCRUTINY BODIES

There were none.

49 SINGLE MEMBER CABINET DECISIONS TAKEN SINCE PREVIOUS CABINET MEETING

The Cabinet agreed to note the report.

50 BATH AND NORTH EAST SOMERSET COUNCIL CORPORATE STRATEGY 2016-20

Councillor Robin Moss commented that a lot of aspiration had been put into the Strategy, which should be supported by all parties in the Council. Councillor Moss questioned what would be consequences from 100% business rates coming into Local Authorities and reduction, or loss, of the Revenue Support Grant because of it. Councillor Moss also said that some statistics on page 7 of the strategy (climate change – ‘by 2020 summers could be 25% dryer and winters 16% wetter’) might not be right.

Councillor Joe Rayment asked if he could be given a guarantee that nobody would be worse off from the Review of the local Council Tax support scheme (page 21 of the Strategy). Councillor Rayment also asked where a figure of further 15% reduction in net budgets came from (page 22).

Councillor Dine Romero stated that she would expect at least double or more than 469 young people (aged 15-24) coming to Bath to study (page 8). Councillor Romero suggested that an update to this paper could reflect a real change in population.

Councillor Tim Warren thanked officers for the hard work they put into this report and said that Corporate Strategy sets out the 2020 vision and direction of travel over the next 4 years. The Corporate Strategy had been shaped by and would deliver the ‘Putting Residents First’ manifesto commitments. The Bath and North East Somerset 2020 vision sets out our aspirations for the future including good health and wellbeing, economic growth, financial sustainability, an effective transport system and an efficient, well run Council. The vision had been developed in partnership with the NHS, police, local business, education, the fire service and the voluntary sector. Once agreed by Cabinet the Corporate Strategy would become the overarching framework for Council business until 2020. It would also set the context for our financial strategy over the same period.

Councillor Tim Warren moved the recommendations.

Councillor Patrick Anketell-Jones seconded the motion. This was a four-year delivery plan, which would also help inform how the Council plan our finances for the same period. The strategy sets out aims and ambitions for the next four years.

Councillor Charles Gerrish said that business rates proposals would not be due to take place before year 2020.

Directorate Plans would replace the Medium Term Service and Resource Plans (MTSRPs). They would include the Directorate budget summary and details of growth and 2015 savings proposals. Directorate Plans would be submitted to all Policy Development and Scrutiny Panels in November as part of the normal budget development process.

A Review of the local Council Tax support scheme would be debated at the Full Council meeting on 12th November.

RESOLVED (unanimously) that the Cabinet approved the Bath and North East Somerset Council Corporate Strategy 2016-20.

51 FRESHFORD & LIMPLEY STOKE NEIGHBOURHOOD PLAN

Councillor Liz Richardson said that she was passionate about Neighbourhood Development Plans (NDP) and highlighted that this was the first plan to cross boundaries of two Councils - Bath & North East Somerset Council and Wiltshire Council. Councillor Richardson welcomed that there was a 50.12% referendum turnout of the overall Freshford and Limpley Stoke Neighbourhood Area electorate. A majority (74%) were in favour of using the Freshford and Limpley Stoke NDP to help decide planning applications in the Neighbourhood Area.

Councillor Liz Richardson moved the recommendation.

Councillor Charles Gerrish seconded the motion by saying that he was delighted that the Cabinet were able to approve this Neighbourhood Plan. The new Freshford & Limpley Stoke Neighbourhood Plans would be used by this Council and Wiltshire Council, as the Local Planning Authorities, to help determine planning applications within their areas.

RESOLVED (unanimously) that:

The Cabinet make and bring into force the Freshford & Limpley Stoke Neighbourhood Development Plan as part of the Development Plan for the Freshford & Limpley Stoke Neighbourhood Area, in accordance with Section 38A(4) of the Planning and Compulsory Purchase Act 2004 ("the 2004 Act") (as amended by the Localism Act, 2011).

52 CLUTTON NEIGHBOURHOOD PLAN

Councillor Cherry Beath welcomed the Clutton Neighbourhood Plan and added that she would hope more area would be able to get their plans. Councillor Beath expressed slight concern that some parts of Bath could not get their Neighbourhood Plans.

Councillor Liz Richardson said that there was no area in England that could not be given a Plan. Nevertheless, Councillor Richardson said that she would investigate an issue raised by Councillor Beath.

Councillor Liz Richardson said that she was pleased that Clutton Neighbourhood Development Plan had successfully passed the referendum. She also said that

significant community resources had been included into the Clutton Neighbourhood Plan preparation, including substantial volunteer time.

Councillor Liz Richardson moved the recommendations.

Councillor Vic Pritchard seconded the proposals by saying that he was delighted that the Cabinet would have the opportunity to approve the Clutton Neighbourhood Plan in the area. Once the Neighbourhood Plan is made, Clutton Parish Council would receive 25% of Community Infrastructure Levy (CIL) payments for development within their Neighbourhood Area, in line with the CIL Regulations (rather than the typical 15%).

RESOLVED (unanimously) that:

The Cabinet make and bring into force the Clutton Neighbourhood Development Plan as part of the Development Plan for the Clutton Neighbourhood Area, in accordance with Section 38A(4) of the Planning and Compulsory Purchase Act 2004 ("the 2004 Act") (as amended by the Localism Act, 2011).

53 REVENUE & CAPITAL BUDGET MONITORING, CASH LIMITS AND VIREMENTS – APRIL TO SEPTEMBER 2015

Councillor Andrew Furse expressed his concern that there had been significant overspend in Children and Community Services and underspend in Transport Services due to vacancy management.

Councillor Dine Romero asked if the burden expected from the Care Act would come out of the revenue reserves. Councillor Romero also questioned £0.5m in year savings from Public Health.

Councillor Charles Gerrish said that this report monitors how the Council has performed against the financial targets set in February 2015 through the Budget setting process. The Budget Management Scheme requires that the Cabinet consider the revenue and capital monitoring position four times per year. Councillor Gerrish also said these were still early days to assess impact created by the Care Act. The money put for this year revenue reserves could be used for Care Act issues in future years. The issue of the Public Health would remain uncertain until the Government's Spending Review is complete. Children Services and Transport Services issues had been considered via joined up activities between services.

Councillor Charles Gerrish moved the recommendation.

Councillor Tim Warren seconded the motion. The report shows that the revenue outturn position was currently forecast with a slight underspend of £8,000 and it was pleasing to see the improvement over the last report which forecast an overspend of £835,000. The Council's financial position, along with its financial management arrangements and controls, were fundamental to continuing to plan and provide services in a managed way, particularly in light of the medium term financial challenge. The revenue budget for 2015/16 includes delivery of £9.7m of savings and it was good to note completion during the period of some capital schemes including the Royal Victoria Skate Park, the Great Dell Walkway and a number of school improvements.

RESOLVED (unanimously) that the Cabinet agreed that:

- 1) Strategic Directors should continue to work towards managing within budget in the current year for their respective service areas, and to manage below budget where possible by not committing unnecessary expenditure, through tight budgetary control.
- 2) This year's revenue budget position is noted.
- 3) The capital expenditure position for the Council in the financial year to the end of September and the year-end projections are noted.
- 4) The revenue virements listed for approval are agreed.
- 5) The changes in the capital programme are noted.

54 QUARTER 2 TREASURY MANAGEMENT PERFORMANCE REPORT 2015/16

Councillor Charles Gerrish said that this was a routine report which sets satisfactory position of the Council.

Councillor Charles Gerrish moved the recommendations.

Councillor Anthony Clarke seconded the motion by paying tributes to Councillor Gerrish and to officers for this report.

RESOLVED (unanimously) that the Cabinet agreed that:

- 1) The Treasury Management Report to 30th September 2015, prepared in accordance with the CIPFA Treasury Code of Practice, is noted;
- 2) The Treasury Management Indicators to 30th September 2015 are noted;
- 3) This Treasury Management Report and attached appendices are reported to November Council and December Corporate Audit Committee.

The meeting ended at 5.10 pm

Chair _____

Date Confirmed and Signed _____

Prepared by Democratic Services

Bath & North East Somerset Council

Cabinet Single-Member Decisions and Responses to Recommendations from PDS Panels

published 30-Oct-15 to 20-Nov-15

Further details of each decision can be seen on the Council's Single-member Decision Register at
<http://democracy.bathnes.gov.uk/mgDelegatedDecisions.aspx?&dm=3>

Date	Decision Maker
Reference	Title

09-Nov-15 Cllr Anthony Clarke

E2799 Kennet and Avon Canal Towpath improvements

The Cabinet Member agreed with recommendations in the decision paper.

09-Nov-15 Cllr Anthony Clarke

E2802 Outer Area TRO 2015

The Cabinet Member AGREES that the proposals be implemented, modified or withdrawn as below:

Restrictions as detailed on plans B4 and C4

Roads affected: Wellow Lane, Braysdown Lane and Tynning Road in Peasedown St. John

Restriction: Prohibit and Restrict Parking At Any Time

Decision: That the proposals are modified to only include restrictions around the junctions of Braysdown Lane and Tynning Road. The restrictions affecting the southern side of Wellow Lane should be removed at this time due to the expressed wishes of Peasedown Parish Council on the grounds of the limited availability of on-street parking in this area. The restrictions affecting the northern side of Wellow Lane, west of the junction with Wellow Tynning, should also be removed on similar grounds.

Restrictions as detailed on plan A2

Road affected: Church Road in Peasedown St. John

Restriction: Prohibit and Restrict Parking At Any Time

Decision: That the proposal is implemented as advertised with the support of Peasedown Parish Council, receiving no objections. It is also intended, at the wish of the Parish Council, that the location is monitored for a possible extension of the restrictions in future proposals if

needed.

Restrictions as detailed on plan C3

Road affected: Russett Way in Peasedown St. John

Restriction: Prohibit and Restrict Parking At Any Time

Decision: That the proposal is withdrawn at this time as the Council received 3 objections and only one response of support, with the location not deemed as having exceptional safety concerns.

Restrictions as detailed on plans C4, D3 and D4

Roads affected: Foxcote Avenue and Roman Way in Peasedown St. John, that make up the Bath Business Park

Restriction: Prohibit and Restrict Parking At Any Time

Decision: That the proposals are withdrawn at this time as the Council received 11 objections. One response of support was received, however this response also stated that the proposals as advertised wouldn't solve the problems faced in this area. Since the proposals were drafted a new management company has been appointed to maintain the Business Park and were not made aware of these proposals by the previous company. As such, it is recommended that location is re-examined separate to this Order.

Restrictions as detailed on plan B3

Road affected: Sunnyside View in Peasedown St. John

Restriction: Prohibit and Restrict Parking At Any Time

Decision: That the proposal is implemented as advertised with the support of Peasedown Parish Council, having received no objections.

Restrictions as detailed on plan C2

Road affected: Belle Vue Close in Peasedown St. John

Restriction: Prohibit and Restrict Parking At Any Time

Decision: That the proposal is implemented as advertised with the support of Peasedown Parish Council, having received no objections.

Restrictions as detailed on plan 3

Road affected: Northend in Batheaston

Restriction: Prohibit and Restrict Parking At Any Time

Decision: That the proposal is implemented as advertised as no objections were received.

Restrictions as detailed on plan 5

Roads affected: High Street and Farm Lane in Wellow

Restriction: Prohibit and Restrict Parking At Any Time

Decision: That the proposal is implemented as advertised, despite receiving one objection. The proposals were made at the request of local councillors and the local school in response to safety concerns.

Restrictions as detailed on plan 6

Roads affected: Waterside Way and Waterside Road in Westfield

Restriction: Prohibit and Restrict Parking At Any Time

Decision: That the proposal is implemented as advertised as no objections were received.

Restrictions as detailed on plan 9

Road affected: High Street in Bathford

Restriction: Prohibit and Restrict Parking At Any Time

Decision: That the proposals are modified to lessen the extent of the restrictions, echoing the concerns received regarding the lack of on-street parking at this location.

Restrictions as detailed on plan 10

Road affected: Salisbury Road in Paulton

Restriction: Prohibit and Restrict Parking At Any Time

Decision: That the proposal is implemented as advertised as no objections were received.

Restrictions as detailed on plan 11

Road affected: Bannerdown Road in Batheaston

Restriction: Prohibit and Restrict Parking At Any Time

Decision: That the proposal is withdrawn at this time as the Council received one objection to the proposals stating them unnecessary, and Batheaston Parish Council submitted a neutral stance. The location is not deemed as having exceptional safety concerns and so it is recommended that the proposal is withdrawn.

Restrictions as detailed on plan 13

Road affected: Sleep Lane in Whitchurch

Restriction: Prohibit and Restrict Parking At Any Time

Decision: That the proposal is implemented as advertised as no objections were received.

Restrictions as detailed on plan 14

Road affected: North Way in Midsomer Norton

Restriction: Prohibit and Restrict Parking At Any Time

Decision: That the proposal is withdrawn at this time as an objection was received, with no responses of support.

Restrictions as detailed on plan 15

Road affected: Catherine Way in Batheaston

Restriction: Removal of No Waiting At Any Time markings

Decision: That the proposal is implemented as advertised as no objections were received.

Restrictions as detailed on plan 19

Road affected: Brookside Drive in Farmborough

Restriction: No Stopping on School Entrance Markings, Mon – Fri, 8am – 8pm

Decision: That the proposal is implemented as advertised as no objections were received.

Restrictions as detailed on plan 20

Roads affected: Waterside Way and Waterside Road in Westfield

Restriction: Prohibit and Restrict Parking At Any Time

Decision: That the proposal is implemented as advertised as no objections were received.

Restrictions as detailed on plan 24

Road affected: West Road in Midsomer Norton

Restriction: Prohibit and Restrict Parking At Any Time

Decision: That the proposal is implemented as advertised as no objections were received.

Restrictions as detailed on plan 25

Road affected: Laburnum Grove in Midsomer Norton

Restriction: Prohibit and Restrict Parking At Any Time

Decision: That the proposal is implemented as advertised as no objections were received.

Restrictions as detailed on plan 26

Roads affected: The Timbers and Charlton Road in Midsomer Norton

Restriction: Prohibit and Restrict Parking At Any Time

Decision: That the proposal is implemented as advertised as no objections were received.

Restrictions as detailed on plan 29

Road affected: Clevedon Road

Restriction: Prohibit and Restrict Parking At Any Time

Decision: That the proposal is modified to incorporate concerns received regarding the reduction in the on-street parking stock at this location. It is recommended that the northerly restrictions either side of Clevedon road go ahead as advertised, and the southerly restrictions are reduced to cover the distance of the dropped kerbs only. This would recover 3 on-street parking spaces on site.

Restrictions as detailed on plan 31

Road affected: Ashley Road in Bathford

Restriction: Prohibit and Restrict Parking At Any Time

Decision: That the proposal is withdrawn at this time as 3 objections were received, including a 19 signature petition, in comparison to only one response in support.

Restrictions as detailed on plan 34

Road affected: Station Road in Clutton

Restriction: Prohibit and Restrict Parking At Any Time

Decision: That the proposal is implemented as advertised as no objections were received.

Restrictions as detailed on plan 35

Roads affected: Woodborough Lane and Springfield Crest in Radstock

Restrictions: Prohibit and Restrict Parking At Any Time, No Loading / Unloading At Any Time

Decision: That the proposals are implemented as advertised as no objections were received.

Restrictions as detailed on plan 36

Roads affected: Chilcompton Road, Riverside Gardens and Oliver Brooks Road in Midsomer Norton

Restriction: Prohibit and Restrict Parking At Any Time

Decision: That the proposal is implemented as advertised as no objections were received.

Restrictions as detailed on plan 40

Roads affected: Barton Well in Paulton

Restriction: Prohibit and Restrict Parking At Any Time

Decision: That the proposal is implemented as advertised as no objections were received, and a response of support was submitted from a local councillor.

Restrictions as detailed on plan 41

Roads affected: High Street, Publow Lane and Church Street in Pensford

Restriction: Prohibit and Restrict Parking At Any Time

Decision: That the proposals relating to Publow Lane and the High Street are implemented as advertised due to reasons of safety, however the restrictions relating to Church Street are modified and limited to its junction with the A37, with the restrictions on the southerly side of the junction being reduced to mirror that of the northern side. It is recommended that rest of the restrictions affecting Church Street, further west from this point, are withdrawn at this time due to the high number of objections received by the Council. It has been proposed that the situation will be monitored and the option of introducing timed parking bays on either side of the section of Church Street north of Culvery Lane will be explored.

Restrictions as detailed on plan 42

Roads affected: Railway View Place in Midsomer Norton

Restriction: Prohibit and Restrict Parking At Any Time

Decision: That the proposal is implemented as advertised, despite the Council receiving one objection, for reasons of safety.

Restrictions as detailed on plan 43

Roads affected: Spencer Drive in Midsomer Norton

Restriction: Prohibit and Restrict Parking At Any Time

Decision: That the proposal is implemented as advertised as no objections were received.

Restrictions as detailed on plan 44

Roads affected: Cobbler's Way in Westfield

Restriction: Prohibit and Restrict Parking At Any Time

Decision: That the proposal is implemented as advertised as the Council received one submission of support from a local resident, along with no objections.

Restrictions as detailed on plan 45

Roads affected: North Road and Lippiatt Lane in Timsbury

Restrictions: Prohibit and Restrict Parking At Any Time, No Loading / Unloading At Any Time, Goods Vehicles Loading Only Bay Mon–Fri, 9.30am-11.30am and 1pm-3pm

Decision: That the proposals are implemented as advertised, despite the Council receiving 3 objections, on the grounds of improving visibility and safety. The Council also received 1 response of support and another that agreed something had to be done at this location.

Restrictions as detailed on plan 46

Roads affected: Chapel Lawns and Springfield Place in Radstock

Restriction: Prohibit and Restrict Parking At Any Time

Decision: That the proposal is implemented as advertised as the Council received one submission of support from a local resident, along with no objections.

Restrictions as detailed on plan 47

Roads affected: Temple in Lane and Meadway in Temple Cloud

Restriction: Prohibit and Restrict Parking At Any Time

Decision: That the proposal is modified due to the number of objections received to remove the westerly restrictions on Temple Inn Lane from the proposals, but keeping the restrictions wrapping around the junction with Meadway for reasons of safety.

Restrictions as detailed on plan 48

Roads affected: Welton Grove in Midsomer Norton

Restriction: Prohibit and Restrict Parking At Any Time

Decision: That the proposal is implemented as advertised as no objections were received.

Restrictions as detailed on plan 49

Roads affected: Winterfield Road and Bloomfield Rise in Paulton

Restriction: Prohibit and Restrict Parking At Any Time

Decision: That the proposal is withdrawn at this time due to the strength of objections received and due to the fact that the comments in support wish for greater restrictions than those proposed. It is suggested that the situation is monitored and re-examined separate to this Order.

Restrictions as detailed on plan 50

Roads affected: Norton Lane in Whitchurch

Restriction: 3 Hour Limited Waiting, Mon – Fri, 8am – 6pm, No Return Within 2 Hours

Decision: That the proposal is implemented as advertised as no objections were received.

19-Nov-15 Cllr Anthony Clarke

E2796 Entrance to site adjacent to 1 Lark Place, Bath

*The Cabinet Member agrees that we should continue and seal Order PEV11187/AC
'(Various Roads, North West Outer Area, Bath (Prohibition and Restriction of Parking and
loading) (No Stopping on Entrance Markings) (Authorised and Designated Parking Places)
(Variation No. 1) Order 201- ' as advertised.*

End of Report

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Bath & North East Somerset Council		
MEETING	Cabinet	
MEETING	2 nd December 2015	EXECUTIVE FORWARD PLAN REFERENCE:
		E 2787
TITLE:	Bath & North East Somerset Placemaking Plan (Pre-submission Draft)	
WARD:	All	
AN OPEN PUBLIC ITEM		
List of attachments to this report: - Attachment 1 The pre-submission draft B&NES Placemaking Plan (NOTE: Given the large file size of the plan can be only viewed on Council's website at http://www.bathnes.gov.uk/services/planning-and-building-control/planning-policy/placemaking-plan/placemaking-plan-pre) - Attachment 2 Public consultation arrangements		

1 THE ISSUE

- 1.1 This report seeks Cabinet approval of the Pre-submission Draft Placemaking Plan for public consultation prior to submission to the Secretary of State for examination.

2 RECOMMENDATION

2.1 That Cabinet

- Approves the Pre-submission Draft Placemaking Plan in Attachment 1 for public consultation from 16th December 2015 to 3rd February 2016,
- Approves the Draft Placemaking Plan for Development Management purposes,
- Delegates authority to the Divisional Director for Development, in consultation with the Cabinet Member for Homes & Planning, to make minor changes to the Draft Placemaking to correct errors and inconsistencies to the Plan prior to publication,

- Recommends to Full Council that it resolves to submit the Draft Placemaking Plan, along with representations received through the public consultation, to the secretary of state for examination, and
- Agrees the public consultation arrangements in Attachment 2.

3 RESOURCE IMPLICATIONS (FINANCE, PROPERTY, PEOPLE)

- 3.1 Preparation of the Placemaking Plan has been funded from the LDF budget. The costs of the examination and adoption in 2016/17 will also need to be funded from the LDF budget.
- 3.2 Preparation of land-use planning policies will inevitably have an impact on value of land & buildings.

4 STATUTORY CONSIDERATIONS AND BASIS FOR PROPOSAL

- 4.1 The Draft Placemaking Plan has been prepared in compliance with the Planning and Compulsory Purchase Act 2004 (“the 2004 Act”) and The Town and Country Planning (Local Planning) (England) Regulations 2012 (“the Regulations”). Once adopted, it will be a statutory Development Plan Document (“DPD”).
- 4.2 Preparation of the Draft Placemaking Plan has also accorded with national policy in the National Planning Policy Framework (NPPF) and guidance in the National Planning Practice Guidance (NPPG). In particular, the Council has sought to ensure that the plan is sound in that it (inter alia);
- Has been **positively prepared** – the plan seeks to meet objectively assessed development and infrastructure requirements, unless any adverse impacts of doing so would significantly and demonstrably outweigh the benefits;
 - Is **justified** – the plan is the most appropriate strategy, when considered against the reasonable alternatives, based on proportionate evidence;
 - Is **effective** – the plan is deliverable; and
 - Is **consistent with national policy** – the plan enables the delivery of sustainable development
- 4.3 The Draft Placemaking Plan has been subject to a fully integrated Sustainability Appraisal (SA) and Strategic Environmental Assessment (SEA) in line with the requirements of the SEA Regulations (Statutory Instrument 2004 No. 1633: The Environmental Assessment of Plans and Programmes Regulations 2004).
- 4.4 The Draft Placemaking Plan will be used for Development Management purposes but will not have the statutory force of section 38(6) of the Planning and Compulsory Purchase Act 2004 until any objections received have been addressed via the examination process and the plan is adopted. In light of the stage of preparation the plan has reached, it will be an important material consideration in the determination of planning applications.
- 4.5 Any existing Development Plan policies superseded by the Placemaking Plan are set out in Appendix 1 to the draft Plan (Regulation 8(5)).

4.6 The Housing & Planning Bill 2015 is likely to have implications for some of the policy approaches in both the Placemaking Plan and the Core Strategy but it is premature to seek to pre-empt the Bill's enactment and so any issues arising will need to be addressed via the examination process.

5 THE REPORT

5.1 The Placemaking Plan will provides a district-wide suite of planning policies for B&NES, complementing the strategic framework in the Core Strategy. The Core Strategy forms Part 1 of the B&NES Local Plan and the draft Placemaking Plan is Part 2. The Plans have been combined for clarity but it is only the Placemaking Plan part which is the subject of this report. In a few instances, the Placemaking Plan contains a policy that is intended to supersede a policy or text in the Core Strategy. These superseded policies are identified in the document (Regulation 8(5) of the 2012 Regulations).

5.2 The draft Placemaking Plan includes;

- Spatial frameworks for Bath, Keynsham, the Somer Valley & the Rural Areas. It allocates sites for development where these are necessary to deliver the strategy, setting out the required land-use mix and the development principles.
- Designations where there is a need to identify and protect valued assets, such as important open hillsides or Local Green Space
- Identifies schemes to be implemented such as road or cycleway improvements
- Generic criteria-based planning policies

5.3 In Bath, the key issue is how to facilitate the Council's ambitions for growth and change in a relatively small city, recognized for its unique heritage and environment and constrained by the Green Belt. The development of the spatial strategy has therefore required that the Council make choices, in order to ensure its key priorities are met. The Plan reflects the ambitions of the Economic Strategy the Housing & Well-being Strategy and the Bath Transport Strategy. In particular the proposals of the Bath Enterprise Area Masterplan have been incorporated. The Plan highlights the transport interventions that are needed to realise the District's growth proposals.

5.4 In Keynsham, the Plan seeks to build on the growing strengths of the town, providing a Masterplan for future change. This takes account of the significant growth contained in the Core Strategy.

5.5 In the Somer Valley, the Plan focuses on regeneration in light of the Core Strategy objectives of seeking a greater balance between homes and jobs. Both Midsomer Norton and Westfield are preparing their own Neighbourhood Plans and the Placemaking Plan complements the Neighbourhood Plans.

5.6 In the rural areas, B&NES has worked closely with the parishes to produce spatial frameworks for inclusion either in the Placemaking Plan or in their own Neighbourhood Plans. The approach has been to identify locations for new

development where required in consultation with the local communities whilst identifying the key environmental assets for protection and conservation.

- 5.7 It is essential that new development is properly aligned with the necessary infrastructure and so the B&NES Infrastructure Delivery Plan has been updated alongside the preparation of the Placemaking Plan. Key infrastructure requirements have been identified where they are critical to the delivery.
- 5.8 The future stages in the preparation process will be for the Council to comply with the statutory requirements concerning publication and receiving representations relating to the Draft Placemaking Plan and for Full Council to agree submission of the Draft Placemaking Plan for independent examination by an Inspector appointed on behalf of the Secretary of State. Also submitted alongside the Draft Placemaking Plan to the Secretary of State will be the schedule of public representations received by the Council. It is for the appointed examination Inspector to consider the issues raised in the public representations in his / her role to assess the soundness of the Draft Placemaking Plan as with the other requirements of S20 (5) of the 2004 Act. As a result the Council will not be formally considering the representations received from the next stage.

6 RATIONALE

- 6.1 The UK Planning system is a Plan-led system. This means that planning applications for development must be determined in accordance with Development Plan unless material considerations indicate otherwise. The National Planning Policy Framework requires that each Local Authority should produce a Local Plan for its area and the importance of having it up to date. The Placemaking Plan will be Part 2 of that for the Council's area.

7 OTHER OPTIONS CONSIDERED

- 7.1 None. Publication of a Draft Placemaking Plan and submission for independent examination are statutory requirements of a DPD as required by the 2004 Act and the Regulations. The Council does not have discretion to depart from this process.
- 7.2 In deciding its preferred spatial strategy, the Council has assessed the reasonable options. It has chosen the most appropriate strategy in light of the evidence, as guided by the sustainability appraisal.

8 CONSULTATION

- 8.1 Preparation of the Placemaking Plan has entailed extensive community engagement, both formal and informal pursuing a range of consultation and engagement methods as set out in the Neighbourhood Planning Protocol (the Council's Statement of Community Involvement).
- 8.2 The Placemaking Plan Launch document was published for consultation in July 2013 and the Options document was published for consultation in November 2014. Around 1,000 comments were received each on the Launch document and Options document.
- 8.3 Alongside these more formal consultations, the Council has continued to work closely with the Town and Parish Councils, community groups and local

representatives in order to draw up a policy framework which takes into account local aspirations and concerns. The Council has also liaised with statutory consultees (such as Historic England, Natural England and the Environment Agency) as necessary to address any issues raised. This front loaded approach is aimed at resolving as many issues as possible early in the process in the preparation of the Placemaking Plan and it is underpinned by evidence to ensure the Plan is 'sound' when submitted for Examination.

8.4 An update on the Placemaking Plan process was presented to the Bath City Forum meeting on 13th October 2015. The meeting discussed the range of issues addressed in the Plan and raised particular concerns about the pressures on the City of Bath caused by University expansion, as well as highlighting the need for affordable and social housing in the City

8.5 The consultation on the Draft Placemaking Plan will be formal and focussed. Consultees will be invited to comment on whether the Draft Placemaking Plan meets the four tests of 'soundness' (positively prepared, justified, effective and consistent with national policy) and is legally compliant as required by the NPPF para 182. The broad programme of engagement activities previously undertaken as part of the Placemaking Plan Launch document and Options document consultation by virtue of Regulation 18 of the Regulations is not repeated in the forthcoming consultation.

8.6 The publication of the Plan for consultation is prescribed in Regulation 19 of the Regulations which entails making the Draft Placemaking plan and other documents publicly available together with notification of Consultees. Nevertheless where possible the Council will publicise the next stage of the process as far as is possible in addition to the statutory requirement in order for public awareness of the process and representations on the Draft Placemaking Plan to be made and in line with the Neighbourhood Planning Protocol.

8.7 The Council's Monitoring Officer, section 151 Officer and the Place Strategic Director have had the opportunity to input to this report and have cleared it for publication.

9 RISK MANAGEMENT

9.1 A risk assessment related to the issue and recommendations has been undertaken, in compliance with the Council's decision making risk management guidance.

Contact person	<i>Lisa Bartlett 01225 477550, Simon de Beer 01225 477616</i>
Background papers	<i>Key Policy</i> <i>B&NES Core Strategy 2014</i> <i>National Planning Policy Framework</i> <i>National Planning Practice Guidance</i> <i>Extant Supplementary Planning Documents – such as the Planning Obligations SPD, HMO in Bath SPD, Sustainable</i>

Construction & Retrofitting SPD etc.

Existing Key Evidence Base/Policy

- *B&NES Economic Strategy*
- *B&NES Housing & Well-being Strategy*
- *Building Heights Study 2010*

New Evidence Base to the Placemaking Plan:

- *Bath Transport Strategy*
- *Office market demand in B&NES - current enquiries*
- *Lambert Smith Hampton Office Review/Demand Study*
- *Lambert Smith Hampton Industrial Review*
- *East of Bath P&R – assessment of options*
- *Existing P&R sites – assessment of options & identification of land for expansion*
- *Paramics modelling of Bath EA & other development mix proposed in Draft Plan*
- *Paramics modelling of development/transport interventions phasing*
- *Bath car parking strategy (off-street car parking provision)*
- *Commercial car parking standards in Bath & town centres (plus modelling of impact of parking standards in Bath on transport network)*
- *Housing mix for Bath (to support Economic Strategy)*
- *Bath CA Character Appraisal (phase 1- city centre/EA)*
- *Flooding – review & prepare sequential approach/exceptions test report (especially relevant for Bath EA sites)*
- *Keynsham Leisure Centre Options*
- *East Keynsham Employment Site Masterplan (helps determine waste site allocation)*
- *Transport Studies for Keynsham*
- *Midsomer Norton Town centre transport studies*
- *MSN: South Road Car park - deliverability/market assessment for retail*
- *MSN: Welton, Bibby & Baron – assess site capacity*
- *Viability – assess viability of development options on proposed allocations across the District*
- *GI – identification of key components of GI network for strategy diagrams*
- *GI – identification of GI network (District-wide) for Policies Map*
- *Landscape – review/identification of green spaces of importance*

	<i>to landscape character (VIOS/IH)</i> • <i>Green Spaces Strategy</i> • <i>Playing Pitch Strategy</i> • <i>Local centres – occupier/use survey of local centres (District-wide)</i> • <i>WENP work - identifying GI/ecological corridors for Policies Map</i> • <i>Student Numbers and Accommodation in Bath (Nov 2015 update)</i> • <i>B&NES Local Green Space Summary Report</i> • <i>B&NES Allotment Management Plan & Site Selection Criteria</i> • <i>Commercial Signage & Tables and Chairs – Bath Design & Conservation Area Guidance (Nov, 2015 Draft)Bath Pattern Book – Parts 1 & 2</i> • <i>B&NES Community Energy Strategy</i> • <i>B&NES Enterprise Area District Heating Feasibility Study</i> • <i>B&NES Renewable Energy Policy Evidence Summary Report</i> • <i>B&NES Surface Water Management Plan</i> • <i>West of England Sustainable Urban Drainage Developer Guide</i>
Please contact the report author if you need to access this report in an alternative format	

Attachment 2 – Proposed Consultation Strategy

DRAFT PLACEMAKING PLAN - PROPOSED CONSULTATION STRATEGY

The Planning Regulations require that each of the statutory consultees, general consultation bodies, public and business community to be invited to make representations on the ‘soundness’ of the Draft Placemaking Plan (Proposed Submission Plan: Reg. 19).

This is a **formal stage** and consultees can only be invited to comment on whether the Plan meets the four tests of ‘soundness’ (positively prepared, justified, effective and consistent with national policy) and is legally compliant as required by the 2004 Act. The consultation will take place over a six week period between **16th December 2015 and 3rd February 2016**.

The table below therefore sets out how Bath & North East Somerset intends to engage with and/or consult at this key stage in the plan making process prior to the submission of the Placemaking Plan to the Secretary of State for Examination in January 2016. The Consultation Strategy has been prepared to ensure consultation with the community and other stakeholders is undertaken in compliance with the Council’s Neighbourhood Planning Protocol.

The timeline for preparation of the Placemaking Plan is outlined below.

Issues and alternative options consultation [Reg 18]	November 2014
Publication of and consultation on Draft Placemaking Plan DPD [Reg 19] and draft SA report	Late November 2015
Submission to Secretary of State [Reg 22] with final SA Report	Spring 2016
Examination Hearings Period	Summer 2016
Receipt of Inspector’s report	Autumn 2016
Adoption and publication	Winter 2016

Proposed Consultation Strategy

Commenting on the soundness and legally compliance of the Draft Placemaking Plan	
Publicity	
Provide information about this stage in the plan preparation process	– Council’s website - News Items, links to consultation webpage News item and reminders via Council’s weekly e-bulletin, with link to Council’s online consultation calendar (as appropriate) – Twitter (as per the Council’s protocol) – Local Publicity: Posters/leaflets for display on notice boards and/or distribution, in Council offices, libraries and other key places as appropriate
Media (Local Press, Council publications, newsletters, etc.)	- Media briefing: – Prepare press release
Parish/Town Council meetings or	Briefing notes, presentations at meetings

Commenting on the soundness and legally compliance of the Draft Placemaking Plan

neighbourhood or residents' forums in areas with no parishes

Consultation

Advance notification by e-mail/letter

Mailout to all those on the mailing list (statutory consultees, non-statutory consultees, local residents & local/national organisations) explaining the purpose of the consultation, where to view the documents, how to respond - electronic mailout except where there is no e-mail address.

- Representations are only invited on the soundness and legal compliance of the Draft Placemaking Plan, using the standard response form for this stage in the process.

Make the Draft Placemaking Plan consultation documents available for public viewing on the Council's website

Placemaking Plan consultation webpage to include:

- Explanatory text about the consultation on the Draft Placemaking Plan
- Evidence underpinning the Draft Placemaking Plan
- Sustainability Appraisal
- Habitats Regulations Assessment
- Information on where to view the documents in person
- Explanatory note about the consultation
- Standard comments forms
- Contact details for further information
- Link to an online consultation

Make the Draft Placemaking Plan consultation documents available for public inspection at each Council's usual deposit stations (Council offices and public libraries)

Deposit station packs to include:

- Explanatory note about the consultation
- Draft Placemaking Plan
- Statement of representations procedure
- Sustainability Appraisal
- Habitats Regulations Assessment
- Consultation Statement
- Standard response forms
- Where to view the evidence base

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Bath & North East Somerset Council		
MEETING	Cabinet	
MEETING DATE:	2 nd December 2015	EXECUTIVE FORWARD PLAN REFERENCE:
		E 2807
TITLE:	Spend of Community Infrastructure Levy income 2015/16	
WARD:	All	
AN OPEN PUBLIC ITEM		
List of attachments to this report: none		

1 THE ISSUE

- 1.1 The B&NES Community Infrastructure Levy (CIL) came into effect in April 2015 and the process for determining spend of the CIL income was agreed by Cabinet in July 2015.

2 RECOMMENDATION

- 2.1 That Cabinet agree that the strategic income from the Community Infrastructure Levy received in 2015/16 should not be allocated this financial year but rolled forward to be added to the spending commitments for 2016/17

3 RESOURCE IMPLICATIONS (FINANCE, PROPERTY, PEOPLE)

- 3.1 CIL is effectively a tax on development at rates set by the Council, the income from which must be spent on infrastructure.
- 3.2 Of the CIL income, 15% in a local area is handed to those local communities where the income has arisen. This rises to 25% in those areas with an adopted Neighbourhood Plan. Parish or Town Councils without NDP is capped at £100 per council tax property in the Parish or Town Council. This local portion of CIL income must be spent within 5 years to “support development in their area”.

- 3.3 Upon receipt of CIL from the liable party and after deduction of the 5% administration allowance, the Bath local proportion (15% of the CIL receipt, if applicable) is credited to the Bath CIL Reserve in the B&NES balance sheet and the Parish or Town Councils' local proportion (15% or 25%, if applicable) is credited to a holding account from where it will be transferred to Parish or Town Councils every 6 months. The remaining proportion of the CIL receipt is credited to a B&NES CIL Strategic Reserve in the B&NES balance sheet

4 STATUTORY CONSIDERATIONS AND BASIS FOR PROPOSAL

- 4.1 The CIL Charging Schedule must comply with relevant legislation, and the National Planning Policy Framework (2012). The Planning Act 2008 (Part 11) made provision for the introduction of the CIL. Regulations governing the preparation and operation of CIL Charging Schedule were first introduced in April 2010, and have subsequently been amended in 2011, 2012, 2013 and 2015.

5 THE REPORT

- 5.1 The Community Infrastructure Levy (CIL) came into effect in B&NES in April. The use of income generated through CIL will need to be spent on infrastructure to support the District's growth plans as set out in the Council's Core Strategy. The spend of CIL will be as below;

- **Local Funds:** A proportion of CIL will be passed on to local communities. 15% (capped) or 25% with adopted Neighbourhood Plans.
- **Administration Costs:** up to 5% of CIL receipts will be used within Planning Services to provide a dedicated resource for the annual monitoring and management and costs associated with collection of CIL required by the CIL regulations.
- **Strategic Funds:** The remaining CIL receipts will be allocated by the Council in accordance with the CIL Strategic Spend Protocol.

- 5.2 A protocol for determining the spend of CIL income was agreed by Cabinet in July 2015. The key principles are;

- The Infrastructure Delivery Programme (IDP) is updated
- The projections of the likely amount of CIL income is reviewed.
- Infrastructure providers (including B&NES Services) invited to submit bids and programmes for the use of available CIL funds.
- Bid applications are considered internally taking into account the infrastructure requirements and infrastructure funding gap.
- A Draft Spending Priority Programme is prepared and presented to Cabinet for decision. Cabinet will agree the allocation of funding for the identified projects in year one, noting potential projects for funding in years two and three.

5.3 CIL is payable on grant of planning permission and hence CIL income is dependent on the level of activity in the development industry. CIL annual income is estimated on the anticipated growth in the Core Strategy. However the income this financial year is limited, likely to be under £50,000 by the end of the financial year 2015/16. In light of this relatively limited amount it is considered that there is more benefit in rolling forward the CIL income to form part of the spending arrangements to be agreed next year.

5.4 CIL receipts may be higher than £50,000 if schemes already in the pipeline get planning permission and start on site before 31st March 2016. Also, CIL receipts are initially depressed by the fact that we allow payment by instalments. It is important to note that CIL receipts in 2016/17 will be enhanced by the remaining instalments of those CIL liable schemes that started on site in 2015/16.

5.5 On the basis of the £45,500 already received, the proportions will be as follows:

- CIL administration allowance £2,240
- B&NES Strategic proportion £ 36,430
- Bath Unparished Area/ Parish & Town Councils £6,830 (split £6,800 to Bath and £30 to Parish and Town Councils)

6 RATIONALE

6.1 In light of the relatively limited amount of CIL income this year, rolling it forward to next year is the most appropriate option as it provides the opportunity to make the spend more effective.

7 OTHER OPTIONS CONSIDERED

7.1 The CIL income could be spent this financial year but it is considered that there is greater benefit in rolling it forward.

8 CONSULTATION

8.1 This report was prepared in consultation with the s.151 Officer & the Monitoring Officer.

9 RISK MANAGEMENT

9.1 A risk assessment related to the issue and recommendations has been undertaken, in compliance with the Council's decision making risk management guidance.

10 HUMAN RIGHTS AND EQUALITIES

10.1 Officers have had regard to the Council's duties under the Human Rights Act 1998 and the Equality Act 2010 and it is considered that the recommendation in this report would not result in any adverse impacts as regards human rights or the Council's public sector equality duty.

10.2

Contact person	<i>Lis Bartlett 01225 477550, Simon de Beer 01225 477616</i>
Background papers	<i>B&NES CIL & Regulation 123 List Community Infrastructure Levy (CIL) Strategic Spend Protocol (June 2015) B&NES Infrastructure Delivery Plan</i>
Please contact the report author if you need to access this report in an alternative format	

Bath & North East Somerset Council		
MEETING/ DECISION MAKER:	Cabinet	
MEETING/ DECISION DATE:	2 nd December 2015	EXECUTIVE FORWARD PLAN REFERENCE:
		E 2790
TITLE:	Your Care, Your Way: Outline Business Case, Market Testing & Service Outcomes	
WARD:	All	
AN OPEN PUBLIC ITEM		
List of attachments to this report:		
Appendix 1: “Your Care Your Way Outline Business Case”		

1 THE ISSUE

1.1 The *Your Care, Your Way* community health and care services review programme has four key phases. The analysis and planning phase was completed in May 2015, the Programme then progressed into its current design phase. The key focus of this stage was to develop and formally consult on a set of commissioning intentions that set out the overarching strategy, outcomes framework and potential models on which service design could be based.

1.2 Before commissioners can progress to developing the service delivery model during the next phase, there are a number of key outcomes that form the body of this report and will need to be considered by Governing Bodies, which are Council Cabinet and BaNES CCG Board:

- i) The analysis of consultation findings that set out what our community has told us about our plans as detailed in September Cabinet report *"Proposals to Review Community Services Consultation Document"*.
- ii) The findings of our market engagement with providers and our proposed methodology to market test and contract in order to develop a process to identify the most capable providers for future service delivery.
- iii) The outline financial planning process that will set out the factors that will impact funding going forwards and the principles against which the funding envelope will be derived.

2 RECOMMENDATION

- 2.1 Note the findings of the consultation document attached as set out in Section 3 of Appendix 1: *"Your Care Your Way Outline Business Case"* and approve progression to the next phase.
- 2.2 Approve the financial planning process as set out in Section 5 of Appendix 1.
- 2.3 Approve the market testing and contracting approach as set out in Sections 7 and 8 of Appendix 1.
- 2.4 Delegate, to officers, implementation of Phase 3, subject to the requirement to obtain approvals by the Joint Commissioning Committee and Governing Bodies in relation to the milestone decisions set out in Section 8, Figure 7 of Appendix 1.

3 RESOURCE IMPLICATIONS (FINANCE, PROPERTY, PEOPLE)

- 3.1 During this phase of the review our engagement with the community and providers has enabled us to better identify both the opportunities and challenges around our proposals and to establish how commissioners will take this learning into the next phase when the preferred service delivery model will be developed.
- 3.2 As the review progresses through Phases 2 and 3, which is planned to cover the period to Summer 2016, it is highly likely that both the CCG and Council will face further reductions in funding of public services arising from Government policy and spending review. This will also have to be taken into account as the envelope for funding service provision is finalised. The scale of the challenge will become clearer on the announcement of the Government's four-year plan to cut public spending by £20bn which will be published on 25 November 2015. Communication on how these funding reductions impact on B&NES Council and BaNES CCG will be addressed through the Council and CCG's annual financial planning and contracting processes and, also, further inform Phase 2 and 3 of the community services review.
- 3.3 Commissioners will work closely with providers to develop service models that reflect the reductions in the funding envelope, which will impact from 2017/18 onwards, and align with the principles that all services must be affordable, provide value for money and demonstrate that resources are appropriately allocated to address priority areas of need.

4 STATUTORY CONSIDERATIONS AND BASIS FOR PROPOSAL

- 4.1 Community health and care services play a vital role in meeting the statutory responsibilities of the Council and CCG. For the Council, these included those in the Care Act (2014); Mental Capacity Act (2005); Mental Health Act/Deprivation of Liberty Safeguards (2007); Children Acts (1989 and 2004) and SEND (Special Educational Needs and Disabilities) reform. Public Health responsibilities include a duty to promote the health & wellbeing of the inhabitants of its area and to reduce inequalities amongst its population.
- 4.2 Your Care, Your Way also supports the delivery of local strategic priorities, including those set out in the Health & Wellbeing Strategy, Better Care Plan, Council vision and priorities, and CCG 5-Year Strategy.

- 4.3 An Equalities Impact Assessment (EIA) has been undertaken and can be found on the Your Care, Your Way website (www.yourcareyourway.org). The EIA will be regularly reviewed and updated throughout all phases of the programme.

5 THE REPORT

- 5.1 Over the past ten months Bath and North East Somerset Council and Bath and North East Somerset CCG have been listening to the views of local people and working together to review and develop proposals to improve the delivery of integrated community health and care services to the people and communities of Bath and North East Somerset. As a result of this work Commissioners have developed the Outline Business Case (OBC) attached as Appendix 1 of this report. The OBC describing proposals for achieving a local model of integrated health and care that improves outcomes and system sustainability both now and in the future.
- 5.2 The proposals detailed within the OBC recognise that not all aspects of community services may need to change and acknowledges the need to build on the successes of the current system and the achievements of providers and staff. This gives us a sound foundation on which to build and to ensure that community services are ready, flexible, and resilient enough for the future – not only to respond to the challenges of constrained resources but also to drive lasting and sustainable improvements in outcomes for our population.
- 5.3 The OBC has drawn on a wide range of external expertise and support so that it is informed by best practice and learning from successful service reconfigurations that have been undertaken in other areas. This includes: Attain, the Consultation Institute, Ashfords LLP (solicitors), South West and Central Commissioning Support Unit and NHS England as well as a wide range of stakeholders. The purpose of the OBC is to:
- Enable the respective commissioning organisations to understand the key outcomes from phase two consultation and earlier engagement and make an informed decisions about how these will shape the project into Phase Three: Service Model Development;
 - Outline the financial principles in order to assess how to most effectively invest the collective health and care resources to improve outcomes for the local population, taking account of funding constraints and demographic challenges; and
 - Outline proposals for the market testing arrangements and contractual model to deliver the transformational change required in the future.

6 RATIONALE

- 6.1 The approach to our consultation has ensured that we were able to gather sufficient quantitative data to evidence the level of stakeholder support for the proposals and understand their priorities for funding. It has also ensured that all identified stakeholder groups (particularly seldom heard groups) were given the opportunity to share their views and that they are fairly and proportionally represented in the final analysis of the data. The consultation has also raised awareness amongst stakeholders of the challenges facing the care and health system in Bath and North East Somerset and how the CCG and the Council are

taking action to address these. The findings from this phase have also informed our strategy for continuing public involvement throughout the remaining phases as detailed in Section 3 of the OBC.

6.2 Both the Council and CCG are facing considerable financial challenges, since the national and local elections in May 2015 the Government has not provided any information on local government funding beyond 31 March 2016, although the Chancellor announced an Emergency Budget Statement on 8 July 2015. This will be followed by a Spending Review leading to the Financial Settlement for Local Government around Christmas 2015. This means we cannot be certain about the funding available for our Community Services from 2016/17 onwards, although we can expect the financial challenge facing the public sector to continue throughout the period of the next parliament from 2016/17 to 2019/20. The funding available indicates a gap for the People and Communities Directorate which equates to a 7% reduction to net budgets over a 4 year period. Savings will need to be achieved through delivery of the Strategic Review proposals to help fund the year on year pressures across health and care, including those arising from demographic change.

6.3 The development of the preferred prime contractor model and regulated market testing strategy as set out Sections 7 and 8 of the OBC provide a sound commercial basis on which to assess the most capable providers and to mitigate risk as far as possible in relation to our legal and statutory obligations.

7 OTHER OPTIONS CONSIDERED

7.1 None

8 CONSULTATION

8.1 Parties consulted in preparing this report include the Monitoring Officer, s151 Officer, Council Strategic Management Team, Council/CCG Joint Commissioning Committee, external legal advisors in addition to the extensive stakeholder engagement detailed in Appendix 1.

9 RISK MANAGEMENT

9.1 A risk assessment related to the issue and recommendations has been undertaken, in compliance with the Council's decision making risk management guidance.

Contact person	Jane Shayler/Sue Blackman 01225 396120
Background papers	N/A
Please contact the report author if you need to access this report in an alternative format	

Outline Business Case

Phase Two



November 2015

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Appendix A: Payment Mechanisms

Bath and North East Somerset Community Services

Outline Business Case

your care, your way

1. Executive Summary

Over the past ten months Bath & North East Somerset Council and Bath and North East Somerset Clinical Commissioning Group (BaNES CCG) have been listening to the views of local people and organisations delivering services. We have been working together to review and develop proposals to improve the delivery of integrated community health and care services to the people and communities of Bath and North East Somerset. As a result of this work commissioners have developed this Outline Business Case (OBC) describing proposals for achieving a local model of integrated health and care that improves outcomes and system sustainability both now and in the future.

The proposals detailed within this document recognise that not all aspects of community services may need to change, and acknowledge the need to build on the successes of the current system and the achievements of providers and staff. This gives us a sound foundation on which to build and to ensure that community services are ready, flexible, and resilient enough for the future – not only to respond to the challenges of constrained resources but also to drive lasting and sustainable improvements in outcomes for our population.

The CCG and the Council published the “Making Plans” consultation document in September 2015 to offer a vision and set of proposals in the context of addressing these challenges. The strategies detailed within this OBC should be read in conjunction with this document as well as the following key publications available www.yourcareyourway.org;

- Case for Change - Phase One : Commissioning Approach
- Getting Started Overview - Phase One : Commissioning Blueprint
- The Story So Far - Phase One : Engagement Report
- Options and Choices - Phase Two : Engagement and Consultation Report

The **your care, your way** programme is also aligned to support the delivery of local strategic priorities including those set out in the Health & Wellbeing Strategy, Better Care Plan, Council vision and priorities, and the CCG’s five year strategy.

What have we learnt from public consultation?

We have undertaken an extensive engagement programme in order to inform future commissioning intentions set out in this Outline Business Case. The **your care, your way** consultation has reached over 2,000 individuals during this phase and we gathered feedback from service users, patients, carers and members of the public who may be service users in the future as well as from those people delivering and commissioning services.

The Phase Two consultation document, 'Making Plans' set out;

- Our vision for community services
- Four potential models for service delivery
- Fourteen priorities to support transformational change

We have a **vision** for delivering real lasting change for local people. Ultimately the key to any successful transformation of services rests with the strength and maturity of the relationships between us all – between individuals, services, commissioners and providers. During Phase Two of the review we set out our vision for community services which has been further developed based on what we have learnt from the consultation process to ensure that recognition is given to encouraging a culture of continuous quality improvement, whilst delivering better outcomes for people in ways which deliver best value for money.

Each **model** was recognised as having its own attributes and although the results of the consultation showed no clear preference towards one particular model there was general support for a locality-based model that would harness the strengths and assets of local communities whilst ensuring that people can continue to access the specialist support they need when required. In response, and to support a new model of outcomes-based commissioning, delivering improved person-centred and integrated care and support, we will seek to adopt a locality-based approach often referred to as asset-based community development.

When it came to the **priorities**, our stakeholders gave us a clear indication that joining up people's care and support is their number one priority for this review. This will require a technical solution that enables everyone to work from a single care plan with a simultaneous investment in the culture, skills and resources of the work force to ensure that services provide holistic, person-centred care and support rather than focussing on specific conditions. There is also strong support for placing greater emphasis on prevention, ensuring that the right support is available to people before they reach crisis point, require hospital admission or develop a long-term condition.

What have providers told us?

Running concurrently with the consultation process, commissioners also embarked on further engagement with providers of services in order to explore the opportunities and challenges around our proposals.

We heard during the engagement process a consistent understanding of the need for change, particularly due to increasing demographic pressures and the knowledge that "things can't continue as they are". However, we recognise there are some anxieties around how any contract would be set to respond to a commissioning approach incorporating a locality-based model. Relationships between providers are also mixed. Many providers welcomed the positive outcomes being brought out through the engagement process, but also they acknowledged the time it takes to get to a level of trust and reach agreement on governance structures in order to realise successful collaboration.

Although a more collaborative and integrated approach is welcomed by providers, the implications of outcomes based commissioning are not fully understood. There are significant

differences between providers in their perceptions of what the commissioners' role should be. For some, it is to free up providers from siloed contracts and budgets, giving them more rein to lead and adapt delivery systems to improve outcomes. For others, it is that the commissioners' role is to lead and, indeed, to tighten the reins when necessary. Clarity on what collaborative commissioning means in practice, and articulation of what a more collaborative approach between commissioners and providers looks like, will assist all stakeholders in their roles and responsibilities in the next phase.

Groups of providers are starting to discuss how they can best react and respond to the increasing pressures they face, and a locality-based approach appears to offer the greatest benefit in readying the health and care economy. The commissioner's leadership of this process should continue to become more visible, working with providers to help articulate how the opportunities within this review could lead to improved service models.

We should consider the production of a comprehensive organisational development programme for commissioners early in the next stage of work. This should include, for example, consideration of how commissioners will work together in a future outcomes based commissioning scenario, what the transition period would mean for commissioning teams and contract managers, and how commissioners should prepare and adapt for the proposed future service model.

The provider engagement carried out thus far has demonstrated the need to undertake further, more detailed work with provider stakeholders across the spectrum of the proposed contract scope. In particular, there is a strong demand for further work to support primary care engagement and development which will need to be taken forward into Phase 3.

What is the financial context?

Commissioners and providers are facing a significant challenge in ensuring that high-quality, affordable, community health and care services can be delivered in the face of reductions in funding allocations and increasing demands. Service transformation will be required in order that B&NES community services remain at the heart of a sustainable health and care system into the future. The funding available indicates a considerable gap, i.e. a 7% reduction to net budgets over a four year period.

This will require care and support provided in a community setting to demonstrate efficiency and productivity savings in the context of the cost reduction required of the whole health and care community.

In order that we achieve and maintain local system sustainability, the following strategic principles apply:

- There will be a further shift of investment from acute and specialist health services to support investment in community-focused provision;
- This shift of investment will be focused on those areas where there is robust evidence that this will achieve improved value from the available resource and deliver wider financial benefits to the health and care system;

- Alternative sources of funding and income will be proactively sought by providers and commissioners working in collaboration;
- Providers and commissioners will explore new approaches to sharing resources, including knowledge and expertise, where there are demonstrable benefits in doing so;
- Any proposed shift of resource and/or service change will be impact-assessed to ensure that the proposed change will not adversely affect whole system sustainability.

How will we deliver transformational change?

The proposals set out in this document will take time to achieve and must be continually nurtured by those commissioning and delivering services and by the people who use them. We want to build – together - a model which will provide trusted, compassionate and responsive services that people recognise as truly personalised in its approach to meeting people’s needs.

We recognise the huge contribution our providers make to the health and care of our local population. Our challenge is that our health and care services are not affordable in their current form in the longer term. We need to work together with providers to transform local services so that we can maintain and improve the quality of services, changing them to meet the developing needs of our population, and do this within a challenging financial environment.

To establish a new commissioning framework for B&NES, we will need to develop a new contract (or set of contracts) with collaborating providers as opposed to the current model where we act as commissioners of individual providers. The scale of the transformation means it is unlikely that an individual provider will be able to deliver this contract independently. Therefore, the preferred “Prime” contractual form needs to incentivise and facilitate collaboration amongst providers to jointly deliver services for the chosen population. Under this arrangement it is expected that commissioners could also determine the proportion, within a range, of the overall contractual value that continues to be provided by third sector and Small and Medium sized Enterprises (SMEs) in order to maintain a diverse and thriving local market.

Once the Prime Contractual form is established commissioners will commence the market testing process in order to identify the most capable provider(s) of services. Commissioners have ruled out any routes to market test that cannot be deemed legally compliant. However it is recognised that regulations permit a “light touch” regime which does provide a mechanism that can mirror and deliver this aim, provided it meets EU Treaty principles.

Based on our assessment of the available processes set out in above and the core requirement to develop a solution with the provider the recommendation is to follow a regulated procurement approach. The assessment process would involve the placing of a formal OJEU advert and iterative stages of bidding. However, the commissioner would use the flexibility afforded to them through their respective legal frameworks to minimise the burden on both commissioners and bidders by optimising the scale of the process and rapidly but safely identifying the most capable provider.

2. Introduction

This OBC builds on the Case for Change published in November 2014 and describes both the strategic and economic cases for the development of integrated community health and care services for people living in B&NES. It sets out our proposals for the future of community health and care services beyond April 2017 and our approach to achieving the required outcomes for the people and communities of B&NES.

The OBC has drawn on a wide range of external expertise and support so that it is informed by best practice and learning from successful service reconfigurations that have been undertaken in other areas. This includes: Attain, the Consultation Institute, Ashford's LLP (solicitors), South West and Central Commissioning Support Unit and NHS England as well as a wide range of stakeholders. The purpose of the OBC is to:

- Enable the respective commissioning organisations to understand the key outcomes from the Phase Two consultation and earlier engagement and make an informed decision about how these will shape the project into Phase Three: Service Model Development;
- Outline the financial principles in order to assess how to invest most effectively in the collective health and care resources to improve outcomes for the local population, taking account of funding constraints and demographic challenges; and
- Outline proposals for the market testing arrangements and commercial model to deliver the transformational change required in the future.

3. Public Consultation...shaping our strategy

Summary

This section sets out what we have learnt from the public consultation process and describes how this has informed future commissioning intentions.

Key points

- We reached over 2000 people during this phase of the review, 545 people responded to our consultation survey
- Our vision has been updated to ensure that recognition is given to innovation, quality and affordability.
- There was no clear preference towards one particular model, however there was general support for a locality-based model that would harness the strengths and assets of local communities
- There was clear indication that joining up people's care and support is their number one priority for this review. There is also strong support for placing greater emphasis on prevention

Recommendations

- More work is needed in phase three to ensure the views of under 18's and over 75's are factored into our developments
- We plan to adopt a co-production approach for Phase Three based around smaller focus groups. These groups will provide a space for informed debate and scrutiny of the plans being put forward by providers.

The team working on **your care, your way** communications has worked hard to ensure the successful implementation of the communications and engagement strategy to enable continuous discussion and involvement of the local population and key stakeholders throughout the process. The face-to-face and digital-led approach has seen us working closely with all stakeholders to ensure that information about the review was widely circulated and we have provided as many people as possible with the opportunity to contribute to the review in a cost-effective manner.

We have placed great emphasis on hearing the views of seldom heard groups and providing suitable opportunities for them to participate in the review. This has included tailored presentations to existing groups, round table discussions, role play exercises, outreach events, sign language invitations and subtitled presentations for people with sensory impairments. In total, we have participated in over 50 separate events during this phase of the review.

We reached over 2000 people during this phase of the review and the formal consultation received 545 responses from across all our stakeholder groups with an even distribution of service users, carers, commissioners and providers of community health and care services.

We explore in the following section how learning from this phase has shaped our commissioning strategy.

3.1 Our Vision

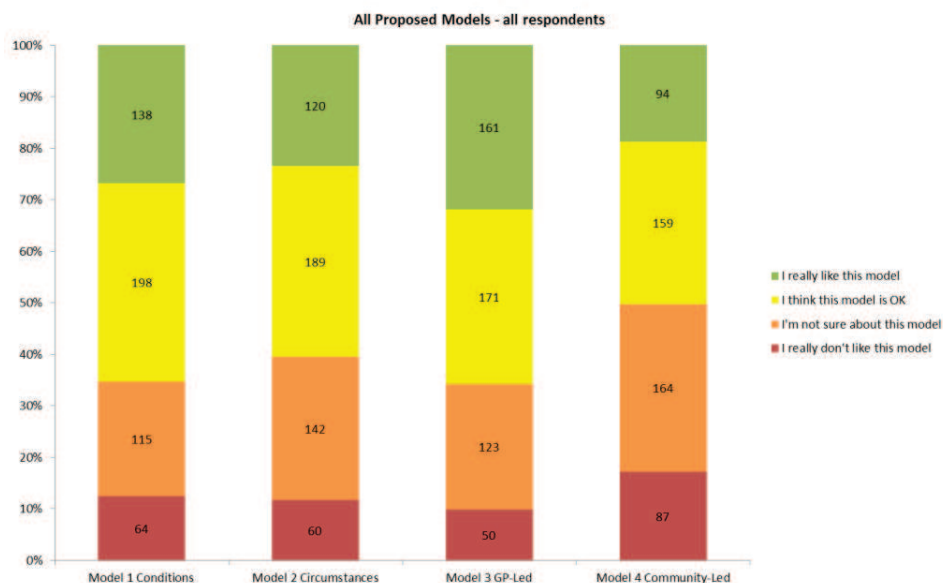
During Phase Two of the review we set out our vision for community services which has been further developed based on what we have learnt from the consultation process;

- Bath and North East Somerset will be a connected area ready to create an extraordinary legacy for future generations - a place with a strong social purpose and a spirit of wellbeing, where everyone is invited to think big.
- We will have health and care services in the community that empower children, young people and adults to live happier and healthier lives.
- Our services will provide timely intervention and support to stem ill health, prevent social isolation and tackle inequalities. By placing people at the heart of services, they will receive the right support at the right time to meet their needs and conditions.
- Dedicated to supporting greater levels of prevention and to help people self-manage their conditions, community services will ensure that clear routes to good health and wellbeing are available.
- Supporting people to access services when they are needed in as seamless a way as possible, navigators will assist individuals to access pathways of care and support.
- Services will be easy to access and will connect and integrate across acute, primary care, mental health and community service boundaries.
- Services will reward excellence and innovation, encouraging a culture of continuous quality improvement, whilst delivering better outcomes for people in ways which deliver best value for money.

3.2 A locality based, community development approach

The Phase Two consultation document, 'Making Plans' set out four potential models for delivering community services in the future. The first two models were based on a pathway approach, with services organised around specific conditions or the nine functions of community services set out in our first publication, "Getting Started". The other two models were based on a locality or asset-based approach, with services coordinated within local communities by a GP-led Wellbeing Hub or a Community-led Neighbourhood Team.

Each model was recognised as having its own attributes but each would also require a differing level of transformation from the existing arrangements to achieve the best outcomes for our population.



Although the results of the consultation showed no clear preference towards one particular model there was general support for a locality-based model that would harness the strengths and assets of local communities whilst ensuring that people can continue to access the specialist support they need when required. In response, and to support a new model of outcomes-based commissioning delivering improved person-centred and integrated care and support, we will seek to adopt a locality-based approach often referred to as asset-based community development.

By taking this approach we want to facilitate people and communities to come together to achieve positive change using their own knowledge, skills and lived experience of the issues they encounter in their own lives. We recognise that positive health and social outcomes will not be achieved by maintaining a 'doing to' culture and believe that meaningful change will only occur when people and communities have the opportunities and infrastructure to control and manage their own futures. In community development terms, asset-based approaches value the capacity, skills, knowledge, connections and potential in a local community, and see people and communities as active co-producers of health and well-being, rather than passive recipients of care.

3.2.1 Locality options

There are a number of potential options for taking a locality approach, or in other words, segmenting B&NES across geographical boundaries. The imperative for our provider base to work together also implies that co-operation must be at the heart of how we procure services in the context of a new community services contract.

We are currently working with three potential options that will be further explored and evaluated in Phase 3. These are as follows:

- Option 1 – A single locality
- Option 2 – Multiple localities designed around groups of GP Practices (Clusters)
- Option 3 – Multiple localities designed around neighbourhoods

3.2.2 Service User Flows

The development of geographical localities must be supported by high level analysis of service user flows. At a locality level, some service-user flows are less easy to track and therefore analyse, and during the next phase we will need to further consider how geographical localities can be defined in a way that best supports easy, effective access to services. Many community service providers currently operate on a B&NES-wide basis and, again, we will need to consider how best to achieve transition to a locality-based model.

We do recognise that there will be further risks and challenges in establishing geographical localities that will need to be considered in the next phase and appropriately managed. For example:

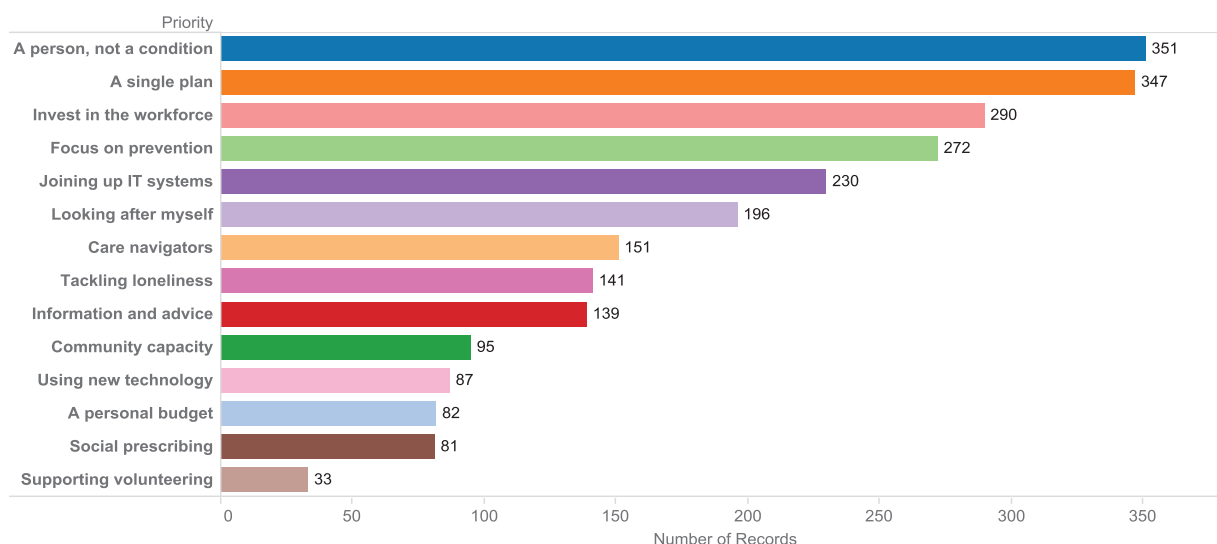
- Whilst we expect to deliver one Prime Contract for the entire B&NES locality we need to consider how we establish geographical boundaries within the commercial model.
- There may be some patient/service-user flows across geographical and/or B&NES Council boundaries, which will need to be managed. Contracts would, therefore, need to make provisions for people accessing services outside of their locality.
- We need to consider how we maintain high levels of quality across multiple localities – particularly for more specialist services and small teams without sufficient scale to have a constant presence in multiple localities.
- We need to consider how GPs can be fully engaged in a locality-based model of community services.
- We need to determine funding arrangements for each locality that ensures the appropriate level of local control and flexibility whilst also ensuring equitable distribution between localities; the most effective utilisation of the overall resource; and robust governance and oversight of public funds.

3.3 What are our priorities?

Our consultation document, 'Making Plans' set out 14 priorities that we aim to address through this review. These priorities were developed as a direct response to the nine themes that emerged from Phase One of the review.



A key part of the formal consultation was to test whether we had identified the right priorities and how important they were to our stakeholders. The results are summarised in the graph below and explored in more detail in our consultation report; *Options and Choices – Phase Two Consultation Report*.



Our stakeholders have given us a clear indication that joining up people's care and support is the number one priority for this review. This will require two key changes:

a) A technical solution that enables individuals and the people involved in their care and support (be they professionals, friends or family) to work from a single care plan.

b) A simultaneous investment in the culture and skill set of our work force to ensure that services provide holistic, person-centred care and support rather than focussing on specific conditions.

There is also strong support for placing greater emphasis on prevention, ensuring that the right support is available to people before they reach crisis point, require hospital admission or develop a long-term condition.

We remain committed to addressing all of the priorities identified during the earlier phases of this review but, in response to the feedback received, we will ensure that there is a greater emphasis on person-centred approaches and single care plans, joined up care and support, integration of health and care and investing in the capability and capacity of the workforce.

These priorities will be reflected in the revised commissioning intentions and new frameworks for commissioning of services which are outlined in further detail below.

3.3.1 Our commitment to personalisation

A key aim for this review is to bring about a fundamental shift in the way we see, and work with, people who need care and support. Personalisation means seeing the whole person, not just their diagnoses, illnesses and disabilities, but their strengths, interests, abilities and networks. It means working with the person in the context of their lives, building support around their preferences and choices and helping them to help themselves.

We want community health and social care support to be enabling people to live their lives, not just doing things for them. We are committing to work this way because it's what the community have told us they want. During our engagement, people have clearly told us they wanted support to consider the whole person, provide more joined up care and support, reduce social isolation and build community capacity. Working in a personalised way fully supports this.

3.4 How will we measure success?

To ensure that the ***your care, your way*** review delivers real lasting change for local people, the Council and the CCG will be measuring the success of community health and care services using a set of physical and emotional outcomes based around the nine themes developed during Phase One of our review as shown in Section 3.2.

The most important outcomes are the ones that make sense and are important to everyone who uses community health and care services and their carers. These will be the priorities for us to embed across all health and care services. Some are built into services already as part of previous and ongoing public engagement but we recognise there is always more that can be done to establish measures that enable us to monitor and evaluate outcomes including the quality, effectiveness and value for money of all services.

All services will contribute to the population outcomes which have been prioritised by the B&NES Health and Wellbeing Board and which are reflected in the Children and Young People's Plan.

Ultimately the key to any successful transformation of services rests with the strength and maturity of the relationships between us all – between individuals, services, commissioners and providers. The proposals set out in this document will take time to achieve and must be continually nurtured by those commissioning and delivering services and by the people who use them. We want to build – together - a model which will provide trusted, compassionate and responsive services that people recognise as truly personalised in its approach to meeting people's needs.

3.5 Commissioning Intentions

Commissioners recognise there are systems and levers which can be used to deliver more effective and efficient services and we must plan to use these to the best effect. We also need to be imaginative and adopt an approach that gets the best for our local communities. This means using the levers but also looking beyond them to the people, processes, systems and outcomes that will deliver high impact and sustainable change.

In such a major programme of development we have a prime opportunity to transform the experiences and outcomes for individuals, the model of care and support, and the working of the system in relation to community services.

We recognise that we need a radically different approach to the commissioning and delivery of community services, and to develop new ways of working with people accessing services as well as providers of services. In common with many areas we have traditionally commissioned on the basis of measuring and funding for activity, with a focus on processes, individual organisations and single inputs of care. This approach has often inadvertently helped sustain a fragmented approach to the way care and support is delivered, acting as a barrier to the development of more integrated services and models.

We believe that the way forward is to establish new models of commissioning based on outcomes, which will not only provide more person-centred care and support for people but also help to address the financial and demographic challenges facing the health and care economy.

3.6 What is Outcomes-based Commissioning?

Outcomes-based commissioning is a way of specifying for health and care services based on rewarding the outcomes that are important to the people using them. This typically involves the use of a fixed budget for the care of a particular population group, with aligned incentives for providers to work together to deliver services which meet the specified outcomes.

The system incentivises interventions that add most value for individuals, shifting resources to community services, a focus on keeping people healthy and in their own homes, and co-ordinated care and support across settings and regions. It also encourages a focus on the experience of people using the services, and achieving the outcomes that matter to them through more integrated and person-centred services.

We will make the best use of contractual models and levers that will both enable service development and set the foundations for more advanced and innovative approaches in the longer term. We have been examining the models that most closely align to what we aim to

achieve. We will also work with all partners to understand the opportunities for workforce development to underpin the future model of delivery. In order to succeed, there is a need for a coherent framework that demonstrates what good will look like and how the outcomes and principles will be measured, monitored and reported on.

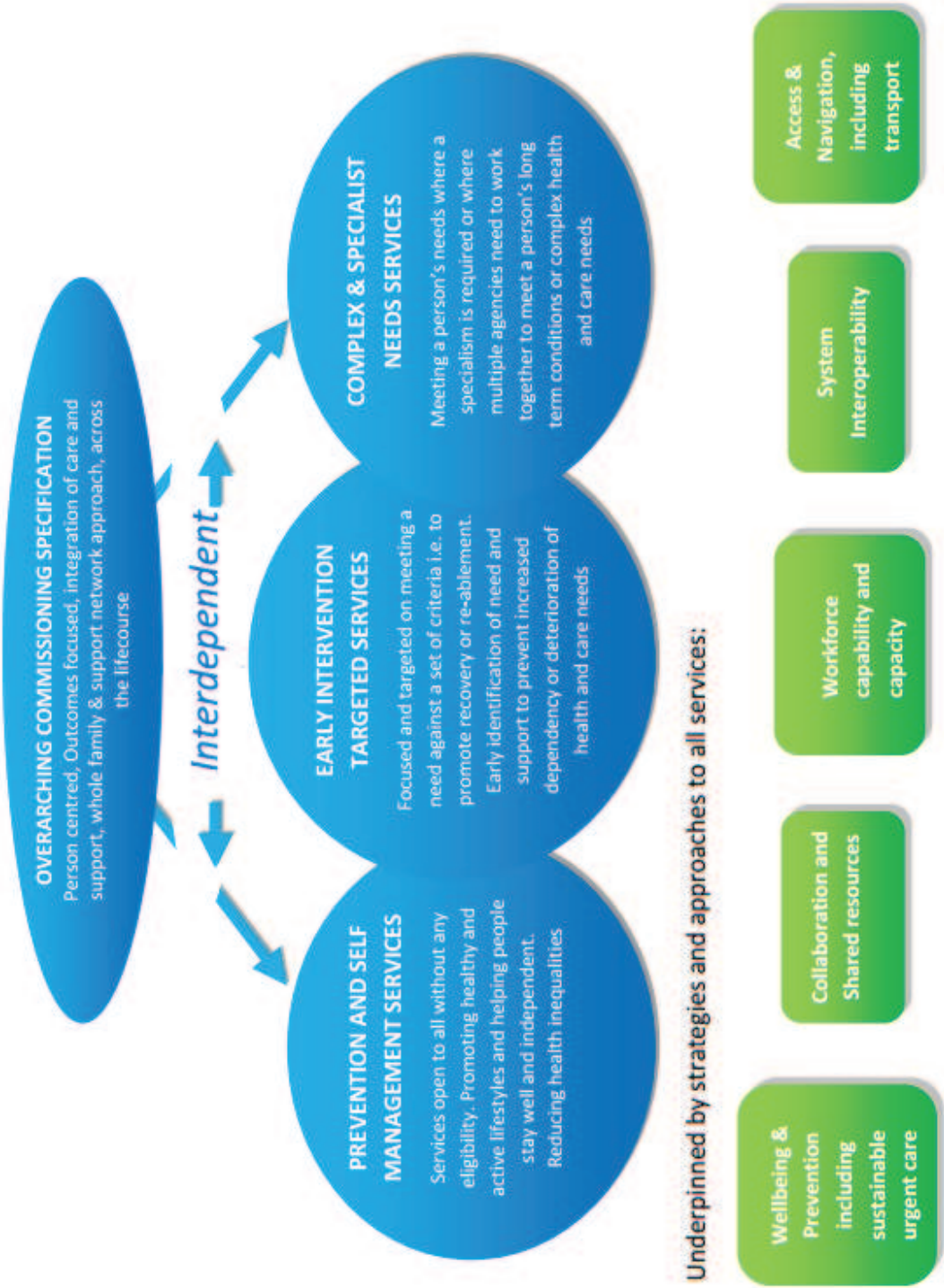
In the strategic planning stage of the review process we must ensure that in preparation for our chosen market testing approach we have a clearly defined strategy and set of priorities before confirming future delivery arrangements. These are described in further detail below.

3.7 A new commissioning framework

We know that there are over 400 community health and care services currently operating in B&NES, provided by over 60 different organisations and commissioned by a number of different commissioners working across the Council and the CCG. We have heard that this can lead to fractured and disjointed service delivery and that people and organisations find our current system confusing, often not knowing who does what, with people having to tell their story numerous times. We have also heard that people find it very frustrating that services don't appear to 'talk to each other' and do not always work collaboratively in individuals' best interests. It is also clear that our current model is based on commissioning multiple providers independently of each other and often not with common outcomes to work towards together.

To address many of the issues that have been raised during the engagement stage of our review, and to respond to the feedback we have received and the learning that has resulted from this, we are proposing a new framework for aligning the commissioning and delivery of future community health and care services, illustrated in the diagram shown in Figure 5 below;

Figure 5: Specification Architecture



3.8 Valuing the workforce

Our vision for community services in B&NES requires a new approach which is able to accommodate the growing demand for access and coordinate care and support around people, families, carers and communities. Workforce development and education and training strategies must be aligned to the emerging and future service delivery models.

We are convinced that approaches to workforce planning along with education and training strategies should be based on achieving population health outcomes. The exact nature and make-up of the workforce will need to be tailored according to localised population needs and circumstances; the health, care and support needs in Chew Valley, for example, are not the same as those in the centre of Bath. We need to ensure we are able to define the workforce requirements locally, aggregating them across the localities where appropriate and using this information to better inform what and how providers train the health and care workforce.

The development of a workforce strategy for B&NES must be based upon an assessment of local need, taking into account emerging service models, defined population needs and outcomes, a focus on appropriate capabilities to enhance population outcomes, and the workforce skill-mix required to improve population outcomes and reduce inequalities. The workforce strategy will also incorporate the training and development needs of those commissioning services to ensure that they also have the necessary capabilities.

3.9 Meeting the needs, wishes and aspirations of our community

The overarching commissioning specification will articulate the underpinning values, principles, priorities and objectives that all services will be governed by, and should be aligned to each service specification for individual contracts.

Under each of the three headings of Prevention and Self-management; Early Intervention; and Complex and Specialist; services will be commissioned in line with clear commissioning specifications that will encourage and incentivise providers to work collaboratively and where appropriate, in formal partnerships with each other through new contracting mechanisms.

New commissioning arrangements will ensure that providers who deliver services to the same cohort of people or with a similar purpose are supported to harness their collective strengths and capabilities to ensure that people can access the right services at the right time as simply as possible, with the minimum bureaucracy, and in new ways of working that achieve the Values outlined in Section 3.4

It is the aspiration of this review that over time all services are jointly commissioned between the Council and the CCG in an integrated commissioning structure, and in a manner that maximises the potential for individuals to exercise choice and control over the services they receive.

New specifications for services will be based on a model of integrated health and care delivering person-centred services to individuals and local communities at different levels of provision.

Effective integration of services overcomes many of the negative consequences of a fragmented system from the user's perspective, such as the need for multiple assessments and visits to different providers, and in turn improves the experience of care. Conversely fragmented and disjointed care and support can have a negative impact on individual experience, result in missed opportunities to intervene early, and consequently can lead to poorer outcomes. Poor alignment of different types of care and support also risks duplication and increasing inefficiency within the system

Integrated care and support has also been shown to lead to improved clinical outcomes, including a reduction in the use of acute and emergency care through better co-ordination with primary and community services, and to support individuals to remain within their communities and to counter threats to their independence.

Successful integration of services is dependent on having a shared purpose and a clear vision of what integrated care and support will achieve. Clarity about the outcomes that integrated care and support is designed to achieve will therefore be an important consideration in developing any new arrangements.

3.10 Continued Engagement

We plan to adopt a co-production approach for Phase Three based around smaller focus groups. These groups will provide a space for informed debate and scrutiny of the plans being put forward by providers. The format for the focus groups is still in development but they will include representatives from all our key stakeholder groups who will receive appropriate training and support to fulfil this role effectively.

4. Scope of the Contract

Summary

This section sets out the current scope of the community services contract.

Key points

- services currently provided as a specific, delegated function of the Council or CCG will need further consideration about appropriate commissioning and delivery arrangements in any future model
- The service scope had informed the baseline financial envelope set out in Section 5.

In the future, community services will need to adapt and thrive in the face of the significant challenges ahead. The age demographic and associated complexity of need, coupled with increasing quality requirements and financial austerity all signal the need for change. Community services will need to become a driving force for the important shift in emphasis towards health and wellbeing and the delivery of new models of care and support at or close to home.

To support the transformation of services for the whole population of B&NES, there needs to be an understanding of the 'scope' of services that providers will be required to deliver under the terms of the contract. Our process for identifying these services has been to first understand our current landscape of health and care commissioning. This has allowed us to determine current spend on services and, therefore, set out the baseline financial envelope for those community health and care services within scope (set out in Section 5).

Whilst we recognise that future service models may be very different to the services that exist under the current system, an understanding of the resources that could be available to shape these models is helpful because it allows future providers to:

- Understand the budgets and contracts they are inheriting, and
- Identify the current service areas being provided that they will need to continue to work with, deliver or transition from.

It is also important to note that while the current contracts and budgets have been used to determine and agree the financial envelope, an outcomes-based specification will contain only a high level outline of the envisaged service model rather than a detailed specification. The focus on outcomes will require providers to innovate with new integrated models of care and support, joining services around the needs of the person, and moving away from previous organisational silos.

4.1 Services In Scope

The health and care landscape of B&NES is complex and a range of services are currently commissioned. However, with the all ages approach to provision and a fundamental aim to integrate care and support, our starting point has been to consider the broadest set of services within scope.

Therefore, our working assumption is to include all services currently commissioned within the scope of a new contractual framework, only removing services from our scope by exception. Even then, it is our ambition that exempt services may be bought into scope over the life of the contract. The table below provides a summary of all in scope services;

Table 1: In Scope Services

Prevention, self-management and support services	
• Wellbeing College • exercise on referral • sexual health services • telehealth support • health visiting • school nursing • community transport	• community resource centres • social prescribing • lifestyle education and campaigns • stop smoking service • healthy weight support • food and health service • advocacy and information services • village agents
Early intervention and targeted services	
• dementia services • early intervention • recovery teams • Talking Therapies Service • district nursing • specialist nursing • health visitors • specialist foot care, • speech and language therapy • rehabilitation	• floating support • child and adolescent mental health services • creative link services • specialist equipment services • social work • independent living services • homelessness support • occupational therapy
Complex and specialist needs services	
• specialist care and support • drug and alcohol support • substance misuse	• sexual health service • specialist clinical services for diabetes, stroke, tissue viability etc

It should be noted that whilst commissioners have categorised services into specific categories of care we recognise that many services span all levels of provision.

4.2 Services Out of Scope

We have, however, identified a number of services that will be excluded from our scope, at least initially.

Potential grounds for excluding certain services include:

1. Relevancy of coordination - One of the key benefits of outcomes-based commissioning for B&NES is how it will stimulate integration and coordination across provider groups. If a particular service operates in a natural silo, then it may not be worthwhile including it in scope.
2. Specialty of service - There may be some specialist services which are delivered in small volumes but at very high costs and, as such, carry a higher risk to the budget holder and this may be grounds to consider a service out of scope.
3. Specialist Commissioning - Some services may be more difficult to include within scope, either because of current contracting arrangements or because they are commissioned centrally for example by NHS England.
4. Services that are not intended or able to be delivered in community settings, for example in-patient beds including mental health

At this stage, our working assumption is to consider the following out of scope:

- **Children's social work services**
These are currently delivered in house by the Council and are not regarded as appropriate for consideration under this review.
- **Core, national and local enhanced primary care services**
These services are commissioned by either NHS England or the CCG and as such fall outside the scope of the contract. While we recognise that core primary care is central to pathway management, as co-commissioning of primary care with NHS England develops, we will continue to explore opportunities to align out of scope services with this contract.
- **Secondary care services**
Secondary care services that are necessarily delivered in a hospital setting such as medical and surgical treatments, accident and emergency services
- **Specialist commissioning**
Similarly, some elements of specialist commissioning fall outside the scope of the contract precisely because they are commissioned externally. In addition, there are grounds to exclude some of these services on the 'specialty of services' test described above.

- **Registered Care and Nursing Home provision**

These services are modelled on a person living under a license arrangement having been placed with the provider through a contracting mechanism with a commissioning authority, or as a self-funded placement. Placements are made following an assessment which has determined that the person is no longer able to live independently and has care or nursing needs which can only be met through the provision of registered care home placement.

In addition, services currently provided as a specific, delegated function of the Council or CCG will need further consideration about appropriate commissioning and delivery arrangements in any future model.

In defining the services in scope it is recognised that nationally the emerging direction of travel is to move towards outcomes based commissioning approaches across whole populations and capitated budgets. Over time there may be potential to extend the scope of services included under this framework (subject to provider agreement) to include a broader range of services to maximise the benefits of this approach.

5. Financial Planning and Payment Mechanisms

Summary

This section sets out the financial context for community services and the strategic principles that will apply to maintaining local system sustainability.

Key points

- The funding available indicates a considerable gap, i.e. a 7% reduction to net budgets over a four year period.
- Service transformation will be required in order that B&NES community services remain at the heart of a sustainable health and care system into the future.

Recommendations

- The future funding envelope will need to be aligned to both the CCG financial planning requirements and the Council's proposals as they are agreed over the next four years as part of the 2016/17-2019/20 budget setting and longer-term financial planning process.
- Consideration will need to be given in phase three to the full range of payment mechanisms

5.1 Financial Planning

Both the Council and CCG are facing considerable financial challenges. Since the national and local elections in May 2015 the Government has not provided any information on local government funding beyond 31 March 2016, although the Chancellor announced an Emergency Budget Statement on 8 July 2015. This will be followed by a Spending Review leading to the Financial Settlement for Local Government around Christmas 2015.

This means we cannot be certain about the funding available for our community services from 2016/17 onwards, although we can expect the financial challenge facing the public sector to continue throughout the period of the next parliament from 2016/17 to 2019/20.

5.1.1 B&NES Council Planning assumptions:

Whilst the scale and speed of funding reductions are not yet clear, there are a number of factors which we can identify that will impact on our funding going forwards:

- Continuing reductions in the national allocation of local government funding – we assume this will be around 40% over the next four years with an element of “front loading” these reductions in the first two years.
- A significant increase in employer’s national insurance contributions to fund the new national pension arrangements
- The ongoing impact of new legislation including the Care Act 2014 and the rising cost of providing adult social care as a consequence of demographic change.
- The need to provide for future pay inflation.
- The potential impact of changes to interest rates and the revenue cost of meeting the Council’s full borrowing requirement.
- The level of inflationary and demographic cost pressures.

5.1.2 BaNES CCG Planning assumptions

Financial planning for 2016/17, subject to national planning guidance and information on allocations and tariff yet to be published, is based on the following assumptions:

- The NHS will continue to receive a level of real terms growth. However, BaNES CCG will receive less than average as the CCG is marginally above target allocation based on the national funding formula. This is expected to reduce the growth to the CCG by £1 million over 3 years.
- Priority expenditure will be on existing recurrent commitments based on 2015/16 outturn, nationally mandated new commitments and unavoidable cost pressures. Should funding remain available after these have been met, any new expenditure will be on the basis of sound evidence of its contribution to improving the value of services and supporting the financial sustainability of the system.
- National guidance, where provided, will be followed in respect of provider inflation and efficiency; CCG financial planning obligations; specific financial contractual rules; and availability and application of CQUIN funding.
- Demographic growth will be at least in line with ONS projections and together with non-demographic demand increases will create a high level of financial as well as operational challenge.
- Cost reductions for reinvestment are expected to be at the level of at least three per cent of the CCG’s allocation and will require sustained commissioner and provider commitment to the delivery of schemes at the scale and pace necessary to support financial stability.
- Any transfers or delegations of commissioning responsibility from NHS England will be accompanied by a flow of funds which creates a neutral impact for all parties.

5.2 Council Funding

Taking these challenges into account the Council has undertaken a Strategic Review that considers spending across the Council to ensure efficiency savings and income

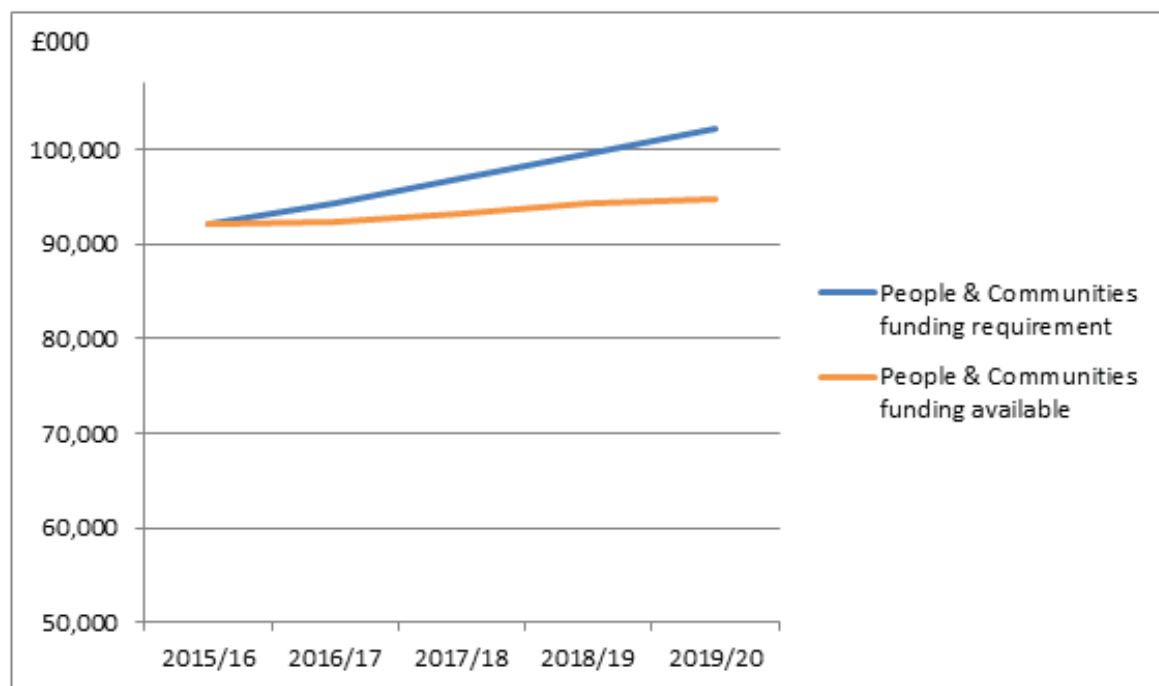
generation opportunities are maximised; thus limiting any necessary service reductions, whether those services are provided directly by the Council or by other organisations commissioned by the Council.

The review has the following four strategic priorities:

- A strong economy and growth
- A focus on prevention
- A new relationship with customers and the community
- An effective business

The Council's community services are commissioned through the People and Communities Directorate as part of the integrated commissioning arrangements with the CCG. The graph below illustrates the Directorate's annual net budget funding requirement with indicative growth and savings proposals that will be subject to formal approval.

Graph 1: Council Annual Net Budget Funding



The funding available indicates a considerable gap, this equates to a 7% reduction to net budgets over a four year period. Savings will need to be achieved through delivery of the Strategic Review proposals to help fund the year on year pressures across health and care, including those arising from demographic change.

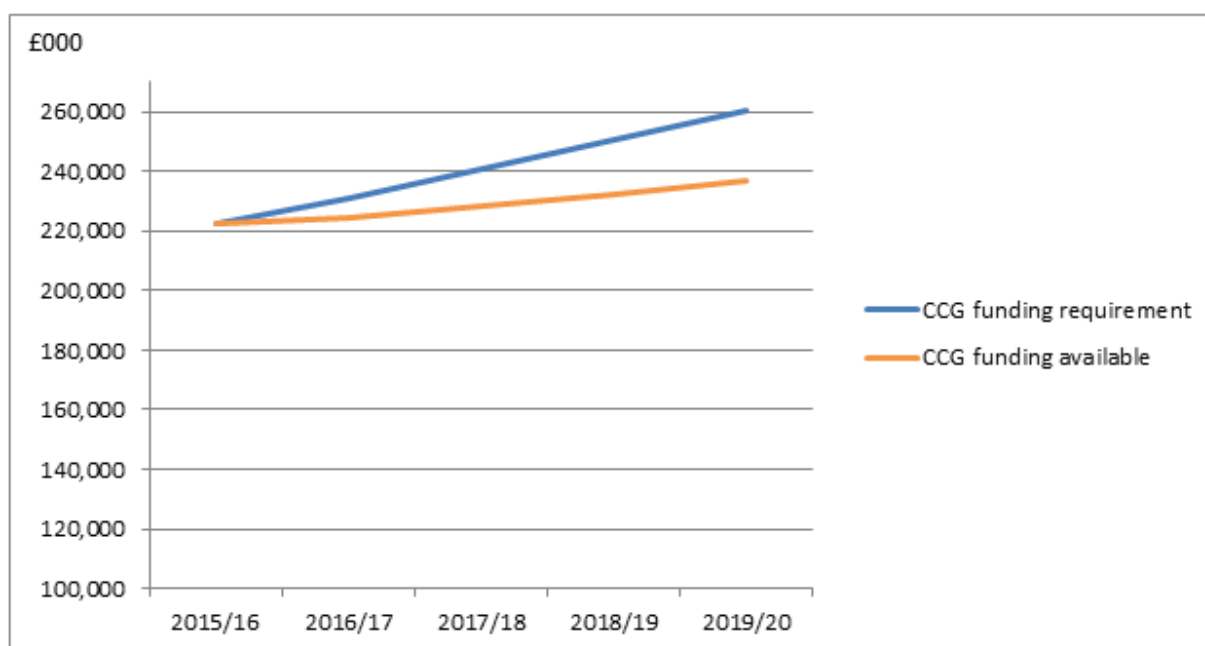
Whilst the detailed proposals for how the funding gap will be delivered will be subject to further consultation and the development of full business cases the indicative recurring savings target for the People and Communities Directorate 2016/17 – 2019/20 is £7.6m.

5.3 BaNES CCG Funding

The CCG has produced a first cut medium term plan based on current expenditure levels, adjusted for demographic growth and expected cost pressures. Planning guidance will be shared nationally in early 2016 and the financial plan will be refreshed at this point although the likely value of savings is assumed to be broadly consistent as those within the current model.

The graph below illustrates the CCG's annual funding requirement at current levels, compared to expected funding, highlighting a significant challenge to deliver an affordable plan.

Graph 2: CCG Annual Net Budget Funding



Based on the current planning assumptions, the CCG is expecting to deliver recurring savings of between £6 million and £7 million per year over the next four years. Over the four years this is a recurring savings target of £24 million and 10% efficiency saving requirement. Savings will be delivered through targeted schemes based on benchmarking analysis, aligned to the CCG strategic objectives. Savings figures exclude those that providers must deliver; these are planned for by providers in line with national pricing assumptions.

The CCG are in the process of developing a number of schemes that are being quantified to assess the level of potential savings. The focus of savings will be via service redesign

and improved efficiency to ensure costs are removed from the local health economy to enable a level of reinvestment by the CCG.

5.4 The Funding Envelope

The services that have been defined as in-scope for the review are made up of 68 providers who provide a range of community health and care services commissioned by the CCG and Council. Table 2 below shows the number of providers across a range of contract values.

Table 2: Provider analysis by contract value

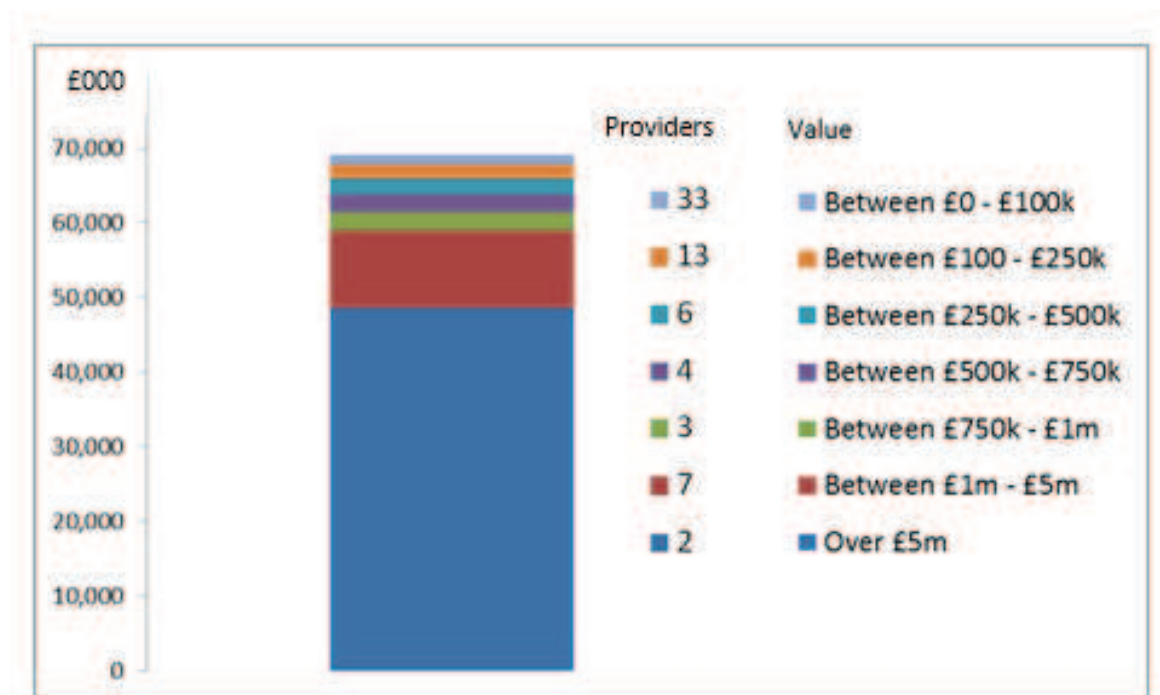


Table 3 below shows the current funding envelope of £69.2m for the in-scope services based on 2015/16 expenditure. Across the CCG and Council this is made up of a range of community health and care providers across the three broad categories illustrated below.

Table 3: Current Funding Envelope

	CCG	Council	
Category	Current commissioner spend £000	Current commissioner spend £000	Total £000
Complex & Specialist	20,567	14,296	34,863
Early Intervention	2,714	23,120	25,834
Prevention and Self-Management	5,067	3,472	8,539
TOTAL SPEND	28,348	40,888	69,236

The future funding envelope will need to be aligned to both the CCG financial planning requirements and the Council's proposals as they are agreed over the next four years as part of the 2016/17-2019/20 budget setting and longer-term financial planning process.

These funding reductions are underpinned by the following assumptions:

- The funding envelope will be adjusted from the 2016/17 baseline to align with Council and CCG reductions in health and care funding arising from both organisations' financial planning and annual budget-setting processes.
- Identified areas for cash-releasing efficiency savings or improving value will need to align to new commissioning & provider delivery models.
- Demographic change pressures will need to be managed within available resources.
- New investment requests will reviewed on an individual basis and require sound quantitative and qualitative evidence of system benefits.
- Commissioners and providers will continue to work in partnership to jointly identify areas of opportunity including back office efficiencies.

Taking into account the funding challenges the key messages for consideration are:

Commissioners and providers are facing a significant challenge in ensuring that high-quality, affordable, community health and care services can be delivered in the face of reductions in funding allocations and increasing demands. Service transformation will be required in order that B&NES community services remain at the heart of a sustainable health and care system into the future.

This will require care and support provided in a community setting to demonstrate efficiency and productivity savings in the context of the cost reduction required of the whole health and care community.

In order that we achieve and maintain local system sustainability, the following strategic principles apply:

- There will be a further shift of investment from acute and specialist health services to support investment in community-focused provision;
- This shift of investment will be focused on those areas where there is robust evidence that this will achieve improved value from the available resource and deliver wider financial benefits to the health and care system;
- Alternative sources of funding and income will be proactively sought by providers and commissioners working in collaboration;
- Providers and commissioners will explore new approaches to sharing resources, including knowledge and expertise, where there are demonstrable benefits in doing so;
- Any proposed shift of resource and/or service change will be impact-assessed to ensure that the proposed change will not adversely affect whole system sustainability.

5.5 Payment Mechanisms

The current payment mechanism for the majority of community service providers is through block contract arrangements, which do not generally vary with levels of activity. Block contract arrangements can be the most effective form of payment for a standard, fixed, service offer. They may not, however, be the most effective payment mechanism for supporting integrated, personalised care and support.

During the next phase of the review, consideration will be given to the full range of payment mechanisms and how utilisation of these payment mechanisms can act as enablers for the provision of integrated, personalised care and support whilst also being consistent with the principle of efficiency and affordability. One example of an alternative payment mechanism is “capitation”. Capitation means paying a provider or group of providers for care and support to a specified population across different care settings. The provider(s) is paid as a lump sum per person in the target population group, which could be, for example, the population of people aged over 85 years and/or all those living within a geographical location.

A range of payment mechanisms will be considered including:

- Capitation
- Block contracts
- Year of care or episodic payment
- Multilateral gain/loss sharing

Appendix A gives a short overview of methods and information on proposed payment mechanisms found at:

<https://www.gov.uk/government/collections/different-payment-approaches-to-support-new-care-models>

6. Provider Engagement

Summary

This section sets out our findings from phase two provider engagement and how this has informed our commissioning process during the remaining phases of the review.

Key points

- There is a consistent understanding of the need for change
- Relationships between providers are mixed but a more collaborative and integrated approach is welcomed by providers
- The locality-based approach seems to be providing the greatest benefit in readying the health and care economy.
- There were consistently strong preferences for a longer term contract of at least seven years, ideally ten.

Recommendations

- We should consider the production of a comprehensive organisational development programme for commissioners and providers early in the next stage of work.
- We must ensure providers, in particular the Third Sector, have time and support to establish sufficient resilience and capacity to play a meaningful part in any redesign process.

In order to undertake a full assessment of the potential provider market in B&NES, a programme of engagement with a range of providers was undertaken between May and October 2015. Phase 2 of the ***your care, your way*** review was launched with a Planning Day, further engagement took place with both incumbent and non-incumbent providers through a series of workshops and on a 1:1 level with providers ranging from telephone to presentations at provider forums and board meetings.

6.1.1 Key themes

Key themes from the engagement programme are summarised below:

a) Opportunities and challenges around service model delivery

We heard during the engagement process a consistent understanding of the need for change, particularly due to increasing demographic pressures and the knowledge that “things can’t continue as they are”. However, there are some anxieties around how any contract would be set up geographically.

Any response to a commissioning approach incorporating a locality-based model needs to show how providers can enable delivery of health and social care service that is localised and meets the needs of the local population.

The implications of moving to more outcomes-based commissioning through a locality model presents challenges to the existing provider landscape, and relationships within it. Relationships between providers are mixed. Many providers welcomed the positive outcomes being brought out through the engagement process, but also acknowledged the time it takes to get to a level of trust and agreements in governance structures in order to realise successful collaboration.

There is strong consensus that primary care should form the basis of a population-based, preventative approach to health and care and should, therefore, be engaged, at the very earliest stage in preventative approaches.

Whilst our proposals were, on the whole, welcomed by providers, many expressed frustration and concern regarding the resource to both commit to and develop this further as well as potential to align the pace of change to existing changes underway. There was also recognition of the commissioning organisations maintaining ‘business as usual’ at an operational level which led to questioning of the seriousness of commissioners in taking a radical new approach. This was articulated in terms of recent procurements or service reviews. In the next phase, as commissioners we need to set out how their activity will align with a shift to new models of care and support and demonstrate where work underway will either potentially stop or reduce in order to release resource across the system, or have a clear rationale where work is required to continue in line with current plans.

The B&NES health and care economy has already achieved some integration of service models. The high level system-wide case for change has been articulated clearly and is understood amongst providers. Less clear are the specific options and impacts on providers – and teams within providers. Some providers welcome the new freedoms that new models of care and support would give them to redesign and collaborate in order to reduce inefficiencies and improve effectiveness. Others, however, feel that such an approach is the responsibility of commissioners and their ‘strong hand’ is required to steer the system.

The scale of potential transformation was welcomed but clearer guidance on how this may be phased or implemented is required. Groups of providers are starting to discuss how they can best react and respond to the increasing pressures on each other, and this locality-based approach seems to be providing the greatest benefit in readying the health and care economy. There does however, need to be some initial investment in supporting the provider response and freeing resource.

b) Views on potential contracting mechanisms

There were consistently strong preferences for a longer term contract of at least seven years, ideally ten, in order to drive the necessary change and promote the right behaviours by providers in managing population health and moving to a more preventative focus.

Third sector providers would welcome the move to a more outcomes based commissioning approach but consistently expressed the need for time and help to establish sufficient resilience and capacity to play a meaningful part in any redesign process. They were nervous that a procurement process might inadvertently lose the important relationships and joint working already existing locally.

There was consistent feedback that existing mechanisms for integration haven't always worked due to different financial incentives across organisation types and an understanding that this would be addressed under the new contractual arrangement.

There was less certainty about the contractual form, such as risk share/gain share arrangements – used to underpin the budget and particular concern that the risk for primary care was carefully considered in the development of any type of new contractual form.

Most providers discussed the need for an integrated IT system; some were looking into options for achieving this locally and all identified this would be a critical success factor requiring finance and planning.

6.1.2 Analysis

The following are the key points arising from the engagement with providers across sectors:

- Although a more collaborative and integrated approach is welcomed by providers, the implications of outcomes based commissioning are not fully understood.
- There are significant differences between providers in their perceptions of what the commissioners' role should be. For some, it is to free up providers from siloed contracts and budgets, giving them more rein to lead and adapt delivery systems to improve outcomes. For others, it is that the commissioner's role is to lead and, indeed, to tighten the reins when necessary. Clarity on what collaborative commissioning means in practice, and articulation of what a more collaborative approach between commissioning and providers looks like, will assist all stakeholders in their roles and responsibilities in the next phase.

- Positive relationships are being developed between providers in localities as reported by each provider organisation.
- Continued engagement with General Practice around the implications of new models of care and support. This engagement also needs to consider the funding implications given the proposed increased role in a more proactive system that is based around population health management and preventative care and support.
- The commissioners' leadership of this process should continue to become more visible, working with providers to help articulate how the opportunities within this review could lead to improved service models.
- The commissioners should then expect providers to be encouraging front line staff to redesign care and support in conjunction with service users.
- We should consider the production of a comprehensive organisational development programme for commissioners early in the next stage of work. This should include, for example, consideration of how commissioners will work together in a future outcomes based commissioning scenario, what the transition period would mean for commissioning teams and contract managers, and how commissioners should prepare and adapt for the proposed future service model.
- The provider engagement carried out thus far has demonstrated the need to undertake further, more detailed work with provider stakeholders across the spectrum of the proposed contract scope. In particular, there is a strong demand for further work to support primary care engagement and development which will need to be taken forward into Phase 3.

7. Provider Contracting Model

Summary

This section sets out the proposed methodology for establishing a new commissioning contractual framework for B&NES.

Key points

- The scale of the transformation means it is unlikely that an individual provider will be able to deliver this contract independently.
- The preferred “Prime” contractual form needs to incentivise and facilitate collaboration amongst providers to jointly deliver services for the chosen population.
- Commissioners will determine the proportion, within a range, of the overall contractual value that continues to be provided by third sector and Small and Medium sized Enterprises (SMEs)
- More “dynamic” contractual arrangements will be developed for lower value, lower complexity services.

Recommendations

- Prime Contractor route is the preferred approach to pursue during phase three of the review
- Dynamic Purchasing Systems will be established for the sub-contracting of lower value, lower complexity services.

The provider contracting model is the vehicle through which a provider or coordinating group of providers come together to deliver the outcomes expected of them in the contract.

To establish a new commissioning framework for B&NES, we will need to develop a new contract (or set of contracts) with collaborating providers as opposed to the current model where we act as commissioners of individual providers. A number of contracting options can be considered to help us achieve our aim to deliver new models of care and support and outcomes that matter.

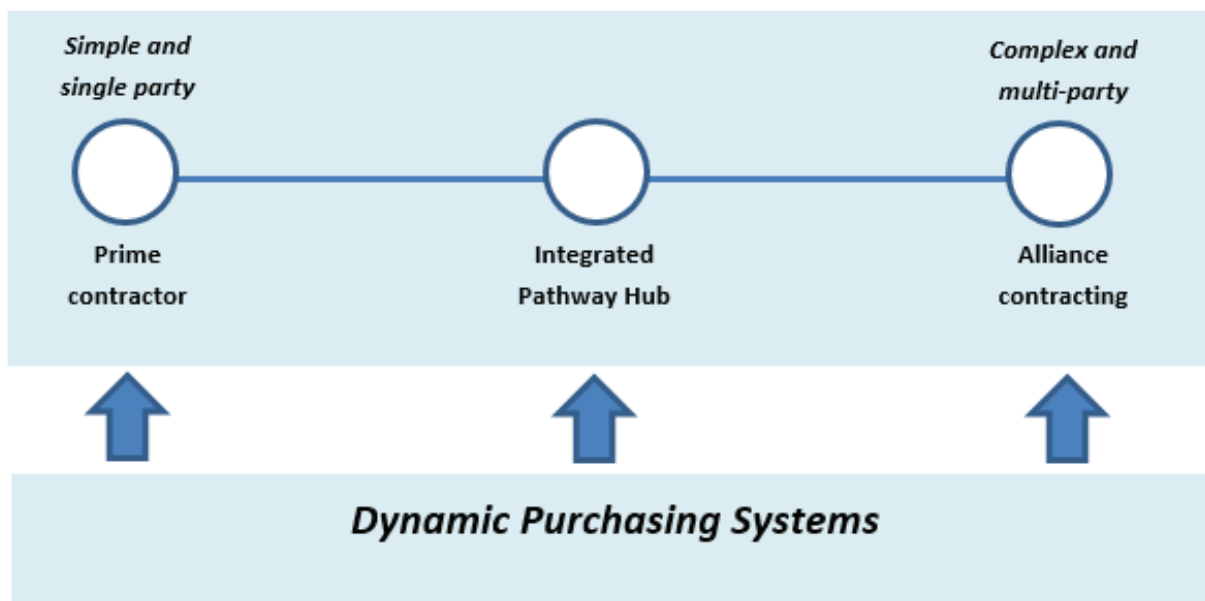
The scale of the transformation means it is unlikely that an individual provider will be able to deliver this contract independently. Therefore, the chosen contractual form needs to incentivise and facilitate collaboration amongst providers to jointly deliver services for the chosen population. Achieving the aim of delivering joined-up, person centred care and support will require more collaborative working.

Delivery options for a new commissioning contract include:

- Prime contracting
- Integrated Pathway Hub
- Alliance contracting
- Dynamic Purchasing System

These models span the range of potential contracting models, as illustrated in figure 6 below.

Figure 6: Potential Contracting Models

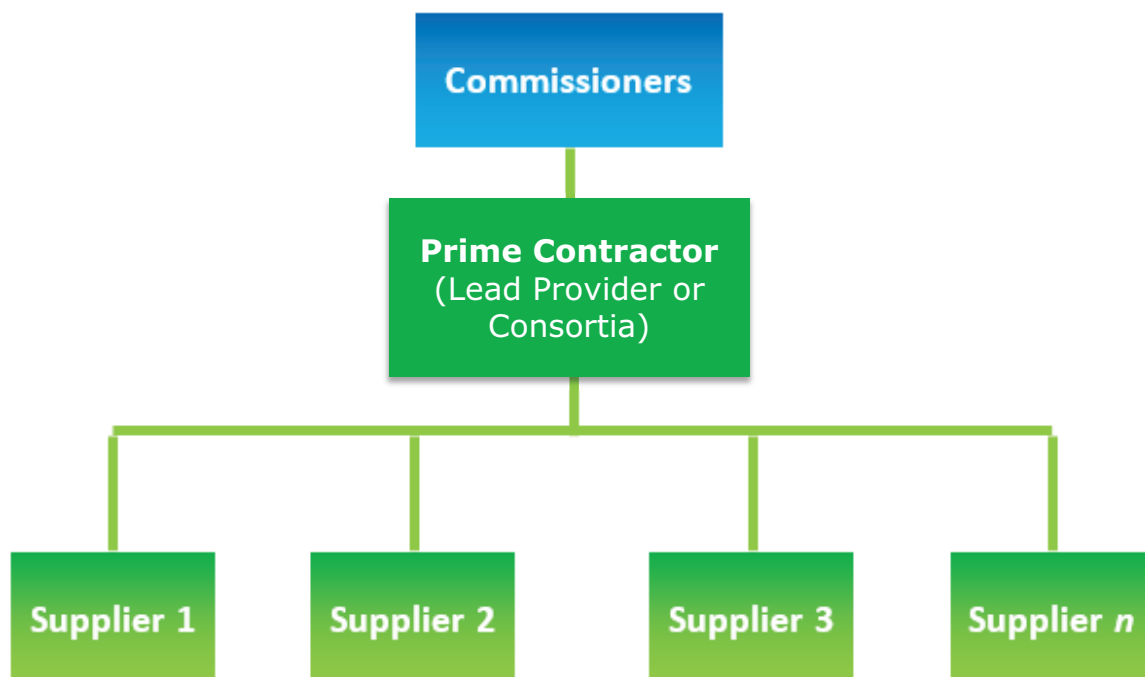


The following sections provide a high level overview of the key characteristics of each delivery model that were used to inform decisions by both commissioners around our preferred contractual design model. We do however recognise that whilst we have set out a preferred approach this should be evolved in discussion with the providers who are better placed to determine which model will allow them to deliver the specified outcomes. The final decision will be presented to Governing Bodies as part of the Full Business Case with full justification, allowing us to ensure that key requirements are met.

7.1 Contracting Model Options

This section provides a high level overview of the key characteristics of each delivery model to help inform decisions by both commissioners and providers. It should be noted that although we may recommend a preferred contractual design model, we recognise that further market engagement will be required in order to determine which model (or combination thereof) will allow them to deliver the contracted services.

Model 1 - Prime Contractor



Under this model, the commissioners enter into a contract with a Prime contractor (or consortia of providers as may be the case).

The contract allocates risk and reward between the commissioner and the Prime contractor. Dependent on the make-up on the Prime contractor (i.e. whether it is a single organisation or a consortia of organisations), the Prime contractor may choose to form itself in any of the following manners:

- With a single organisation as 'lead provider', sub-contracting any elements within the scope of the Prime contractor specification allows the commissioners to achieve best of breed and the inclusion of third sector providers and Small and Medium sized Enterprises (SMEs).

- With a group of organisations jointly forming a new business (a Special Purpose Vehicle) that are jointly accountable and liable for the provision of services.

The commissioners could choose to require a Prime contractor to form a Special Purpose Vehicle as part of the market testing process, but in doing so would need to be conscious of the additional regulatory and corporate burden on bidders and the commissioners of mandating the establishment of a new legal entity.

The Prime Contractor would remain accountable to the commissioners for the delivery of the entire service, and for the co-ordination of its 'supply chain' (i.e. its sub-contractors) in order to ensure that it can and does deliver the entire service. The Prime Contractor is likely to be a provider of services itself, but it could sub-contract any elements of service excluding the co-ordination role.

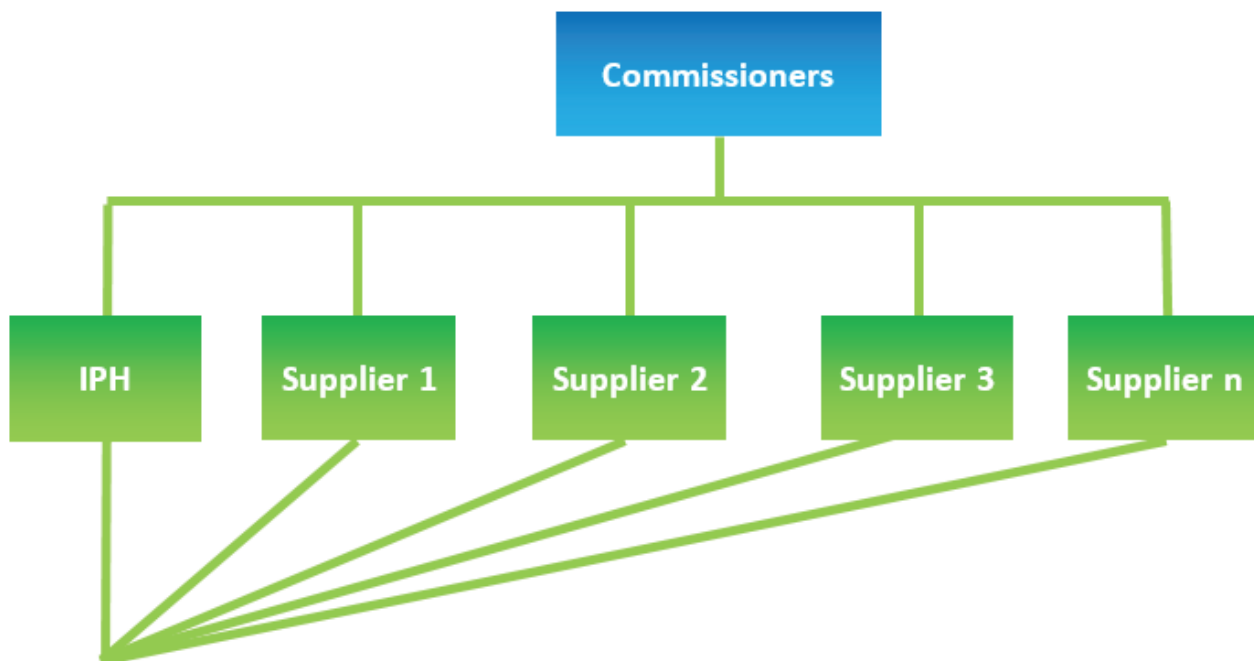
Prime Contract - Key Risks:

- Provides less ability for commissioners to influence the behaviour of individual subcontractors.
- Relies on the strength of the Prime contractor in managing the services.
- Requires some scrutiny of how the Prime contractor engages and manages their supply chain.
- Careful contractual arrangements would be required to set out clearly what is expected of the lead provider and subcontracted organisations.
- Identifying one provider as the Prime contractor may disengage other providers who consider they may be more appropriate for that role.
- May take longer to put in place if the commissioners first need to engage with a Prime contractor before engaging with sub-contractors.

Prime Contract - Key Benefits:

- Enables commissioners to transfer the responsibility and risk for the delivery of services to a single provider.
- Gives a single point of contact for the commissioner and vice-versa.
- Allows appropriate emphasis on contracting for outcomes.
- Provides a single leadership structure and clear accountability for integrated working.
- Providers can directly work together, supported by the contracts between them, to ensure the pathway is as efficient and effective as possible.
- Sufficiently flexible to accommodate a range of payment mechanisms and incentives.
- The Prime contractor would normally directly employ a multi-disciplinary/multi-agency management team and provide the IT solution for all key participants to be able to deliver the objective.

Model 2 – Integrated Pathway Hub



Under this model separate contracts are awarded to a number of providers, all of whom contribute to the delivery of an integrated service. One of the awarded providers acts as an Integrated Pathway Hub (IPH) provider, and they are additionally commissioned to coordinate and manage the integrated service. The IPH provider assumes responsibility for the co-ordination and management of the integrated service and risks and rewards are allocated between the commissioner and the IPH provider in relation to that integration and management function. The IPH provider may be a provider of clinical services, or alternatively may just take a clinical coordination and management role. No one provider is responsible for the delivery of the entire integrated pathway. It should be noted that in the IPH model, the commissioner retains individual contracts with each and every provider, and so each provider remains accountable to the commissioner, rather than to the IPH. A separate collaboration agreement will be required between the IPH and each provider to enable end-to-end service provision.

Integrated Pathway Hub - Key Risks:

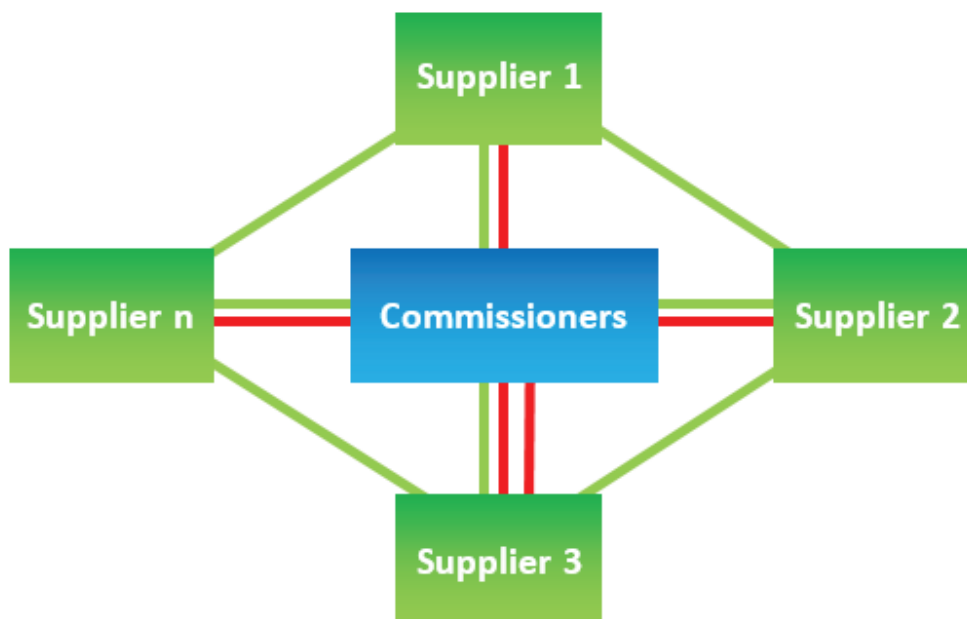
- No single provider is responsible for the delivery of the entire integrated pathway.
- The IPH provider, if a non-service deliverer, could become detached from service delivery. This could cause tension between care delivery and contract management.
- If a single contract approach is being adopted then the commissioner would need to ensure that a single contract could cover all the relevant services.

- All of the supply chain will need to be engaged and to agree the terms of any flow down of the contract – there is a risk of the IPH provider enforcing down a position to protect its bid position and margin. This could destabilise the supply chain.
- The IPH provider is responsible for the whole system, but not accountable for the whole system.
- Significant risk of the duplication of commissioning resource, where the commissioners are paying the IPH provider to act ‘like a commissioner’, but also retaining the costs of commissioning in-house as well.
- Providers become confused who they are accountable to – whether it is the commissioner or the IPH provider.
- Without adequate incentivisation for the delivery of an end-to-end service the providers may lapse into a siloed approach to service delivery.

Integrated Pathway Hub - Key Benefits:

- Providers are incentivised to reduce waste and deliver high quality care and support
- Supports the provision of subcontracting.
- Shared decision making and supports self-care as a means of delivering optimal care and support for specific individuals in the right setting to demonstrate best value for money.
- If not delivering any services, the IPH provider’s sole objective is to manage the contract. They have no vested interest in how the sub-contract payments are proportionally distributed. Therefore they can be very focused and targeted on providing more focused contract management as there is no distraction by service delivery pressures.
- A reduction in the need for management resources for the commissioner.
- The providers are mutually dependent and must collaborate to achieve end-to-end service levels.

Model 3 – Alliance Contract



The commissioner holds individual contracts with a number of providers. In addition to each individual contract, an Alliance Contract is created that all the providers are party to, and contained in which is a common performance framework with collective measures. Although each provider maintains their own internal control and accountability for delivering their contracted services, providers are additionally judged on performance as a whole rather through the Alliance Contract.

This model is typically a commissioner-led contracting mechanism which aims to incentivise collaboration between two or more providers, who co-operate to deliver a particular service or services.

Alliance Contract – Key Risks

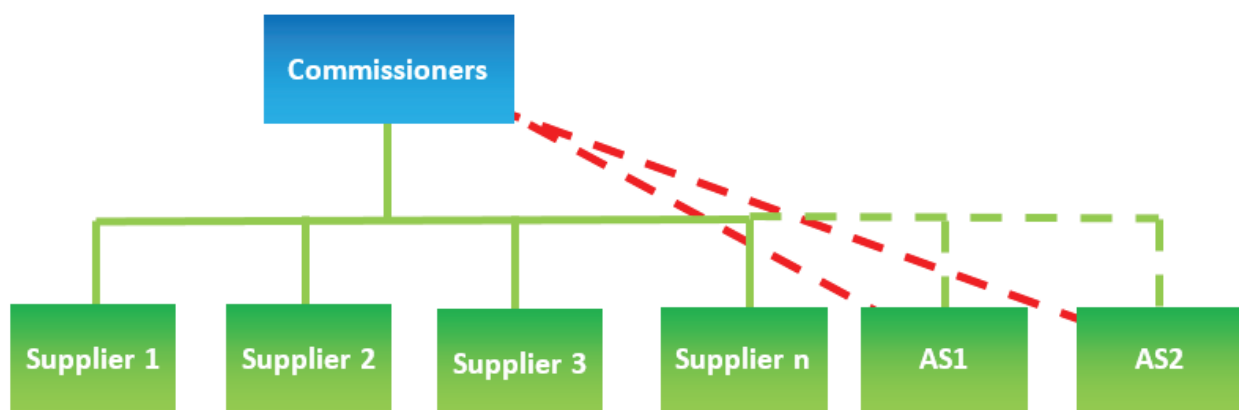
- There is no single agreed form of alliance arrangement in an NHS setting at present. This would therefore be a complex approach where the time and cost required for legally compliant documentation and management should not be underestimated.
- Creating the balance between partnership working and individual organisational interests.
- Sufficient provider engagement is required to make the contract work and develop inclusive provider partnerships.
- Need to design the systems of risk and reward around the NHS standard contract
- Complexity when a contract variation is required.

- Alliance contracting works better with a manageable number of partners; the greater the number, the greater the complexity and management issues.

Alliance Contract – Key Benefits

- Collaborative environment without the need for new organisational forms.
- Collective ownership of opportunities and responsibilities; any 'gain' or 'pain' is linked to performance overall.
- Supports a focus on outcomes and incentivises.
- Joint leadership is incentivised through an outcomes-based payments structure. This reduces the risk inherent in the lead provider model that the lead provider may be able to make changes not in line with commissioners' objectives.

Model 4 – Dynamic Purchasing System



A Dynamic Purchasing System (DPS) is a form of framework agreement. DPS's are traditionally used for well-defined goods or services where there are multiple potential providers, with the key difference between a DPS and a framework being that providers can enter or leave the DPS throughout its life. By contrast a traditional framework arrangement does not allow additional providers to be admitted once it has been let and have a limited contract duration. A DPS (or set of DPSs) would not be the only form of contractual arrangement, and could be let in conjunction with one or more of the other contractual models for lower value, lower complexity services.

For example, DPSs would be let for specific pathways or conditions, and contracts for each would be held either by the commissioner or directly by the Prime Contractor (if used in conjunction with the aforementioned Prime Contractor model).

Dynamic Purchasing System – Key Risks

- The open nature of DPSs could create an additional contract management burden on the commissioner.
- The number of available providers under a DPS could cause confusion if not clearly communicated to professional and public stakeholders.
- The zero-volume nature of DPS contracts does not offer providers any guarantees of payment, so their use for any particular condition or pathway must always be carefully considered.

Dynamic Purchasing System – Key Benefits

- Aligned with choice agenda.
- Does not disadvantage small or third sector organisations.
- Flexible in a way that other contracting mechanisms are not – with the ability to gain and lose providers throughout the life of the DPS.
- Allows specialisation to flourish by not requiring organisations to provide aggregated or homogenised services.
- DPS as a contracting mechanism is increasingly being used in B&NES, so commissioners and providers may have existing knowledge of the process.

7.2 Assessment Approach

Given the above contracting model options, a legal workshop was established as part of the decision-making process. The workshop had representation from the Council and CCG, as well as an independent legal advisor. The purpose of the workshop was to discuss the options, and form a recommendation to take forward with regard to both contracting model and market testing.

The group were led through the different contractual models, discussing the relative merits of each option and combinations thereof. An assessment of each model was made based on the following key considerations:

- **Does the proposed model support the delivery of outcomes based commissioning?**

All contracting options can be used in the delivery of outcomes based services.

- **Does the proposed model encourage and facilitate collaboration between providers?**

Alliance contracts formalise collaboration amongst providers. However, the success of these models also hinges on strong working relationships between providers. In a Prime contracting model, the prime contractor takes an integrator role and is responsible for achieving collaboration.

- **How does the model allocate risk between providers?**

A Prime contract transfers the majority of risk to the prime contractor. On the other hand, the service integration risk in an Alliance contract is retained by the commissioner. It should be noted that the Prime contract can be a formed consortium which would in turn share risk.

- **How much involvement of commissioners is required in the proposed model?**

Under each model, commissioners have a key point of contact. With a Prime contractor model, however, the commissioners' role is primarily limited to governance. In a Prime contractor model, the commissioners are able to deal with a single service provider (assuming the services are let through a single contract). The other models all require multiple contractual relationships, with a higher degree of commissioner involvement in contractual governance.

- **How will the dual role of the Council as commissioners and providers of service be managed?**

The Council acts as a provider of some services and as a commissioner of others; within all of the contract structures, differing arrangements and terms need to be considered in order to manage this dual role.

- **How will the contract model support the continued sustainable provision of services delivered by the third sector as well as SMEs?**

A Prime contract enables the co-commissioning of these contracts via a "dynamic purchasing system" further explored in Section 7.1. Under Alliance and IPH models commissioners would continue to be contractually accountable for these providers. It should be noted that third sector suppliers will participate in all contractual models as independent contracting bodies. However, there is more scope for simplified contractual arrangements to be developed between a Prime contractor and a third or voluntary sector supplier working in collaboration as part of a consortium.

Commissioners could also determine the proportion, within a range, of the overall contractual value that continues to be provided by third sector and SMEs in order to maintain a diverse and thriving local market.

Although the ultimate contracting model established within B&NES will be determined jointly with providers, the commissioner will need to set out the core principles which we expect to base market testing and to consider these principles in the final evaluation of contracting options. A fundamental decision needs to be made as to how to restructure the role of commissioners to support delivery of the new contractual model.

7.3 Recommended Approach

Prime Contractor route is the preferred approach, aligned to the establishment of Dynamic Purchasing Systems for the sub-contracting option. The following core principles are recommended for commissioners to pursue during Phase Three:

- I. The ability to first commission that Prime Contractor, and to then subsequently commission the DPS arrangements.
- II. It is expected that the commissioner will specify the DPS processes and specifications in conjunction with the Prime Contractor and will be party to the appointment of DPS providers alongside the Prime Contractor.
- III. In this model, it would be the Prime Contractor who would hold the DPS contracts and be accountable for this functioning.
- IV. Within the combined model where a Prime Contractor is sought who then themselves establishes a number of DPS's, there is a potential risk that the commissioner loses an element of control over those DPS contracts, including in the initial formation of them. To ensure this is not the case, the process for appointing DPS providers will need to be clearly and contractually laid out at the onset of the process to seek the Prime Contractor, and that the commissioner would have to mandate that they be party to the process of seeking DPS providers.
- V. The commissioner will need to carefully specify the ongoing system management arrangements such as a Partnership Board that would be chaired by the Prime Contractor, and that would take membership from the commissioner and the DPS providers.
- VI. In the case where the Prime Contractor is made up of more than one organisation consideration must be given to how the Prime Contractor chooses to organise itself. The commissioner may require a Prime Contractor made up of a consortia of organisations to create a new legal entity (a Special Purpose Vehicle). Alternatively, the commissioner could accept that a consortia bid for the role of Prime Contractor would be led by a single lead provider, who would then hold a contract with the commissioner and would hold sub-contracts with their delivery partners. The group recognised that it was ultimately not for the commissioner to decide how a Prime Contractor chooses to organise itself structurally.

8. Approach to Market Testing

Summary

This section provides and options appraisal of the compliant market testing processes and sets out the recommended approach to identifying the most capable provider(s) of services.

Key points

- Commissioners have ruled out any routes to market test that cannot be deemed legally compliant.
- Regulations permit a “light touch” regime which does provide a mechanism that can mirror and deliver this aim, provided it meets EU Treaty principles

Recommendations

- Based on our assessment of the available processes and the core requirement to develop a solution with the provider(s) the recommendation is to follow a regulated negotiated procurement approach.

It is important to recognise that as commissioners, the CCG and the Council are governed by EU procurement law and governed by the Public Contract Regulations 2015. The CCG is further bound by the Procurement, Patient Choice and Competition Regulations 2013. The regulations permit a number of ways in which services can be commissioned, but in each case they require the publication of a call for competition and the conduct of a fair and transparent process prior to the award of the contract. Any decision to award a contract must also be publicly notified.

The requirements for conducting a fair and transparent process can be achieved by:

- **open tendering**, under which all those interested may respond to the published advertisement by submitting a tender for the contract;
- **restricted tendering**, under which the commissioners invite qualified suppliers to submit a tender for the contract.
- **a choice of negotiated procedures**, under which qualified suppliers are invited to develop a solution in consultation with the commissioners.

It is plausible under these regulations that commissioners can develop a locally derived process that follows best practice elements of the methods above but ensures delivery against a core set of local principle:

- **Stability:** Ensure the stability of the current system for the whole population;

- **Competition:** Maintain an element of competition to encourage innovation and value for money;
- **Market:** Retain the ability for new parties to enter into the local health and social care economy;
- **Accountability:** Require providers to become accountable for transformation and innovation and the delivery of outcomes for the whole population;
- **Choice:** Maintain choice and competition within the delivery of services – both through this process and in future delivery;
- **Benefits:** Deliver in-year system benefits (outcomes and financial); and
- **Constraints:** Recognise fixed points, such as existing estate, within the system that will need to be maintained and utilised.

8.1 Options for market testing

Commissioners have ruled out any routes to market test that cannot be deemed legally compliant. However it is recognised that regulations permit a “light touch” regime which does provide a mechanism that can mirror and deliver this aim, provided it meets EU Treaty principles.

Based on our assessment of the available processes set out above and the core requirement to develop a solution with the provider the recommendation is to follow a regulated procurement approach. This can be defined as:

“An assessment process using a transparent approach that complies with the regulations which seeks to identify the most capable provider(s) to deliver the service by means of a light-touch, front-loaded process. The assessment would seek to make an early identification of the preferred bidder(s). The assessment process would involve the placing of a formal OJEU advert and iterative stages of bidding. However, the commissioner would use the flexibility afforded to them through their respective legal frameworks to minimise the burden on both commissioners and bidders by optimising the scale of the process and rapidly but safely identifying the most capable provider.”

The key merits to this approach are;

- Provides a specific framework within which decisions are made objectively and transparently.
- Assures legal and regulatory compliance.
- Allows the commissioners to prove value for money over the life of the contract.
- If properly designed, allows the commissioners to take a flexible and iterative approach to contracting.
- Makes the contracting process significantly simpler through pre-completion and pre-confirmation of acceptance of core terms from bidders.

- Allows the commissioners to rapidly progress to discussions with a focused group of most capable providers, reducing burden on both the commissioner and providers.

8.2 Recommended Approach

Having assessed the current market and legally compliant market testing options available, the recommendation is to pursue the regulated procurement approach.

Given the very significant value of the services over their lifetime, a formal “call for competition” for the services was deemed mandatory. It is proposed this is issued in the form of an OJEU advert.

This would be subject to safeguards for both the commissioner and providers including that:

- Any approach to a regulated procurement must be proportionate (not overly burdensome);
- The procurement process would as rapidly as reasonable reduce the number of bidders involved in the process; and
- The process would recognise the need to involve and support the broad provider base within B&NES.

Given the regulatory flexibility afforded to the CCG and Council due to the type of services being commissioned (health and care services), the regulated procurement was considered the most viable option. This is because of its simultaneous legal compliance and level of flexibility.

As part of the assessment process the commissioner would commit to a number of principles:

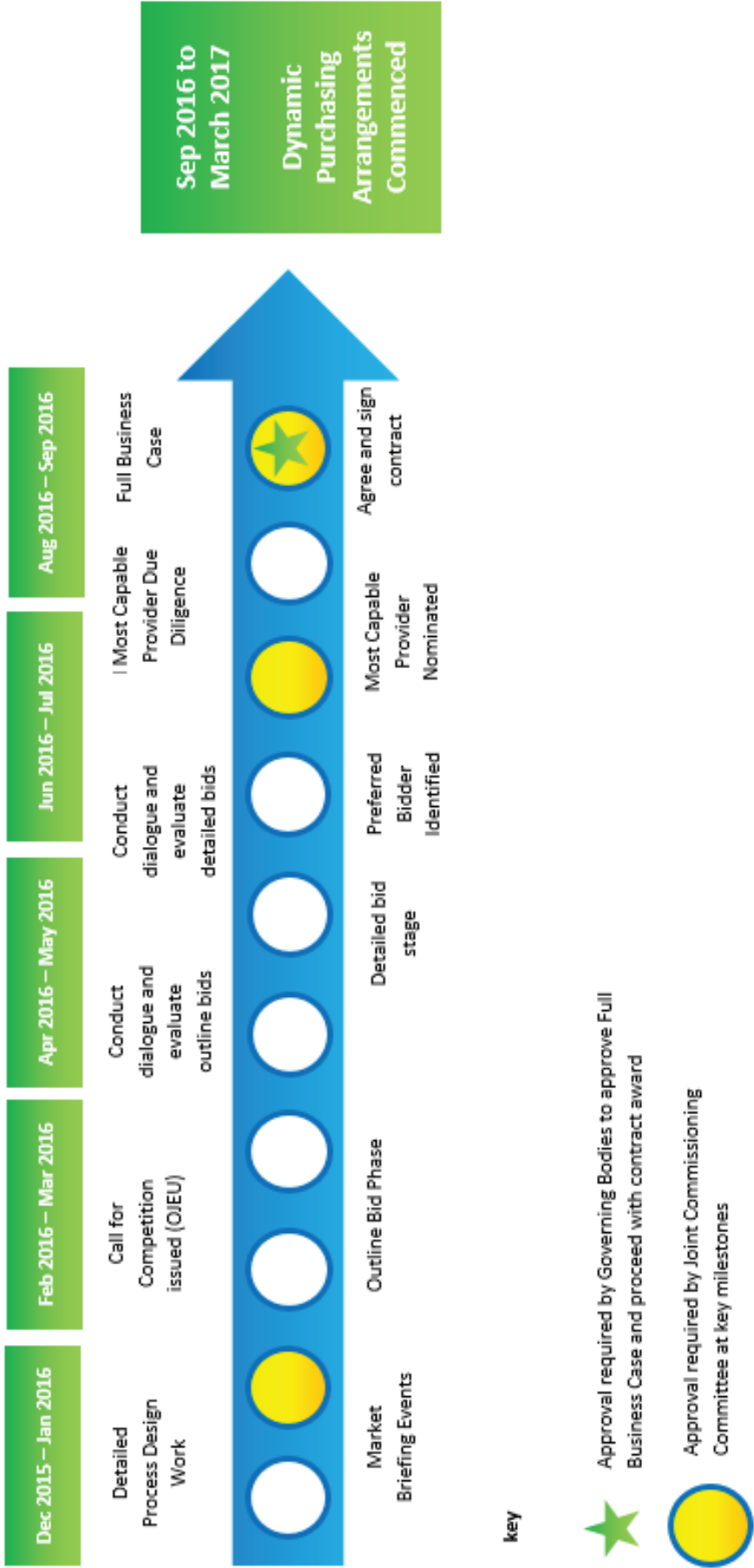
- Minimise the burden on the commissioners and bidders through the asking of primarily strategic, rather than operational, questions.
- Minimise the overall number of questions asked through the formal process (i.e. 10 or 15 overall questions).
- Limit the number of proposed iterative stages and the number of bidders to be taken through to those stages in order to quickly identify a single preferred bidder (or consortia thereof).
- Front-load the process (pre-procurement) to ensure full readiness and understanding on all key issues from both the commissioners and potential providers.

Considering the above principles, we have stated a preference to pursue a regulated procurement approach to identifying a Prime Contractor.

Given the previous recommendation to also commission a series of Dynamic Purchasing Systems to work under the Prime Contractor, ***it is further recommended that the Prime Contractor should be sought first, with the DPS providers then being sought afterward.*** They will be formally commissioned by, and accountable to, the Prime Contractor, but with support from the commissioner in terms of regulatory and legal compliance.

An overview of the regulated procurement process is illustrated in figure 7 below;

Figure 7: Regulated Process Timeline



8.3 Areas for further consideration

In order to support the recommendations made above, a number of further pieces of work need to be carried out.

- **Extension of existing contracts** – given the recommendation to first seek a Prime Contractor, and to then seek DPS providers, it may be that all of the DPSs are not in place by April 2017. Existing in-scope contracts will be audited in order to understand where any need to be extended past April 2017, and the date to which they need to be extended.
- **Market engagement work to inform and ready the provider base** – To ensure a smooth and effective market testing (and eventual contracting) process, it is imperative that the provider base is aware and supportive of the commissioner's plans.
- **Careful consideration of the DPS design** – The design of the DPS process requires careful consideration as part of the Prime Contractor process. This is to ensure that the commissioners retain a level of engagement and control over the subsequent appointment of DPSs by the Prime Contractor.
- **Detailed process design** – the Most Capable Provider assessment process will be designed in detail with the above principles as critical success factors.
- **Contract duration** – the duration of a contract is central to facilitating the delivery of transformational care and providing an opportunity to realise the agreed outcomes and gain a return on any investment. The length of the contract needs careful consideration: the longer the contract the more opportunity a provider has to develop, implement and refine new models that will realise the full benefits of integrated outcomes based care and support
- **Geographical structure** - whilst the expectation is to develop one Prime Contract for the entire B&NES locality the structure is key to supporting delivery of locality based contracts and ensuring issues in terms of equity of provision are addressed.

9. Governance

The preparation of this Outline Business Case was directed and monitored through existing governance arrangements:

- a. Formal consideration by the CCG Board
- b. Formal consideration by the Council Cabinet
- c. Consideration and oversight by Joint Commissioning Committee
- d. Consideration by and regular updates to the Health and Wellbeing Board
- e. Consideration by NHS England
- f. The CCG's Executive Team
- g. The Council's Strategic Management Team
- h. Consideration by the Health and Wellbeing Select Committee

A number of workstreams were established during project initiation, which have contributed to various aspects of the business case. External support to the workstreams was provided by Attain Consultancy, Ashfords Legal Services and South Central and Western Commissioning Support Unit

The resulting Outline Business Case is presented for formal acceptance to the following authorities:

- Bath and North East Somerset Council Cabinet (2nd December 2015)
- NHS BaNES CCG Board (3rd December 2015)

10. Summary of Recommendations

Before commissioners can progress to developing the service delivery model during the next phase, there are a number of key outcomes that form the body of this report and will need to be considered and approved by Governing Bodies, which are the Council Cabinet and the CCG Board:

- i) The analysis of consultation findings that set out what our community has told us about the plans detailed in the September Cabinet report “*Proposals to Review Community Services Consultation Document*”.
- ii) The findings of our market engagement with providers and our proposed methodology to market test and contract in order to develop a process to identify the most capable providers for future service delivery.
- iii) The outline financial planning process that will set out the factors that will impact funding going forwards and the principles against which the funding envelope will be derived.

In consideration of the rationale outlined in this report, Governing Bodies are asked to:

- i) Note the findings of the consultation as set out in Section 3 and approve progression to the next phase.
- ii) Approve the financial planning process as set out in Section 5.
- iii) Approve the pursuit of a Prime contractor approach supported by a regulated market testing process as set out in Sections 7 and 8.

Appendices:

Appendix A - Payment Mechanisms

The current payment mechanism for the majority of Community Service providers is through block contracting arrangements. Through the next phase of the review consideration will need to be given to alternative payment mechanisms. As we move to more integrated models of care and support we need to consider how to align to the 'Five Year Forward View' and Integrated Personal Commissioning (IPC) programme with payment mechanisms that will give the best outcomes for service users.

In line with our strategic vision, our longer-term approach is to align contractual and financial incentives across the system to deliver care and support in the most effective and best value setting. We will develop our preferred approach of contracting and payment mechanisms which best support our plans for effectively streamlined and integrated care and support within the overall affordability envelope for the health and social care community, and which both limit and fairly share the impact of risks across partners. Our approach will seek to use innovative commissioning and contracting models which incentivise delivery of our desired wellbeing outcomes across our population and, where appropriate, across targeted segments of our population. We expect our providers to work together to develop provider contractual models which best equip them to respond to our commissioning requirements.

In parallel to the development of contractual approaches, we expect to move towards payment mechanisms which also incentivise delivery of our desired outcomes, including effective co-operation between providers and system cost reduction in support of meeting our population's care and support needs in a sustainable and affordable way. Capitated, year of care, pathway and network-based payments would be examples of this. We will also examine our commissioning finance mechanisms for opportunities to extend demonstrably effective arrangements such as the use of pooled budgets.

The current contract payment mechanisms being considered as part of the review are:

a) Capitation

Capitation means paying a provider or group of providers for care and support to a specified population across different settings. The provider(s) is paid as a lump sum per patient in the target population group. This allows providers to plan and deliver care and support in a way that can be tailored to individual and local population needs, while also incentivising early intervention, prevention and recovery.

Different capitated payment approaches may be appropriate depending on local factors, including:

- the vision for the local health economy and the degree of coordination between relevant services, including social care and housing
- the accuracy and availability of data to inform the capitated budget.

All capitated payment approaches should include a component linked to quality and outcomes to ensure that providers have financial incentives to maintain access to services elsewhere under cost pressure. In addition it may be desirable to include a mechanism that allows for some sharing of financial gains or losses between commissioners and providers, to facilitate changes in demand and data quality.

Developing this payment approach locally

When developing local capitated payment models, the CCG and the capitated budget holder (e.g. Prime contractor) must agree the scope of services and how payment will be calculated. If the budget holder is not the provider of all services, it will also need to agree payment arrangements with any sub-contracted providers of care and support. This could include NHS and community providers and the voluntary sector.

b) Block contracts

Block contracts do not vary with levels of activity. These are the most common type of local contract identified for existing community services in B&NES, and covered the largest volume of services. The contract values for long standing contract arrangements are historic and future year values are aligned to the Council and NHS planning processes incorporating contract deflator / inflator where applicable. Changes to services within the block are incorporated through a contract variation process that gives the contract mechanism to alter values and service specifications.

c) Year of care or episodic payment

A year of care or episodic payment approach means payment based on a price for each unit of activity. For community services this would mean linking payment to specified areas of activity that can be measured. This approach can make it easier for patients to choose their provider for an episode of treatment.

This payment approach can draw on existing data flows, provided existing data is of sufficient quality. This approach is based on work that has been undertaken in developing a Payment by Results Tariff system for Mental Health. Introducing a year of care or episodic approach to payment builds on what is already being implemented or shadowed in many areas: payment based on mental health cluster currencies. Quality and outcome measures should also be agreed, along with agreement on data reporting, and how agreed quality and outcomes measures will be linked to payment. Caps and collars and risk sharing could be used to aid transition to this payment approach, particularly where untested assumptions have been made about demand or expected costs.

Developing this payment approach locally

Commissioners and providers should carry out a bottom up costing exercise to look at how much NICE compliant care actually costs to deliver. This should include an appropriate focus on prevention and early intervention to ensure that good quality outcomes are delivered, and that resources are used in the most efficient and effective way.

e) Multilateral gain/loss sharing

Designing the right payment mechanism relies on the wider process of moving to a new care and support model. This starts with developing a common vision for the local care economy, it is an essential step since getting the financial incentives right is crucial to supporting the delivery of high quality, good value care and support. Multilateral gain/loss sharing combined with an underlying payment model – such as capitation – defines the overall payment approach.

The two key components of a multilateral gain/loss sharing mechanism are:

- it covers multiple providers and one or more commissioners
- financial gains/losses are identified and distributed based on system financial performance and/or other metrics, such as performance on quality and outcomes.

The gain/loss sharing mechanism works by comparing the expected commissioner spend (associated with delivering care and support) with the actual outturn. The difference between the expected spend and actual outturn forms the gains/losses pool. This pool is then distributed between the commissioners and providers. For instance, a reduction in non-elective admissions may lead to an overall reduction in spend across the board. This reduction would form a gains pool that could then be shared among the participants, including the provider that has seen a reduction in its activity and the providers in the community that helped achieve this outcome. The gain/loss sharing mechanism therefore helps:

- align individual organisations' and the system's financial incentives
- allocate financial risk associated with service change appropriately

By bringing together payment for multiple providers, the gain/loss sharing mechanism allows individual organisations' financial incentives to be realigned to achieve outcomes for the whole system. It allows organisations to benefit from individual actions that generate benefits for other parts of the system, and similarly feel the impact of costs their individual actions impose on others in the system. It also enables commissioners and providers to contribute to system-wide change with some protection from a sudden loss in revenue and unfunded fixed costs, or from an unpaid increase in activity. In doing so it supports the successful transition towards new care and support model.

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Bath & North East Somerset Council		
MEETING/ DECISION MAKER:	Cabinet	
MEETING DATE:	2 nd December 2015	EXECUTIVE FORWARD PLAN REFERENCE:
		E 2785
TITLE:	Establishment of a Local Property and Development Company	
WARD:	All	
AN OPEN PUBLIC ITEM		
List of attachments to this report: Appendix 1 Summary Outline Business Case Appendix 2 Property Company Flow Diagram		

1 THE ISSUE

- 1.1 The establishment by the Council of a local authority wholly owned company (the Company) to develop, deliver, own and manage property as well as new development on a case by case basis using either Public Works Loan Board (PWLb) funding or external financing dependent which is the most viable option.
- 1.2 The company will initially focus on the refurbishment of existing properties suitable for residential lettings. Consideration will also be given, on a case by case basis to the delivery of new build property developments, if deemed financially viable.

2 RECOMMENDATION

The Cabinet agrees to the:

- 2.1 Approval of the Outline Business Case for the establishment of the Company
- 2.2 Establishment of a Company limited by shares, for this purpose, to be wholly owned by the Council in line with the proposed structure set out in sections 5.31 to 5.39
- 2.3 Approval of the composition of the Company's Board as set out at para 5.32.
- 2.4 Utilisation of appropriate investment to deliver, own and manage residential and property developments on a case by case basis.

- 2.5 Transfer the relevant Title of the existing residential properties to the Company, subject to approval of the terms of such transfer by the Corporate Property Officer in accordance with S123 of the Local Government Act.
- 2.6 Delegate to the Leader the exercising of all Council functions as sole shareholder of the Company, with the exception of any changes regarding ownership of the Company.
- 2.7 Delegation to the Chief Executive and Strategic Director of Resources, in consultation with the Leader and the Cabinet Member for Homes & Planning, of the approval of Council investment in the Company within approved budgetary provisions, including but not limited to the:
- terms of Council investment
 - business cases for future development proposals to be undertaken by the Company.
 - terms of any guarantee to be provided to support the provisions of the investment
 - terms of any loan or equity agreement between the Council and the Company
 - such others matters as are regarded as necessary to enable the provision of the investment, progress of the developments and their subsequent sale, lettings and on-going management.
- 2.8 Delegation to the Strategic Director (Resources) in consultation with the Leader to finalise and agree the and Articles of the Company and other such matters necessary to (i) incorporate and register the Company and (ii) facilitate the objectives identified in this report.
- 2.9 Full Approval of the existing Capital funding provision of £6.536M to support investment in the Company in accordance with 2.6 above.
- 2.10 Note that all further decisions regarding the future level of Capital Funding for potential investment in the Company will be subject to the approval of the Full Council and form part of the Budget process for 2016/17.
- 2.11 Agree that an annual report will be provided by the Company to the Council setting out its activities, performance and accounts.
- 2.12 The Strategic Director (Resources) is given delegated authority to finalise the service provision arrangements between the Council and the Company for all required support services, including officer support.
- 2.13 Indemnification, to the full extent permissible under the Local Authorities (Indemnities for Officers and Members) Order 2004, of the Council officers and Members identified in paragraph 5.32 in respect of any personal liability arising as a result of their appointment as directors of the Company.

3 FINANCIAL IMPLICATIONS

- 3.1 This proposal supports the delivery of the Council's Medium Term Financial Plan for the period 2016/17 to 2019/20, with an additional £600K of recurring income targeted by the end of this period.
- 3.2 The Company would require loan funding from the Council at an appropriate market rate of interest (in order to comply with State Aid rules) to support refurbishment and development activity. Such loans would facilitate the purchase of the relevant title of the existing residential properties from the Council and be subject to the approval of a detailed business case on all proposed future developments.
- 3.3 All disposals of land and property to the Company will be based on the appropriate market value as assessed by the Corporate Property Officer in accordance with S123 of Local Government Act. Provided the disposal represents the best consideration that can reasonably be obtained (or otherwise falls within the General Disposal Consent for undervalue disposal contained in Circular 06/03) no specific consent of the Secretary of State would be needed for the disposals from the Council to the Company. Capital receipts from such disposals will be used to support the generation of additional commercial estate income.
- 3.4 A capital sum of £6.536M has been provided within the existing capital programme to support the future revenue generation from the Commercial Estate. It is proposed that this sum (in full or in part) be made available to the Company in the form of loans on market terms to support the purchase of land and property from the Council. Any further capital funding for investment in the Company will be subject to the approval of Full Council, as part of the 2016/17 Budget process.
- 3.5 All costs, fees and charges payable by the Company, including the reimbursement of appropriate costs incurred by the Council to support the Company, would be charged against the Company's income. The Council will continue to meet its own incurred usual costs for land and property disposals, including such works and outline planning permissions as deemed appropriate by the Corporate Property Officer, to maximise market value.

4 STATUTORY CONSIDERATIONS AND BASIS FOR PROPOSAL

- 4.1 This proposal will support the delivery of the Medium Term Financial Plan and Strategic Objectives.
- 4.2 The Company will be established in accordance with the powers set out under S1 of the Localism Act 2011 (the general power of competence).

- 4.3 Legal advice has been sought confirming that on the face of it, the renting of housing at market rents would be pursuing a "commercial purpose" even if the Council's ultimate purpose was to create mixed, economically active communities. Further, on the understanding that it is the Council's intention to seek a commercial return from its participation in the Company, for example through dividend distribution, the Council has been advised that such action would be likely to be deemed a commercial purpose. Indeed this view has been borne out by the authorities that have set up such companies to date.
- 4.4 Under Section 4 of the Localism Act 2011 Act a Council exercising its general power of competence for a commercial purpose must do so through a company or a (Community Benefit Society). Therefore the "commercial" nature of the enterprise would justify the Council's establishment of, and participation in, the Company.
- 4.5 All land and property transactions between the Council and the Company must comply with S123 of the Local Government Act 1972.

5 THE REPORT

Context – The Financial Challenge

- 5.1 In autumn 2014 the Council identified that the likely financial impact on its funding for the 4 year period to 2016/17 indicated a potential budget gap of circa £38m.
- 5.2 A number of further key challenges were also identified that the Council has had to respond to including: population growth, a slowing of post-recession growth and economic productivity; and a range of service reforms.
- 5.3 A Strategic Review process was established to manage the issues and in particular identify options to address funding the budget gap. The outcomes of the review were based on the following four themes.
- ➡ **A strong economy and growth**
 - ➡ **A focus on prevention**
 - ➡ **A new relationship with customers and communities**
 - ➡ **An efficient business**
- 5.4 The Strategic Review process and corresponding themes were reported to, and agreed upon, by all Group Leaders prior to the May 2015 elections.
- 5.5 As part of the theme for "an efficient business" this included the consideration of ideas for generating additional income for the Council.

Generating Additional Income

- 5.6 The idea of establishing a Local Property and Development Company was a very early proposal identified in the Strategic Review process and reflected the growing activity and interest by other local authorities to establish similar vehicles.

- 5.7 Following a review of initial projects, in early 2015, this project was agreed for Outline Business Case development.
- 5.8 The Outline Business Case identified the potential to deliver £600K of recurring Revenue Income by 2019 and over £1.5M within 10 years (see summary at Appendix 1). This could potentially be delivered earlier if the development programme were accelerated.
- 5.9 The diagram at Appendix 2, sets out the potential for a Local Property and Development Company to both generate capital receipts for use by the Council's commercial estate, but also to deliver additional income via market property rentals and sales. The Council retains 100% ownership of the Company itself.

Government Housing Policy

- 5.10 There is a shortage of housing nationally and the Government has identified a need to build 200,000 houses per year, in total 1million homes by the year 2020. Locally as identified in the B&NES Core Strategy our target is to provide an additional 12,956 homes by the year 2029.
- 5.11 On the 13th November the Government published the "Housing & Planning Bill". The Bill, which is currently going through committee stages, aims to put many of Governments recent housing announcements into statute. Importantly it recognizes, and supports, the Government's desire to increase homeownership through a significant expansion of the starter home initiative, a tenure type that could prove attractive to the Company on potential future developments whilst meeting an element of local demand. In addition the Bill provides the legal basis for the voluntary extension of Right to Buy for Housing Association tenants and the forced sale of high value Council housing.
- 5.12 The Bill relies heavily on secondary legislation, and as such without this detail it is impossible to assess the impacts on the Council.

Existing Residential Property Assets

- 5.13 The Council does not hold any Social Housing properties as these were all transferred as part of the Large Scale Voluntary Transfer to Curo (then Somer Community Housing Trust) on 1st April 1999. This lead to the closure of the Council's Housing Revenue Account.
- 5.14 Within the Council's ownership however, there are around 68 residential property assets located within the City centre and surrounding areas, mainly above existing commercial estate properties. Many of these properties were leased to Curo and will be transferred back to the Council, only once the leases have ended.
- 5.15 Approximately 20 properties have already been returned to the Council from Curo and now require an appropriate action by the Council. Through the use of a Local Property Development Company, the Council can secure a revenue return for the Commercial estate, and benefit from an ongoing income stream.

Supporting Housing Delivery

- 5.16 The SHMA has identified a need for 12,956 new homes to be delivered over 2011-2029, including 3,290 affordable homes. The delivery of this target requires a significant and sustained uplift in the historic housing delivery within B&NES.
- 5.17 Alongside the 68+ properties identified above, there are a number of B&NES owned sites whose use could be maximised for the development of Housing Delivery.
- 5.18 A detailed analysis will be undertaken of all Council owned sites to identify those which may be appropriate for housing delivery. A Local Property Development Company could then, on a case by case basis, bring forward development proposals for these sites. This will include innovative proposals not often considered by developers.
- 5.19 This approach would proactively assist the delivery of Core Strategy housing targets and advance delivery where private developers are moving slowly , through an ability to provide targeted housing solutions, for example:
- Smaller family accommodation; shared living; high density “lifestyle” housing for young professionals/graduate retention etc.
 - Various tenure options, such as, discounted home ownership (equity stake); high quality market or sub-market rent or market purchase including starter homes.
 - Providing “added value”
 - Utilising local training schemes, apprenticeships and worklessness programmes.
 - Providing a future funding stream to be used as appropriate, potentially on other housing schemes.
 - Utilise local private sector experts to manage residential lettings
- 5.20 B&NES is one of the most expensive areas in the South West with an average house price of £336,718 and annual house inflation rising 13.4% over the last 12 months.

The Proposal to Establish a Local Property and Development Company

- 5.21 The establishment of a Council owned Property and Development Company is proposed as an income generating investment and development vehicle. It would manage the Council's private residential property assets and deliver new housing for both private ownership and the private rented sector.
- 5.22 The company would move forwards in two stages:
- **Stage 1** – transfer title of existing properties for private residential letting or sale with a capital receipt and revenue income generated for the Council.
 - **Stage 2** – based on a commercial business case, opt to deliver approved housing developments either directly or as part of a joint venture. Each business case will be subject to approval by the Council's delegated process and the Company's Board.

Key Objectives & Benefits

5.23 The proposed objectives of the company are set out below:

- To generate revenue income and maximise revenues for the Council
- To deliver approved property developments
- To acquire and sell private market property
- To hold, manage and operate high quality private lettings.
- To be fully policy compliant in terms of Affordable Housing.
- To support the Council's ambition to help create an ongoing supply of modern energy efficient and sustainable homes.
- To stimulate and accelerate property and development delivery for the Council.
- To improve supply, quality and quantity of private rented housing.
- To act as a responsible and equitable landlord.
- To deliver long term capital appreciation.
- To support the Council's strategic vision and objectives.

5.24 The benefits to the Council in taking this approach are:

- The potential to generate significant returns on Capital Invested
- The potential for tax efficiency through an arrangement that recognises the grouping of the Council and the Company.
- The investment /support by the Council can be structured in a State Aid compliant manner.
- The Council meets EU procurement rules including "Teckal" (or group control) compliance which is now set out in regulation 12 of the public contracts regulations 2015.
- A vehicle to manage Council market housing assets.
- Improve the supply and delivery of market and affordable housing.
- Council controls the Company but the Company has a Board of directors acting in the best interests of the Company (Council Ownership).
- Provide the ability to utilise public finance / borrowing subject to market rates of interest (and market loan terms) being payable by the Company to the Council.
- Provide a flexible structure for future needs and potential development.
- An entity that could be disposed of / sold in the future.
- Helps address the financial challenge and protect frontline services.
- Generate additional Council Tax and New Homes Bonus.
- Support Manifesto Commitments.
- Support the Core Strategy and Placemaking Plan.

Management of Lettings

5.25 B&NES has a long history of managing commercial properties using its in-house team of surveyors and lettings specialists. This team manages 480 commercial properties valued at over £230M, generating around £15M of commercial income.

- 5.26 Recognising that the Private Rental market is different in nature to the commercial retail market the proposed Company would employ the services of a residential lettings agent. These services would be procured from private sector practices that operate in Bath ensuring relevant specialists manage the entire letting and tenant customer process.
- 5.27 This is in line with other private rented landlords with large estates which operate using this model. St John's Hospital has over 80 residential investment properties which are managed by a Bath residential letting agent.

Commercial Approach to Developments

- 5.28 The Council's Project Delivery team is made up of a small core of construction professionals with a wealth of private sector construction experience including relevant property developments.
- 5.29 The model developed by Project Delivery over the last 8 years has been to draw in specialist Project Management support to supplement the core team to deliver the capital programme. The Project Management support has been supplied by a number of framework consultants. Each appointment is selected on the relevant experience required for the specific project.
- 5.30 It is proposed to use this model of delivery for any refurbishment or development undertaken by the Property Company. The experience of the core team of construction professionals will be supplemented by the appropriate private sector specialist.

Governance

- 5.31 Based on independent expert legal advice, it is recommended that the Company should be formed as a Company Limited by Shares, with 100% of the share capital retained by the Council. As sole shareholder, the Council would retain control of the Company, including the flexibility to change aspects of its purpose and operation or even cease, transfer or dispose of the Company in the future. The Council in its corporate capacity would be the sole shareholder of the Company.
- 5.32 A Board of directors will be put in place to oversee and manage the Company in accordance with the objectives set by the Council. The proposed Board Structure is set out below:
- Councillor Chair – Cabinet Member for Resources & Efficiency
 - Councillor Member – to be confirmed
 - Officer, Managing Director – Divisional Director (Business Support)
 - Officer, Operations Director – Divisional Director (Project Delivery)
 - Officer, Executive Director – Strategic Director, Director or Service Lead – to be confirmed
 - 2 x Non Exec independent experts – to be externally appointed and likely to include private sector development, housing and property experts.

-
- 5.33 The Company would be 100% Council-owned at shareholder level. It would operate through its Board. The Directors would have a duty to act in the best interests of the Company. In a commercial company the best interest of the company is usually to maximize the return for the shareholders - in this case - the Council. In those circumstances there is unlikely to be any inherent conflict of interest between the role of Council officers and members in those capacities and in their capacity as Board directors but it is nonetheless something that needs to be kept under review.
- 5.34 The Councillor and Officer roles would be unpaid although expenses to attend Board meetings would be in line with normal Council policy.
- 5.35 Non-Executive Directors will be paid an appropriate fee and will be appointed, following an external process (as advised by the Monitoring Officer), with the approval of the Leader and the Chair of the Board.
- 5.36 It is intended that the Company will operate on a “thin” basis, drawing appropriate support directly from the Council, with the exception of specialist services which would be separately contracted by the Company. This would keep operational expenses to a minimum albeit all resources provided by the Council would be charged to the Company. These arrangements would be reviewed on a regular basis to ensure overall value for money and efficiency.
- 5.37 Following the initial transfer of the title of the current Council residential properties set out in Paragraphs 5.13 to 5.15 above, all future proposals for development of Council sites would be subject to a site specific Business Case. This would include as a minimum:
 - Site details and proposals
 - Delivery options, including direct delivery or joint venture
 - Financial returns
 - Legal advice
 - Planning advice and requirements
 - Project delivery proposals
 - Delivery of affordable housing provisions
- 5.38 All such Business Cases would require approval by both the Council's delegated decision makers and the Company's Board.
- 5.39 The relevant Policy Development and Scrutiny Panel will also be able to review the activities of the Company as appropriate.

Timetable

- 5.40 Subject to Cabinet approval the provisional timetable for the establishment and operation of the Company is broadly as follows:
 - Detailed Financial Modelling and Company Business Plan – Jan 16
 - Agreement of Legal documentation – Feb 16
 - Establish LPDV Board including “expert” Non-Execs –Feb/Mar 2016
 - Establish and incorporate LPDV Company – Feb/Mar 2016

- Transfer title of initial properties – Feb 2016 onwards
- Website and branding – Mar 2016 onwards
- Site by Site Business Case approvals – commencing April 2016
- Progress planning, design etc., for identified sites – ongoing
- First site delivery commences during 2016/17 financial year

6 OPTIONS CONSIDERED

- 6.1 **Do nothing** - Council continues piecemeal disposal of surplus land and properties. This would provide capital receipts to the Council for which alternative commercial investment could be sought, although the overall yields for the Council would be less. There would also be no guarantee over the use of the disposed site or speed of development.
- 6.2 **Prioritise Sales land for Market Housing Development** – Similar to option in 6.1 above with a more proactive approach to disposal of surplus land and properties. Similar issues to the do-nothing approach, although the capital receipts could be generated more quickly.
- 6.3 **Joint Venture Options between the Council and Private Developers** – This option provides the potential to secure market capital and capacity but is likely to increase overall costs and reduce the overall revenue benefit to Council. This option will be considered further as part of business case approach to each development.

7 CONSULTATION

- 7.1 All proposals have been drawn up with support from internal and external experts together with the experience of other local authorities who have, or are in the process of, establishing similar companies.
- 7.2 Consultation has been undertaken with relevant Cabinet Portfolio Holders and Group Members. The relevant statutory officers have also been consulted.
- 7.3 All future development proposals will be subject to the normal planning process and consultation.

8 RISK MANAGEMENT

- 8.1 A risk assessment of the issue and recommendations has been undertaken and a full risk register has been maintained in accordance with the Council's decision making risk management guidance. Copies of the risk register are available.

Contact Person	<i>Tim Richens, Divisional Director (Business Support), Tel: 01225 477468</i>
Background papers	
Please contact the report author if you need to access this report in an alternative format	

Outline Business Case **Property & Development Company** Summary

Summary of Proposal

- » To Establish a Council Owned Local Property & Development Company to:
 - » Generate revenue income.
 - » Deliver approved property developments.
 - » Acquire and sell private market property.
 - » To stimulate and accelerate property development.
 - » To deliver long term capital appreciation.
 - » To support Council vision and objectives

Key Benefits

- » Generates Revenue Income for the Council
- » Manage market housing assets
- » To help stimulate / accelerate market housing and development delivery
- » Improve supply, quality and quantity of private rented housing
- » To act as a responsible private landlord
- » A flexible structure for future needs

Recommended Form

- » A Company Limited By Shares
- » Share 100% Owned by the Council
- » Established under General Fund Powers (S1 Localism Act 2011)
- » Benefits of this structure include:
 - » Flexibility
 - » Teckal Compliant
 - » Group rules for Stamp Duty Land Tax
 - » Simplicity

Considerations for Company

- » Clear rationale for establishment
- » Land transactions between Council and Co' must comply with S123 LG Act 1972
- » EU Procurement Compliance
- » State Aid considerations
- » Taxation including VAT and Corporation Tax
- » Access to Capital Funding and Working Capital

Modelling Options for Business Case

- » The following specific options have been modelled for this Business Case:
 - » 68 Council Owned Market Rental Properties (Base Case)
 - » A development of 13 houses for market rental
 - » A development of 24 houses for market rental
 - » A refurb & dev of 15 properties for market rental
 - » A development of 75 houses for market rental
 - » A development of 135 houses for market rental
- » Likely that larger sites will be mixed disposal and market rental – improve overall financial return.

Key Modelling Assumptions

- » Market rental for a 2 bed = £250 / wk in Bath
- » Affordable rental for a 2 bed = £200 / wk in Bath
- » Occupancy rates 90% pa Market / 100% Affordable
- » Split between Market Rental / Affordable = 70:30 %
- » Management cost taken at 15% of income
(Marketing, Cleaning, Tenant Management, Overhead etc)
- » Insurance and Maintenance costs included per property
- » Bad Debts / Contingency of 5% per annum included
- » Cost and Revenue inflation taken at 2%
- » PWLB taken over 35 years
- » Payment to Council for S123 Lease on Land assumed at Market Value.

Key Financial Points

- » Potential to deliver annual £600K+ revenue by 2019 and £1.6M pa within 10 years.
- » Based on a programme of increasing scale & complexity.
- » PWLB requirement of up to £20M (Maximum)
- » Significant long-term potential and capital appreciation
- » Options to accelerate delivery (subject to risk and resourcing)
- » Outline site by site financial models attached as per appendix.
- » **Subject to detailed site-by-site business cases.**

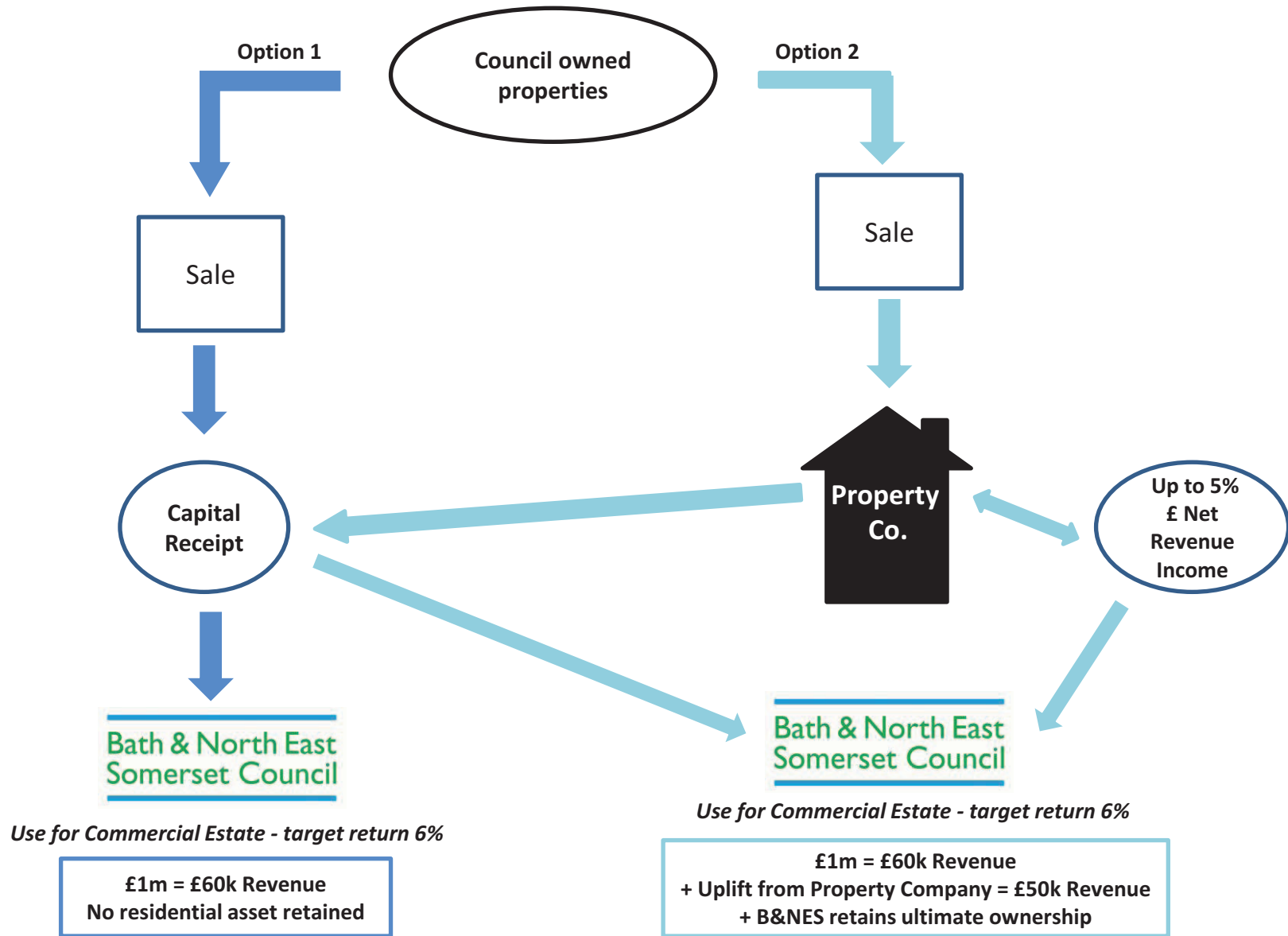
Other Benefits

- » Relatively simple to set up
- » Utilises Council expertise from project delivery
- » Brings vacant brownfield and greenfield sites into use.
- » Potential to speed up market housing delivery and hence deliverability of Housing numbers (SHMA)
- » Potential use of local contractors and / or subcontractors (Think Local)
- » Generates Council Tax and New Homes Bonus
- » Company structure provides flexible basis for other commercial opportunities

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Comparison of Council Residential Property Disposal Options

Appendix 2



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Bath & North East Somerset Council		
MEETING/ DECISION MAKER:	Cabinet	
MEETING/ DECISION DATE:	02 December 2015	EXECUTIVE FORWARD PLAN REFERENCE:
		E 2809
TITLE:	Local Flood Risk Management Strategy – Cabinet Approval	
WARD:	All	
AN OPEN PUBLIC ITEM		
NOTE: Given the large file size for these attachments they can be only viewed on Council’s website. • Local Flood Risk Management Strategy: Main document • Local Flood Risk Management Strategy: Summary • Local Flood Risk Management Strategy ‘What’s changed’ review of consultation feedback • Bath & North East Somerset Council’s Surface Water Management Plan • Strategic Environmental Assessment: Main document • Strategic Environmental Assessment: Non-technical Summary • Habitats Regulations Assessment		

1 THE ISSUE

The Flood and Water Management Act 2010, makes Bath and North East Somerset Council a Lead Local Flood Authority and as such the Council is responsible for managing flood risk from surface water, groundwater and ordinary watercourses in the area. Under provisions in the Act, the Council must *develop, maintain, monitor and apply a Local Flood Risk Management Strategy* (and assist in the management of local flood risk).

2 RECOMMENDATION

- 2.1 Cabinet approve the adoption of the Bath & North East Somerset Council Local Flood Risk Management Strategy.

3 RESOURCE IMPLICATIONS (FINANCE, PROPERTY, PEOPLE)

Financial – Revenue

- 3.1 The duties of the Lead Local Flood Authority, including the implementation of a Local Flood Risk Management Strategy, are currently funded by a combination of Defra grants and Council Revenue budgets. We anticipate this revenue scenario to continue into 2016/17.
- 3.2 The Strategy identifies (in table 5-1) a series of actions the vast majority of which would be managed within these existing revenue budgets.
- 3.3 Due to the inherent uncertainties in flood risk, key areas where costs arising from the adoption of the Strategy could be in excess of existing revenue budgets include:
- *Development of a register of assets which significantly affect local flood risk.*
The scale and cost of this project will depend on the volume of assets and the level of detail required for each asset. This is something that will be worked through with the Operational Flood Working Group and Strategic Flood Board with any potential costs being factored into annual budgets as the register grows.
 - *Completing investigations of flood incidents, where the appropriate criteria are met.*
If and when flood incidents occur and there is a requirement for a large-scale flood investigation (as happened with the Chew Valley floods in 2012), grants would be available from Defra via mechanisms outlined in Section 6 and Appendix E of the main Strategy.
- 3.4 Where possible the Council would look to work in new ways with multiple external stakeholders (such as the Environment Agency) in order to fund works either through joint working or supported through external funding. The Council would also seek to secure other dedicated flood risk management funding where it is appropriate and available. These mitigating working and funding measures mean that overall no revenue budget growth is anticipated from these proposals.

Financial – Capital

- 3.5 It is not anticipated that there are any additional costs (i.e. costs beyond current budget arrangements) as a consequence of the actions within the Strategy. Where drainage or flooding investigation work might result in the need for a significantly large scheme with a high cost that is beyond current annual budgets we would investigate the opportunities to utilise other funding mechanisms (such as the Defra Flood and Coastal Erosion Risk Management Grant in Aid). Other funding opportunities are reviewed in Appendix E of the Strategy.
- 3.6 Each capital project would be considered through the Council's usual review and approval process.
- 3.7 Funding for the Actions in the Strategy is outlined in Section 6 and Appendix E of the main Local Flood Risk Management Strategy document. To note that whilst all the funding opportunities outlined in Appendix E can contribute to better flood risk management, not all of these funding options are available to the Council. We have used this section to highlight a range of possible funding opportunities for anyone that can contribute to managing flood risk (including land owners and communities).

Other

- 3.8 It is not anticipated that there are any significant resource implications in terms of property/ offices/ land etc.
- 3.9 It is not anticipated that there are any significant resource implications in terms of staffing.

4 STATUTORY CONSIDERATIONS AND BASIS FOR PROPOSAL

- 4.1 Under the requirements in the Flood and Water Management Act 2010 the Council has a duty to work towards the objectives set out in the Local Flood Risk Management Strategy, as well as to comply with statutory duties as a Lead Local Flood Authority set out in the Flood & Water Management Act 2010.
- 4.2 The Flood & Water Management Act 2010 imposes a duty on the Council as Lead Local Flood Authority to develop, maintain, apply and monitor a strategy for local flood risk management – i.e. the Local Flood Risk Management Strategy which is the subject of this report.
- 4.3 Section 9 of the Flood and Water Management Act 2010 sets out what a Local Flood Risk Management Strategy must specify:
 - (a) the risk management authorities in the authority's area,
 - (b) the flood and coastal erosion risk management functions that may be exercised by those authorities in relation to the area,
 - (c) the objectives for managing local flood risk (including any objectives included in the authority's flood risk management plan prepared in accordance with the Flood Risk Regulations 2009),
 - (d) the measures proposed to achieve those objectives,
 - (e) how and when the measures are expected to be implemented,
 - (f) the costs and benefits of those measures, and how they are to be paid for,
 - (g) the assessment of local flood risk for the purpose of the strategy,
 - (h) how and when the strategy is to be reviewed, and
 - (i) how the strategy contributes to the achievement of wider environmental objectives.
- 4.4 The Local Flood Risk Management Strategy must be consistent with the National Flood and Coastal Erosion Risk Management Strategy in England, published by the Environment Agency, which outlines a national framework for flood and coastal risk management, which aims to balance the needs of communities, the economy and the environment.

- 4.5 A Strategic Environmental Assessment (SEA) and a Habitats Regulations Assessment (HRA) have been prepared and are annexed to this report. These documents have analysed the environmental impact of the measures and actions outlined in the Local Flood Risk Management Strategy. Both the SEA and the HRA have been reviewed by the Council's Ecology team and Natural England.
- 4.6 The Strategic nature of the Local Flood Risk Management Strategy is such that no specific practical projects have been identified in environment or habitat sensitive areas. The SEA and HRA do however make it clear that any subsequent on-the-ground works, as a consequence of Strategy actions, will need to be screened for environmental or habitat impact.
- 4.7 The Local Flood Risk Management Strategy supports the following statutory considerations:
- Sustainability – the Strategy promotes the use of sustainable drainage systems for new developments
 - Planning Act 2008 and National Planning Policy Framework – the Strategy supports the requirement that new development should not increase flood risk
- 4.8 The Local Flood Risk Management Strategy supports the following policies within the Council's Core Strategy:
- CP5 Flood Risk Management
 - CP7 Green Infrastructure

5 THE REPORT

- 5.1 Cabinet members are asked to review the Local Flood Risk Management Strategy annexed, which sets out, amongst other things, the legislative requirements for the Lead Local Flood Authority under the Flood and Water Management Act 2010 and the Lead Local Flood Authority's Objectives and Strategic Actions.
- 5.2 The Local Flood Risk Management Strategy has been informed by an area wide Surface Water Management Plan. The Surface Water Management Plan has analysed incidents of local flooding between 2009 and 2014. This information has been used to help identify locations at risk of local sources of flooding and produce appropriate actions for these areas. These actions are then incorporated into the Local Flood Risk Management Strategy (and combined with others).
- 5.3 The Local Flood Risk Management Strategy has been developed in cooperation with other Risk Management Authorities, relevant Council departments and neighbouring local authorities, and has included specific workshops with key stakeholders (other organisations and community groups) – see Consultation (below) for more details.
- 5.4 The Local Flood Risk Management Strategy presented to this Cabinet has been developed in conjunction with technical consultants and is based on best practice and is consistent with the National Flood and Coastal Erosion Risk Management Strategy in England.

- 5.5 The draft Local Flood Risk Management Strategy was subject to an eight week public consultation. Results from the Consultation concluded that more than 80% of respondents either agreed with the Objectives or thought they could be slightly rephrased. 86% of respondents agreed with the Actions set out in the strategic action plan.
- 5.6 All feedback from the Consultation has been carefully considered and where appropriate the Strategy has been edited to accommodate suggestions.

Also attached to this report is:

- a summary of the Local Flood Risk Management Strategy
- a document showing what has changed following the consultation on the draft Local Flood Risk Management Strategy
- the Bath and North East Somerset Surface Water Management Plan
- the Strategic Environmental Assessment (and non-technical summary); and
- the Habitats Regulations Assessment.

6 RATIONALE

- 6.1 The publication of the Local Flood Risk Management Strategy is a legislative requirement under the Flood and Water Management Act 2010. All 174 Lead Local Flood Authorities are required to produce a Strategy.

7 OTHER OPTIONS CONSIDERED

- 7.1 NONE- It is a legal requirement for the Council as Lead Local Flood Authority to produce a Local Flood Risk Management Strategy

8 CONSULTATION

- 8.1 Informal consultation has taken place between partners and stakeholders through the Strategic Flood Board and Operational Flood Working Group.
- 8.2 A key phase of consultation focused around a stakeholder workshop. This was held on 17th June 2015. A wide range of stakeholders were invited to attend – these are listed in Appendix B of the main Strategy document.
- 8.3 The stakeholder workshop consisted of:
- A briefing on the role of the Council as Lead Local Flood Authority, the background and context for the Local Flood Risk Management Strategy and the Local Flood Risk Management Strategy objectives.
 - A more detailed presentation on the results of the Surface Water Management Plan and how these have been fed into the Local Flood Risk Management Strategy as well as on the Local Flood Risk Management Strategy Action Plan

- A break out session which gave attendees the opportunity to discuss the Local Flood Risk Management Strategy objectives and Action Plan in more detail.
- 8.4 As a result of the workshop a number of changes were made to the draft Local Flood Risk Management Strategy documents.
- 8.5 The formal area-wide public consultation took place over 8 weeks starting on 1st September 2015 through 26th October 2015. The draft Local Flood Risk Management Strategy (and associated documents) was shared with the public giving accurate information, myth-busting and taking the views of partners and residents.
- 8.6 The consultation was primarily web based; using the Council's Consultation Module on the public website. The consultation information was also available in printed format at the Council's libraries and One Stop Shops. Targeted emails to the main stakeholders (including other Risk Management Authorities, transport organisations, heritage and environment organisations, Parish Councils, Local Flood Representatives and community flood groups) was also sent to draw attention to the consultation.
- 8.7 Other channels of engagement included the following:
- A two-page article in the Council's 'Connect' magazine that goes to every home in the area.
 - News releases and feature articles (external media, website, social media) were picked up by all local newspapers.
- 8.8 Feedback was widespread and received from a mixture of organisations and individuals. The final version of the Local Flood Risk Management Strategy incorporates all comments relevant to the remit of a Local Flood Risk Management Strategy as defined in the Flood and Water Management Act 2010.
- 8.9 The table below summarises the main themes arising from the consultation and how the final draft has addressed these themes:

Theme	How this has been addressed
Clarity on the remit of the Local Flood Risk Management Strategy (i.e. why flooding from Main Rivers was not included)	Improvements have been made to the introduction to the Strategy, setting out its remit more clearly.
Flood risk impact of development in Bath (along the Avon corridor) and impact of potential changes to Twerton Gates and Pultney Weir.	A section has been added to talk in general terms about Main River flood risk (which includes the River Avon through Bath) and direct people to the most appropriate organisation (the Environment Agency and their Bristol Avon Catchment Management Plan).
Being clearer about the Council's role in coordinating the various agencies and organisations involved in all forms of flood risk (not just local flood risk)	Sections have been improved to emphasise the Council's role in terms of ensuring that all forms of flood risk are being addressed by the appropriate organisations. This highlights the coordination role of the Council and emphasises the important partnership functions of the Strategic flood Board and Operational Flood Working Group.
The value of heritage in the City of Bath and the area as a whole	The City of Bath World Heritage Management Plan has been referenced, and heritage in general is acknowledged as being important in the Bath and North East Somerset area.

8.10 The Councils Monitoring Officer, section 151 Officer and the Place Strategic Director have had the opportunity to input into this report and have cleared it for publication.

8.11 Please see Appendix B of the main Strategy document for full details of the stakeholder engagement and consultation method used for the production of the Local Flood Risk Management Strategy.

9 RISK MANAGEMENT

9.1 A risk assessment related to the issue and recommendations has been undertaken, in compliance with the Council's decision making risk management guidance.

10 EQUALITIES

10.1 Consideration has been given to the public sector equality duty under the Equality Act 2010 in the preparation of the Local Flood Risk Management Strategy and no adverse or significant issues have been identified.

11 HUMAN RIGHTS

- 11.1 The Local Flood Risk Management Strategy is a strategic document the adoption of which is unlikely to have any direct interference with any individual's human rights. The Council is under a legal duty to prepare and maintain the Local Flood Risk Management Strategy.

Contact person	<i>Jim Collings, Flood Authority Manager</i> <i>Telephone: 01225 394366</i> <i>Email: jim_collings@bathnes.gov.uk</i>
Background papers	
Please contact the report author if you need to access this report in an alternative format	

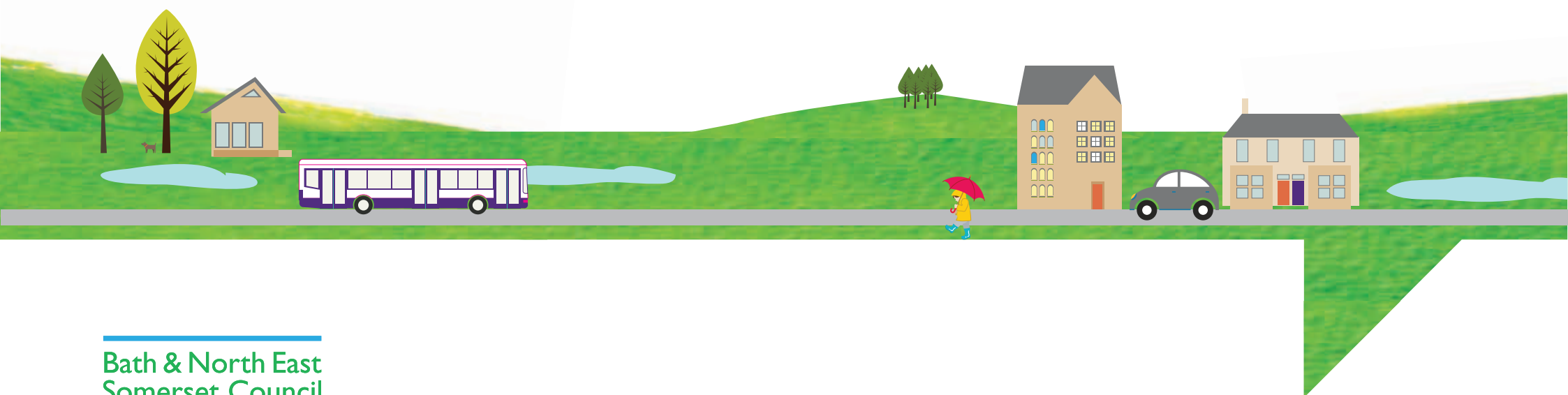
A ten year plan for the management of flooding from local sources

Bath & North East Somerset's
Local Flood Risk Management Strategy

2015 – 2025

Issue 1.1

Page 127



Prepared by



Burderop Park
Swindon
SN4 0QD

Document Status

Title: Bath & North East Somerset Council’s Local Flood Risk Management Strategy

Date: November 2015

Owner: Bath & North East Somerset Council Lead Local Flood Authority (Drainage and Flooding Team)

Version: 4.0

Revision History

Revision No.	Description	Date	Signed
1.0	Early Draft for comments from Bath & North East Somerset Council	5th March 2015	Alistair Cotton (CH2M)
2.0	Draft for further comments from Bath & North East Somerset Council	20th May 2015	Alistair Cotton (CH2M)
3.0	Final Draft for Bath & North East Somerset Council	10th Aug 2015	Alistair Cotton (CH2M)
4.0	Final Document following Public Consultation	12th Nov 2015	Alistair Cotton (CH2M)

Authors

Jemma Bennett (CH2M)

Alistair Cotton (CH2M)

Jim Collings (Bath & North East Somerset Council)

Jim McEwen (Bath & North East Somerset Council)

Daniel Parr (Bath & North East Somerset Council)

Simon Morrisey (Bath & North East Somerset Council)

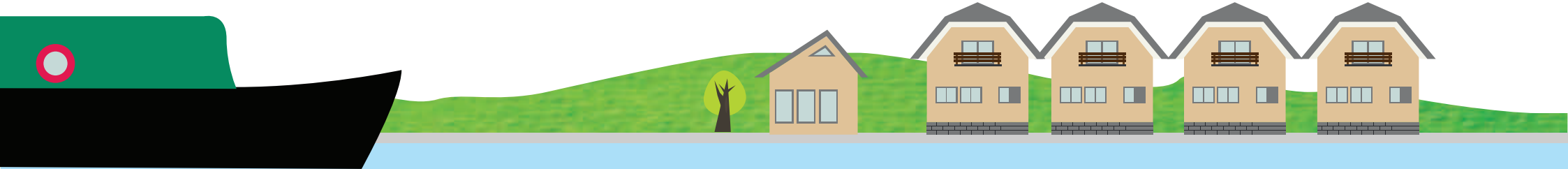
Stella Davies (formerly Bath & North East Somerset Council)

Approvals

Produced by: Jemma Bennett (CH2M)

Checked by: Alistair Cotton (CH2M)

Approved by: Alistair Cotton (CH2M)

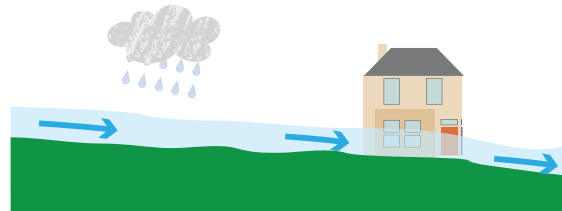


Local Flooding

The summary below outlines what is classified as *local* flooding.

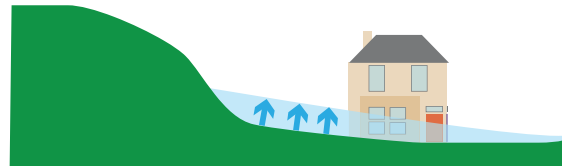
Local flooding includes:

Surface water flooding



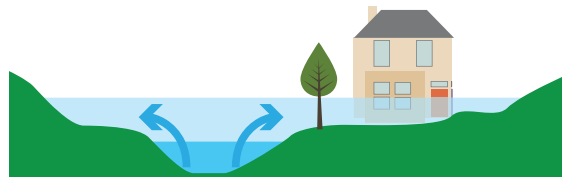
Surface water flooding (also referred to as pluvial flooding or flash flooding), is rainwater, snow and other precipitation which runs across the surface of the ground and pools in low lying areas. To be classed as surface water flooding it must not have entered a watercourse, drainage system or public sewer. This type of flooding often occurs quickly during, or shortly after, a high intensity storm.

Groundwater flooding

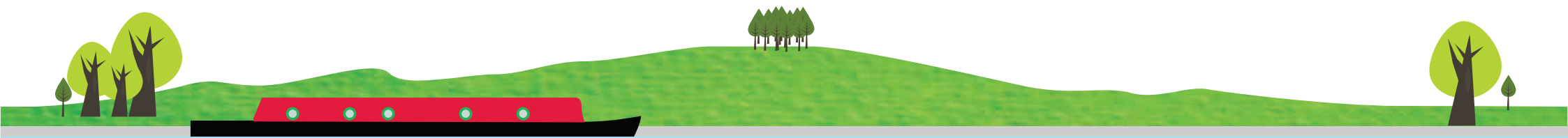


Groundwater flooding occurs where the water levels in rock and soil become high enough for the water to appear near to or above the ground surface. This may happen, for example, where there are underlying gravels, or porous or fractured rocks, allowing water to pass through. Flooding from natural springs would be classed as a form of groundwater flooding. Slow response means that groundwater flooding can occur a long time after prolonged or heavy rainfall and can last for a long time (often several weeks or months).

Ordinary Watercourse flooding



Ordinary watercourse flooding, also referred to as fluvial flooding, occurs when water overtops the banks of a stream or smaller watercourse. This can occur because there is more water draining into the channel than it can hold, or because it is blocked. Flooding from Main Rivers, (as defined by the Environment Agency) is not classed as 'local' flooding.



Foreword



Flooding results in significant impacts to local communities, businesses, the economy and our environment. It causes damage to property and infrastructure, and results in significant stress and disruption to people.

Flooding in Bath & North East Somerset occurs from rivers, surface water runoff, groundwater and drainage networks (e.g. sewers and highway drainage). No one organisation has responsibility to manage flood risk from all of these sources. Therefore, it is vital the Council, as a Lead Local Flood Authority, works with others to fulfil its responsibilities and manage flood risk for communities, businesses and the environment.

The Flood and Water Management Act (2010) gave Bath & North East Somerset Council, along with other local authorities across England and Wales, responsibility to manage flood risk from:

- surface water runoff;
- groundwater, and;
- Ordinary Watercourses.

Flood risk from these sources is known as 'local flood risk' in the legislation.

This Local Flood Risk Management Strategy has been developed in collaboration with the Strategic Flood Board, which includes representatives from Bath & North East Somerset Council, the Environment Agency, Wessex Water, Bristol Water and the Canal & River Trust.

Bath & North East Somerset Council in its role as Lead Local Flood Authority has also set up an Operational Flood Working Group, which discusses specific flooding or drainage issues with a view to developing practical measures to improve drainage or reduce flood risk. The importance of working with local communities is also recognised, and this will primarily be achieved through Local Flood Representatives who act as a point of contact between local communities and Bath & North East Somerset Council's Drainage & Flooding team (who undertake most of the roles and responsibilities of the Lead Local Flood Authority).

We must all recognise that flooding cannot be completely prevented, but its impacts can be reduced and managed through investment and good planning. This Local Flood Risk Management Strategy represents the first step in ensuring we have a sound and deliverable strategy to manage local flood risk over the next ten years.

Yours Sincerely,

Councilor Liz Richardson

(Chair of the Bath & North East Somerset Strategic Flood Board).



Glossary

Please refer to Appendix F at the back of this document.



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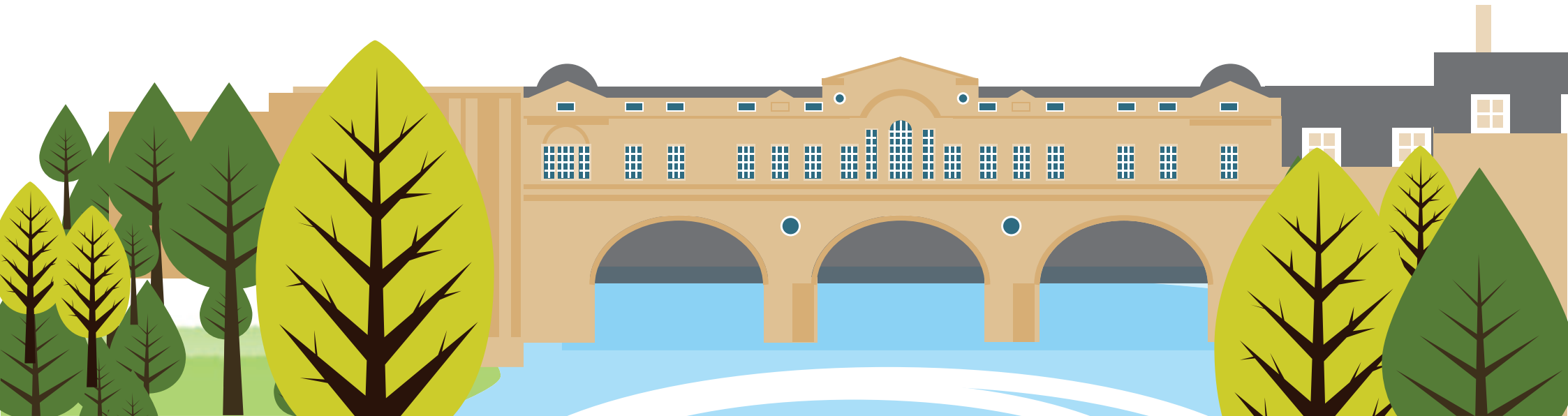
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Section 1

Introduction



1.1 Context of the Local Flood Risk Management Strategy

Bath & North East Somerset covers an area of approximately 350 km², and two thirds of the study area is designated as a green belt. The largest urbanised areas within Bath & North East Somerset are Bath, Keynsham, Midsomer Norton and Radstock, and there are numerous historical villages and hamlets spread across 48 rural parishes which accommodate a substantial rural population.

Flooding is an important issue which affects individuals, businesses and communities, and can occur from rivers, surface water runoff, groundwater, reservoirs, canals and drainage networks (e.g. sewers and highway drainage). A Bath & North East Somerset regional Surface Water Management Plan was prepared in 2015 and identified that Bath, Keynsham, Whitchurch, Chew Magna, Chew Stoke, West Harptree, Midsomer Norton and Radstock are the locations in Bath & North East Somerset which have suffered the most flooding. This has affected people, property, critical infrastructure and key transport routes.

Until recently there has been limited understanding about who is responsible for different types of flooding and what can be done to reduce the risks. Responsibilities have been clarified in recent policy and legislation changes. However, it is sometimes difficult to distinguish against different types of flooding and it is therefore important that all organisations involved in managing flooding work in partnership to understand the causes of flooding and what can be done to manage it. This document sets the strategy for ensuring this is achieved.

1.2 The role of the Local Flood Risk Management Strategy

To improve the organisation of flood risk management in England, new legislation was passed in 2010 called the Flood and Water Management Act (2010). Under the Flood and Water Management Act (2010) Bath & North East Somerset Council is now a Lead Local Flood Authority¹

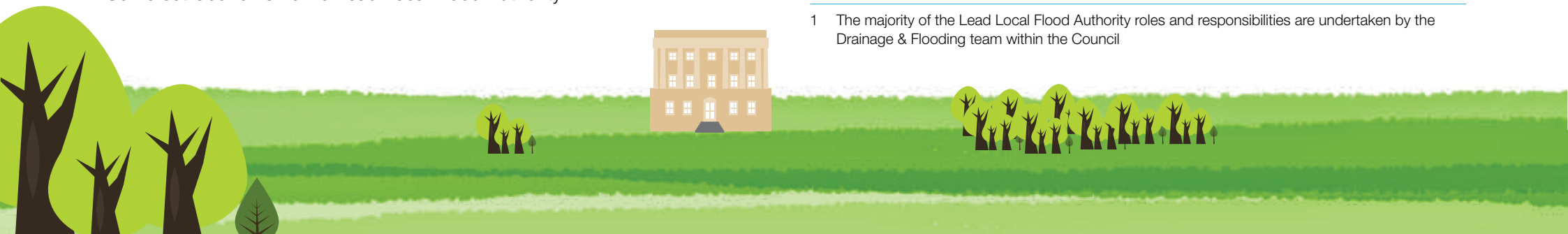
This means the Council has a coordinating role for flood risk management across Bath and North East Somerset. The Council, as Lead Local Flood Authority, will work within the legislative framework to identify the appropriate organisation to take a lead in any given location, working in partnership with other organisations as necessary. This will increase accountability to the public.

In our operational role the Council will take responsibility for working with communities and implementing measures on the ground to reduce flood risk from surface water, Ordinary Watercourses and groundwater. This will be done in partnership with organisations that have a responsibility for managing flooding and local communities. We will undertake this on a prioritised basis, with areas at greatest flood risk from surface water, Ordinary Watercourses and groundwater remaining our highest priority.

Under the Flood and Water Management Act (2010) one of the statutory requirements was for each Lead Local Flood Authority to develop, maintain, apply and monitor a Local Flood Risk Management Strategy. The Local Flood Risk Management Strategy must:

- communicate the roles and responsibilities of the various Risk Management Authorities in Bath & North East Somerset (see Section 3 and Appendix C);
- identify 'locally significant' flood risk which are the priority risk areas (see the Bath & North East Somerset regional Surface Water Management Plan and Section 4);
- set objectives for managing 'locally significant' flood risk (see Section 2);
- outline measures to achieve the objectives set above (see Section 5);
- identify costs and benefits of the proposed measures, and how they will be paid for (see Section 6 and Appendix E);
- communicate how the Local Flood Risk Management Strategy contributes

¹ The majority of the Lead Local Flood Authority roles and responsibilities are undertaken by the Drainage & Flooding team within the Council



to wider environmental objectives (refer to the accompanying Strategic Environmental Assessment), and;

- provide information on the review process for the Local Flood Risk Management Strategy (see Section 7.3).

The purpose of the Local Flood Risk Management Strategy is to help inform the Council, partners and communities about local flood risk, where it is most significant, how it can be managed, and who is responsible for doing so. The overall goal of the strategy is to help reduce risk to homes and businesses, which will include buildings and areas with significant heritage value.

The strategy sets out the objectives for doing this, and identifies the key actions we will take as the Lead Local Flood Authority, in partnership with other Risk Management Authorities, to manage local flood risk. Flooding cannot be completely prevented, though its impacts can be reduced and managed through investment, education and good planning. Therefore, through the Local Flood Risk Management Strategy there is also a need to manage the expectations of partners and communities to achieve better local flood risk management that benefits communities in Bath & North East Somerset, and establish new policies that will help minimise the impact of flooding.

1.3 Who is the Strategy aimed at?

The Local Flood Risk Management Strategy is aimed at a wide range of partners and stakeholders, as each has an important role to play in managing local flood risks in the Bath & North East Somerset area. These include:

- communities, parish councils, flood action groups, and individuals;
- businesses;
- voluntary groups;

- developers and their consultants;
- Risk Management Authorities (see section 3.2);
- members of the Strategic Flood Board;
- members of the Operational Flood Working Group, and;
- the West of England Flood Risk Managers Group.

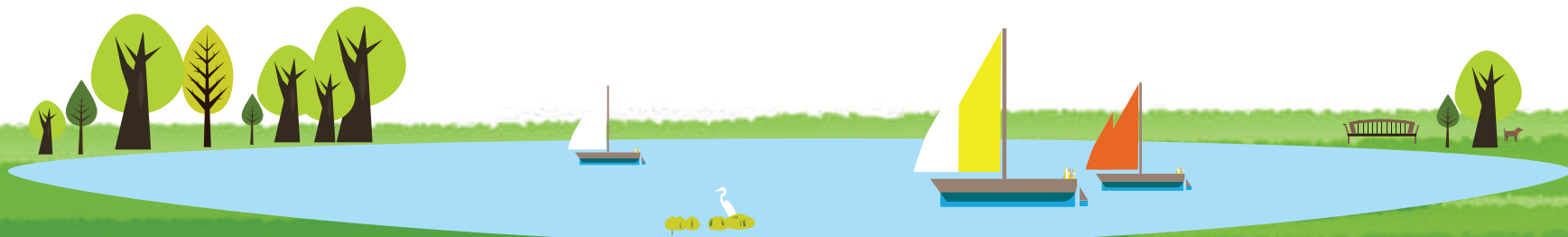
Further details on members within these groups are included in the Glossary in Appendix F.

1.4 What types of flooding are covered by the Strategy

In line with the Council's statutory responsibilities as a Lead Local Flood Authority, the focus of the Local Flood Risk Management Strategy is on flood risk from surface water, groundwater or Ordinary Watercourses, which we are now directly responsible for managing, and termed 'local' sources under the legislation.

The Local Flood Risk Management Strategy does however also consider flood risk in line with our coordinating responsibility. As part of this, it outlines the roles and responsibilities of other Risk Management Authorities who manage other types of flooding within Bath & North East Somerset, and how the Lead Local Flood Authority are working in partnership with these organisations.

More details about roles and responsibilities of Risk Management Authorities are included in Section 3 and Appendix C, and information on local flood risk in Bath & North East Somerset is included in Section 4.



1.4.1 Main Rivers

It is important to outline that the Bath & North East Somerset area includes a number of Main Rivers* including the River Avon, Cam Brook, and the River Chew (as shown in Figure 1.1), which may present a flood risk to people living near to these. The operational management of flood risk from Main Rivers is undertaken by the Environment Agency who have developed plans and projects in partnership with other organisations.

The Environment Agency has created a Bristol Avon Flood Management Plan that includes details about flood risk in the city of Bath and other locations within Bath & North East Somerset. Wherever the Environment Agency develops plans or projects to manage flood risk on Main Rivers, the Council will work with them as appropriate.

1.5 The area covered by the Strategy

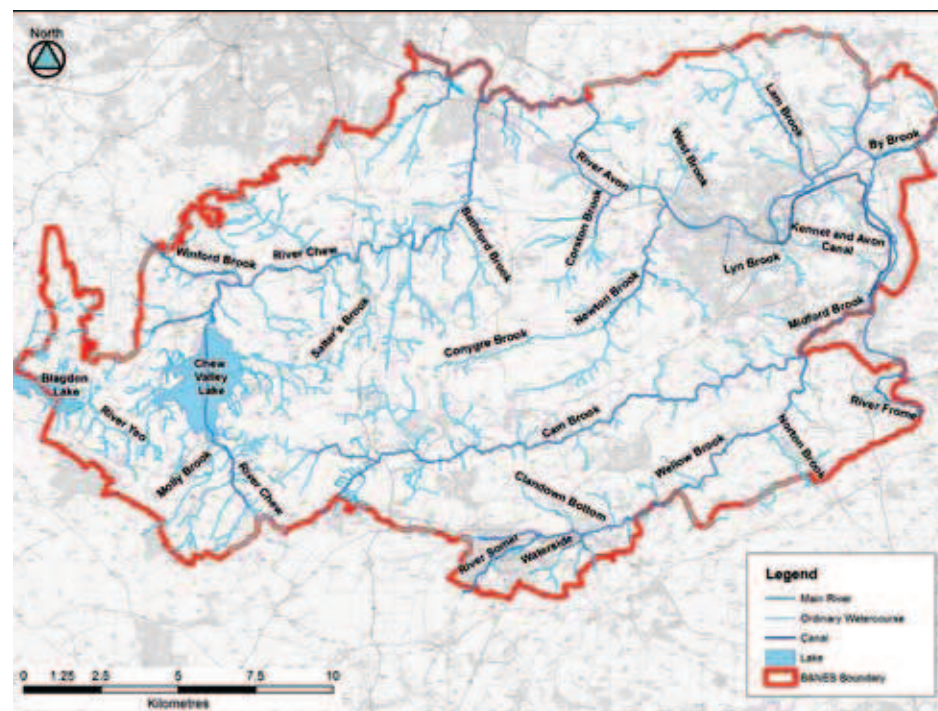
Bath & North East Somerset covers an area of approximately 350 km², and two thirds of the study area is designated as a green belt.

The largest urban areas within Bath & North East Somerset are Bath (a World Heritage site), Keynsham, Midsomer Norton and Radstock, and there are numerous historic towns and villages spread across 48 rural parishes which accommodate a substantial rural population.

This document presents the Local Flood Risk Management Strategy for the whole of the Council's area which is depicted in Figure 1-1.

*A Main River is defined as a watercourse marked as such on the Environment Agency's Main River

Figure 1-1 Geographical extent of Bath & North East Somerset Council (courtesy of JBA Consulting)⁵ area



5 JBA Consulting (2015), Bath & North East Somerset Council Surface Water Management Plan



1.6 Links to other plans, policies and legislation

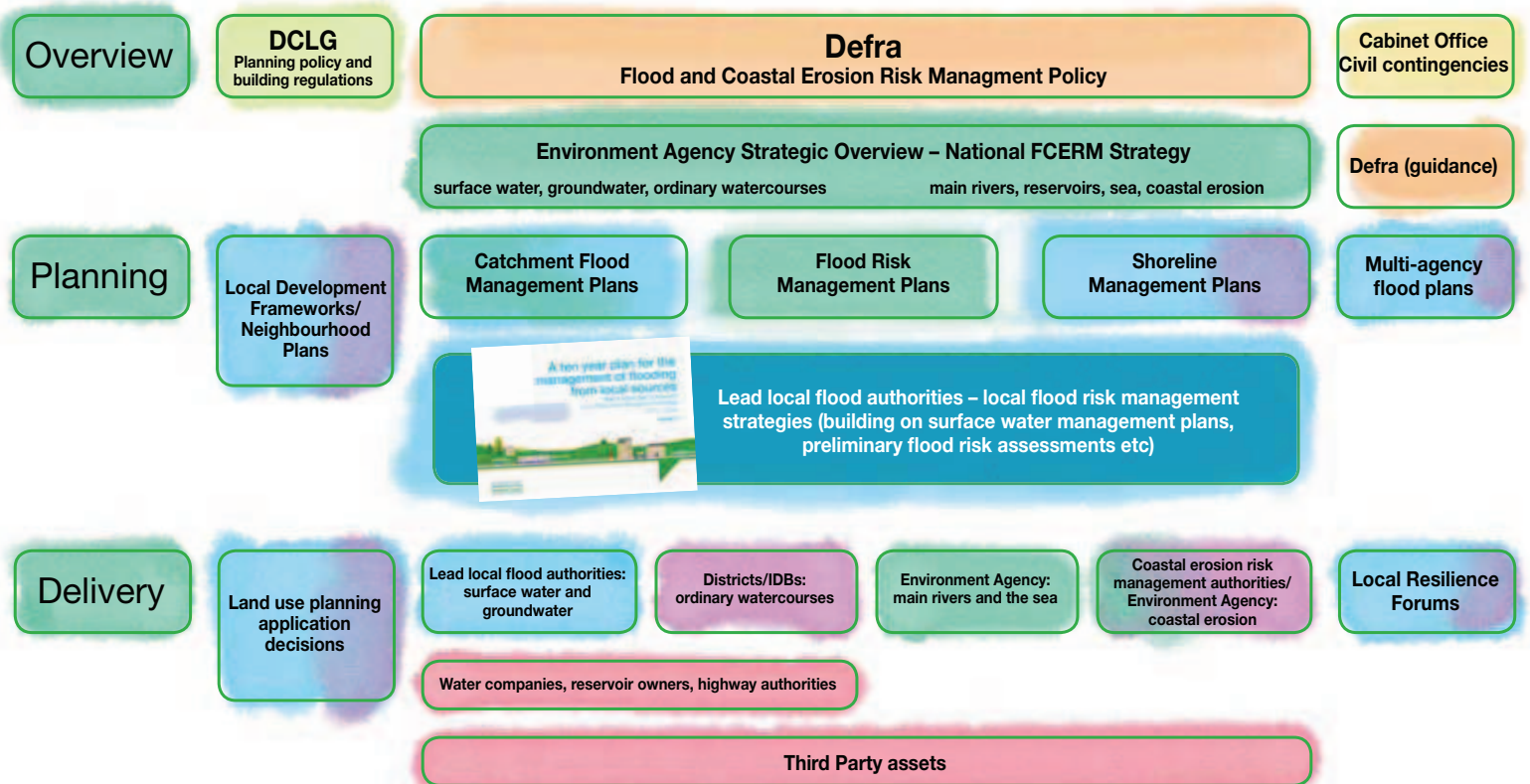
There are a number of additional important flood related documents which have been produced for Bath & North East Somerset such as the Strategic Flood Risk Assessment and Surface Water Management Plan. Figure 1 2 outlines how the Local Flood Risk Management Strategy links with these other flood and coastal erosion risk management strategies and plans.

As a UNESCO World Heritage site, the City of Bath has a World Heritage Site Management Plan (2010- 2016) which works in tandem with this strategy to outline the response to the threat of flooding and ensure the outstanding heritage in this important area is protected.

There are also a number of pieces of legislation, planning documents and policies linked to the management of flood risk which also link to this Local Flood Risk Management Strategy, but again are not included specifically within it to avoid duplication. Details of these are included in Appendix A.



Figure 1-2 How this Strategy fits in with other planning initiatives
(extracted from National Flood and Coastal Erosion Risk Management Strategy)⁶



⁶ The National Flood and Coastal Erosion Risk Management Strategy is available at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/228898/9780108510366.pdf

- Department for Communities and Local Government
- Department for the Environment, Food and Rural Affairs
- Cabinet Office
- Environment Agency
- Lead Local Flood Authorities (county and unitary authorities)
- District Council
- Major infrastructure owners and third parties

1.7 How the Strategy has been prepared

The Local Flood Risk Management Strategy document has been developed by the Council as the Lead Local Flood Authority. To ensure a coordinated approach to flood risk management in the Bath & North East Somerset area, the Strategic Flood Board have been consulted to ensure the Local Flood Risk Management Strategy aims and objectives align with those of other Risk Management Authorities.

A stakeholder workshop has also been undertaken to outline the purpose and function of the Local Flood Risk Management Strategy to a wider audience and gain initial feedback on the objectives and actions explained within this document. Amendments were made to the Strategy following this workshop.

Following this, a period of public consultation was held on the draft Local Flood Risk Management Strategy to gain feedback on whether the strategy was considered to be effective and suitable for the whole of the Bath & North East Somerset area. The Local Flood Risk Management Strategy has been updated based on the comments received.

The full approach for stakeholder engagement is provided in Appendix B.

In addition to the Local Flood Risk Management Strategy itself, given the number of designated sites and cultural heritage interest in the Bath & North East Somerset district, it was felt that a Strategic Environment Assessment Report should be completed to accompany this Local Flood Risk Management Strategy and give consideration to the environmental implications of the objectives included within this strategy.

1.8 How the public will be involved

The public have already had an important role in influencing this document through the public consultation process as outlined above. This has allowed the public and other partners of the Council to have their say on the Local Flood Risk Management Strategy document, its objectives and its action plans.

The public now have an important ongoing role to play in helping reduce the risks from flooding within the region. In addition to being aware of the risks, this includes:

- reporting flooding incidents to the appropriate Risk Management Authority (see Section 3.4.1);
- taking action to reduce flooding to their property or land (see Section 3.4.2);
- cooperating with Risk Management Authorities where appropriate to help improve understanding about the mechanisms of flooding and help develop effective approaches to manage risks, and;
- supporting the management of local risks through good land use practices, maintaining any privately owned flood risk structures or assets, and maintaining watercourses where there are Riparian Owner responsibilities (see Section 3.4.3).





2 Strategy Objectives



It is helpful to describe local flood risk management in Bath & North East Somerset in three phases, which are illustrated in Figure 2-1. The majority of actions arising from the Local Flood Risk Management Strategy are related to managing the risks of local flooding, although there are some actions to support the planning for, warning of, and response to, flooding. The warning and responding to flooding incidents is primarily undertaken by the emergency planning authority⁷ with the support of the emergency services, including Bristol & Avon Fire and Rescue and the Police.

A series of objectives have been defined to help structure and govern the implementation of the Local Flood Risk Management Strategy. These objectives are to:

- **Objective 1:** improve understanding of local flood risk;
- **Objective 2:** promote community awareness and build capability for appropriate action;
- **Objective 3:** manage local flood risk through capital and maintenance investment;
- **Objective 4:** prevent inappropriate development that creates or increases flood risk;
- **Objective 5:** improve flood preparedness, warning and ability to recover.

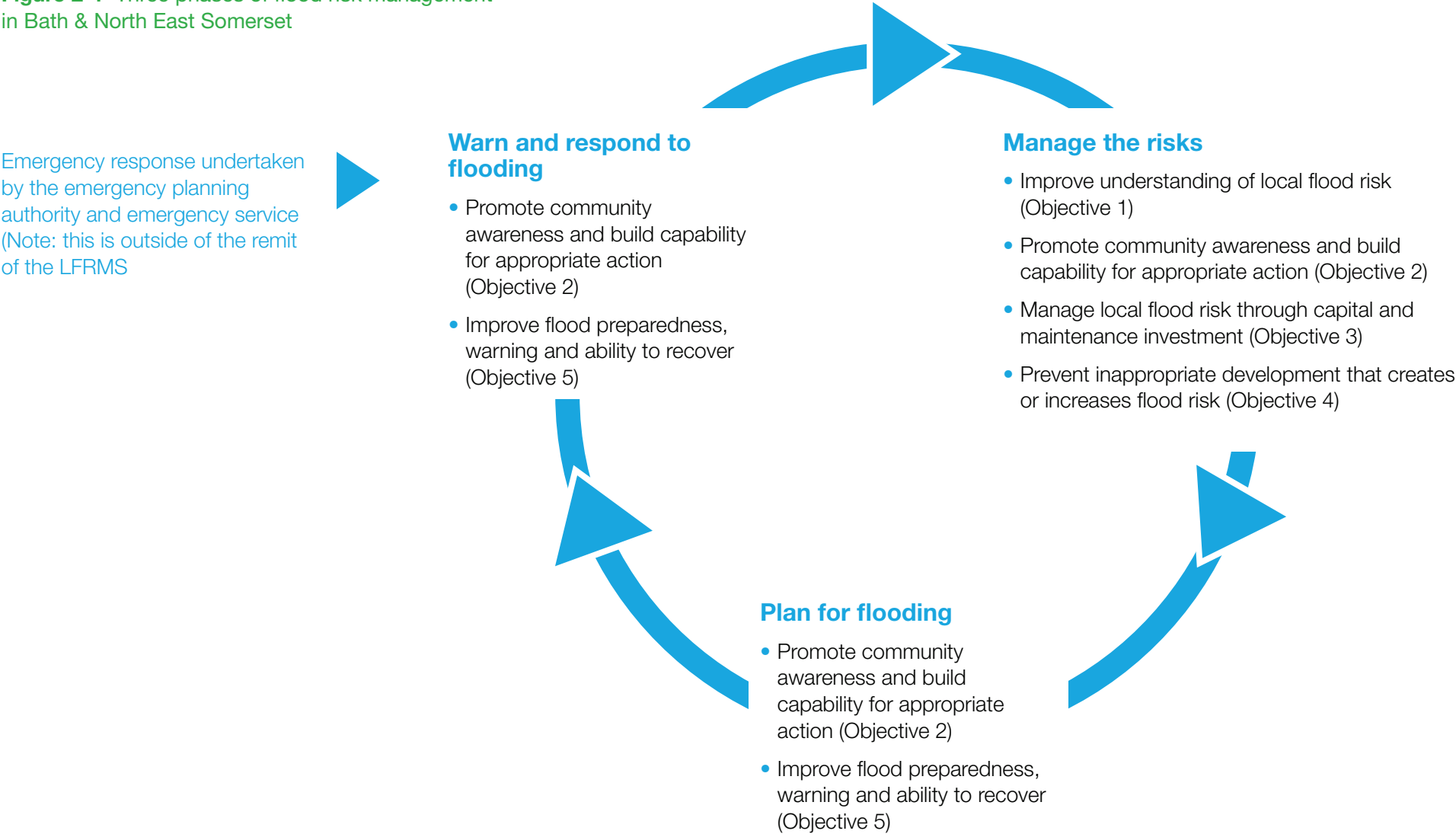
Figure 2-1 identifies how each of these objectives are linked to the three phases of flood risk management. Objective 2 is an over-arching objective which needs to be promoted during all phases of local flood risk management. It is vital that local communities are aware of local flood risks, know how to prepare and respond to flooding, are empowered to take ownership of local flood risk issues, and understand the roles and responsibilities of Risk Management Authorities.

The measures proposed to help achieve these objectives are detailed in the action plan provided in Section 5, and an explanation of the principles of each objective are contained below/overleaf.

⁷ This role is undertaken by the Emergency Planning and Business Continuity department within Bath & North East Somerset Council



Figure 2-1 Three phases of flood risk management in Bath & North East Somerset



Objectives

1

Improve our understanding of local flood risk

To date a lot of work has been done by the Council and partners to improve understanding of flood risk in the Bath & North East Somerset area. This has included recording where and when flooding occurs, and assessments to ensure that new development considers flood risk. For further details refer to the Bath & North East Somerset website at: <http://www.bathnes.gov.uk/services/environment/land-drainage>.

These studies and investigations have partially helped to meet this objective, but there are additional actions outlined within the Strategy Action Plan in Section 5 which the Lead Local Flood Authority has developed as part of the Local Flood Risk Management Strategy. These actions will help improve the understanding of all parties including the Council, communities, businesses, individuals, developers and Risk Management Authorities. They will also help ensure the appropriate party responsible to mitigate risks is identified, and that action is taken by the correct Risk Management Authority.

2

Promote community awareness and build capability for appropriate action

Communities, individuals and businesses have an important role to play in flood risk management, understanding what the risks are, and taking an active role in managing these risks. Further details on this essential role are discussed in Section 3.5. However, as part of the role as the Lead Local Flood Authority there is also a need to help ensure that useful information is provided to all communities of Bath & North East Somerset.

3

Manage local flood risk through capital and maintenance investment

Although the Lead Local Flood Authority has responsibility for taking a leading role in managing local flood risk, it is not possible or appropriate for the Lead Local Flood Authority to try to manage all flood risk in isolation. To ensure that flood risk is managed over the long term the Lead Local Flood Authority will engage with all relevant partners to develop long term, joined up approaches. This may involve other Risk Management Authorities or individuals, communities or developers i.e. anyone who has a shared interest in mitigating specific flood risks. Through our role as the Lead Local Flood Authority we will also prioritise our resources based on our improved understanding of where the risks are greatest.



4

Prevent inappropriate development that creates or increases flood risk

The Council holds roles as both the Local Planning Authority and Lead Local Flood Authority, and as such have responsibility to ensure that new development properly considers drainage and flood risk as part of the planning application stage. In addition, the Lead Local Flood Authority is a statutory consultee on all major planning applications⁹. The Lead Local Flood Authority also offers technical advice on local flood risk and drainage issues in Bath & North East Somerset, and encourage pre-planning discussion to better inform proposed drainage strategies and minimise local flood risk.

To support this the Bath & North East Somerset Placemaking Plan incorporates Sustainable Drainage System policy, and links with the Core Strategy Key Policy CP5 Flood Risk Management and CP7 Green Infrastructure, to ensure that all new sites are expected to incorporate sustainable drainage systems to reduce surface water runoff and minimise its contribution to flooding.

Local guidance in the form of the West of England Sustainable Drainage Developer Guide has also been recently published. This provides standards and guidance for developers, planners, designers and consultants on the requirements for design, approval and adoption of SuDS in the West of England and Somerset. The guidance provides information on the planning, design and delivery of attractive, high quality and well integrated SuDS schemes, promotes the need for early consideration of Sustainable Drainage Systems, and introduces the use of a “proof of concept” process to gain agreement in principle at an early stage from the Local Planning Authority.

As part of the Local Flood Risk Management Strategy a number of actions have been identified to help strengthen the information available and ensure that inappropriate development is prevented. This is described in Section 5.

5

Improve flood preparedness, warning and ability to recover

The removal of all flood risk is not feasible and as such it is important to predict when flooding is likely to occur, warn people when there is a risk to themselves or their properties, and thereafter help people to recover from the adverse effects of flooding.

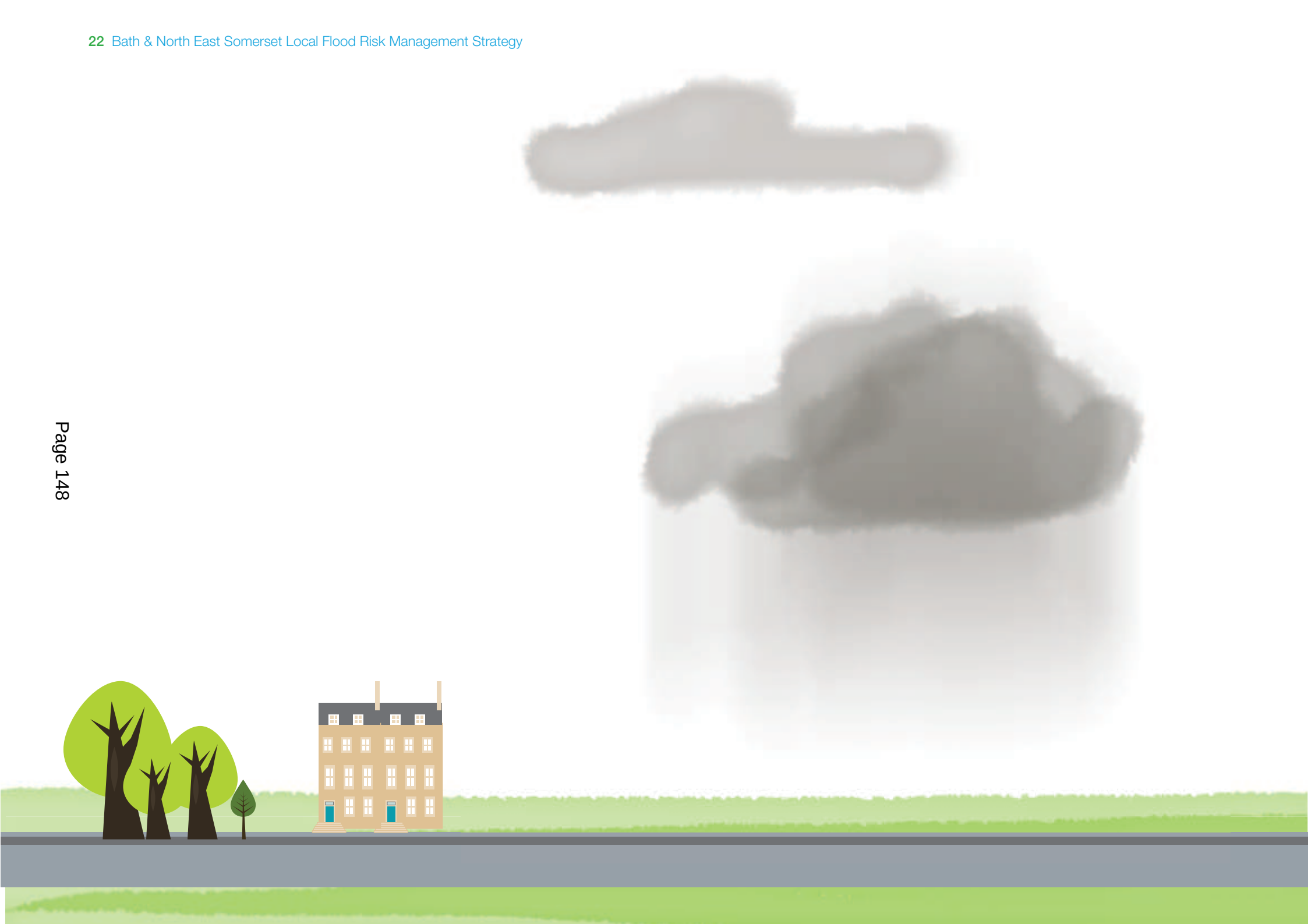
The Council is already responsible for planning and responding to flood emergencies as a Category 1 responder under the Civil Contingencies Act 2004, and works closely with the Bristol & Avon Fire and Rescue Service¹⁰, the Police Service and the Environment Agency to do this.

As part of the Local Flood Risk Management Strategy the Lead Local Flood Authority has developed a number of actions to ensure there is improved awareness about flood warnings and how to recover following a flood event. This is outlined further in Section 5.

⁹ Major development is defined in Article 2(1) of the Town and Country Planning (Development Management Procedure) (England) Order 2010, http://www.legislation.gov.uk/uksi/2010/2184/pdfs/ukxi_20102184_en.pdf

¹⁰ The Fire and Rescue Service are not a Risk Management Authority and do not have any specific mandated responsibilities around flood emergencies. However, as part of the service they offer, they are often involved.





Section 3

Roles and Responsibilities



3.1 Partnership Working

The Lead Local Flood Authority has established a number of working groups which enable partnership working with other organisations and Risk Management Authorities (see figure 3-1 and Section 3.2).

The Strategic Flood Board

The Strategic Flood Board facilitates partnership working for flood risk management in the Bath & North East Somerset area. It includes representatives from Bath & North East Somerset Council, the Environment Agency, Wessex Water, Canal & River Trust, Bristol Water, Avon Fire and Rescue, and Avon and Somerset Police.

The Operational Flood Working Group

The purpose of the Operational Flood Working Group is to discuss and agree ways to manage local flood risk. The Operational Flood Working Group will discuss specific flooding or drainage issues with a view to coming up with practical measures to improve drainage or reduce flood risk. The group consists of technical officers from the Council's Drainage and Flooding team, the Environment Agency and Wessex Water, as well as other invited Council officers and Local Flood Representatives as required.

Local Flood Representatives

Local Flood Representatives are individuals nominated by their local community to act as a direct point of contact between the community and Bath and North East Somerset Council.

They provide first hand information on drainage and flooding issues that affect the community and relate these to the Council's Drainage and Flooding Team who can then escalate information to the Operational Flood Working Group.

If you are interested in becoming a Local Flood Representative for your area please contact your Parish Council or the Council's Drainage and Flooding Team (email: drainage&flooding@bathnes.org.uk).

Regional groups

The Lead Local Flood Authority also attend meetings with the South West Flood Risk Managers and West of England Flood Risk Working Groups, which aids communication with other Lead Local Flood Authorities in the South West of England.

The established lines of communication between the various groups is shown in Figure 3-1.

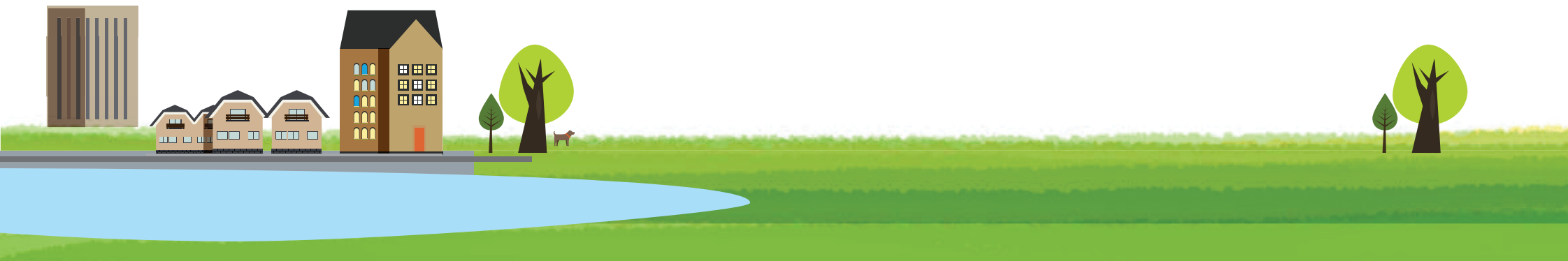
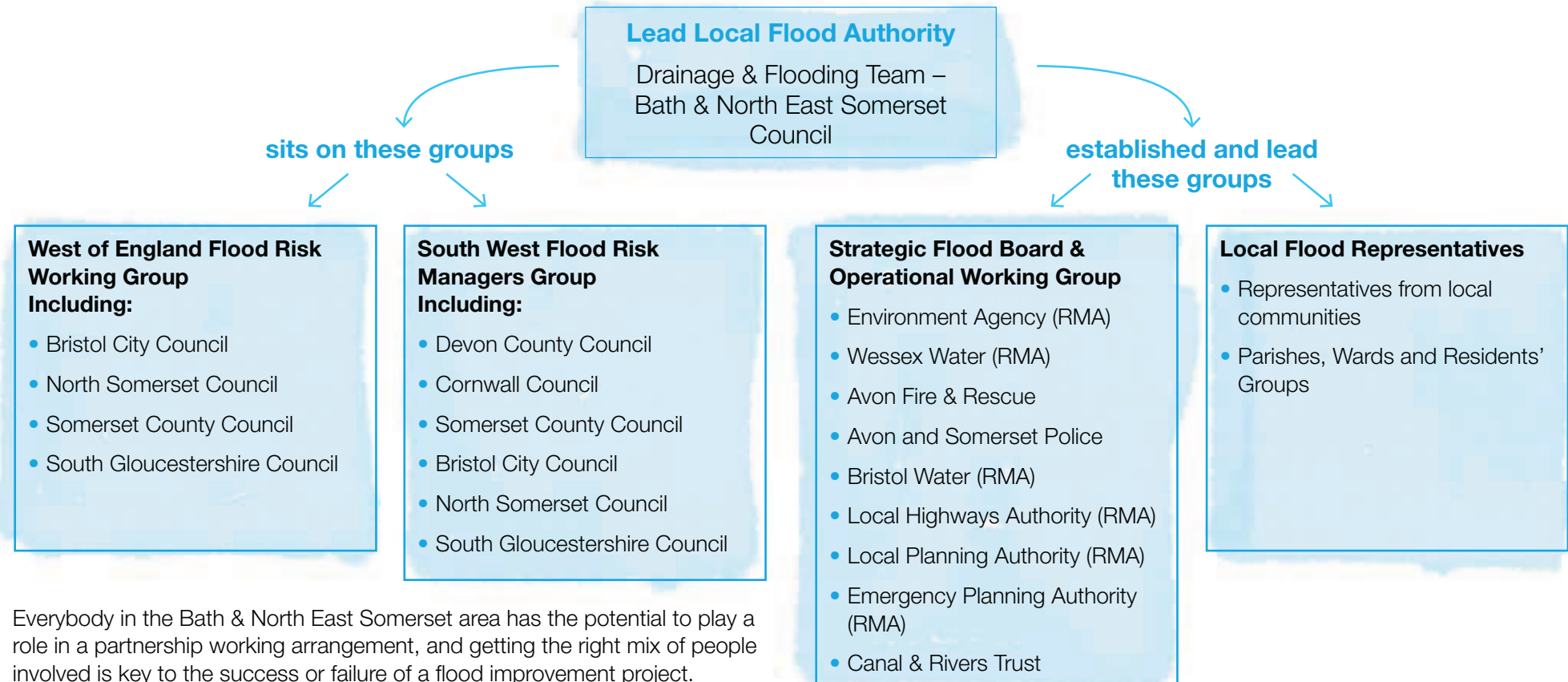
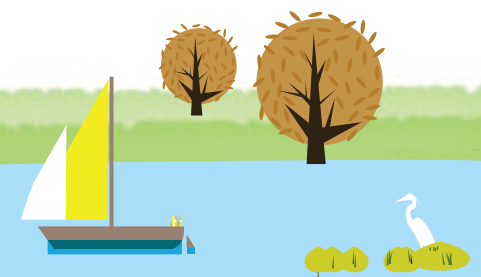


Figure 3-1 Showing how Bath & North East Somerset Council as the Lead Local Flood Authority communicate with other partners who have roles and responsibilities for flood risk management. Risk Management Authorities have been defined in this diagram with (RMA) assigned next to their organisations title.



Everybody in the Bath & North East Somerset area has the potential to play a role in a partnership working arrangement, and getting the right mix of people involved is key to the success or failure of a flood improvement project. The Lead Local Flood Authority will facilitate the development of further partnership working where required, and when resources allow.



3.2 Who are the Risk Management Authorities?

Certain organisations were defined in the Flood and Water Management Act (2010) as Risk Management Authorities and given specific responsibilities around flooding. This includes both new responsibilities from the Flood and Water Management Act (2010), and longstanding ones from previous legislation such as the Highways Act (1980), and the Land Drainage Act (1991).

Within the Bath & North East Somerset region Risk Management Authorities include:

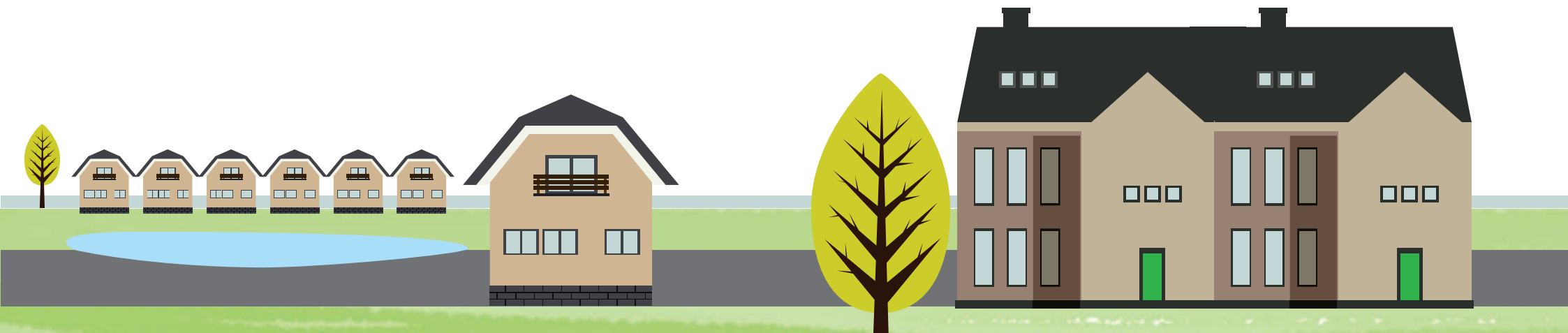
- Bath & North East Somerset Council;
- the Environment Agency;
- Highways England;
- Bristol Water; and
- Wessex Water.

Table 3-1 provides an overview of these Risk Management Authorities and their responsibilities for managing flood risk within the region.

Table 3-1 Overview of responsibility for flood risk management within Bath & North East Somerset

Flood Source	Responsible Risk Management Authority				
	Environment Agency	Bath & North East Somerset Council	Bristol Water	Wessex Water	Highways England
Main River	✓				
The Sea	✓				
Surface Water		✓			
Surface Water (on or coming from the highway)		✓			✓
Sewer Flooding				✓	
Ordinary Watercourse		✓			
Ground Water		✓			
Reservoirs	✓		✓		

A summary of the key roles and responsibilities are provided in subsequent sections. Full details of all roles and responsibilities are included in Appendix C.



3.3 Roles of Risk Management Authorities

All of the Risk Management Authorities in Bath & North East Somerset have the following general duties and powers:

- duty to co-operate with other Risk Management Authorities in the exercise of their flood and coastal erosion risk management functions, including sharing flood risk management data;
- duty to have regard for national and local flood and coastal erosion risk management strategies, and;
- power to take on flood and coastal erosion functions from another Risk Management Authorities when agreed by both sides (except those in relation to the function of the Lead Local Flood Authority or the Environment Agency).

The specific roles of each Risk Management Authority are explained in the following sections.

3.3.1 Bath & North East Somerset Council

The main responsibilities of the Council associated with flood risk management are as the:

- Lead Local Flood Authority;
- Local Highways Authority;
- Local Planning Authority, and;
- Emergency Planning Authority.

The Council has an important role to play as the strategic leader for local flood risk management. This includes developing a Local Flood Risk Management Strategy, ensuring all Risk Management Authorities are aware of their responsibilities, and co-operate with each other through the Strategic Flood Board and the Operational Flood Working Group. Some of our functions are described below.

As the **Lead Local Flood Authority** the Council is responsible for:

- development, maintenance, application and monitoring of the Bath & North East Somerset Local Flood Risk Management Strategy;
- recording flood incidents, investigating and publishing reports on flooding incidents as appropriate¹¹;
- managing an Asset Register of structures or features which have a significant (as defined in this Section 3.4.4) effect on flood risk in the region;
- Ordinary Watercourse consenting and enforcement;
- designation of assets (structures and features) that affect flooding, and;
- statutory consultee for major planning applications with surface water implications.

As the **Local Highways Authority** the Council is responsible for:

- maintaining adopted highways within the Bath & North East Somerset area,
- ensuring highways are not dangerous for traffic.

As the **Local Planning Authority** the Council is responsible for:

- preparing a Local Plan for development;
- considering flood risk assessments submitted in support of applications;
- determination of planning applications, giving consideration for flood risk within the region, and;
- working closely with the Lead Local Flood Authority to ensure that planning applications take adequate account of drainage requirements.

¹¹ This section of the Flood and Water Management Act (2010) also includes: Identifying which authorities have relevant flood risk management functions to deal with flooding incidents, and what they have done or intend to do to ensure future risks are reduced.



As the **Emergency Planning Authority** the Council has responsibility for:

- planning for and responding to flood emergencies as a Category 1 responder under the Civil Contingencies Act 2004, and;
- working closely with the Bristol & Avon Fire and Rescue Service¹² and the Police Service to do this.

3.3.2 The Environment Agency

The Environment Agency is required to publish a National Flood and Coastal Erosion Risk Management Strategy which provides a national framework for all sources of flooding and coastal erosion. Similar to the Local Flood Risk Management Strategy, it defines roles and responsibilities, and sets out some guiding principles for flood risk management. The Bath & North East Somerset Local Flood Risk Management Strategy must be consistent with this national strategy.

The Environment Agency is also responsible for:

- having a strategic overview of flood risk from all sources;
- managing flood risk from Main Rivers through preparation of plans and policies (e.g. Catchment Flood Management Plans and Flood Risk Management Plans), and delivery of flood risk management schemes;
- managing coastal erosion, but as Bath & North East Somerset does not contain any stretches of coastline this is not relevant for the management of flood risks in Bath & North Somerset;
- providing flood warnings to the public, protecting and improving the environment, and promoting sustainable development;
- flood defence consenting;

¹² The Fire and Rescue Service are not a Risk Management Authority and do not have any specific mandated responsibilities around flood emergencies. However, as part of the service they offer, they are often involved.

- carrying out flood defence works on Main Rivers, but the overall responsibility for maintenance lies with the Riparian Owner¹³;
- bringing forward flood defence schemes through the Regional Flood and Coastal Committees;
- working with Lead Local Flood Authorities and local communities to shape schemes which respond to local priorities;
- establishing and maintaining a register of reservoirs, and making this information available to the public;
- acting as Enforcement Authority for reservoirs under their jurisdiction;
- using their role as the Enforcement Authority for reservoirs under their jurisdiction to enforce the Reservoirs Act 1975 and ensures flood plans are produced for specified reservoirs. It should be noted that responsibility for carrying out work to manage reservoir safety lies with the reservoir owner/operator who should produce the flood plans.

3.3.3 Wessex Water

Wessex Water, as a water and sewerage company, has the following responsibilities related to flood risk management:

- responding to flooding incidents involving their assets;
- producing reports of the flood incidents as deemed necessary under Section 19 of the Flood and Water Management Act (2010);
- undertaking capacity improvements to alleviate sewer flooding problems where it is economically viable to do so, and in accordance with their business plan and performance commitments;
- providing, maintaining and operating public sewers systems and works for the purpose of effectively draining an area including adoption of new systems, and;

¹³ Riparian Owners are those who own land or property next to a river, stream or ditch. https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/403435/LIT_7114.pdf



- have a role to play in integrated catchment management. It should be noted that although a burst water main can also cause a property or road to flood, this is excluded from the definition of flooding in the Flood and Water Management Act (2010).

3.3.4 Bristol Water

Bristol Water are a water supply company only, and as such they do not have any responsibility for sewer flooding. Bristol Water are however responsible for:

- management of water impounding reservoirs, and have interests in;
- managing flooding caused by burst water mains within their area¹⁵, and;
- integrated catchment management.

3.3.5 Highways England (formally the Highways Agency)

Highways England are responsible for:

- managing the quantity and quality of road runoff that is collected within the Highways England network.

3.4 Existing activities

Specific activities the Council is already undertaking to manage local flood risk are outlined below.

3.4.1 Highway drainage maintenance

As outlined in Section 3.3.1 the Local Highways Authority have responsibilities under the Highways Act (1980). This includes ensuring that highway drainage systems are maintained and that blockages on the highway are cleared, where reasonably practicable.

¹⁵ It should be noted that flooding from burst water mains is specifically excluded from the Flood and Water Management Act (2010).

3.4.2 Local Highway Authority emergency response

There is an Emergency Duty Officer available 24 hours a day, 365 days a year, who is responsible for activating key Council staff in an emergency event, advising them of appropriate measures to take.

3.4.3 Ordinary Watercourse maintenance

Regular maintenance works undertaken on Ordinary Watercourses helps ensure the free flow of water in these watercourses. This is necessary to alleviate flooding and to assist land drainage. The Lead Local Flood Authority have identified 37 reaches of Ordinary Watercourses where clearance is required to reduce the risk of property flooding. These reaches are maintained on an annual basis. Furthermore, the Lead Local Flood Authority undertake reactive maintenance works on trash screens to reduce the risk of blockage using permissive powers under the Land Drainage Act (1991).

3.4.4 Maintenance of an asset register

As highlighted in Section 3.3.1, the Lead Local Flood Authority are required to establish and maintain a register of structures and features which are considered to have a significant impact on flood risk, under Section 21 of the Flood and Water Management Act (2010). This register holds a record of information about each of those structures or features, including information about ownership and condition. The flood risk asset register is a live database, and new structures and features are added as information becomes available.

The purpose of the asset register is to:

- inform the public of key flooding assets in their area;
- inform the Bath & North East Somerset Local Flood Risk Management Strategy;
- influence the maintenance regime of the assets, and;



- assist investigations of significant flood events ('significant' being as defined below).

The register is published on the the Council website and can currently be found under the following link: [http://isharemaps.bathnes.gov.uk/myBathNES.aspx?MapSource=BathNES/Lead Local Flood Authority&TAB=maps](http://isharemaps.bathnes.gov.uk/myBathNES.aspx?MapSource=BathNES/Lead%20Local%20Flood%20Authority&TAB=maps).

3.4.5 Emergency planning and response

As highlighted in Section 3.3.1, as the Emergency Planning Authority the Council has a responsibility for planning for and responding to emergencies; including flood emergencies. Guidance about emergency planning in Bath & North East Somerset Council is available on the Council's website at <http://www.bathnes.gov.uk/services/your-council-and-democracy/emergencies/emergency-planning>.

During and after an emergency the Emergency Planning Authority:

- coordinate emergency support within their own functions;
- work with the other Category 1 and 2 responders as part of the multi-agency response;
- coordinate emergency support from the voluntary sector;
- liaise with central and regional government departments;
- liaise with essential service providers;
- open rest centres;
- manage the local transport and traffic networks;
- mobilise trained emergency social workers;
- provide emergency assistance;
- deal with environmental health issues, such as contamination and pollution;

- coordinate the recovery process;
- manage public health issues;
- provide advice and management of public health;
- provide support and advice to individuals, and;
- assist with business continuity.

To support the development of business continuity, the Council have developed an Emergency Planning Protocol which can be found at http://www.bathnes.gov.uk/sites/default/files/emergency_planning_protocol_v10.pdf.

It should be noted that the Emergency Planning Authority will only act in an emergency that threatens serious damage to human welfare, the environment or security, and may not respond immediately as a result of a flood event not considered to meet the criteria laid out in section 1 of Civil Contingencies Act 2004. Further advice on who can help during a flood is available at: <https://www.gov.uk/prepare-for-a-flood/get-help-during-a-flood>. Please also see Section 3.5.1 and 3.5.2 for further details on how to report and prepare for flooding.



3.4.6 Land Drainage Consent

Under Schedule 2 of the Flood and Water Management Act (2010) the Lead Local Flood Authority has a duty to consent works and a power to undertake enforcement on Ordinary Watercourses under changes to the Land Drainage Act 1991 (sections 23, 24 and 25). The duty to consent enables the Lead Local Flood Authority to approve or reject applications for works on Ordinary Watercourses depending on the impact of the proposed works on flood risk. As part of this role the Lead Local Flood Authority review proposals from applicants who intend to carry out works (whether temporary or permanent) that may construct or alter any mill, dam, weir, and any culvert which is likely to affect the water flow on an Ordinary Watercourse.

The reason for this consenting process is to ensure that any works do not endanger life or property by increasing the risk of flooding or cause harm to the water environment.

3.4.7 Investigating flooding

The Lead Local Flood Authority have a duty to record and investigate significant flooding events (regardless of source) under Section 19 of the Flood and Water Management Act (2010). There is no national definition of significant and it is up to the Lead Local Flood Authority to decide what flooding incidents are locally important to them and are worth recording and investigating. Any of the following will trigger an investigation and be classified as significant:

- five or more dwellings at an urban location experience internal flooding;
- two or more dwellings at a rural location experience internal property flooding;
- where the event resulted in a loss of life, or;
- where critical infrastructure (e.g. power station, pump station, electricity supply, critical transport route) was affected by flooding for a significant period of time.

The investigations will identify which Risk Management Authority is responsible for the flood incident. The relevant Risk Management Authority will then be required to prepare a report detailing the cause of flooding, the consequences of the flood event and the actions taken to deal with the event during and after the flooding, in accordance with the requirements of Section 19 of the Flood and Water Management Act (2010). Investigations will involve consultation with the relevant Risk Management Authorities, landowners and private organisations involved, all of whom we will work with to ensure cooperation. These reports will be important tools that will bring all useful information together, providing a better picture and understanding of situations, outlining possible causes of flooding and identifying potential long-term solutions. These reports will also include further recommendations for future flood risk management actions that could be undertaken to address and resolve flooding. Reports will be available to anyone on request within 3 months of an incident being reported to the Lead Local Flood Authority. However, there are cases where this timeframe will be extended (e.g. if widespread flooding occurred across the area).



3.5 Roles of Stakeholders and the Public

As highlighted in Section 1.8, all residents have a role to play in helping to manage flooding. Further details regarding these roles is outlined in Section 3.5.

3.5.1 Reporting Flooding

In a flooding emergency contact the emergency services.

Following a flooding incident, it is important to report flooding to the appropriate organisation to ensure appropriate action can be taken and to help improve understanding on where and when flooding is occurring within the region.

The following sections provide guidance and contact details on who to contact in the Bath & North East Somerset area.

3.5.1.1 Bath & North East Somerset Council

Council Connect, and/or a Local Flood Representative, should be contacted:

- where flooding has led to internal property flooding;
- where there is a maintenance issue with a watercourse that may result in flooding of properties. For instance overgrown vegetation impeding flows, or other restrictions or blockages such as fallen trees or trash that could result in property flooding;
- maintenance issues with watercourse structures that may result in flooding of properties (e.g. blocked culverts or trash screens);
- where there is actual evidence of flooding from an Ordinary Watercourse;
- where surface water runoff from land may be flooding roads or property, or;
- where evidence of groundwater flooding is observed.

Council Connect service:

Online forms:	www.bathnes.gov.uk/reportit
Email:	councilconnect@bathnes.gov.uk
Twitter:	@ccbathnes
Telephone:	01225 39 40 41
Text (SMS):	07797 806 545

The more information that can be provided the better, with photos being particularly useful. Council Connect, or a Local Flood Representative, will then pass the information to the Lead Local Flood Authority for them to consider and escalate as appropriate. Issues may be discussed at an Operational Flood Working Group meeting or passed to the relevant Risk Management Authority.

It should be noted that unless the flooding event is classed by the Emergency Planning Authority as an emergency, it is unlikely that an immediate response will be provided during a flood event. As highlighted in Section 1.8 it is the responsibility of residents to prepare themselves for flooding. Please refer to Section 3.5.2 on further information on how to do this.



3.5.1.2 Wessex Water

If flooding is considered to have occurred as a result of problems with sewers anywhere in Bath & North East Somerset, or from mains water supply in the Bath area, then Wessex Water should be contacted on 0345 600 4 600.

3.5.1.3 Bristol Water

If flooding has resulted from a burst or leak from a mains water supply in Bath & North East Somerset (except for Bath area) then Bristol Water should be contacted on 0800 801 011.

3.5.1.4 Environment Agency

The Environment Agency should be contacted on 0800 80 70 60 to report flooding from Main Rivers or the sea. They also provide other useful advice on who to contact in an event of a flood: <https://www.gov.uk/prepare-for-a-flood/get-help-during-a-flood>.

3.5.2 Preparing for flooding

Even where drainage and flood risk systems are functioning in accordance with their design standards there will always be situations when rainfall exceeds the capacity of these systems and flooding will occur. Consequently it is important that householders and businesses, whose homes are at risk of flooding, take steps to ensure that their house is protected and ensure they do not increase the risk of flooding to others.

The Environment Agency provides information on what to do to prepare a household for flooding and what to do during a flood: <https://www.gov.uk/prepare-for-a-flood>. This includes how to make a flood plan which will help you decide what practical actions to take before and after a flood.

There may be opportunities for support with helping to prepare properties and premises against flooding, but this will be dependent on individual circumstances. Further details on potential financial support is outlined in Section 6 and Appendix D.

3.5.3 Role of property owners next to a watercourse

If a property is adjacent to or backs onto a river, stream or other watercourse then it is likely that the land owner will be the Riparian Owner and as such be held to own the land up to the centre of the watercourse.

Riparian Owners have a right to protect their property from flooding and erosion, but will need to discuss the method of doing this with the Lead Local Flood Authority if the watercourse is an Ordinary Watercourse, or the Environment Agency if the watercourse is classified as a Main River (as outlined in Section 4.4.3). Riparian Owners also have responsibility for maintaining the bed and banks of the watercourse and ensuring there is no obstruction, or diversion to the flow of the watercourse.



If you are a riparian owner there is useful information in the Environment Agency's document 'Living on the Edge' https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/454562/LIT_7114.pdf



3.6 Responsibilities for surface water runoff from neighbouring property and land

All property and land owners are encouraged to adopt good land use practices and adequately maintain their drainage systems to avoid surface water runoff from causing problems for neighboring property and land.

However, under common law, land or property owners are responsible for the drainage of their own land. Higher land owners have the right to make natural discharge to lower ground, but the lower landowner does not have a duty to accept that runoff.

A dispute between neighbours over problems resulting from surface water runoff is a civil matter and the.

3.7 Responsibility for surface water runoff onto the public highway

Drainage of the highways, and maintenance of highway drainage features are the responsibility of the Local Highways Authority.

Under Section 163 of the Highways Act (1980) the Local Highways Authority have powers to issue notice to adjoining occupiers to construct, and thereafter maintain, “channels, gutters or downpipes as may be necessary to prevent:

- water from the roof or any other part of the premises falling upon persons using the highway, or;
- so far as is reasonably practicable, surface water from the premises flowing onto, or over, the footway of the highway.¹⁶

3.8 Who else has a role?

Utility and infrastructure providers such as Network Rail, energy companies and telecommunication companies are not Risk Management Authorities, but have a crucial role to play in flood risk management. Their assets can be important consideration in planning for flooding, and although they already maintain plans for the future development and maintenance of the services they provide, it is important that they factor in flood risk management issues into this planning process.

Utility and infrastructure providers may therefore wish to invest time and resources into developing and delivering aspects of the Local Flood Risk Management Strategy in order to protect their assets and customers.

¹⁶ Highways Act (1980), <http://www.legislation.gov.uk/ukpga/1980/66>



Section 4

Local Flood Risk in Bath & North East Somerset



This section provides an overview of the current, and potential future flood risk in Bath & North East Somerset. It draws primarily on information contained within the Bath & North East Somerset regional Surface Water Management Plan, but also the Preliminary Flood Risk Assessment produced in 2011¹⁷. This section should therefore be read in conjunction with the Surface Water Management Plan available at: <http://www.bathnes.gov.uk/services/environment/land-drainage>.

4.1 What is flood risk?

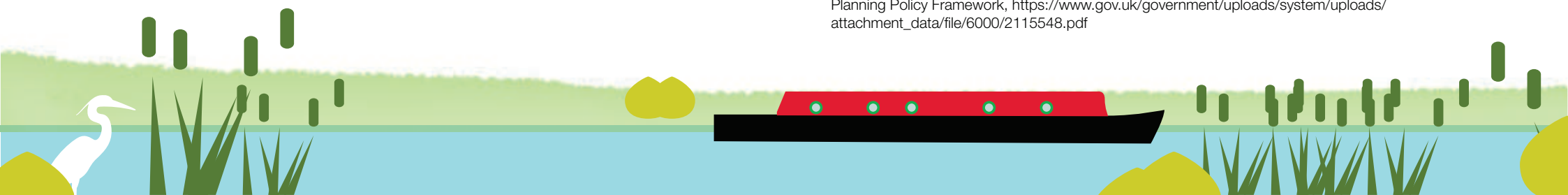
Flood risk is a combination of the probability and consequence of flooding from any, or all, sources. High flood risk can endanger lives, damage buildings and infrastructure, historic structures, archaeology and settlements.

Flood risk means risk from all sources of flooding. This includes from:

- rivers;
- the sea;
- directly from rainfall on the ground surface (surface water runoff);
- rising groundwater;
- overwhelmed sewers and drainage systems;
- from reservoirs;
- canals;
- lakes, or;
- other artificial sources¹⁸.

¹⁷ <http://www.bathnes.gov.uk/sites/default/files/sitedocuments/Planning-and-Building-Control/Planning-Policy/Evidence-Base/Flood-Risk/PreliminaryFloodRiskAssessment.pdf>

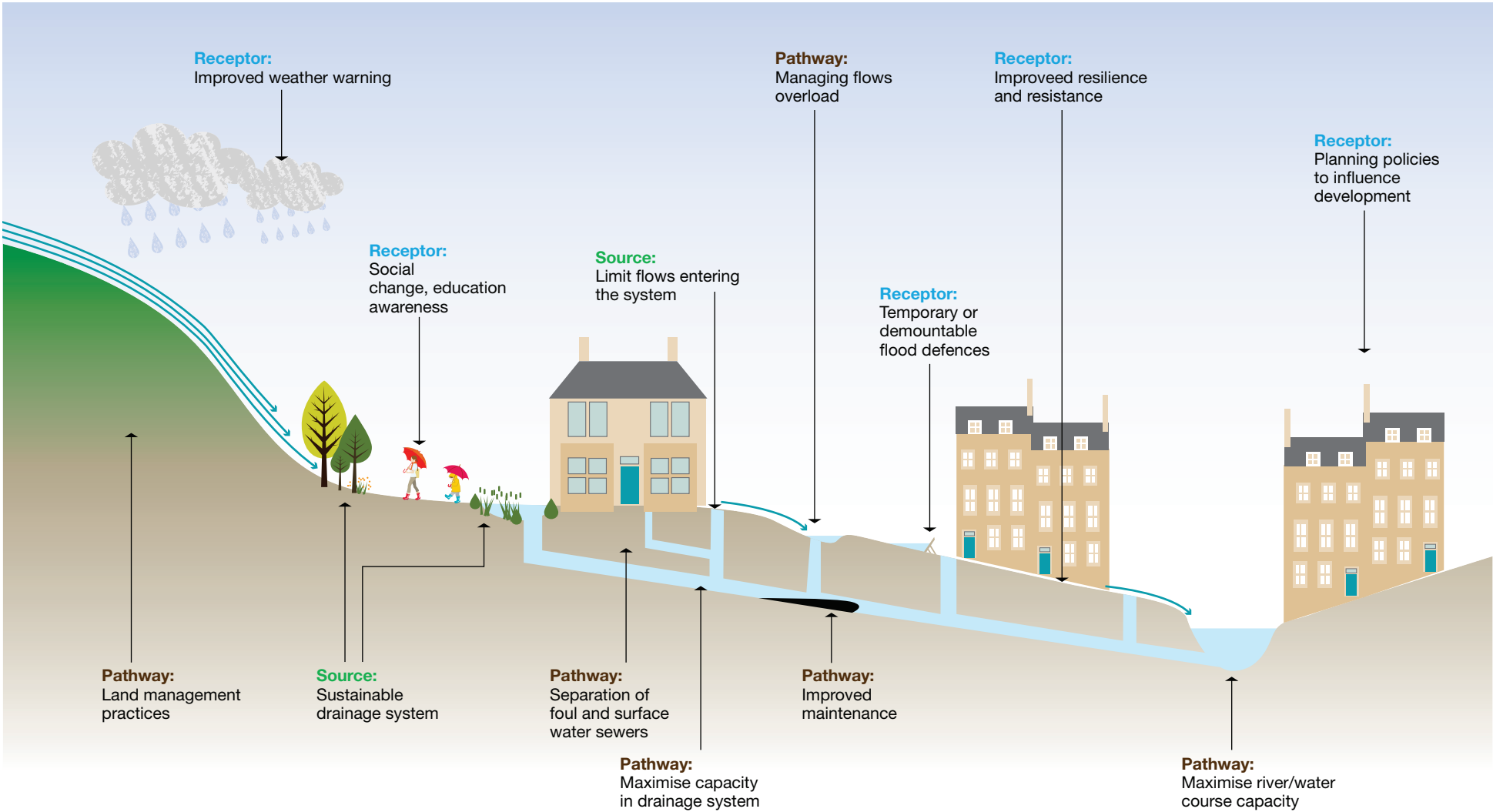
¹⁸ Extracted from: Communities for Local Government (2012), Technical Guidance to the National Planning Policy Framework, https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/6000/2115548.pdf



Flood risk management measures can be broken down into broad themes as detailed below and in figure 4-1

Measure	Description	Typical examples
Investigations	Aim to better understand the cause of flooding to improve the confidence in decision-making.	• studies (e.g. Surface Water Management Plan); • site walkovers; • surveys, or; • drainage and overland modelling studies.
Source control	Source control measures aim to control flood water at their source by increasing storage, reducing the rate of runoff or increasing the volume of water which soaks into the ground. Sustainable drainage systems are often an effective means to implement source control. Sustainable drainage systems encompass a variety of measures such as permeable paving which allows more water to soak into the ground than traditional impermeable road and path surfaces. Other sustainable drainage measures may include introducing ponds and wetlands that can hold flood water, or swales and detention basins which slow the movement of water and reduce the volume of runoff. Source control measures can also integrate with re-use of water through (grey-water recycling or rainwater harvesting).	• introducing sustainable drainage systems / green infrastructure / rainwater harvesting; • improving land management practices, or; • intercepting and diverting pluvial runoff.
Pathway	Pathway measures aim to effectively manage the movement of flood water through both natural and manmade drainage systems. Measures may be structural, for example involving the development of new drainage systems, or separating foul and surface water sewers. They may be non-structural, for example encouraging land management practices which reduce runoff. Maintenance of existing drainage infrastructure is also an important aspect to managing flood risk. It can reduce flood risk with minimal capital investment, freeing up funds for measures elsewhere.	• storage above or below ground; • management of exceedance flows (e.g. re-profiling road); • increasing capacity of urban drainage network (sewer or highway drainage); • increasing capacity of drains/watercourses; • raising/creating flood defences; • removing culverted sections of watercourses and replace with open channels; • enhancing maintenance of gullies / drainage network; • enhancing maintenance of watercourses/culverts, or;
Receptor level	Measures aim to reduce the likelihood and/ or impact of flooding on people, property and environment.	• introducing individual property level protection / resilience measures; • improving flood warning • planning policies to prevent inappropriate development; • raising awareness and education, and; • promoting community level resilience.

Figure 4-1 Flood risk management (Source Control, Pathway, Receptor)



4.2 What is flood risk management?

The ultimate aim of flood risk management is to reduce the likelihood and/or impact of potential flood risks, but there are a number of stages which are needed in order to do this effectively. For example without understanding the cause of flooding properly, the solution to reduce flood risk would not be as effective.

4.3 Records of local flooding in Bath & North East Somerset

One of the purposes of the Bath & North East Somerset regional Surface Water Management Plan was to collate information and map recent and relevant flood incidents within Bath & North East Somerset, to help inform what the local flood risk issues are within the region.

Recorded flooding incidents in the Bath & North East Somerset regional Surface Water Management Plan were based on the information supplied by the partners and stakeholders involved in the management of surface water, Main Rivers, Ordinary Watercourses, groundwater and sewer flooding. This included data from Bath & North East Somerset Council, the Environment Agency, Wessex Water, and the Canal & River Trust.

Based on this, over 990 recorded flood incidents of recent and relevant flooding were recorded in the region between 2009 and 2014. Records of flooding prior to 2009 were removed to prevent any misrepresentation of recorded flood incidents which may now have been actioned. Further details on the methodology used to analyse flooding incidents is detailed in the Bath & North East Somerset regional Surface Water Management Plan report.

These records were used to develop a Flood Incident Register and Interactive Maps of Local Flood Incidents. These outputs are available in the Bath & North East Somerset regional Surface Water Management Plan report. As demonstrated on the Interactive Maps of Local Flood Incidents, flooding occurs across the region, although there are notable clusters of flooding in Bath, Keysham, Whitchurch, Chew Magna, Chew Stoke, West Harptree, Midsomer Norton and Radstock.

4.4 Potential flood risks in Bath & North East Somerset

The information in Sections 4.4.1 to 4.4.6 describe the nature of flood risk in Bath & North East Somerset from a range of sources. Information on local flooding is summarised in Table 4 2.

4.4.1 Flood risk from surface water

Surface water flooding, also referred to as pluvial flooding or flash flooding, is “rainwater, including snow and other precipitation, which is on the surface of the ground and has not entered a watercourse, drainage system or public sewer”.¹⁹ When this happens the water either ponds on the surface or runs over it and this can potentially lead to flooding.

In 2014 the Environment Agency produced the Updated Flood Map for Surface Water to identify areas that were vulnerable to flooding from surface water. The maps have been published online and are currently available at http://watermaps.environment-agency.gov.uk/wiyby/wiyby.aspx?lang=_e&topic=ufm fsw&layer=default&scale=5&x=387426&y=172732#x=387426&y=172732&scale=5. The Bath & North East Somerset regional Surface Water Management Plan was completed in July 2015 using the updated data from the Environment Agency to better understand the risk of flooding from surface water. For this Bath & North East Somerset regional Surface Water Management Plan a count of the number of residential properties, critical infrastructure and emergency service assets at risk of flooding was undertaken, for all of the mapped return periods in the Updated Flood Map for Surface Water, which is shown in Table 4-1.

¹⁹ Extract from: Department for Environment, Food and Rural Affairs and the Environment Agency (2011), Understanding the risks, empowering communities, building resilience: the national flood and coastal erosion risk management strategy for England, https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/228898/9780108510366.pdf



Table 4-1 Estimated number of receptors at risk from surface water flooding (extracted from Bath & North East Somerset regional Surface Water Management Plan)

Probability ²⁰	Residential Properties	Critical Infrastructure	Emergency Responders
High	302	11	0
Medium	737	24	0
Low	3039	77	2

The Lead Local Flood Authority has also completed a number of other studies looking into the effect of surface water flooding within the region. These include the following:

- a Preliminary Flood Risk Assessment;
- Surface Water Assessment for Weston (Bath), and;
- Section 19 flood investigations for Chew Stoke, Chew Magna and Broadmead Lane Industrial Estate (Keynsham).

Further information on these and other studies which have been completed are provided on the Bath & North East Somerset website at <http://www.bathnes.gov.uk/services/environment/land-drainage>.

4.4.2 Flood risk from groundwater

Groundwater flooding occurs where the water levels in the ground becomes high enough for the water to appear above the ground surface. This may happen, for example, where there are underlying gravels, or porous or fractured rocks, allowing water to pass through. Flooding from natural springs would be classed as a form of groundwater flooding.

²⁰ High means that each year, this area has a chance of flooding of greater than 1 in 30 (3.3%). Medium means that each year, this area has a chance of flooding of between 1 in 100 (1%) and 1 in 30 (3.3%). Low means that each year, this area has a chance of flooding of between 1 in 1000 (0.1%) and 1 in 100 (1%).

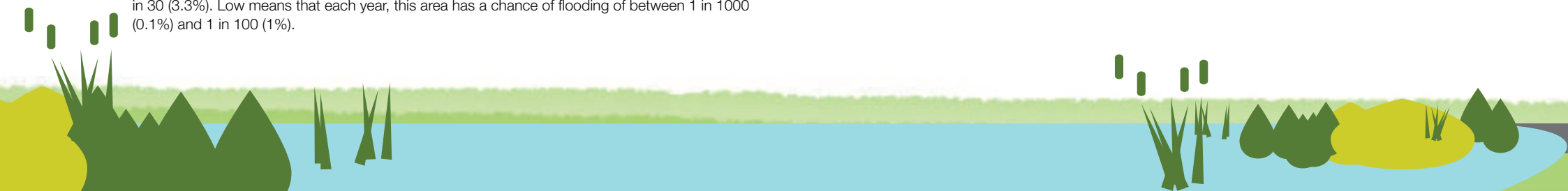
Flooding of this type tends to occur after long periods of sustained heavy rainfall and can last for weeks or even months. The areas at most risk are often low-lying areas where the water table is more likely to be at a shallow depth; flooding can be experienced through water rising up from the underlying aquifer or from water flowing from springs or when watercourses force fluvial flood water into the ground.

The Bath & North East Somerset regional Surface Water Management Plan has noted that no recent and relevant flood incidents have been directly attributed to groundwater. There is likely to be some interaction between Ordinary Watercourses, surface water runoff, and groundwater for a number of flood incidents (e.g. as has previously occurred in Chew Magna when fluvial flooding infiltrated into the ground and caused properties to suffer from groundwater flooding).

4.4.3 Flood risk from Main Rivers and Ordinary Watercourses

Flooding from rivers occurs when water overtops the banks of the channel. This can occur because there is more water draining into the channel than it can hold, or because it is blocked. In England watercourses are defined as either Ordinary Watercourses or Main Rivers. Main Rivers are generally the larger arterial watercourses, but smaller watercourses can be designated if they pose a significant flood risk. Flooding from Main Rivers is managed by the Environment Agency using its permissive powers under the Environment Act (1995). The Lead Local Flood Authority have permissive powers to carry out works on Ordinary Watercourses within the area to manage risks from flooding, but Riparian Owners (see Section 3.4.3) have the primary responsibility for managing these risks.

The Environment Agency has published 'Risk of Flooding from Rivers and Sea' maps of flood risk from Main Rivers and Ordinary Watercourses, which are available at: http://watermaps.environment-agency.gov.uk/wiyby/wiyby.aspx?lang=_e&topic=floodmap&layer=default&scale=11&x=415469&y=184167-x=415469&y=184167&scale=11.

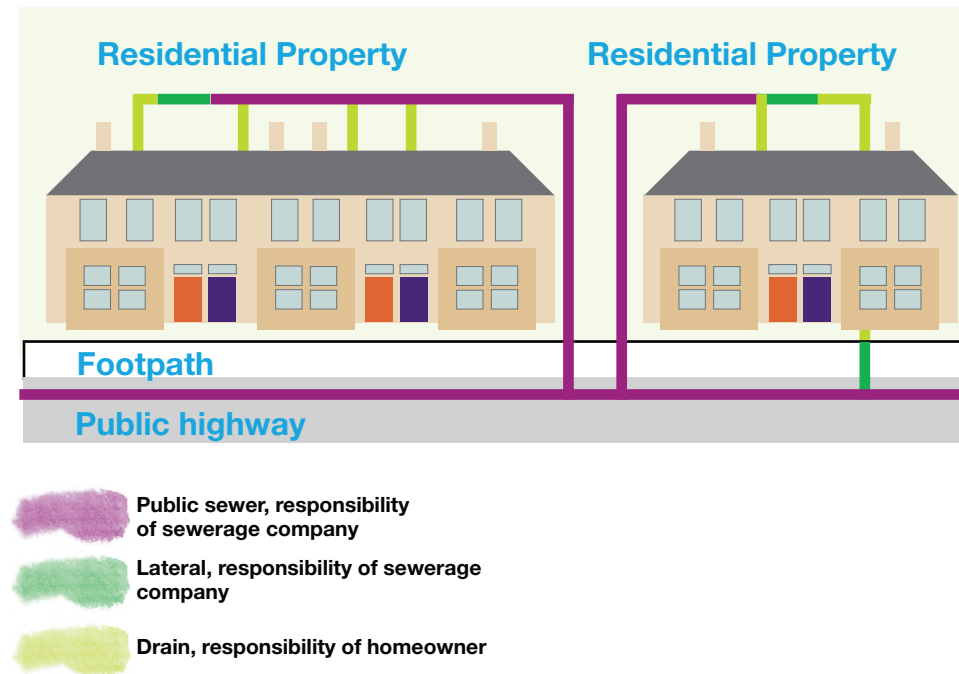


4.4.4 Flooding from sewerage systems

Flooding from sewerage systems occurs when the capacity of the drainage network is exceeded. This can be due to blockage, failure of equipment or overloading of sewers due to rainfall. Sewerage companies are responsible for managing sewerage networks under the Water Industry Act (1991). Wessex Water maintain records of flooding from foul sewers, combined sewer and surface water sewers. The difference between these types of sewer are explained in the glossary in Appendix F.

In 2011 water companies in England and Wales took on new responsibilities for private drainage, under the transfer of private sewers²¹. Under this transfer most private sewers, lateral drains and pumping stations that form part of the sewer or lateral drain that connect to the public sewer network were transferred to the ownership of the water companies. Homeowners remain responsible for household drainage to the point at which it connects to the public sewer. This is normally at the property boundary, as illustrated in Figure 4-2.

Figure 4-2 Responsibility of householders and sewerage companies (from Ofwat website)



For the Bath & North East Somerset regional Surface Water Management Plan, Wessex Water provided a list of sewer flooding incidents for the period 2013-2014, including those attributable to surface water flooding. Wessex Water has identified postcode locations for 44 occurrences of sewer flooding during this period. These have been mapped and referred to as the Interactive Maps of Local Flood Incidents. This is available in Appendix B of the Bath & North East Somerset regional Surface Water Management Plan. Where there is overlap with other sources of flooding (e.g. surface water runoff or Ordinary Watercourses) there may be opportunities for Risk Management Authorities to co-fund or co-deliver flood risk management schemes to address flooding more cost effectively.

²¹ https://www.ofwat.gov.uk/consumerissues/rightsresponsibilities/sewers/prs_web_sewertransfer. Note not all transfers of ownership have yet been completed.



4.4.5 Flooding from highway drainage

Appropriate highway drainage is required in order to ensure the highway is safe. What action is reasonable will depend on a number of factors, but to ensure compliance with Section 41 of the Highways Act 1980, the Council operates a comprehensive inspection and repair regime in accordance with the National Code of Practice.

It should be noted that the majority of roadside ditches are the responsibility of adjacent landowners, unless the ditch was constructed by the Highways Authority solely for the purpose of draining the highway.

Highways England is responsible for maintaining drainage systems which drain highways on trunk roads in their network.

A significant proportion of the recent and relevant recorded incidents of flooding are from highway drainage systems. However, it should be noted that this might not actually reflect the true split of flooding, and may just be the incidents of flooding that the Council were previously responsible for, and hence have been reported to the Council and recorded on its systems.

4.4.6 Flooding from other artificial sources

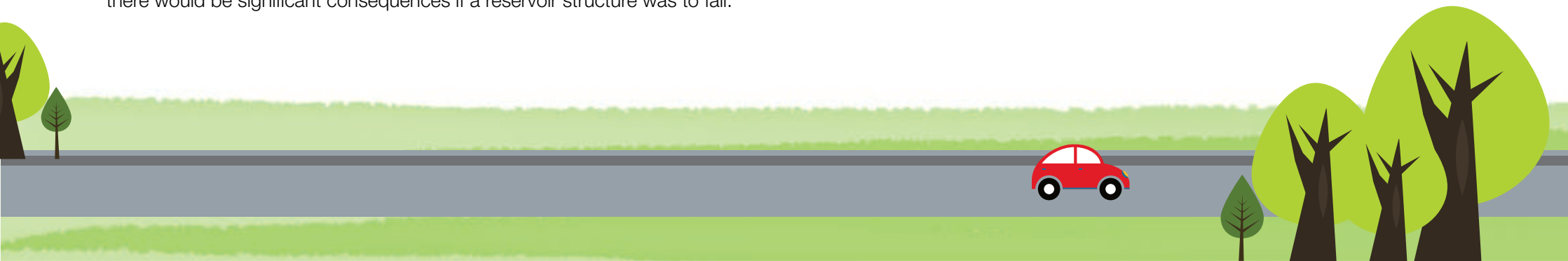
Flooding from other artificial sources includes risk from reservoirs, canals and manmade structures.

The flood risk along canals is generally considered to be low as they are not subject to the same flows as other water bearing infrastructure. The Canal & River Trust do however keep records of flooding along canals within the Bath & North East Somerset area and to date there have been limited flooding incidents recorded.

Reservoirs are designed to accommodate large quantities of water and although it is unlikely that flooding will occur in Bath & North East Somerset, there would be significant consequences if a reservoir structure was to fail.

The Environment Agency act as the enforcement authority for reservoirs . Responsibility for carrying out work to manage reservoir safety lies with the reservoir owner/operator such as Bristol Water.

The Environment Agency has published mapping to indicate the area that could be flooded if a large reservoir were to fail and release the water it holds. This is available http://watermaps.environment-agency.gov.uk/wiyby/wiyby.aspx?lang=_e&topic=reservoir&layer=default&scale=5&x=387426&y=172732-x=387426&y=172732&scale=5.



4.5 Future increases in flood risk

There are a number of factors which will influence flooding in the future. This will result in an increase in the risk of flooding across Bath & North East Somerset unless this is adequately planned for and managed.

Although there are many factors that can increase flood risk, the major risks include:

- climate change;
- new development, and;
- deterioration or blockage of drainage infrastructure and flood defence structures.

4.5.1 Climate change

Climate change is predicted to result in more severe extreme weather which could lead to extreme floods with more serious consequences. Although this will vary depending on the catchment, the UK Climate Projections 2009 Study (described in the Glossary in Appendix F) predicted that by 2050 the South West of England will experience winter rainfall increases of around 12% (very likely to be between 2 and 26%); rainfall on the wettest day in winter will be increased by around 9% (very unlikely to be more than 22%); and peak river volumes in a typical catchment are likely to increase by between 9 and 18%.

Table 4-2 Sensitivity ranges for considering climate change impacts on flooding (extracted from National Planning Policy Framework Technical Guidance)

	Development Design Life			
Parameter	1990 to 2025	2025 to 2055	2055 to 2085	2085 to 2115
Peak river flow	+10%	+20%	+20%	+20%
Peak rainfall intensity	+5%	+10%	+20%	+30%

As part of the Bath & North East Somerset regional Surface Water Management Plan additional surface water modelling was undertaken to assess the impact of climate change on surface water flood risk in Bath & North East Somerset. A 30% uplift was applied to the rainfall (as per Table 4-2), and the Bath & North East Somerset regional Surface Water Management Plan report notes that:

“The results show that climate change is likely to have a notable impact on flood risk across the Bath & North East Somerset area. Flood outlines for an event with a 1 in 100 chance of occurring in any given year (i.e. a storm event with a 1% annual exceedance probability) are slightly larger than present day outlines in all flooding wet-spot locations. Increases in flood extents are generally more pronounced in flatter valleys where water would spread further at lower depths. In steep-sided valleys flood extents do not increase significantly, however flooding becomes deeper.”²²

22 JBA Consulting (2015), Bath & North East Somerset Surface Water Management Plan



Further analysis undertaken for the Bath & North East Somerset regional Surface Water Management Plan indicated that with 30% allowance for climate change, an additional 656 residential properties, 22 critical infrastructure locations and two emergency responders may be at risk of surface water flooding following an event with a 1 in 100 chance of occurring in any given year (i.e. a storm event with a 1% annual exceedance probability).

4.5.2 New development

If new development and changes in land use are not properly controlled and managed this could cause increased runoff during rainfall events and result in increased flood risk.

The Lead Local Flood Authority are a Statutory Consultee for major planning applications and will scrutinise applications in terms of surface water flood risk and sustainable drainage. This will also provide guidance on all applications which have surface water implications and may affect local flood risk.

When making planning decisions the Local Planning Authority and Lead Local Flood Authority work together to review development proposals to ensure that inappropriate new developments are prevented or directed away from high risk flood areas, and that appropriate drainage is to be provided. This includes a review of whether suitable consideration has been given to climate change.

There are a number of national and local documents which need to be considered by developers prior to applying for a Planning Application. Table 4-3 sets out the policies and legislation in relation to the management of surface water drainage for new developments. Table 4-4 sets out the national and local guidance in relation to the management of surface water drainage for new developments.

Table 4-3 Surface water drainage policies and legislation for development

Policy/ legislation	More information
National Planning Policy Framework Paragraph 103	https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/6077/2116950.pdf
Sustainable drainage systems: Written statement (HCWS161) 18 December 2014	http://www.parliament.uk/business/publications/written-questions-answers-statements/written-statement/Commons/2014-12-18/HCWS161/
Bath & North East Somerset Council emerging Placemaking Plan: Policy SU1	TBC
Building Regulations Part H (HM Government, 2010)	http://www.planningportal.gov.uk/buildingregulations/approveddocuments/parth/approved
Bath & North East Somerset Council’s Core Strategy	http://www.bathnes.gov.uk/services/planning-and-building-control/planning-policy/core-strategy-examination



Table 4-5 Surface water drainage guidance for development

Guidance	More information
Planning Practice Guidance (Department for Communities and Local Government)	https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/6077/2116950.pdf
Non-statutory technical standards for sustainable drainage systems (Department for Environment, Food & Rural Affairs, 2015)	http://www.parliament.uk/business/publications/written-questions-answers-statements/written-statement/Commons/2014-12-18/HCWS161/
West of England Sustainable Drainage Developer Guide (West of England Partnership, 2015)	http://www.bathnes.gov.uk/sites/default/files/sitedocuments/Planning-and-Building-Control/Planning-Policy/LDFGeneral/bd6457_woe_developer_guide_complete_72dpi.pdf
Surface Water Management Plan for Bath & North East Somerset (Bath & North East Somerset Council, 2015)	http://www.bathnes.gov.uk/services/environment/land-drainage
Environment Agency Local Flood Risk Standing Advice (Environment Agency, 2014)	http://www.bathnes.gov.uk/sites/default/files/sitedocuments/Planning-and-Building-Control/Apply-for-Planning-Permission/flood_risk_standing_advice_banes_v1_0_march_2014.pdf
Bath & North East Somerset Council's Local Flood Risk Management Strategy (Bath & North East Somerset Council, 2015)	-

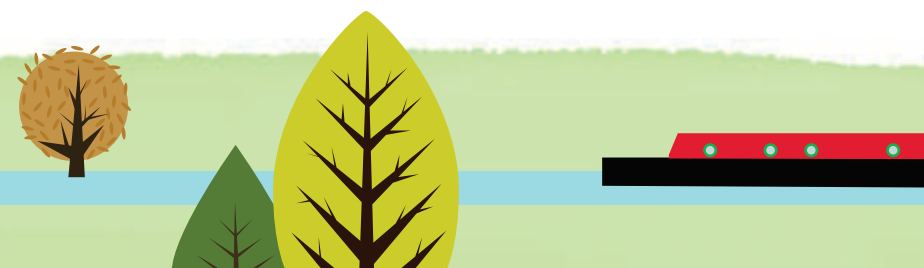
If national and local guidance is adopted, flood risk should not increase as a result of new development. There will occasionally be situations where development in the floodplain is unavoidable or where, when all things are considered, the risks posed are outweighed by very significant environmental and socio-economic benefits. It is important in these circumstances to be able to demonstrate no detrimental impact on downstream impacts and that new development will remain safe through resilience and resistance measures. The Lead Local Flood Authority will review this as part of the application process. It is therefore important that developers follow national and local guidance and seek advice from the Lead Local Flood Authority as needed to ensure the right information is provided as part of a planning application.

4.5.3 Asset deterioration and/or blockage

Unless maintained, deterioration will occur in the condition and performance of existing drainage infrastructure and flood defence structures. As a result an increase in future flood risk may be seen unless there is investment to ensure drainage infrastructure is functioning. The Risk Management Authorities listed in Section 3 maintain their assets to minimise the risks they are responsible for. The Lead Local Flood Authority also maintain an asset register, detailed in Section 3.3.2, and this is a vital tool to help manage flood risk.

As part of the Bath & North East Somerset regional Surface Water Management Plan a high level analysis was undertaken to look at critical infrastructure assets comprising of bridges, culverts and screens. These structures could contribute to significant flooding if they became blocked or were in a state of collapse requiring repair.

This high level analysis identified 27 structures which are deemed critical for maintenance to avoid blockage. The Strategy Action Plan (section 5.1) sets out a process for developing prioritised routine and emergency asset monitoring.

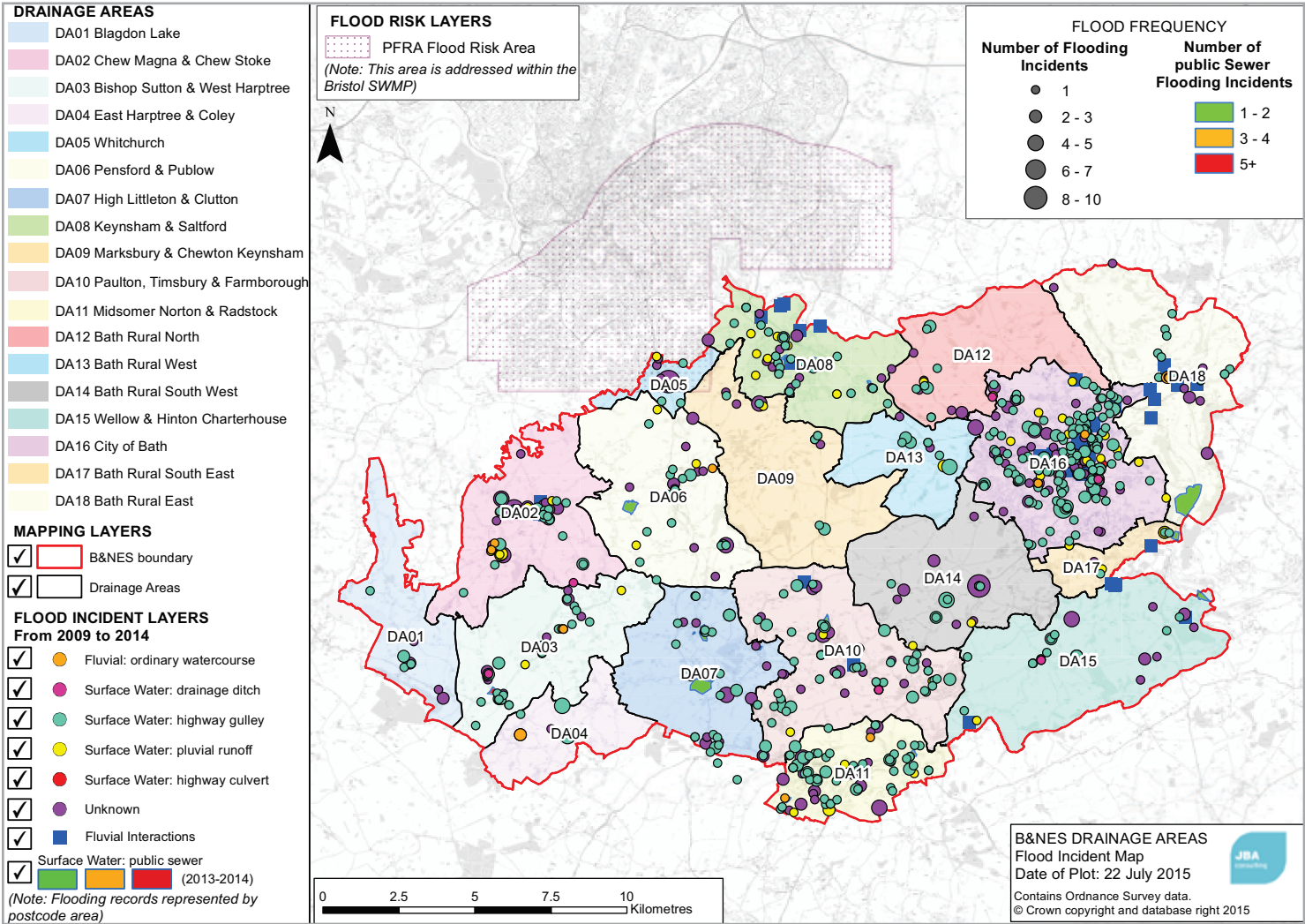


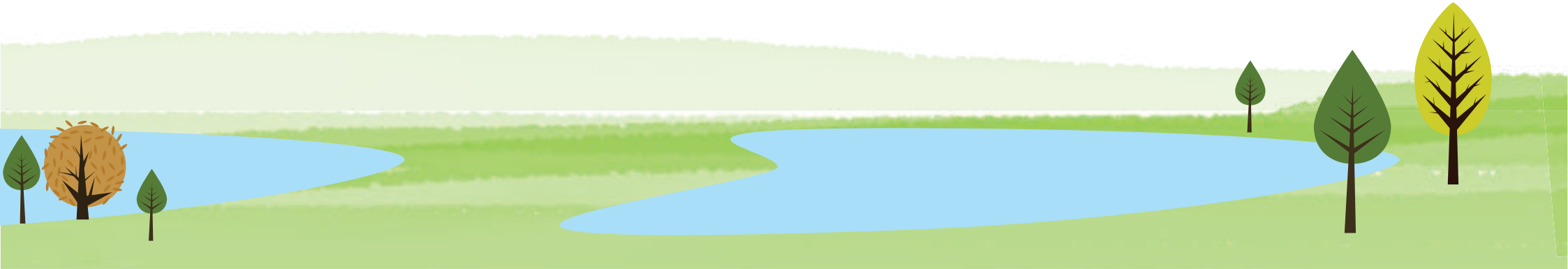
4.6 Communities most at risk from local flooding

A number of 'wet-spots' were identified in the Bath & North East Somerset regional Surface Water Management Plan. These were derived from analysis of recent and relevant flood incident data, and verified through an analysis of the predicted surface water flood risk areas identified by the Updated Flood Map for Surface Water. In total 53 individual wet-spots were identified. In every wet-spot a suitable action was identified in the Bath & North East Somerset regional Surface Water Management Plan, and has been transposed into this Local Flood Risk Management Strategy to form the actions the Lead Local Flood Authority will take, in partnership with others, to manage local flood risk. Section 5.2 and Appendix D provide further information on these actions.



Figure 4-3 Overview of the Interactive Map of Local Flood Incidents, taken from the Surface Water Management Plan





Section 5 Action Plan



This section sets out the actions the Lead Local Flood Authority will take, in partnership with others, to manage local flood risk. Measures already being delivered are outlined in Section 3. Actions that the Lead Local Flood Authority will take across Bath & North East Somerset ('Strategy Action Plan') are outlined in Section 5.1, and location-specific actions are identified in Section 5.2.

The delivery of actions in the Local Flood Risk Management Strategy will be dependent upon the availability of funding. Therefore a phased implementation will be required. The actions are also subject to legislative, regulatory and financial changes during the ten year period of the Local Flood Risk Management Strategy and the Council needs to maintain some flexibility during the delivery period. The Lead Local Flood Authority will update the action plan annually, and this update will identify these changes and the effect on the Local Flood Risk Management Strategy actions.

5.1 The Strategy Action Plan

The Strategy Action Plan measures are identified in Table 5-1 and are broken down by the objectives set out in Section 2. These are repeated below for reference:

- Objective 1: improve understanding of local flood risk;
- Objective 2: promote community awareness and build capability for appropriate action;
- Objective 3: manage local flood risk through capital and maintenance investment;
- Objective 4: prevent inappropriate development that creates or increases flood risk;
- Objective 5: improve flood preparedness, warning and ability to recover.

The Strategy Action Plan includes measures which are currently underway, but also includes new measures which are necessary to ensure the delivery of the objectives outlined. It is a 'live' document which the Lead Local Flood Authority will update as part of the annual review of the action plan.



Objectives

For reference, Table 5-1 is broken down into the following columns:

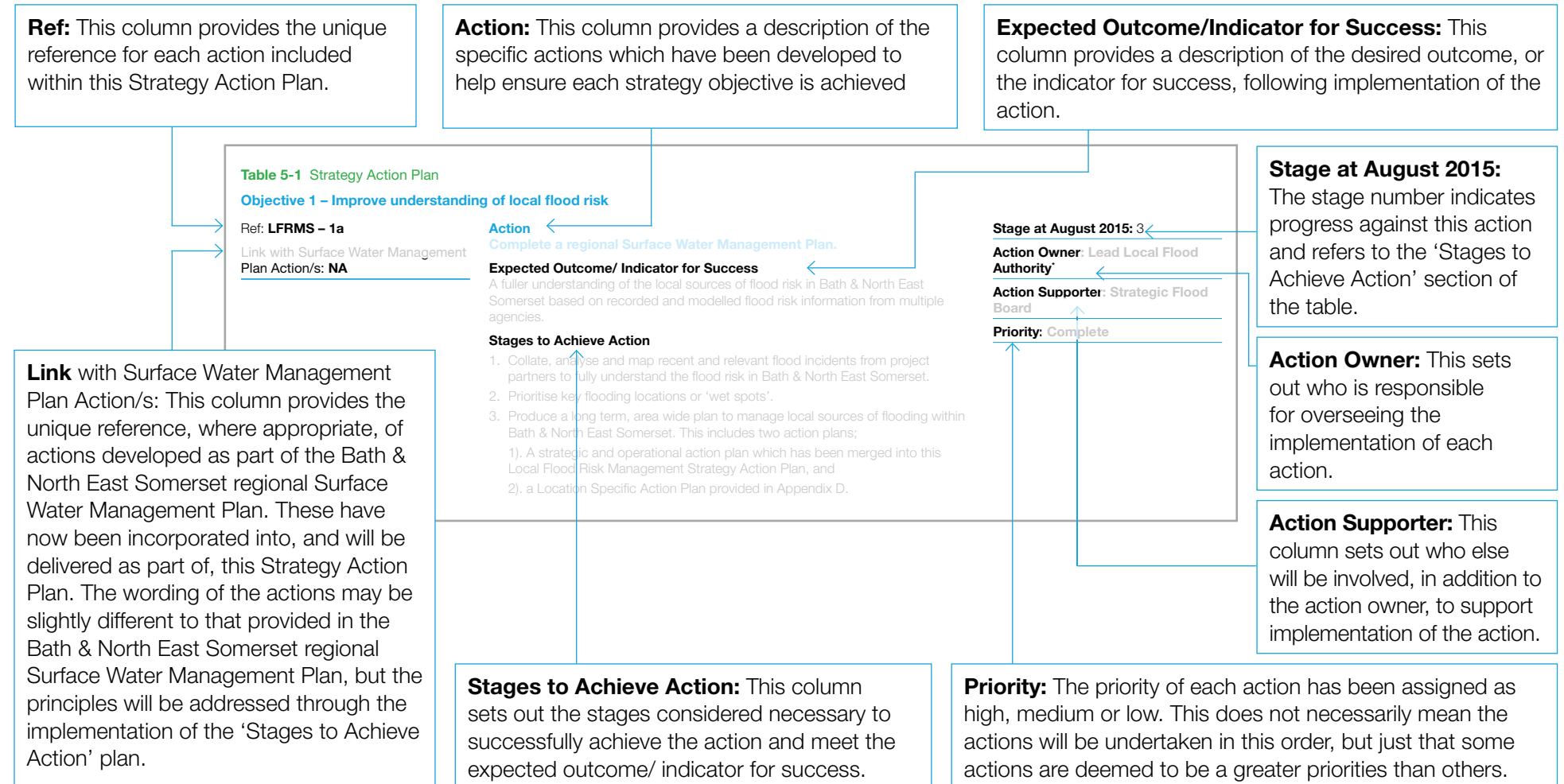


Table 5-1 Strategy Action Plan

Objective 1 – Improve understanding of local flood risk

Ref: LFRMS – 1a Link with Surface Water Management Plan Action/s: NA	Action Complete a regional Surface Water Management Plan. Expected Outcome/ Indicator for Success A fuller understanding of the local sources of flood risk in Bath & North East Somerset based on recorded and modelled flood risk information from multiple agencies. Stages to Achieve Action 1. Collate, analyse and map recent and relevant flood incidents from project partners to fully understand the flood risk in Bath & North East Somerset. 2. Prioritise key flooding locations or 'wet spots'. 3. Produce a long term, area wide plan to manage local sources of flooding within Bath & North East Somerset. This includes two action plans; 1). A strategic and operational action plan which has been merged into this Local Flood Risk Management Strategy Action Plan, and 2). a Location Specific Action Plan provided in Appendix D.	Stage at August 2015: 3 Action Owner: Lead Local Flood Authority* Action Supporter: Strategic Flood Board Priority: Complete
Ref: LFRMS – 1b Link with Surface Water Management Plan Action/s: SOAP01	Action Continue to develop an updated flood reporting system. Expected Outcome/ Indicator for Success Flood incident data provided in a standardised format which will improve ability to use the data as a beneficial source of information. Stages to Achieve Action 1. Review the Surface Water Management Plan database summarising flooding to understand key information. 2. Review Bath & North East Somerset flood incident reporting system. 3. Update the reporting system to include prompts for key information. Information to include; date, location, duration, an idea of the flood source, description of the flood extent and depth. 4. Undergo annual review of the flood reporting system and update as appropriate.	Stage at August 2015: 4 Action Owner: Lead Local Flood Authority Action Supporter: Council Connect, Local Highways Authority, Environment Agency, Wessex Water, Avon Fire and Rescue. Priority: High

* Lead Local Flood Authority: Bath & North East Somerset Council's Drainage and Flooding Team undertake most of these responsibilities.

Objective 1 – Improve understanding of local flood riskRef: **LFRMS – 1c**Link with Surface Water Management Plan Action/s: **NA****Action****Improve the use of visual tools (e.g. GIS) to record and analyse flooding incidents.****Expected Outcome/ Indicator for Success**

A holistic picture of flooding in the region and improved ability to identify priority areas in the future.

Stages to Achieve Action

1. Identify and map flooding incidents as part of the Bath & North East Somerset regional Surface Water Management Plan.
2. Develop a process to add new flooding incidents to GIS when they occur.
3. Incorporate flooding incidents to the GIS.

Stage at August 2015: 3**Action Owner:** Lead Local Flood Authority, Bath & North East Somerset GIS team.**Action Supporter:** Environment Agency, Wessex Water**Priority:** MediumRef: **LFRMS– 1d**

Link with Surface Water Management

Plan Action/s: **NA****Action****Continue to complete investigations of flood incidents, where the appropriate criteria is met (see Section 3.4.6).****Expected Outcome/ Indicator for Success**

The appropriate Risk Management Authority is identified, and an investigation is completed

Stages to Achieve Action

1. Lead Local Flood Authority to identify the relevant authority responsible for undertake a Section 19 investigation where the criteria is met.

Stage at August 2015: 1**Action Owner:** Lead Local Flood Authority**Action Supporter:** Relevant Risk Management Authorities.**Priority:** High (following flood events which meet the criteria)Ref: **LFRMS– 1e**Link with Surface Water Management Plan Action/s: **NA****Action****Ensure that appropriate data on flooding is shared between organisations, and between organisations and communities.****Expected Outcome/ Indicator for Success**

Awareness about flood risk is improved within Bath & North East Somerset.

Stages to Achieve Action

1. Ensure Risk Management Authorities share appropriate data about flooding with the Lead Local Flood Authority. (Links specially with LFRMS 1a & 3a).
2. Ensure communities and other organisations can share knowledge about flooding with the relevant Risk Management Authority. (Links specially with LFRMS 2a, 2b & 2d).
3. Ensure relevant flooding information obtained through stages 1 and 2 above is shared appropriately with communities in Bath & North East Somerset

Stage at August 2015: 2**Action Owner:** Lead Local Flood Authority**Action Supporter:** Relevant Risk Management Authorities, communities, other organisations**Priority:** Medium

Objective 2 – Promote community awareness and build capability for appropriate action

Ref: LFRMS– 2a Link with Surface Water Management Plan Action/s: NA	Action Establish clearer routes for communicating with communities and businesses about the roles and responsibilities for flood risk. Expected Outcome/ Indicator for Success Good communication will enable people to clearly understand their risks, the impact of proposed actions to manage these risks, and what can be done by communities and businesses to manage the residual risk. Stages to Achieve Action 1. Agree routes for communication between communities, the Operational Flood Working Group, Local Flood Representatives and other appropriate partners. 2. Raise awareness of ways to report property flooding and communicate about other appropriate flooding information.	Stage at August 2015: 1 & 2 Action Owner: Lead Local Flood Authority Action Supporter: Parish councils, Wards, Federation of Bath Residents Association, Local Flood Representatives, Environment Agency, Wessex Water Priority: Medium
Ref: LFRMS– 2b Link with Surface Water Management Plan Action/s: NA	Action Help communities understand their own flood risk and their responsibilities for managing flooding. Expected Outcome/ Indicator for Success Improved awareness within communities about responsibilities around managing flooding and how to assess flood risks. Stages to Achieve Action 1. Work with partners to support community-led flood forums or flood awareness events.	Stage at August 2015: – Action Owner: Lead Local Flood Authority, Emergency Planning and Business Continuity Action Supporter: Local Flood Representatives Parish Councils, Wards, Community Groups, Environment Agency Wessex Water Priority: High
Ref: LFRMS– 2c Link with Surface Water Management Plan Action/s: NA	Action Raise awareness of land drainage and riparian responsibilities. Expected Outcome/ Indicator for Success Improved maintenance of watercourses by Riparian Owners Stages to Achieve Action 1. Work with Local Flood Representatives, or other appropriate partners, to ensure awareness riparian responsibilities is improved amongst communities.	Stage at August 2015: – Action Owner: Lead Local Flood Authority Action Supporter: Local Flood Representatives, other appropriate partners Priority: Medium



Objective 2 – Promote community awareness and build capability for appropriate actionRef: **LFRMS– 2d**Link with Surface Water Management Plan Action/s: **SOAP 08****Action****Develop a network of Local Flood Representatives to act as a point of contact in the community on flooding issues.****Expected Outcome/ Indicator for Success**

Improved communication between individual communities and the Lead Local Flood Authority on flooding issues.

Stages to Achieve Action

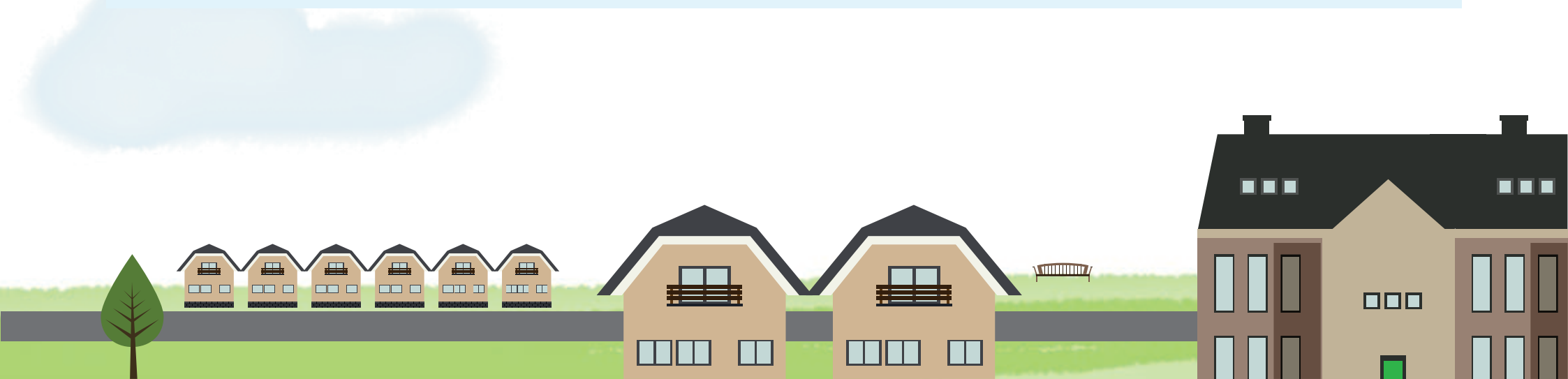
1. Invite Parish Councils, the Federation of Bath Residents' Associations and Bath Wards to nominate Local Flood Representatives as a communication channel between the Operational Flood Working Group and all communities.
2. Appoint Local Flood Representatives.
3. Continue to review Local Flood Representatives and recruit as needed.

Stage at August 2015: 2**Action Owner:** Lead Local Flood Authority**Action Supporter:** Parish Councils, Wards, Federation of Bath Residents Association, Local Flood Representatives**Priority:** MediumRef: **LFRMS – 2e**Link with Surface Water Management Plan Action/s: **NA****Action****Ensure communities know what to do in the event of a flood.****Expected Outcome/ Indicator for Success**

Communities can approach the appropriate Risk Management Authority for support and are able to recover more quickly as a result of actions taken.

Stages to Achieve Action

1. Develop a guidance sheet to improve awareness of what communities should do in the event of a flood.
2. Share this guidance sheet with Councillors and communities through the appropriate communication channels established as part of LFRMS 2a.

Stage at August 2015: 1**Action Owner:** Lead Local Flood Authority**Action Supporter:** Local Flood Representatives, Councillors**Priority:** Medium

Objective 3 – Manage local flood risk through capital and maintenance investment

Ref: LFRMS – 3a Link with Surface Water Management Plan Action/s: SOAP03 & SOAP04	Action Continue to work with partners, including adjacent authorities, to develop long term approaches to manage flood risk. Expected Outcome/ Indicator for Success A more coordinated approach to the management of local flood risk in Bath & North East Somerset. Stages to Achieve Action 1. Form a Strategic Flood Board and Operational Flood Working Group. 2. Schedule regular meetings of the Strategic Flood Board, and Operational Flood Working Group as required.	Stage at August 2015: 2 Action Owner: Lead Local Flood Authority. Action Supporter: Strategic Flood Board, Operational Flood Working Group. Priority: High
Ref: LFRMS – 3b Link with Surface Water Management Plan Action/s: NA	Action Deliver the actions in the regional Surface Water Management Plan. Expected Outcome/ Indicator for Success Improved local flood risk in the Bath & North East Somerset. Stages to Achieve Action 1. Use the findings from the regional Surface Water Management Plan to inform the need for projects/ schemes. 2. Work with the Strategic Flood Board, and Operational Flood Working Group, to help deliver this as part of a long term plan.	Stage at August 2015: 1 Action Owner: Lead Local Flood Authority, Local Highways Authority. Action Supporter: Strategic Flood Board, Operational Flood Working Group. Priority: High
Ref: LFRMS – 3c Link with Surface Water Management Plan Action/s: SOAP05	Action Continue to develop a register of assets which significantly affect local flood risk. Expected Outcome/ Indicator for Success Effective management of assets which have a significant effect on flood risk Stages to Achieve Action 1. Develop an improved flood risk asset register and record template, a process for the assessment of assets, and establish a periodic monitoring procedure for further discussion. 2. Strategic Flood Board to agree the register and record template, and the assessment and monitoring procedures. 3. Produce the agreed updated flood risk asset register and record. 4. Record and monitor assets using the agreed procedures.	Stage at August 2015: 1 Action Owner: Lead Local Flood Authority. Action Supporter: Strategic Flood Board, Bath & North East Somerset GIS team, Local Highway Authority. Priority: Medium

Objective 3 – Manage local flood risk through capital and maintenance investment

Ref: LFRMS – 3d Link with Surface Water Management Plan Action/s: NA	Action Designate structures that effect local flood risk, to protect them from alteration or removal. Expected Outcome/ Indicator for Success Significant assets will not be altered, removed or replaced without consideration of the impacts to flood risk. This will also enable the Lead Local Flood Authority to understand who owns and maintains structures. Stages to Achieve Action 1. Using the procedure identified for the identification of flood risk assets (Action 3c), identify 3rd party assets. 2. Implement individual procedures on a case by case basis.	Stage at August 2015: 1 Action Owner: Lead Local Flood Authority Action Supporter: Relevant partners Priority: Low
Ref: LFRMS– 3e Link with Surface Water Management Plan Action/s: NA	Action Continue to assess applications for works on Ordinary Watercourses, through the land drainage consent process. Expected Outcome/ Indicator for Success To ensure the normal flow of water in Ordinary Watercourses with no increase in flood risk Stages to Achieve Action 1. Use consenting and enforcement powers when required 2. Raise awareness of Land Drainage Consent via Planning and other means.	Stage at August 2015: 1 Action Owner: Lead Local Flood Authority. Action Supporter: Local Planning Authority. Priority: Medium
Ref: LFRMS – 3f Link with Surface Water Management Plan Action/s: See the Location Specific Action Plan for wet spots provided in Appendix D	Action Identify catchments where improved land management could reduce flood risk and/ or improve the water environment. Expected Outcome/ Indicator for Success Reduced local flood risk and improved overall water environment (e.g. contribution to meeting Water Framework Directive) Stages to Achieve Action 1. Monitor flooding incidents recorded in wet spots identified in the Bath & North East Somerset regional Surface Water Management Plan to identify catchments where improved land management could reduce flood risk, and work with other organisations to help identify potential areas. 2. If improved land management is deemed as preferable in order to reduce flood risk or improve the water environment, investigate opportunities to work with landowners to develop schemes.	Stage at August 2015: 1 Action Owner: Lead Local Flood Authority. Action Supporter: Relevant partners Priority: Medium

Objective 3 – Manage local flood risk through capital and maintenance investment

Ref: LFRMS – 3g Link with Surface Water Management Plan Action/s: SOAP06	Action Identify critical highway drainage assets, in order to undertake targeted maintenance and respond to issues as the Local Highways Authority. Expected Outcome/ Indicator for Success More effective management of highways drainage assets to mitigate/ reduce flood risk. Stages to Achieve Action 1. Investigate highways drainage flooding events to identify the critical assets. 2. Develop a revised maintenance regime for these critical assets; or identify assets that require replacement or improvement.	Stage at August 2015: 1 Action Owner: Lead Local Flood Authority, Local Highways Authority. Action Supporter: – Priority: High
Ref: LFRMS – 3h Link with Surface Water Management Plan Action/s: NA	Action Prioritise maintenance and clearance works to culverts and watercourses. Expected Outcome/ Indicator for Success More targeted and effective management of culverts and watercourses which pose a significant flood risk. Stages to Achieve Action 1. Identify and prioritise which culverts or watercourse pose the most significant flood risk to people, property and infrastructure 2. Develop a revised maintenance regime for these critical assets; or identify assets that require replacement or improvement. Ensure that consideration is given to the potential impact on roosting bats or other ecology.	Stage at August 2015: 1 Action Owner: Lead Local Flood Authority Action Supporter: Riparian Owners, Bath & North East Somerset Ecology Team, Natural England. Priority: High
Ref: LFRMS – 3i Link with Surface Water Management Plan Action/s: NA	Action Evaluate flood reports to identify where drainage improvements or other mitigation works are possible. Expected Outcome/ Indicator for Success Improved drainage/ flood risk. Stages to Achieve Action 1. Identify locations and investigate flood mechanisms. 2. Prioritise locations using a risk based approach. 3. Design schemes. 4. Implement schemes where possible.	Stage at August 2015: 1 Action Owner: Lead Local Flood Authority Action Supporter: Relevant partners Priority: High



Objective 4 – Prevent inappropriate development that creates or increases flood riskRef: **LFRMS – 4a**Link with Surface Water Management Plan Action/s: **SOAP02****Action****Continue to review planning applications to make recommendations for surface water drainage and managing flood risk.****Expected Outcome/ Indicator for Success**

Planning decisions are properly informed about flood risk and drainage requirements.

Stages to Achieve Action

1. Ensure new developments consider all flood risk and climate change. Promote Sustainable Drainage Systems in accordance with National Planning Policy Framework, the Bath & North East Somerset Place Making Plan, West of England Sustainable Drainage Systems Guidance and other relevant sustainable drainage requirements.

Stage at August 2015: 1**Action Owner:** Lead Local Flood Authority, Local Planning Authority*, Environment Agency.**Action Supporter:** Wessex Water, Canal & River Trust Emergency Planning Authority**Priority:** HighRef: **LFRMS – 4b**Link with Surface Water Management Plan Action/s: **NA****Action****Publish the West of England Sustainable Drainage System Guidance for developers, and work across the West of England to co-ordinate sustainable drainage system implementation.****Expected Outcome/ Indicator for Success**

Developers utilise sustainable methods of surface water drainage and increases in surface water flow from future development are mitigated.

Stages to Achieve Action

1. Complete the West of England Sustainable Drainage Systems Guidance document.
2. Publish the guidance on the Bath & North East Somerset Council website and ensure this is communicated to developers as appropriate.

Stage at August 2015: 2**Action Owner:** Lead Local Flood Authority, Local Planning Authority.**Action Supporter:** West of England Partnership.**Priority:** High

* LPA: Bath & North East Somerset Council/ Local Planning Authority



Objective 4 – Prevent inappropriate development that creates or increases flood risk

Ref: LFRMS – 4c Link with Surface Water Management Plan Action/s: NA	Action Include Sustainable Drainage System planning policy within the Council's Placemaking Plan/ Core Strategy. Expected Outcome/ Indicator for Success Sustainable drainage is incorporated into new development to reduce surface water runoff and minimise its contribution to flooding. Stages to Achieve Action 1. Incorporate Sustainable Drainage System planning policy within the Council's Placemaking Plan/ Core Strategy.	Stage at August 2015: 1 Action Owner: Local Planning Authority, Lead Local Flood Authority Action Supporter: – Priority: High
Ref: LFRMS – 4d Link with Surface Water Management Plan Action/s: NA	Action Continue to provide guidance at the pre-application stage on flooding issues. Expected Outcome/ Indicator for Success Drainage and flooding issues are adequately considered prior to applications gaining approval and that applications consider the use of Sustainable Drainage Systems. Stages to Achieve Action 1. Work with developers and the Local Planning Authority to implement the most appropriate drainage strategy for planning applications. 2. Promotion of advisory service via Council communication channels and Local Flood Representatives.	Stage at August 2015: 1 Action Owner: Lead Local Flood Authority, Local Planning Authority. Action Supporter: Environment Agency, Wessex Water. Priority: High
Ref: LFRMS – 4e Link with Surface Water Management Plan Action/s: NA	Action Consider the need for additional planning guidance on flooding specific to Bath & North East Somerset. Expected Outcome/ Indicator for Success Effective planning guidance on flooding is provided within Bath & North east Somerset. Stages to Achieve Action 1. Continually review the appropriateness and effectiveness of current planning guidance to minimise flooding in Bath & North East Somerset. 2. Take appropriate action to improve planning guidance and considered necessary.	Stage at August 2015: 1 Action Owner: Lead Local Flood Authority, Local Planning Authority. Action Supporter: – Priority: Low



Objective 4 – Prevent inappropriate development that creates or increases flood riskRef: **LFRMS – 4f**Link with Surface Water
Management Plan Action/s: **NA****Action****Identify areas that are sensitive to surface water flood risk and develop appropriate surface water drainage and flood risk requirements for any proposed development in these areas.****Expected Outcome/ Indicator for Success**

To ensure flood risk is not compromised and potentially improved with any proposed development.

Stages to Achieve Action

1. Identify development sensitive areas.
2. Develop appropriate drainage and/or flood risk requirements.

Stage at August 2015: 1**Action Owner:** Lead Local Flood Authority**Action Supporter:** Local Planning Authority**Priority:** Medium

Objective 5 – Improve flood preparedness, warning and ability to recover

Ref: LFRMS – 5a Link with Surface Water Management Plan Action/s: NA	Action Help develop a multi-agency flood plan for high risk areas in Bath & North East Somerset. Expected Outcome/ Indicator for Success A joined up approach that ensures resources are effectively managed. Stages to Achieve Action 1. Identify areas at high risk. 2. Work with partners and communities to produce plans. 3. Share the flood plan with communities in the region using the agreed approach developed in LFRMS 2a.	Stage at August 2015: 1 Action Owner: Emergency Planning Authority Action Supporter: Strategic Flood Board Action Supporter: Emergency Services, Environment Agency, Lead Local Flood Authority. Priority: Medium
Ref: LFRMS – 5b Link with Surface Water Management Plan Action/s: NA	Action Communicate information to communities, businesses and individuals on flood preparedness and recovery. Expected Outcome/ Indicator for Success Communities, individuals and businesses can adequately prepare for flooding and are more likely to be able to recover more quickly following a flood event. Stages to Achieve Action 1. Work with Local Flood Representatives, or other appropriate partners, to target the most vulnerable communities, businesses and individuals as outlined in the Bath & North East Somerset regional Surface Water Management Plan / those interested in developing their own Community Flood Plans. 2. Provide literature and templates to ensure plans are appropriately structured, developed and maintained.	Stage at August 2015: 1 Action Owner: Lead Local Flood Authority, Emergency Planning Authority. Action Supporter: Environment Agency, Parish Councils, Community Groups, Local Flood Representatives. Priority: High



Objective 5 – Improve flood preparedness, warning and ability to recoverRef: **LFRMS – 5c**Link with Surface Water Management Plan Action/s: **NA****Action****Promote uptake of the Environment Agency's Floodline Warnings Direct service.****Expected Outcome/ Indicator for Success**

Individuals will have improved access to flood warnings which will aid them in their ability to respond to threats.

Stages to Achieve Action

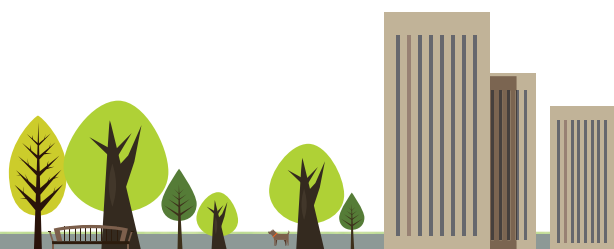
1. Review information provided on the Bath & North East Somerset Council website and update as appropriate. Ensure consideration is also given to providing information about the service on appropriate Council literature and other communications.

Stage at August 2015: 1**Action Owner:** Lead Local Flood Authority, Communications team.**Action Supporter:** Environment Agency.**Priority:** LowRef: **LFRMS – 5d**Link with Surface Water Management Plan Action/s: **SOAP07****Action****Improve warnings and proactive mitigation in response to predicted rainfall.****Expected Outcome/ Indicator for Success**

Assets can be targeted for maintenance in advance of forecast rainfall to reduce the risk of blockage, and hence flood risk.

Stages to Achieve Action

1. Develop a timely and appropriate response to flood and serve weather warnings; giving consideration for proactively maintaining assets in response to forecast rainfall.

Stage at August 2015: 1**Action Owner:** Lead Local Flood Authority.**Action Supporter:** Local Highways Authority, Emergency Planning and Business Continuity, Met Office.**Priority:** High

5.2 Location-Specific Action Plan

The Bath & North East Somerset regional Surface Water Management Plan is the most comprehensive source of information about location-specific actions. It contains at least one action for each of the wet-spots identified as being vulnerable to surface water flood risk based on recent and relevant flooding incidents and predicted flood risk. For the Local Flood Risk Management Strategy the Location Specific Action Plan has been transposed from the Bath & North East Somerset regional Surface Water Management Plan. This is a ‘live’ action plan which will be updated as measures are implemented or new information becomes available following further inspections or investigations. It will be reviewed on an annual basis.

This Location Specific Action Plan recommends measures to investigate, reduce or mitigate local flood risk in Bath & North East Somerset, and developed so it can be delivered in a phased approach. In many locations the action plan recommends further investigation or survey in the first instance. This is necessary to fully understand flooding mechanisms and impacts prior to the development of flood mitigation schemes.

A significant number of the wet-spots identified in the Bath & North East Somerset regional Surface Water Management Plan (42 of the 53 identified in total) had common actions around improvements to highway and/or land drainage, and have been grouped together in the Bath & North East Somerset regional Surface Water Management Plan and Local Flood Risk Management Strategy. For these wet-spots a five stage implementation plan was identified in the Bath & North East Somerset regional Surface Water Management Plan:

- 1. monitor;
- 2. check cyclic maintenance has been carried out;
- 3. investigate performance of highway/land drainage system, identifying any maintenance or design requirements;
- 4. carry out required maintenance or design and construct engineering scheme, and;
- 5. implement continued maintenance programme.

The 42 wet-spots identified in the Bath & North East Somerset regional Surface Water Management Plan which have been grouped together with common actions are listed in Table 5-2. Further details on the action owner, priority and indicative cost are provided in Appendix D.



Table 5-2 Action plan with common actions for highway/land drainage improvements

Wet-spot ID	Location	Wet-spot ID	Location
DA06A	Publow Lane and Pensford Hill	DA16I	Priory Park Road, Wiscombe
DA07B	Wells Road, Hallatrow	DA09A	Redlynch Lane, Chewton, Keynsham
DA07C	Rush Hill, Farrington	DA12A	Bath Road, Kelston
DA10C	Durcott Lane, Camerton and Radford	DA13A	Wells Road, Corston
DA10D	Brookside Paulton	DA14B	Tunley Road, Longhouse
DA11A	Hayes Park area, Midsomer Norton	DA16A	Weston and Upper Weston
DA11D	Fortescue Road, Radstock Regeneration area	DA16C	Newbridge Road
DA14A	Vicinity of Crossways, Dunkerton	DA01A	Ubley, Blagdon Lake
DA16B	Charlcombe Lane and London Road, Larkhall and Fairfield	DA03A	Wick Road and Ham Lane, Bishop Sutton
DA16E	Camden Crescent, Walcot	DA04A	South Widcombe
DA16F	Bathwick Street, Bathwick	DA04B	Coley
DA16H	Lymore Avenue, South Twerton	DA07A	Clutton Hill
DA16J	Wellsway, Bloomfield	DA08C	Bath Road, Saltford
DA03B	Bristol Road, Whitecross Farm	DA11C	Fosse Way, Clandown
DA05A	Bristol Road, Whitchurch	DA11E	Kilmersdeon Road, Haydon
DA06B	Charlwood	DA13B	Pennyquick, Newton St Loe
DA08A	Park Road, Keynsham	DA15A	Old Milford Road, Twinhoe
DA10A	The Street, Farmborough	DA15B	The High St, Wellow
DA10E	Carlingcott Lane	DA15C	Green Lane, Hinton Charterhouse
DA10F	Bath Road & Albert Avenue, Peasdown St John	DA17A	Brassknocker Hill, Monkton Combe
DA11B	Charlton Road, Midsomer Norton	DA18A	Box Road and London Road East, Batheaston and Bathford



In addition, 14 wet-spots identified in the Bath & North East Somerset regional Surface Water Management Plan have been assigned specific actions. In these wet-spots the actions are bespoke to each area, and range from inspection and investigation, through to scheme design and build. The following wet-spots have specific actions identified:

- Bath City Centre;
- Batheaston and Bathford;
- Chew Magna;
- Chew Stoke;
- Clandown;
- West Harptree;
- Whitchurch;
- Keynsham;
- Lower Bristol Road;
- Timsbury;
- Midsomer Norton;
- Weston and Upper Weston;
- Weston Village;
- Weston Park, and;
- White Cross Farm (Bristol Road).

Across these 14 wet-spots 21 specific actions have been identified (i.e. a few wet-spots have more than 1 specific action). 17 of these actions are considered high priority in the Bath & North East Somerset regional Surface Water Management Plan, with a further four considered as medium priority. The specific actions for each wet-spot is provided in Appendix D.

5.3 Maximising the wider benefits of flood risk management

Flood risk management intervention can offer a significant range of wider benefits beyond reducing flood risk. For example, it can:

- protect or enhance the environment by improving water quality, hydromorphology of watercourses, creating habitat or new biodiversity;
- provide amenity for local communities;
- ensure areas with historical importance and value can be better protected;
- improve mental and physical health through reduction of the stress associated with flood risk, and creation of new amenity features integrated into the design of a scheme;
- support economic regeneration, and;
- unlock additional land for future development.

Historically, drainage and flood risk management infrastructure have been designed and implemented with limited focus on the wider social, environmental or economic benefits. Through implementation of the Local Flood Risk Management Strategy actions the Lead Local Flood Authority will encourage and promote investment in drainage and flood risk management which integrates wider social, economic and environmental benefits into design and implementation.

Indeed, to access many funding sources the Lead Local Flood Authority will need to demonstrate the wider benefits of our investment. The Lead Local Flood Authority will therefore need to think carefully during design and implementation to maximise the wider social, economic and environmental benefits of our investment, which in turn will support access to funding. This can only be achieved through close partnership working and early consideration of the wider opportunities through investment. For example, through implementation of green infrastructure in developed areas which capture surface water at source, thereby reducing flood risk, but which also provide significant opportunities to improve amenity, and to create habitat and biodiversity within developed areas.



5.3.1 Environmentally responsible flood risk management

There is a range of European and UK legislation which ensures protection and enhancement of the environment, such as the Strategic Environment Assessment Directive, the Water Framework Directive and the Conservation of Habitats and Species Regulation ('Habitats Regulation'). Any investment must not cause detriment to the environment, and should seek enhancement wherever possible.

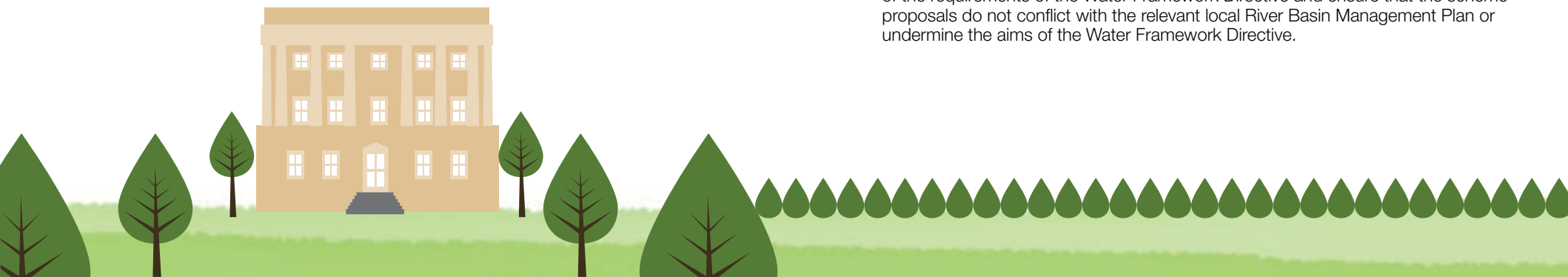
The Local Flood Risk Management Strategy action plan has been developed to set policy or process to reduce flood risk, prevent deterioration of the environment, and seek enhancement where possible. For example, in the 'Strategy Action Plan,' Action 3f is to "identify catchments where improved land management could reduce flood risk and/or improve the water environment. Implementation of this measure will reduce flood risk to communities and reduce diffuse pollution from runoff into watercourses. Another example is our planning policy in the Placemaking Plan about implementation of Sustainable Drainage Systems as part of new development, which will reduce flood risk, improve water quality, and deliver amenity benefits for local residents.

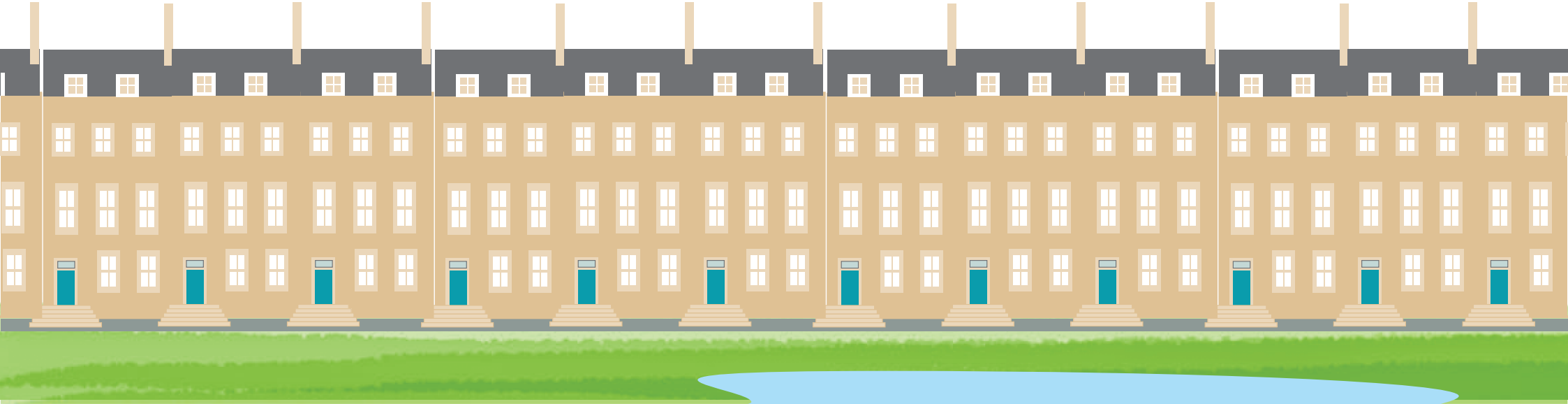
With respect to the Location Specific Action Plan the majority of actions are focused on improvements to highway drainage, inspections and/or investigations. These will have limited, if any, impact on the environment, although we will always undertake measures with consideration to the surrounding environment. Where location-specific actions identified in the Bath & North East Somerset regional Surface Water Management Plan or Local Flood Risk Management Strategy interact with a Main River or Ordinary Watercourse they will need to be subject to a Water Framework Directive assessment²³ during implementation.

Should larger schemes be identified and progressed these will be in line with planning controls, which will include consideration of environmental impact, and a screening opinion on the need for an Environmental Impact Assessment will be sought from the Local Planning Authority. It is also recognised that an environmental reporting procedure should and will be undertaken to ensure that the Council's duties under the relevant legislation are met.

Further details on environmentally responsible flood risk management is available in the Strategic Environmental Assessment Environmental Report which is a separate document.

²³ The requirements of the Water Framework Directive and actions to achieve Good Ecological Status need to be taken into account in the planning of all new activities, plans or strategies that could affect the water environment. Many of the aims of the Water Framework Directive are relevant to the preparation of local flood risk management schemes, and such schemes also may offer opportunities to help deliver some of the actions identified in relevant River Basin Management Plans. Therefore when we are proposing local flood risk management schemes as part of our Strategy, these schemes will be subject to a Water Framework Directive Assessment where they involve works to ordinary or main watercourses. This assessment will take account of the requirements of the Water Framework Directive and ensure that the scheme proposals do not conflict with the relevant local River Basin Management Plan or undermine the aims of the Water Framework Directive.





Section 6

Funding Strategy



Small drainage works can often be funded from Bath & North East Somerset Council's revenue and capital funding streams. Reported flooding incidents are prioritised on a risk analysis basis. In a continued era of austerity the delivery of flood risk management infrastructure will require new ways of working and funding across different organisations and stakeholders. The Council may also seek to secure other dedicated flood risk management funding from Government²⁴ where a project is of sufficient magnitude to justify additional funding or it is likely to qualify for funding.

The introduction of partnership funding by the Department for Environment, Food and Rural Affairs in 2011 for flood and coastal erosion risk management projects means that the ability to leverage additional funding contributions could be the difference between a project going ahead or not. It may be possible for some projects to be fully funded by Flood and Coastal Erosion Risk Management Grant in Aid (which is the current partnership funding mechanism for capital works provided by the Department for Environment, Food and Rural Affairs). However, the majority are likely to require supplementary funding from a range of sources to make up the total sum needed.

To leverage additional funding will require relationships and the right timing. In addition tailoring the outputs or outcomes of flood risk management infrastructure is essential to attract a wider range of funding sources. For example, a flood storage area not only provides reduced flood risk, but creates wider benefits such as new amenity, biodiversity and recreation. These wider benefits are often key to unlocking additional funding from non-dedicated flood risk management sources (e.g. Heritage or Lottery Funding).

The following sections provide information on the approaches that will be taken to gain funding for both strategic and individual actions. Appendix E expands further on the full range of potential funding opportunities available. In addition the Department for Environment, Food and Rural Affairs has published a guide to "Partnership funding and collaborative delivery of local

flood risk management"²⁵, intended to promote successful collaboration and partnership funding.

The development of the Strategic Flood Board, Operational Flood Working Group and the West of England Local Enterprise Partnership will assist the Lead Local Flood Authority in its ability to effectively communicate project needs to appropriate partners, whether local businesses or Risk Management Authorities, to identify funding needs for projects. The role of the Lead Local Flood Authority will be to ensure that proposed schemes are financially viable with respect to whole life costing, to identify who will be best placed to assist with funding or in kind contributions, and to work with partners to develop appropriate solutions to manage risks.

6.1 The 'Strategy' funding approach

Figure 6-1 and Figure 6-2 set out the funding sources and approaches for the actions outlined for the Council's Local Flood Risk Management Strategy. These separate the approach for funding of capital works (i.e. new infrastructure to reduce flood risk) and maintenance of existing infrastructure.

6.1.1 Funding capital works

Figure 6-1 outlines a hierarchical approach to access funding for capital works to alleviate flooding. The Lead Local Flood Authority will seek to secure dedicated funding from Flood and Coastal Erosion Risk Management Grant in Aid and Local Levy in the first instance (Tier 1) where a project is likely to qualify for funding. Refer to Appendix E for further details on these types of funding.

To determine what funding is likely to be available through Flood and Coastal Erosion Risk Management Grant in Aid we will use Department for Environment, Food and Rural Affairs Partnership Funding Calculator to identify the amount that is likely to be available through this route and help the

24 This could include Flood and Coastal Erosion Risk Management Grant in Aid funding from Central Government, or funding from the Regional Flood and Coastal Committee

25 Partnership funding and collaborative delivery of local flood risk management (Defra) <http://randd.defra.gov.uk/Default.aspx?Menu=Menu&Module=More&Location=None&Completed=0&ProjectID=17085>

Lead Local Flood Authority to identify the size of the funding gap. The Lead Local Flood Authority will then engage with the Regional Flood and Coastal Committee to identify the likelihood of securing Local Levy. In the majority of cases funding from these sources will not be sufficient to fully fund a scheme (unless it scores >100% on the Department for Environment, Food and Rural Affairs Partnership Funding Calculator). It should be recognised that funding from this category is dependent on the benefits the scheme will provide (i.e. linked to Department for Environment, Food and Rural Affairs outcomes).

Flood and Coastal Erosion Risk Management Grant in Aid is provided by the Department for Environment, Food and Rural Affairs, but administered and managed by the Environment Agency.

Funding is unlikely to meet the full scheme costs in most cases, and approvals are subject to the consent of the Wessex Regional Flood and Coastal Committee.

Local Levy can be raised by the Wessex Regional Flood and Coastal Committee and used to support flood risk management projects that do not attract 100% national funding through Flood and Coastal Erosion Risk Management Grant-in-Aid.

Where a funding shortfall remains, the Lead Local Flood Authority will subsequently consider Tier 2 funding. This primarily considers economic growth and/or other direct beneficiaries of the proposed scheme, and may include:

- Local authority contributions (either capital or revenue);
- West of England Local Enterprise Partnership where a scheme can directly contribute towards economic growth;
- Section 106 agreements can be used to support provision of infrastructure where they are directly related to development, necessary to make the development acceptable, and relevant to planning;
- Bath & North East Somerset Community Infrastructure Levy, and;
- Beneficiaries of the scheme (e.g. homeowners, businesses or utility providers).

For each capital scheme the Lead Local Flood Authority will identify the economic growth and development opportunities, and the potential beneficiaries. The Lead Local Flood Authority will also engage with relevant organisations early to identify potential funding, either as a contribution towards a Flood and Coastal Erosion Risk Management Grant in Aid application or a contribution outside of this process.

Tier 3 funding is from non-flood risk management sources. To access these will require thinking about the wider benefits such as biodiversity, amenity, health/wellbeing, recreation, and education. Sources could include Lottery funding, money raised by the community and from potential European Union funding sources.

Further explanation on these sources of funding is provided in Appendix E.

Figure 6-1 Options for funding of capital flood risk management works.



6.1.2 Funding maintenance of existing infrastructure

Most of the responsibility for funding of maintenance lies with the Risk Management Authority responsible for the asset (as explained in Section 3.3.2), but Riparian Owners (explained in Section 3.4.3) also have responsibilities for funding maintenance along watercourses which form part of the land they own.

As highlighted in Figure 6-2 this means that Wessex Water are responsible for funding maintenance of sewer network assets that they are responsible for. The money for this comes from the revenue they gain from charging their customers for the services they provide.

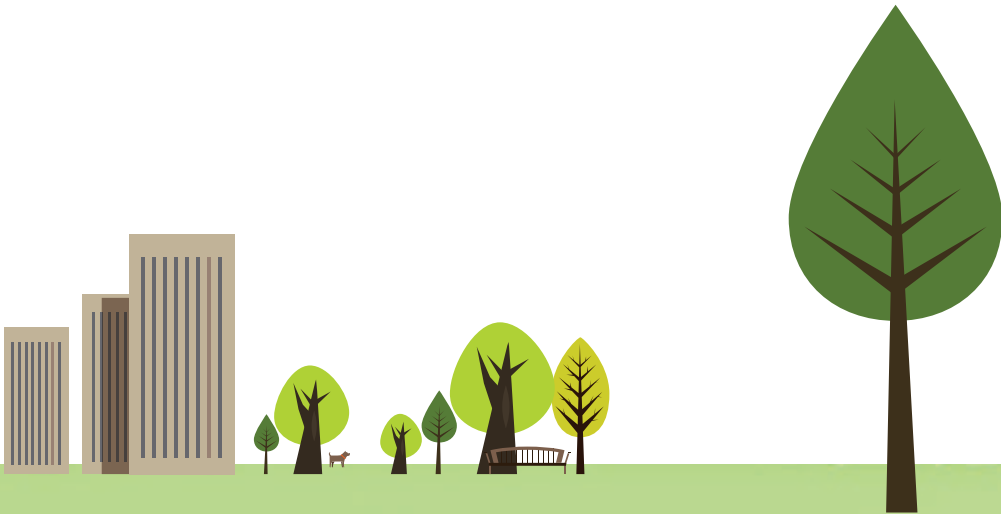
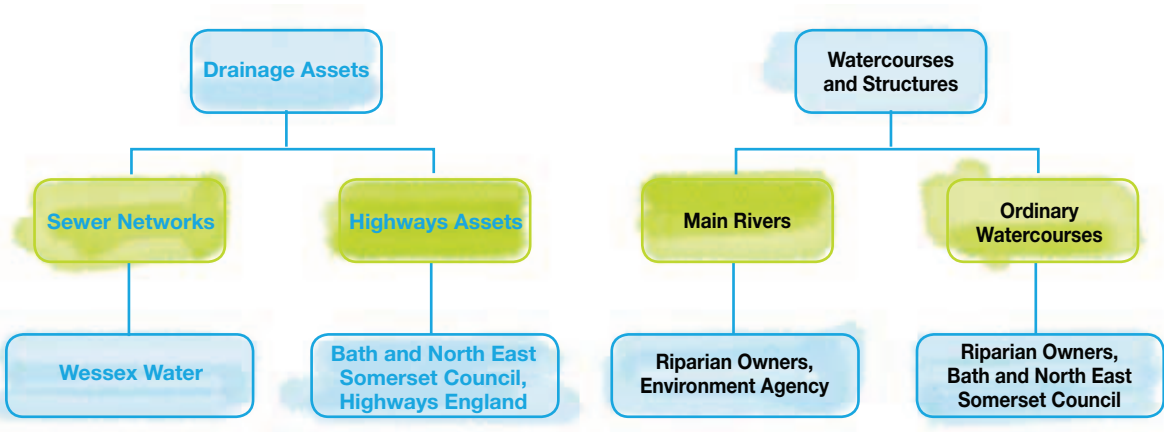
With respect to roads the responsibility for maintenance depends on the asset owner. Funding for maintenance of the assets we are responsible for comes predominantly from revenue through the Council's Settlement Funding Assessment and Council Tax. Funding for the Highways England comes via the Department for Transport.

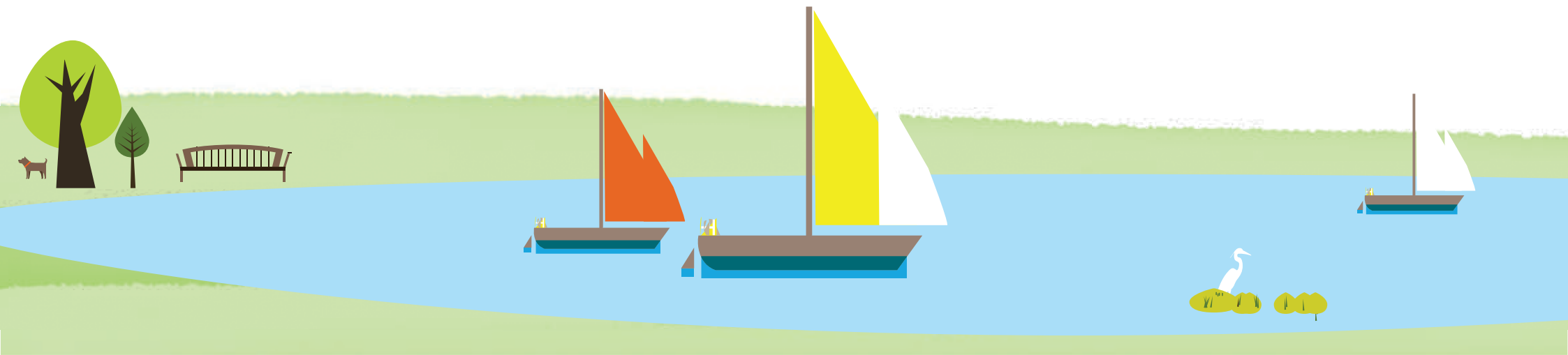
Maintenance of Main Rivers (and associated structures) is the responsibility of Riparian Owners and/or the Environment Agency, depending on ownership. In some cases the Environment Agency will undertake maintenance of Main Rivers which are under Riparian Ownership, using their permissive powers to manage flood risk under the Water Resources Act (1995). Funding for work undertaken by the Environment Agency comes from central government.

Similarly, maintenance of Ordinary Watercourses is the responsibility of Riparian Owners. Using permissive powers under the Land Drainage Act (1991) the Lead Local Flood Authority proactively maintain 37 reaches of Ordinary Watercourses and reactively maintain trash screens, to reduce property flood risk. Funding for the Council's maintenance work comes predominantly from revenue through our Settlement Funding Assessment and Council Tax. Riparian Owners will need to privately fund their own maintenance works.

The Council already compile a yearly maintenance and improvements programme to prioritise where efforts will be focused. This will continue to be undertaken, but using a risk based approach to ensure resources are allocated effectively. This will ensure there is a clearer approach to where the Council plan to focus its attention in the medium term.

Figure 6 2 Funding for maintenance of existing infrastructure





Section 7 Governance, Monitoring and Review



7.1 Governance for flood risk management

There is a governance arrangement in place to co-ordinate actions at an operational and strategic level, and ensure that these have appropriate scrutiny and accountability through our Flood Risk Scrutiny Panel, and Full Council. An overview of the governance arrangements for flood risk management, and the interfaces with stakeholders, is provided in Figure 7-1.

7.1.1 Resources

To ensure Bath & North East Somerset Council can fulfill its duties as a Lead Local Flood Authority, members of the Drainage and Flooding Team, who carry out most of the responsibilities of this role, are appropriately trained and experienced. Most team members have completed the Environment Agency's River and Coastal Engineering Degree programme, and the team is overseen by an experienced Flood Authority Manager.

This also ensures the Drainage and Flooding Team can provide in-house technical advice to those such as the Planning Policy Team who undertake most of the responsibilities of the Local Planning Authority.

7.2 Monitoring

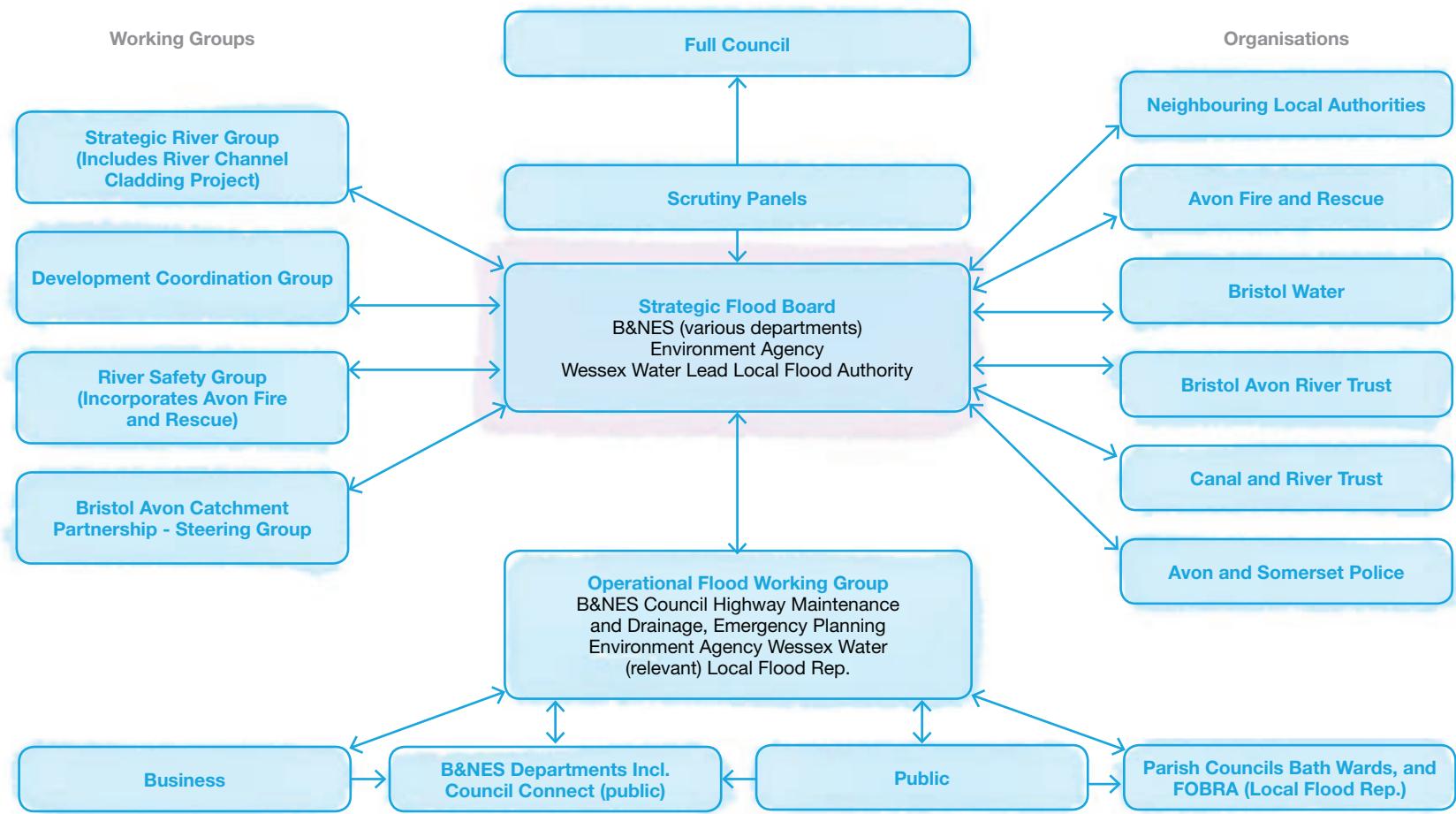
Monitoring, reviewing and updating the Local Flood Risk Management Strategy will be essential to ensure it continues to be 'fit for purpose'. It will also demonstrate success in delivering reduced flood risks to communities in Bath & North East Somerset.

The Lead Local Flood Authority will monitor the progress of the Local Flood Risk Management Strategy on an annual basis through preparation of the annual action plan, which will be presented to, and agreed by, the Strategic Flood Board. The annual action plan will identify:

- progress against the strategies objectives;
- whether measures have been delivered and can therefore be removed from the action plan;
- any changes to legislation or understanding of flood risk, and the implications of this, and;
- set the priorities for the forthcoming year.

The action plan will be published on the Bath & North East Somerset Council website.

Figure 7-1 Governance for flood risk management



7.3 Review and Update

The Local Flood Risk Management Strategy will remain live for a ten year period to 2025, after which it will be reviewed and updated where necessary. A mid-term update of the Local Flood Risk Management Strategy will take place after five years, in 2020, to check progress against the strategies objectives and update the document where required. The update of the Local Flood Risk Management Strategy in 2020 will be reviewed by the Flood Risk Scrutiny Panel. Any significant changes to the Flood and Water Management Act (which is to be reviewed in 2017) which concern the duties of the Lead Local Flood Authority will be reflected in the 2020 review.

In the interim period the Local Flood Risk Management Strategy will only be updated if:

- it is not meeting its objectives as identified in the annual action plan;
- significant flooding occurs that causes the Lead Local Flood Authority to re-consider the risk assessment and prioritised locations;
- there are significant updates to datasets which underpin the risk assessment undertaken in the Bath & North East Somerset regional Surface Water Management Plan;
- there are regulatory, policy or legislative changes that affect the roles and responsibilities for flood risk management, or;
- there are changes to the funding landscape which affects our ability to meet the Local Flood Risk Management Strategy actions.

Appendix A

Policies, legislation, plans, assessments and strategies

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National legislation

The Flood and Water Management Act 2010

The Flood and Water Management Act (2010) brings together the recommendations of the Pitt report and previous policies to improve the management of water resources and create a more comprehensive and risk based regime for managing the risk of flooding from all sources. The Flood and Water Management Act states that its purpose is to “make provision about water, including provision about the management of risks in connection with flooding and coastal erosion”. The key features of the Flood and Water Management Act in relation to flood and coastal risk management are that it provides:

- the Environment Agency with a strategic overview role of all flood and coastal erosion risk management and re-affirms their responsibility as the lead authority for managing flood risk from Main Rivers, the Sea and reservoirs;
- unitary Authorities and County Councils with a Lead Local Flood Authority role, allocating responsibility for managing flooding from surface runoff, groundwater and ordinary watercourses;
- an improved risk based approach to reservoir safety, and;
- a duty for relevant flood risk management authorities to co-operate and share information.

A key implication for County Councils and Unitary Authorities is the introduction of the Lead Local Flood Authority role, which enhances their responsibilities so that they lead the co-ordination of local flood risk management in their areas. However, partnership arrangements are in no way prevented, which will ensure full use of all capabilities and experience locally. In addition, the Flood and Water Management Act allows for all roles and actions to be delegated to another risk management authority (subject to agreement), with the exception of the Local Flood Risk Management Strategy, which must be developed by the Lead Local Flood Authority. The Flood and Water Management Act is available at <http://www.legislation.gov.uk/ukpga/2010/29/contents>.

To avoid administrative burdens, the Flood and Water Management Act does not require routine reporting on performance, but allows information to be requested where necessary. Local authorities can bring matters to the Government’s attention and if a risk management authority fails to exercise a flood or coastal erosion risk management function, the Secretary of State can direct another authority to carry out that function. In addition, the Flood and Water Management Act enables Overview and Scrutiny Committees in Lead Local Flood Authorities to hold all the risk management authorities to account. In this way, the public can be actively involved in ensuring authorities perform and fulfil their responsibilities.

Under the Flood and Water Management Act a ‘flood’ is caused by heavy rainfall; a river overflowing its banks or being breached; a dam overflowing or being breached; tidal waters; groundwater; or anything else including a combination of factors. It does not include a flood caused from any part of a sewerage system, unless wholly or partly caused by an increase in the volume of rainwater (including snow and other precipitation) entering or otherwise affecting the system; or a flood caused by a burst water main.

Flood Risk Regulations 2009

The Flood Risk Regulations came in to force on 10th December 2009 and transpose the European Commission Floods Directive (Directive 2007/60/EC on the assessment and management of flood risks) into UK domestic law. The Flood Risk Regulations can be viewed at <http://www.legislation.gov.uk/ukpga/2010/29/contents>.

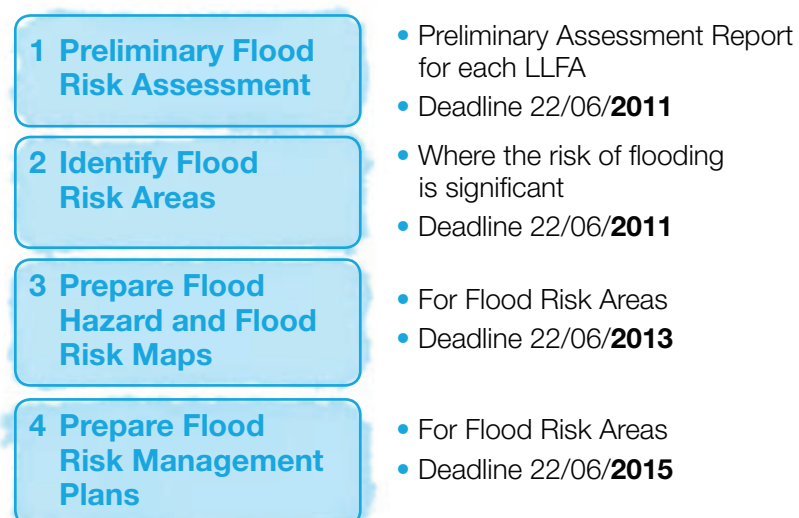
The Directive requires Member States to develop and update a series of tools for managing all sources of flood risk. The Flood Risk Regulations outline the roles and responsibilities of the various authorities consistent with the Flood and Water Management Act and provide for the delivery of the outputs required by the directive.

The Regulations give responsibility to:

- the Environment Agency to prepare Directive deliverables: preliminary assessment report, flood risk maps and hazard maps and flood risk management plans for flood risk from the sea, main rivers and reservoirs;
- Lead Local Flood Authorities to do the same for 'local flood risk', which includes surface runoff, groundwater and ordinary watercourses, and;
- the Environment Agency for collating and publishing the preliminary assessment reports, flood risk maps and hazard maps, and flood risk management plans.

The stages of the Flood Risk Regulations are illustrated in Figure 1. The Flood Risk Regulations operate on a six yearly cycle; therefore an updated version of the Preliminary Flood Risk Assessment will be prepared in 2017. The Preliminary Flood Risk Assessment is a high level screening exercise to identify areas of most significant flood risk across Europe. The aim of the Preliminary Flood Risk Assessment is to assess local flood risk with respect to past floods and the potential harmful consequences of future floods.

Figure 1 Flood Risk Regulations process (taken from Environment Agency guidance)



Land Drainage Act 1991

The Land Drainage Act (1991) outlines the duties and powers to manage land drainage for a number of bodies including the Environment Agency, Internal Drainage Boards, local authorities, navigation authorities and riparian owners. A number of its provisions have been re-defined following the Flood and Water Management Act, in particular the provisions on consenting and enforcement on ordinary watercourses. As a result Bath & North East Somerset Council is now responsible for administering and issuing consents to third parties for undertaking works which could affect ordinary watercourses, and enforcing where works have been undertaken without the necessary consent, under Sections 23, 24 and 25 of the Act.

Water Framework Directive

The Water Framework Directive is the most substantial piece of European Commission water legislation to date and is designed to improve and integrate the way water bodies are managed throughout Europe. It came into force on 22 December 2000 and was transposed into UK law in 2003. Member States must aim to reach good chemical and ecological status in inland and coastal waters by 2015. It is designed to:

- prevent deterioration in the classification status of aquatic ecosystems, protect them and improve the ecological condition of waters;
- achieve at least good status for all waters. Where this is not possible, good status should be achieved by 2021 or 2027;
- promote sustainable use of water as a natural resource;
- conserve habitats and species that depend directly on water;
- progressively reduce or phase out releases of individual pollutants or groups of pollutants that present a significant threat to the aquatic environment;
- progressively reduce the pollution of groundwater and prevent or limit the entry of pollutants, and;
- contribute to mitigating the effects of floods and droughts.

In essence, the Water Framework Directive establishes new and better ways of protecting and improving rivers, lakes, groundwater, transitional (where freshwater and sea water mix) and coastal waters. To address this, the Environment Agency has embarked on river basin management planning with the aim to develop new and better ways of protecting and improving the water environment. It should be noted that the objectives referred to above and contained in the Water Framework Directive, whilst supported in the Bath & North East Somerset Local Flood Risk Management Strategy, are considered outside the scope of this Strategy. Nevertheless it is important that measures to manage local flood risk does not cause deterioration of water bodies and considers opportunities to improve water bodies in conjunction with local flood risk management.

River Basin Management Plans have been produced by the Environment Agency for the eleven river basin districts in England and Wales and are the central tool setting out the objectives and actions required to achieve the objectives of the Water Framework Directive. River Basin Management Plans describe the main issues for each river basin district and state the environmental objectives for the basin, explain the objectives selected to achieve good ecological status and summarise the actions needed to deliver those objectives. A River Basin District is: a river basin, or several river basins, and the river basin's adjacent coastal waters. The Severn River Basin District River Basin Management Plan¹ covers the Bath & North East Somerset Council boundary, and within the area there are 239 artificial or heavily modified water bodies and 633 natural water bodies. As of 2009 when the Plan was published, only 29% of these were meeting good ecological status. At least 75% of the 40 groundwater bodies were however achieving good status. As a requirement of the Water Framework Directive all 912 water bodies will need to meet good or high ecological status or potential by 2027.

Climate Change Act

The Climate Change Act (2008) requires a UK wide climate change risk assessment every five years, accompanied by a national adaptation programme that is also reviewed every five years. The Act has given the Government powers to require public bodies and statutory organisations such as water companies to report on how they are adapting to climate change.

Conservation of Habitats and Species Regulations

The Conservation of Habitats and Species Regulations (2010) transpose the Habitats Directive into UK law. The regulations aim to help maintain and enhance biodiversity throughout the European Union, by conserving natural habitats, flora and fauna. The main way it does this is by establishing a coherent network of protected areas and strict protection measures for particularly rare and threatened species.

Civil Contingencies Act

The Civil Contingencies Act (2004) is legislation that aims to deliver a single framework for civil protection in the UK and sets out the actions that need to be taken in the event of a flood. The Civil Contingencies Act is separated into two substantive parts: local arrangements for civil protection (Part 1) and emergency powers (Part 2).

Strategic Environmental Assessment Directive

The Strategic Environmental Assessment Directive (2001) (European Commission Directive 2001/42/EC) is legislation which aims to increase the consideration of environmental issues during decision making related to strategic documents such as plans, programmes or strategies. The Strategic Environmental Assessment identifies the significant environmental effects that are likely to result due to the implementation of a plan, programme or strategy. A Strategic Environmental Assessment has been prepared in parallel to the development of the Bath & North East Somerset Local Flood Risk Management Strategy.

¹ The Severn River Basin Management Plan is available at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/291442/gemi0910bssk-e-e.pdf

National Flood and Coastal Erosion Risk Management Strategy

The National Flood and Coastal Erosion Risk Management Strategy² was produced to ensure that government, the Environment Agency, local authorities, water companies, internal drainage boards and other organisations that have a role in flood and coastal erosion risk management understand each other's roles. It also encourages them to work together to:

- understand the risks;
- manage the likelihood;
- help people to manage their own risk;
- prevent inappropriate development, and;
- Improve flood prediction, warning and post flood recovery.

This Flood and Coastal Erosion Risk Management Strategy fulfils a requirement in the Flood and Water Management Act (2010), which gave the Environment Agency a 'strategic overview' of flood and coastal erosion risk management and in turn takes forward a recommendation from Sir Michael Pitt's inquiry into the 2007 floods.

National Planning Policy Framework

The National Planning Policy Framework³ sets out the Government's planning policies for England and was produced to help ensure sustainable development can be achieved. It provides a framework within which local people and their accountable councils can produce their own distinctive local and neighbourhood plans, which reflect the needs and priorities of their communities. Within the National Planning Policy Framework it states that local plans should take account of climate change over the longer term, including factors such as flood risk by:

- applying the Sequential Test, and if necessary the Exception Test;
- safeguarding land from development that is required for current and future flood management;
- using opportunities offered by new development to reduce the causes and impacts of flooding;
- seeking opportunities to facilitate the relocation of development, including housing, to more sustainable locations where climate change is expected to increase flood risk so that existing development may not be sustainable in the long-term;
- ensuring the most vulnerable new development is located in areas of lowest flood risk unless there are overriding reasons to prefer a different location, and;
- ensuring development is appropriately flood resilient and resistant, including safe access and escape routes where required, and that any residual risk can be safely managed, including by emergency planning, and it gives priority to the use of sustainable drainage systems.

It also states local planning authorities should ensure flood risk is not increased elsewhere and only consider development appropriate in areas at risk of flooding where, informed by a site-specific flood risk assessment following the Sequential Test, and if required the Exception Test, it can be demonstrated that:

- the most vulnerable development is located in areas of lowest flood risk unless there are overriding reasons to prefer a different location, and;
- development is appropriately flood resilient and resistant, including safe access and escape routes where required, and that any residual risk can be safely managed, including by emergency planning; and it gives priority to the use of sustainable drainage systems.

² The FCERMS is available at: <http://nationalfloodforum.org.uk/wp-content/uploads/EA-National-Strategy-flooding-and-coastal-erosion-risk-management-summary.pdf>

³ The National Planning Policy Framework is available at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/6077/2116950.pdf

Plans, Assessments and Strategies undertaken locally by Risk Management Authorities

Preliminary Flood Risk Assessment

Bath & North East Somerset Council produced its Preliminary Flood Risk Assessment⁴ in 2011. The Preliminary Flood Risk Assessment provides a high level overview of local flooding within Bath and North East Somerset, considering both past flooding and potential future flooding. In order to do this the Preliminary Flood Risk Assessment used Environment Agency Flood Risk Maps and gathered records of historic flooding. The historical flooding information was combined into a single database using records held by the council's land drainage and highways drainage departments, Wessex Water, the Environment Agency and information from Parish Councils.

In England the Department for Environment, Food and Rural Affairs and the Environment Agency have identified the 'Flood Risk Areas' on a national basis. This has been done by identifying locations where there are clusters of 30,000 or more people predicted to be vulnerable to surface water flooding. There are ten 'Flood Risk Areas' in England. No standalone indicative Flood Risk Areas fall within the Bath and North East Somerset area. The closest Indicative Flood Risk Area to Bath and North East Somerset is that of Bristol. A relatively small portion of this area (1.5%) falls within Bath and North East Somerset administrative boundary. Discussions with Bristol City Council have resulted in the agreement that they will take the lead in reviewing this indicative flood risk area on the basis that the selected location falls predominantly within their administrative boundary.

Strategic Flood Risk Assessments

Strategic Flood Risk Assessments are tools used by a planning authority to assess flood risk for spatial planning, producing development briefs, setting constraints, informing sustainability appraisals and identifying locations of emergency planning measures and requirements for flood risk assessments. The purpose of a Strategic Flood Risk Assessment is to assess and map all forms of flood risk from groundwater, surface water, impounded water bodies, sewer and river sources, taking into account future climate change predictions, to allow planning authorities to use this as an evidence base to locate future development primarily in low flood risk areas. The outputs from a Strategic Flood Risk Assessment also assist in the production of sustainable policies for the long-term management of flood risk.

In 2008 the Level 1 Strategic Flood Risk Assessment was produced for Bath & North East Somerset Council. The Strategic Flood Risk Assessment provides an overview of flood risk within Bath & North East Somerset using historical flooding records gathered from the Environment Agency and Bath & North East Somerset Council, Parish Councils, Wessex Water and local residents. This was supported by the use of mapping products provided by the Environment Agency outlining modelled flood extents and locations of flood defences. The Strategic Flood Risk Assessment was designed to provide the information required through the planning process so that land is allocated for development in low risk flood areas first.

Following the Level 1 Strategic Flood Risk Assessment, Level 2 Strategic Flood Risk Assessments⁵ were produced to focus on areas considered to be at higher potential risk from flooding as a result of conclusions in the Level 1 report. These Level 2 Strategic Flood Risk Assessments covered three areas:

- Bath;
- Keynsham, and;
- Midsomer Norton/ Radstock.

As part of these Level 2 Strategic Flood Risk Assessments sequential tests and a scoping studies for flood risk management strategies were undertaken.

⁴ The Bath & North Somerset PFRA is available from: [HTTP://WEBARCHIVE.NATIONALARCHIVES.GOV.UK/20140328084622/HTTP://CDN.ENVIRONMENT-AGENCY.GOV.UK/FLHO1211BVPL-E-E.PDF](http://web.archive.nationalarchives.gov.uk/20140328084622/http://cdn.environment-agency.gov.uk/flho1211bvpl-e-e.pdf)

⁵ The level 1 & 2 SFRAs can be accessed from the Bath & North East Somerset Council website at: [HTTP://WWW.BATHNES.GOV.UK/SERVICES/PLANNING-AND-BUILDING-CONTROL/PLANNING-POLICY/EVIDENCE-BASE/FLOOD-RISK](http://www.bathnes.gov.uk/services/planning-and-building-control/planning-policy/evidence-base/flood-risk)

Flood Risk Management Strategy

Following on from the Level 2 Strategic Flood Risk Assessment a Flood Risk Management Strategy was prepared for Bath & North East Somerset. This provides strategic options for the management of flood risk in areas prioritised in the SFRA, namely, Bath, Keynsham, Midsomer Norton and Radstock. This Flood Risk Management Strategy sits alongside the Council's Local Development Framework and provides guidance and advice on flood risk management and sustainable urban drainage systems.

Surface Water Management Plans

Bath & North East Somerset Council has completed a regional Surface Water Management Plan. Surface Water Management Plans are described as a framework through which key local partners with a responsibility for surface water and drainage in their area work together to understand the causes of surface water flooding and agree the most cost effective way of managing that risk. The purpose is to make sustainable surface water management decisions that are evidence based, risk based, future proofed and inclusive of stakeholder views. A Surface Water Management Plan establishes a long-term action plan to manage surface water in an area and should influence future capital investment, drainage maintenance, public engagement and understanding, land-use planning, emergency planning and future developments.

The regional Surface Water Management Plan was undertaken in order to be used as an overarching framework to assist with the identification and management of flood risk from surface water within Bath & North East Somerset. To understand the flood risk, data was collated and scored according to its quality from Bath & North East Somerset Council records and those of project partners including the Environment Agency and Wessex Water. Source-Pathway-Receptor modelling was then applied, and the data mapped to identify key flooding locations which are referred to as 'wet spots'. Based on the overall findings of the regional Surface Water Management Plan a Strategic and Operational Action Plan was developed which identified actions which can be applied in general to address flood risk. Using the flood history data, a location specific Action Plan was developed to summarise actions required in wet spot areas. The actions from both of these action

plans have now been incorporated into the Local Flood Risk Management Strategy, see Section 5 of the main Local Flood Risk Management Strategy for further details.

Flood Risk Management Plans

By law the Environment Agency must produce flood risk management plans for each River Basin District. These must cover flooding from main rivers, the sea and reservoirs. Lead Local Flood Authorities that are not in Flood Risk Areas may contribute to a joint partnership Flood Risk Management Plans. Other Risk Management Authorities can also contribute to developing the joint partnership Flood Risk Management Plans for the River Basin District. Such contributions are carried out on a voluntary basis and will result in better co-ordinated flood management.

Lead Local Flood Authorities must also produce Flood Risk Management Plans for all Flood Risk Areas covering flooding from local sources (surface water, ordinary watercourses and groundwater). Bristol was identified as a Flood Risk Area as part of a Preliminary Flood Risk Assessment (which were undertaken by all Lead Local Flood Authorities). Some of the area was identified in the Bath & North East Somerset area, but Bristol City Council have taken the lead on producing the Flood Risk Management Plan for this area.

Catchment Flood Management Plans

Catchment Flood Management Plans have been produced by the Environment Agency and are high-level planning tools that set out objectives for flood risk management for each river catchment and estuary. They also identify flood risk management policies that are economically practical, have a potential life of 50 to 100 years, and will help partnership working to put them in place. Catchment Flood Management Plans consider inland risk from rivers, surface water, groundwater and tidal flooding but do not consider sewer flooding. The Bristol Avon Catchment Flood Management Plan covers Bath and North East Somerset⁶ as three sub-areas and each has preferred policy options identified to manage the risks most relevant to each area.

6 The Bath & North East Somerset Core Strategy is available at: <http://www.bathnes.gov.uk/services/planning-and-building-control/planning-policy/core-strategy-examination>

In the sub-area of Bath policy option 5 is outlined as the preferred option to take further action to reduce flood risk. Under this it is proposed that action will be taken through carrying out improvements to existing assets below standard; identifying an overall strategy for the future protection of the city; increasing awareness of risk and response to flood warning developed for the area; and discouraging inappropriate development.

In the Lower Avon sub-area the preferred option is policy option 3 which means managing existing flood risk effectively. To do this it is proposed that a System Asset Management Plan be developed; investigation be undertaken to understand the cost efficiency of existing asset maintenance in areas such as Bathford, Swineford and Batheaston; and recommended improvements as a result of the above be implemented.

In the sub-area of Mendip Slopes and Long Ashton the preferred option is policy option 4 as it is believed that flood risk is already being managed effectively, but that further action is needed to keep pace with climate change. To implement the preferred policy option it is proposed that actions will include reviewing emergency contingency planning; increasing awareness of risk and response to flood warnings; discourage inappropriate development; and investigate the benefits of improved flood forecasting and warnings.

Core Strategy

Adopted in July 2014, the Bath & North East Somerset Core Strategy⁷ is one of the main planning documents for Bath & North East Somerset Council. It sets out the Council's vision and objectives and translates them into a deliverable plan from now up to 2029.

The key policy relating to flood risk management within the Core Strategy is CP5: Flood Risk Management. This outlines Development in the District will follow a sequential approach to flood risk management, avoiding inappropriate development in areas at risk of flooding and directing development away from areas at highest risk in line with Government policy (i.e. National Planning Policy Framework). Any development in areas at risk of flooding will be expected to be made safe throughout its lifetime, by incorporating mitigation measures, which may take the form of on-site flood defence works and / or a contribution towards or a commitment to undertake such off-site measures

as may be necessary. All development will be expected to incorporate sustainable drainage systems to reduce surface water run-off and minimise its contribution to flood risks elsewhere. All development should be informed by the information and recommendations of the Bath & North East Somerset's Strategic Flood Risk Assessments and Flood Risk Management Strategy.

Other policies within the Core Strategy which relate to flood risk management include:

- CP2: Sustainable Construction: which states that all planning applications should, amongst others, minimise the vulnerability to flooding and give consideration of climate change adaptation.
- CP7: Green infrastructure: which seeks to maintain, protect and enhance green infrastructure as an integral part of creating sustainable communities.

Strategic Environmental Assessment

Under the Strategic Environmental Assessment Directive, a Strategic Environmental Assessment is required to accompany the Bath & North East Somerset Local Flood Risk Management Strategy. This identifies any potentially significant environmental effects arising from the implementation of the Local Flood Risk Management Strategy so that their impact can be mitigated. It considered effects on water, flooding, population, human health, biodiversity, the landscape, climatic factors, material assets, cultural heritage and air quality.

⁷ The Bath & North East Somerset Core Strategy is available at: <http://www.bathnes.gov.uk/services/planning-and-building-control/planning-policy/core-strategy-examination>

Emergency Planning Protocol

To support the development of business continuity plans, the Council have developed an Emergency Planning Protocol⁸.

City of Bath World Heritage Site Management Plan

The entire City of Bath is inscribed by UNESCO as a World Heritage Site and as such the UK Government and Bath and North East Somerset Council (as principal site steward) are under an international obligation to protect the outstanding heritage. This heritage may be above or below ground and flooding is identified in the City Of Bath World Heritage Site Management Plan (2010 – 2016)⁹ as a risk. The Local Flood Risk Management Strategy works in tandem with this plan in outlining the response to this threat. The same principle applies to the protection of archaeology and standing structures within the wider Bath and North East Somerset district.

⁸ The Emergency Planning Protocol can be found at: http://www.bathnes.gov.uk/sites/default/files/emergency_planning_protocol_v10.pdf.

⁹ The City of Bath World Site Heritage Plan can be found at: <http://live-world-heritage-site.pantheon.io/sites/default/files/heritage/City%20of%20Bath%20World%20Heritage%20Site%20Management%20Plan%202010.pdf>

Appendix B

Statement of stakeholder engagement

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Introduction

This Statement of stakeholder engagement summarises the consultation activities that have been undertaken to help shape the Bath & North East Somerset's Local Flood Risk Management Strategy.

It provides an overview of the 5 key stages of work:

- stage 1 – development of a stakeholder engagement plan (2014);
- stage 2 - set up of the Strategic Flood Board, Operational Flood Working Group and Local Flood Representatives (2014);
- stage 3 – stakeholder updates/briefing notes;
- stage 4 – stakeholder workshop (June 2015), and;
- stage 5 – formal public consultation (September and October 2015).

Context

Bath & North East Somerset Council has a duty to undertake consultation on the Local Flood Risk Management Strategy. The Flood and Water Management Act 2010 states (in Section 9) that:

“A lead local flood authority must consult the following about its local flood risk management strategy — (a) risk management authorities that may be affected by the strategy (including risk management authorities in Wales), and (b) the public.”

In preparing the draft Local Flood Risk Management Strategy the Council has undertaken engagement in order to meet, and hopefully exceed, this requirement for consultation.

The Act does not specify how or when consultation should take place. The steps taken have therefore followed good practice to develop an overall engagement strategy which is embedded within and clearly influences the Local Flood Risk Management Strategy development process.

The approach has taken account of the guidance set out in the Council's Statement of Community Involvement, the Parish Charter, and the messages contained within the Local Government Association document 'Framework to Assist the Development of the Local Strategy for Flood Risk Management' (Nov, 2011).

Overall the consultation approach was based on a combination of:

- **informal engagement** - undertaken in parallel to the preparation of the draft Local Flood Risk Management Strategy which has helped to inform the documents which are now out for public consultation;
- **formal engagement** – which, through the current consultation, will invite feedback on the published draft version of the Local Flood Risk Management Strategy, and;
- ongoing **technical discussions**.

Objectives

Engagement on the Local Flood Risk Management Strategy aimed to help:

- improve understanding of current and future local flood risk across Bath & North East Somerset;
- improve understanding of who is responsible for dealing with different types of flooding;
- encourage individuals and communities to understand their own responsibilities and be more aware of the range of actions that they can take themselves to address flooding;
- manage expectations (in terms of what can be done to address flood risk);
- create positive engagement, through which a wide range of ideas about flooding can be understood and fed into the strategy;
- share data and ensure that the data used to underpin the Local Flood Risk Management Strategy is as accurate as possible - ensuring that best use is made of local knowledge;
- maintain close liaison with flood risk management partners and pave the way for a smooth working relationship with them going forward;
- build awareness and positive support for the way in which the Council intend to manage local flooding going forward, and;
- ensure ultimately that the final Local Flood Risk Management Strategy can be readily supported and adopted by the Council's Cabinet.

Key messages

There are a number of key messages that the stakeholder engagement and communication work undertaken has aimed to clearly and consistently convey, including the following.

- Bath & North East Somerset Council, as Lead Local Flood Authority, now has a responsibility to work with local partners to better manage local flooding.
- The Council's responsibility, and the focus of the Local Flood Risk Management Strategy, is on the management of local flooding. This includes flooding from surface runoff, groundwater and ordinary watercourses (small streams and rivers). The council will continue to work with the Environment Agency, who remain responsible for flooding from main rivers.
- It is not economically, technically, socially or environmentally feasible to wholly prevent flooding. However, we can reduce and mitigate the impacts of flooding through good planning and management and effective investment.
- Local communities have a key role to play and will themselves need to take action to help mitigate and manage local flood risk.

Stage 1

Development of a stakeholder engagement plan

At the start of the project, a stakeholder engagement plan was drawn up. This identified who would need to be consulted, how and when.

The stakeholder engagement plan recognised that successful delivery of the Local Flood Risk Management Strategy would require close working with a range of internal partners in various departments across the Council as well as with a number of key external partners. It also set out a consultation timeline, which was then evolved as the project progressed. The key activities mapped out in the timeline were:

- internal meetings with representatives from other Bath & North East Somerset Council departments;
- preparation of regular update sheets/newsletters which were distributed to stakeholders;
- a stakeholder workshop;
- a formal consultation, supported by publicity;
- iterative feedback, with the Local Flood Risk Management Strategy documents being updated to take account of comments raised, and;
- involvement of the Council's overview and scrutiny panel.

Stage 2

Set up of the Strategic Flood Board, Operational Flood Working Group and Local Flood Reps

At an early stage in the development of the Local Flood Risk Management Strategy the Council set up an overarching process of governance to apply to all of its duties as Lead Local Flood Authority.

A Strategic Flood Board was set up. This includes representatives from the Council, as well as the Environment Agency, Wessex Water, Bristol Water and the Canals and Rivers Trust. In addition, an Operational Flood Working Group has been set up. Going forwards this will discuss specific flooding or drainage issues with a view to coming up with practical measures to improve drainage or reduce flood risk. Both the Strategic Flood Board and the Operational Working Group have been involved in developing the Local Flood Risk Management Strategy from an early stage.

A network of Local Flood Representatives based in many of the Parishes has also been set up to act as an intermediary between the Council and the community and will feed information directly to the Operational Flood Working Group.

Stage 3

Stakeholder updates/briefing notes

At key stages throughout the project update sheets were prepared and circulated to key stakeholders. These gave information about the emerging objectives and the tasks undertaken and were also used to advertise the consultation.

Stage 4

Stakeholder workshop

The key phase of consultation focused around a stakeholder workshop. This was held on 17th June 2015. A wide range of stakeholders were invited to attend including:

- members of the Strategic Flood Board, Cabinet Members and Local Ward Councillors;
- representatives from Bath & North East Somerset Council as planning authority and highways authority and in relation to building control, emergency planning;
- Canal and River Trust;
- English Heritage;
- Environment Agency;
- Natural England;
- Wessex Water;
- Emergency Services (including Ambulance Civil Contingencies Unit, Avon Fire and Rescue and Avon and Somerset Constabulary);
- neighboring authorities (Bristol, Wiltshire, North Somerset and South Gloucestershire);

- residents associations;
- Town and Parish Councils;
- Chamber/s of Commerce;
- Network Rail;
- local bus and train operating companies;
- cycling groups (including Sustrans and Cycle Bath);
- river and flooding groups (including the Broadmead Lane Industrial Estate, Kennet and Avon Canal & River Trust, Chew Valley Flood Forum, River Corridor Group);
- wildlife and nature groups (including the Avon Wildlife Trust, Forest of Avon Trust, West of England Nature Partnership and RSPB);
- heritage groups (including Bath Preservation trust and Bath Heritage Watchdog);
- land owners, and;
- the Met office.

The session was attended by over 30 stakeholders from a wide cross section of backgrounds and disciplines.

The workshop comprised of a:

- briefing on the role of the Council as LLFA, the background and context for the Local Flood Risk Management Strategy and the Local Flood Risk Management Strategy objectives;
- more detailed presentation on the results of the Surface Water Management Plan (SWMP) and how these have been fed into the Local Flood Risk Management Strategy as well as on the Local Flood Risk Management Strategy Action Plan, and;
- break out session which gave attendees the opportunity to discuss the Local Flood Risk Management Strategy objectives and Action Plan in more detail.

A detailed summary of the workshop was produced and is available, on request, as a separate document. This documents all the comments and queries raised and shows how each has been responded to.

As a result of the workshop a number of changes were made to the emerging draft Local Flood Risk Management Strategy documents. The version that is currently out for consultation therefore incorporates these amendments. A summary of these amendments is presented below:

- The key feeling at the workshop was that raising awareness of flooding and of responsibilities for flooding was critical and that the Local Flood Risk Management Strategy should address this. The stakeholders felt strongly that encouraging individuals, communities and businesses to be aware of and manage their own flood risks was paramount, and that providing the right people with the right tools was key to doing this.

Action taken – The Local Flood Risk Management Strategy documents were amended to give greater emphasis to these issues.

- Stakeholders also expressed an opinion that the Local Flood Risk Management Strategy should reflect the stages of a flood – i.e. manage, plan, warn/respond.

Action taken – a diagram was added to show how the Local Flood Risk Management Strategy objectives relate to the various stages of a flood.

- Stakeholders were keen to ensure that the Local Flood Risk Management Strategy took account of natural springs that can appear after heavy rain.

Action taken – reference to this was added to the draft Local Flood Risk Management Strategy by outlining that flooding from natural springs would be considered as groundwater flooding.

- Stakeholders were keen to ensure that the Council continues to work in partnership with neighbouring authorities and that information should be freely shared between and within organisations.

Action taken – actions about partnership working and sharing information have been added.

- The stakeholders felt that, at present, it is difficult to advise the public correctly about the actions to take when a flood occurs.

Action taken – the Local Flood Risk Management Strategy now includes a section on who to report flooding to, and links to Environment Agency guidance (on the Gov.uk website) about preparing for a flood and what to do during a flood event.

- Stakeholders felt that maintenance and clearance works to culverts and watercourses should be prioritized.

Action taken – an action has been added.

- Stakeholders felt that the wording of an action ‘Support communities to manage their flood risks was misleading’

Action taken – this action has been rephrased for clarity.

- Stakeholders felt strongly that communities should be empowered to take control of local issues.

Action taken – action added.

Stage 5

Formal public consultation

The public consultation period held between September and October 2015 formed the 5th stage of engagement. The Local Flood Risk Management Strategy was made available online and in libraries and one-stop-shops. A questionnaire was available on line, or via hard copy, to capture comments.

The Consultation was publicised in the Council’s ‘Connect’ magazine that is sent to every household in the area and was picked up in the local media. The feedback from the consultation was reviewed and analysed. Discussion was then held on how appropriate comments would be used to help shape the final version of the Local Flood Risk Management Strategy.

The responses to each comment and the changes as a result are available in a ‘What’s Changed’ summary document available online.

Appendix C

Roles and responsibilities of Risk Management Authorities

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Introduction

The Risk Management Authorities identified under the Flood and Water Management Act 2010 (section 6, part 13) are:

- a Lead Local Flood Authority;
- the Environment Agency;
- a district council for an area for which there is no unitary authority;
- an internal drainage board;
- a water and sewerage company, and;
- a highway authority.

These organisations have a duty under the Flood and Water Management Act to act consistently with (or in the case of a water company to have regard to) the Local Flood Risk Management Strategy. They are required to co-operate with each other and share information in the exercise of their flood and coastal erosion risk management functions. They are also able to delegate flood and coastal erosion functions to each other by mutual consent (except for the Local Flood Risk Management Strategy which Bath & North East Somerset cannot delegate).

In the case of Bath & North East Somerset the Risk Management Authorities are:

- Bath & North East Somerset, as the Lead Local Flood Authority, Local Highways Authority, Local Planning Authority, and Emergency Planning Authority;
- the Environment Agency;
- Wessex Water;
- Bristol Water (noting that burst water mains are excluded from flooding in the Flood and Water Management Act), and;
- Highways England.

The Lead Local Flood Authority have established a number of working groups which enable partnership working with other organisations and

Risk Management Authorities. These include the Strategic Flood Board and Operational Flood Working Group, which hold regular meetings. The Strategic Flood Board provides oversight and partnership working for flood risk management in Bath and North East Somerset. The purpose of the Operational Flood Working Group is to discuss and agree ways to manage flood risk from local sources.

The Lead Local Flood Authority also attend meetings with the South West Flood Risk Managers and West of England Flood Risk Working Groups which aids communication with other Lead Local Flood Authorities in the South West of England.

Powers and duties of Risk Management Authorities

Table C-1 provides an overview of the powers and duties of each Risk Management Authority, with respect to flood risk management.

Table C-1 Roles, duties powers and responsibilities of Risk Management Authorities

Risk Management Authority	Overview of role	Duties, powers and responsibilities
Bath & North East Somerset Council , as Lead Local Flood Authority	Lead Local Flood Authority, responsible for managing and coordinating local flood risk management;	Duties: • develop, maintain, apply and monitor a Local Flood Risk Management Strategy, which is consistent the national flood and coastal erosion management strategy; • act consistently with the Local Flood Risk Management Strategy and national flood and coastal erosion management strategy; • upon becoming aware of a flood, the Lead Local Flood Authority must, to the extent is considers necessary or appropriate, investigate which authority has flood risk management responsibilities and whether that authority has or is proposing to exercise those function; • co-operate with risk management authorities for the purposes of managing flood or coastal erosion risk; • maintain a register of structures or features which are considered to significantly affect flood risk; • responsible for consenting third party works on ordinary watercourses; • statutory consultee for surface water drainage proposals for major¹ planning applications, and; • contribute towards achievement of sustainable development; Powers: • to do works to manage flood risks from surface runoff and groundwater; • designate structures and features that affect flooding; • request information from any person with respect to flood and coastal erosion; • sanction persons who do not provide information following a request for information; • enforcement where works have been completed without a necessary consent for all districts/ boroughs, and; • enforcement to maintain a proper flow on ordinary watercourses. Other: • management and co-ordination of local flood risk, bringing together all relevant bodies to help manage local flood risk

¹ Major development is defined as: a) Winning and working of mineral or the use of land for mineral working deposits, b) Waste development, c) The provision of dwellings where: i. The number of dwellings is 10 or more, ii. The site has an area of 0.5 hectares or greater, d) The provision of a building or buildings where the floor space to be created by the development is 1,000 square meters or more, or, e) A development carried out on a site having an area of 1 hectare or more. This is as defined in Article 2(1) of the Town and Country Planning (Development Management Procedure) (England) Order 2010.

Table C-1 Roles, duties powers and responsibilities of Risk Management Authorities

Risk Management Authority	Overview of role	Duties, powers and responsibilities
Bath & North East Somerset Council, as the Local Highways Authority ²	Responsible for highway drainage and roadside ditches	Duties: • responsible for the provision and management of highway drainage and roadside ditches under the Highways Act (1980). This excludes the roads that are the responsibility of the Highways Agency; • contribute towards achievement of sustainable development, and; • statutory consultee where a development proposal is likely to affect a local highway.
Bath & North East Somerset Council, as the Local Planning Authority ³	Responsible for plan making and decision taking for new development	Duties: • preparing a Local Plan for development; • considering flood risk assessments submitted in support of applications, and; • determination of planning applications, giving consideration for flood risk within the region. Other: • working closely with the Drainage and Flooding team (who undertake most of the duties of the Lead Local Flood Authority) to ensure that planning applications take adequate account of drainage requirements.
Bath & North East Somerset Council, as the Emergency Planning Authority	Prepare for, and respond to emergencies, including flooding	Duties: • assess the risk of emergencies occurring and use this to inform contingency planning; • put in place emergency plans; • put in place business continuity management arrangements; • put in place arrangements to make information available to the public about civil protection matters and maintain arrangements to warn, inform and advise the public in the event of an emergency; • share information with other local responders to enhance co-ordination; • co-operate with other local responders to enhance co-ordination and efficiency, and; • provide advice and assistance to businesses and voluntary organisations about business continuity management.⁴

² The Highways Agency have the same roles for runoff that is collected within the Highways Agency network

³ This includes being the planning authority for minerals and waste

⁴ From <https://www.gov.uk/preparation-and-planning-for-emergencies-responsibilities-of-responder-agencies-and-others>

Table C-1 Roles, duties powers and responsibilities of Risk Management Authorities

Risk Management Authority	Overview of role	Duties, powers and responsibilities
The Environment Agency	Strategic overview of all sources of flood risk, and operational responsibility for flooding from Main Rivers, the Sea and Reservoirs	Duties: • develop, maintain, apply and monitor a strategy for flood and coastal erosion risk management in England; • specific consultation body on the preparation of local plans; • statutory consultee for proposed developments in flood zones 2 and 3, and in areas with critical drainage problems in flood zone 1 where the Environment Agency has notified the local planning authority; • statutory consultee responsible for consenting for work or operation conducted in, over or under the bed of, or within 8 meters of the top of a bank of a Main River. • establish Regional Flood and Coastal Committees; • co-operate with risk management authorities for the purposes of managing flood or coastal erosion risk; • contribute towards achievement of sustainable development; • must report to the Minister about flood and coastal erosion risk management, and; • duty to be subject to scrutiny from Lead Local Flood Authority with respect to flood risk management functions. Powers: • designate structures and features that affect flooding; • request information from any person with respect to flood and coastal erosion; • sanction persons who do not provide information following a request for information; • manage flood risk from Main Rivers, the Sea and Reservoirs; • may make grants in respect of expenditure incurred or expected to be incurred in connection with flood or coastal erosion risk management in England; • may issue levies to the lead local flood authority for an area in respect of the Agency's flood and coastal erosion risk management functions in that area, and; • arrange for a coastal erosion risk management function to be exercised on its behalf by a coast protection agency, Lead Local Flood Authority or Internal Drainage Board. Other: • provides fluvial and coastal flood warnings; • supports emergency responders when flooding occurs; • allocation of flood and coastal erosion risk management capital funding (Flood and Coastal Risk Management Grant in Aid⁵), and; • provides advice to local planning authorities in relation to development and flood risk.

5 Formally known as Flood Defence Grant in Aid

Table C-1 Roles, duties powers and responsibilities of Risk Management Authorities

Risk Management Authority	Overview of role	Duties, powers and responsibilities
Wessex Water	Responsible for draining foul water, and runoff from roof and yards	Duties: • responsible for effectually draining foul water, and roof and yard runoff from their area; • duty to co-operate and may share information; • duty to be subject to scrutiny from Lead Local Flood Authority with respect to flood risk management functions; • adopt private sewers; • non-statutory consultee where a drainage proposal would interact with a public sewer, and; • need to have regard to the Local Flood Risk Management Strategy and the National Flood and Coastal Erosion Management Strategy.
Bristol Water	Manage service reservoirs for which they are responsible	Duties⁶: • responsible for managing service reservoirs under their ownership; • prepare on-site emergency plans for service reservoirs under their ownership; • duty to co-operate and may share information; • duty to be subject to scrutiny from Lead Local Flood Authority with respect to flood risk management functions, and; • need to have regard to the Local Flood Risk Management Strategy and the National Flood and Coastal Erosion Management Strategy.

6 Excluded burst water main flooding as this is not defined as a ‘flood’ in the Flood and Water Management Act (2010)

Appendix D

Location-specific action plan

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Introduction

The regional Surface Water Management Plan is the most comprehensive source of information about location-specific actions. It contains at least one action for each of the wet-spots identified as being vulnerable based on relevant and recent flood incident records which were analysed and rationalised for the period of 2009 to 2014. Historical flooding incidents (i.e. those that occurred before 2009) have not been included to prevent misrepresentation of recorded flood incidents which may now have had appropriate action taken.

For the Local Flood Risk Management Strategy the location-specific action plan has been transposed from the Surface Water Management Plan because it is based on the most comprehensive and robust information available.

This location-specific action plan recommends measures to investigate, reduce or mitigate flood risk in Bath & North East Somerset, and developed so it can be delivered in a phased approach based on consideration of the frequency of flooding and vulnerability of receptors. In many locations the action plan recommends further investigation or survey in the first instance. This is necessary to fully understand flooding mechanisms and impacts prior to the development of flood mitigation schemes. This is a 'live' action plan which will be updated as measures are implemented or new information becomes available following further inspections or investigations. Its implementation will now form part of the Local Flood Risk Management Strategy as this is the overarching strategy for managing local flood risk in the region, and will be reviewed on an annual basis during preparation of the annual action plan.

A significant number of the wet-spots (42) identified in the Surface Water Management Plan had common actions around improvements to highway and/or land drainage, and have been grouped together in the Surface Water Management Plan and Local Flood Risk Management Strategy. For these wet-spots a five stage implementation plan was identified in the regional Surface Water Management Plan:

- monitor;
- check cyclic maintenance has been carried out;
- investigate performance of highway/land drainage system, identifying any maintenance or design requirements;
- carry out required maintenance or design and construct engineering scheme, and;
- implement continued maintenance programme.

In addition, a further 15 wet-spots identified in the regional Surface Water Management Plan have been assigned specific actions. In these wet-spots the actions are bespoke to each area, and range from inspection and investigation, through to scheme design and build. The following wet-spots have specific actions identified in the regional Surface Water Management Plan, and have been adopted for the Local Flood Risk Management Strategy:

- Bath City Centre;
- Batheaston and Bathford;
- Chew Magna;
- Chew Stoke;
- Clandown;
- West Harptree;
- Whitchurch;
- Keynsham;
- Lower Bristol Road;
- Timsbury;
- Midsomer Norton;
- Weston and Upper Weston;
- Weston Village;
- Weston Park, and;
- White Cross Farm (Bristol Road).

Across these wet-spots 21 specific actions have been identified. 17 of these actions are considered high priority in the regional Surface Water Management Plan, with a further four considered as medium priority.

The action plans are set out in subsequent tables. The column headings are listed below for reference:

- Wet-spot ID: to allow cross reference with the Interactive Flood History Maps;
- Location: providing location context;
- Driver: providing justification of the action;
- Action: an outline of the mitigation measure required;
- Implementation Plan: step by step plan of tasks required to complete the action, split into numbered phases (1-4);
- Plan Progress at April 2015: The step on the implementation plan that each action is at, at the time of publication of this report. This column will be updated by Bath & North East Somerset as actions progress;
- Action Owner: sets out which partner or stakeholder is responsible for implementing the actions;
- Action Supporter: sets out which partner or stakeholder will support the implementation of the action;
- Priority*: sets out what order the actions should be undertaken.

* In the context of Priority, actions have been prioritised by considering frequency of flooding and vulnerability of receptors. There are four classifications of action priority:
High: indicating a recent flood events with a high frequency, affecting a more vulnerable receptor;
Medium: indicating high frequency flooding affecting less vulnerable receptors OR lower frequency flooding affecting more vulnerable receptors;
Low: indicating one off flood events affecting low vulnerability receptors;
Complete: indicating completed actions which have been added to include where work has already been undertaken, to avoid duplicating efforts and track progress.

Location Specific Action Plan

Wetspot ID: DA02A Location: Chew Magna	Driver Chew Magna suffers from significant flood risk. The local flood risk mechanisms are integrated with main river flooding. Investment has been made in PLP measures to reduce the damage caused by flooding in this area. Action Maintenance of drainage assets to enable effective drainage and source control. Implementation Plan 1. Asset inspection 2. Undertake necessary maintenance 3. Implement a continued asset maintenance programme 4. Implement source control measures to reduce surface water runoff	Plan Progress at April 2015: 1 Action Owner: Lead Local Flood Authority Action Supporter: Local Highway Authority Priority: High
Wetspot ID: DA02A Location: Chew Magna	Driver Chew Magna suffers from significant flood risk. The local flood risk mechanisms are integrated with main river flooding. The Environment Agency has carried out extensive fluvial flood modelling for the catchment. Action Monitor and record flood incidents and continue sharing of information between B&NES and the Environment Agency Implementation Plan 1. Monitor and record flood incidents	Plan Progress at April 2015: 1 Action Owner: Lead Local Flood Authority Action Supporter: Environment Agency, Wessex Water, North Somerset Council Priority: High
Wetspot ID: DA02D Location: Chew Stoke	Driver Properties on Wallycourt Road have experienced flooding from pluvial runoff. Action Engineering scheme to improve capacity and conveyance route. Implementation Plan 1. Implement drainage scheme 2. Add upgraded highway gullies to Special Attention maintenance list	Plan Progress at April 2015: 2 Action Owner: Lead Local Flood Authority Action Supporter: Local Highway Authority, Environment Agency Priority: High

Location Specific Action Plan

Wetspot ID: DA02D Location: Chew Stoke	Driver Billie Close has experienced flooding from pluvial runoff. Curo (housing association managing properties) has made investment in Property Level Protection measures to reduce the damage caused by flooding in this area. Action Property Level Protection to be installed Implementation Plan 1. Curo (housing association) to install Property Level Protection for residents	Plan Progress at April 2015: 1 Action Owner: Curo Action Supporter: Lead Local Flood Authority Priority: High
Wetspot ID: DA03C Location: West Harptree	Driver West Harptree has experienced flooding as a result of blocked highway gullies. Action Maintenance of drainage assets to enable effective drainage. Implementation Plan 1. Asset inspection: is the gully or pipework blocked 2. Undertake necessary maintenance 3. Implement a continued asset maintenance programme	Plan Progress at April 2015: 1 Action Owner: Lead Local Flood Authority Action Supporter: Local Highway Authority Priority: High
Wetspot ID: DA03C Location: West Harptree	Driver West Harptree has experienced flooding as a result of surcharging surface water sewers and gullies. Action Undertake scheme to improve capacity and conveyance of drainage system. Implementation Plan 1. Engage community on potential scheme(s). 2. Implement drainage scheme. 3. Monitor performance of new systems.	Plan Progress at April 2015: 2 Action Owner: Lead Local Flood Authority Action Supporter: Local Highway Authority Priority: High

Location Specific Action Plan

Wetspot ID: DA03C Location: Ridge Lane and Cowleaze Lane, West Harptree	Driver West Harptree has experienced flooding as a result of surcharging culverted watercourses and highway drains. Action Undertake scheme to improve capacity and conveyance of drainage system. Implementation Plan 1. Engage community and inform how they can contribute to managing flood risk. 2. Source control measures are required to Ridge Lane and Cowleaze Lane	Plan Progress at April 2015: 2 Action Owner: Lead Local Flood Authority Action Supporter: Local Flood Reps, Wessex Water Priority: High
Wetspot ID: DA05A Location: Whitchurch	Driver Development is planned on the fringe of Whitchurch. Action Upgrade Surface Water sewer system for the area. Implementation Plan 1. Design a drainage scheme which will work within the current restrictions	Plan Progress at April 2015: 1 Action Owner: Wessex Water, Developer Action Supporter: Lead Local Flood Authority, Local Planning Authority Priority: High
Wetspot ID: DA05A Location: Whitchurch	Driver This area is defined as a Flood Risk Area and Bristol Lead Local Flood Authority is taking the lead on the Flood Risk Management Plan Action Any proposed developments must consider the Flood Risk Management Plan for the area. Implementation Plan 1. Inform developers of the Flood Risk status	Plan Progress at April 2015: 1 Action Owner: Lead Local Flood Authority Action Supporter: Bristol City Lead Local Flood Authority, Local Planning Authority

Location Specific Action Plan

Wetspot ID: DA08B Location: Keynsham	Driver East Keynsham (A4) has experienced flooding from a number of sources including fluvial interactions, pluvial runoff and highway gulley blockage. Action Monitor future flood incidents in this area, if flooding continues to cause disruption, upgrade works to highway drainage may be required. Implementation Plan 1. Monitor flooding at this location 2. Understand the cause of flooding 3. Assess the need for upgrade works to the drainage network	Plan Progress at April 2015: 2 Action Owner: Lead Local Flood Authority Action Supporter: Local Highway Authority, Environment Agency, Wessex Water Priority: High
Wetspot ID: DA10B Location: Timsbury	Driver Bloomfield Road has experienced surface water flooding, particularly as a result of blocked highway gullies. Action Maintenance of drainage assets to enable effective drainage. Implementation Plan 1. Asset inspection: is the gulley or pipework blocked 2. Undertake necessary maintenance 3. Implement a continued asset maintenance programme	Plan Progress at April 2015: 1 Action Owner: Local Highway Authority Action Supporter: - Priority: High
Wetspot ID: DA11A Location: Midsomer Norton	Driver Midsomer Norton has experienced flooding from a number of sources across the town. Action Work with Environment Agency to better understand hydraulics and flood risk. Implementation Plan 1. Undertake integrated hydraulic modelling	Plan Progress at April 2015: 1 Action Owner: Lead Local Flood Authority Action Supporter: Local Highway Authority, Environment Agency, Wessex Water Priority: High

Location Specific Action Plan

Wetspot ID: **DA16A**Location: **Weston and Upper Weston****Driver**

Significant areas of development are planned on the fringes of Upper Weston and Weston.

Action

Manage the risk of exacerbating an existing surface water problem by considering drainage at master planning stage.

Implementation Plan

1. Establish the current status of the planning applications
2. Inform the developer of the wet-spot status
3. Design a drainage scheme which will work within the current restrictions

Plan Progress at April 2015: 1**Action Owner:** Lead Local Flood Authority, Developer**Action Supporter:** -**Priority:** HighWetspot ID: **DA16A**Location: **Weston Village****Driver**

This is a steep catchment. There is a potential flood risk stemming from maintenance of a culverted watercourse through the village.

Action

Undertake study of flooding issues and identify potential measures.

Implementation Plan

1. Engage local community
2. Commission study
3. Identify potential improvements
4. Identify funding opportunities

Plan Progress at April 2015: 1&2**Action Owner:** Lead Local Flood Authority**Action Supporter:** Wessex Water, Environment AgencyWetspot ID: **DA16D**Location: **Weston Park****Driver**

Weston Road has experienced flooding. The sources have not been well documented but includes highway gully blockage.

Action

Maintenance of drainage assets to enable effective drainage.

Implementation Plan

1. Asset inspection: is the gully or pipework blocked
2. Undertake necessary maintenance
3. Implement a continued asset maintenance programme

Plan Progress at April 2015: 3**Action Owner:** Lead Local Flood Authority**Action Supporter:** -**Priority:** High

Location Specific Action Plan

Wetspot ID: **DA16G**Location: **Bath City Centre****Driver**

Bath City Centre has experienced flooding. The quality of data recorded has however not always provided enough information to properly understand the mechanism for why flooding has occurred. Likely sources include fluvial, surface water / pluvial, groundwater and highway gulley blockage.

Action

Continue to monitor flood incidents in this area, if flooding continues to cause disruption, upgrade works to highway drainage may be required.

Implementation Plan

1. Monitor flooding at this location
2. Understand the cause of flooding

3. Assess the need for upgrade works to the drainage network

Plan Progress at April 2015: 1**Action Owner:** Lead Local Flood Authority**Action Supporter:** Lead Local Flood Authority, Local Highway Authority, Environment Agency, Wessex Water**Priority:** HighWetspot ID: **DA16G**Location: **Lower Bristol Road****Driver**

Surface water flooding and highway drainage issues known. Significant development and associated river Avon flood risk improvements planned.

Action

Ensure any development/ flood risk scheme appreciates surface water flood risk.

Implementation Plan

1. Ensure developer is aware of surface water flooding issues (and potential interaction with river Avon).

Plan Progress at April 2015: 1**Action Owner:** B&NES Major projects**Action Supporter:** Environment Agency, Lead Local Flood Authority

Location Specific Action Plan

Wetspot ID: **DA02B**Location: **Chew Magna, Winford Road and Littleton Lane****Driver**

Winford Road has experienced flooding as a result of pluvial runoff and blockage on a highway structure. Investment has been made in PLP measures to reduce the damage caused by flooding in this area.

Action

The highway drainage assets require maintenance and an assessment of capacity.

Implementation Plan

1. Asset inspection: is the culvert blocked
2. Maintenance of culvert
3. Monitor future flooding incidents at this location
4. Assess the need for upgrade works to the drainage network

Plan Progress at April 2015: 1

Action Owner: Local Highway Authority

Action Supporter: Lead Local Flood Authority

Priority: Medium

Wetspot ID: **DA02C**Location: **Chew Stoke****Driver**

Chew Stoke has experienced surface water flooding, particularly from pluvial runoff. Investment has been made in PLP measures to reduce the damage caused by flooding in this area.

Action

Source control measures are required to mitigate the flood risk in this area.

Implementation Plan

1. Engage the community and inform how they can contribute to managing flood risk
2. Promote Wessex Water's save water scheme, providing discounts of the purchase of a water butt

Plan Progress at April 2015: 1

Action Owner: Bath & North East Somerset Council, Wessex Water

Action Supporter: Local Flood Representatives, Environment Agency

Priority: Medium

Location Specific Action Plan

Wetspot ID: DA03B Location: White Cross Farm	Driver Bristol Road has experienced flooding from blocked gullies and drainage ditches. Action Education of riparian owners on their rights and responsibility. Implementation Plan 1. Engage the community and inform how they can contribute to managing flood risk 2. Explain the importance of maintenance to ditches	Plan Progress at April 2015: 1 Action Owner: Bath & North East Somerset Council Action Supporter: Local Flood Representatives Priority: Medium
Wetspot ID: DA11C Location: Clandown	Driver Springfield Place has experienced flooding from an ordinary watercourse. Action Education of riparian owners on their rights and responsibilities. Implementation Plan 1. Engage the community and inform how they can contribute to managing flood risk 2. Explain the importance of maintenance to ditches	Plan Progress at April 2015: 1 Action Owner: Bath & North East Somerset Council Action Supporter: Local Flood Representatives Priority: Medium

Appendix E

Review of Funding Sources

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Introduction

This section sets out the potential sources of funding available for flood risk management works in Bath and North East Somerset and has been split into a tiered approach as shown in Figure E-1 and described in the main Local Flood Risk Management Strategy document.

Figure E-1 Options for funding of capital flood risk management works.



Tier 1 – Dedicated Flood Risk Management Funding Sources

Funding from dedicated flood risk management sources will most likely make up the majority of the funding mix for delivering the Bath & North East Somerset Strategy measures, supported by other alternative sources. The following expands on current dedicated funding sources available for flood risk management purposes.

Flood and Coastal Erosion Risk Management Grant in Aid

In relation to flood risk management, capital funding from Government is provided through Flood and Coastal Erosion Risk Management Grant-in-Aid¹. This is provided by the Department for Environment, Food and Rural Affairs and administered and managed by the Environment Agency, although funding approvals are also subject to the consent of the relevant Regional Flood and Coastal Committee. Bath & North East Somerset Council falls within the Wessex Regional Flood and Coastal Committee and both Councillor Charles Gerrish and Councillor Brian Simmons sit on this committee. The Wessex Regional Flood and Coastal Committee area is shown on this Environment Agency map – [click here to view map](#).

Flood and Coastal Erosion Risk Management Grant-in-Aid is available to projects relating to all sources of flooding, and has historically been the most important source of funding for flood risk management and coastal erosion schemes. Flood and Coastal Erosion Risk Management Grant-in-Aid is not available to fund studies that are not materially linked to a flood risk scheme (e.g. it will fund a Project Appraisal Report which can lead to the development of a scheme).

However, Flood and Coastal Erosion Risk Management Grant-in-Aid is unlikely to meet the full scheme costs in most cases (as outlined for the Bath Flood Risk Management Project). For the Bath Flood Risk Management Project a Flood and Coastal Erosion Risk Management Grant-in-Aid contribution of £0.6m for 2014/15 was made towards scheme costs (with a further £0.5m from Regional Flood and Coastal Committee Local Levy. This roughly equaled 12% of the scheme cost.

¹ This is formerly known as Flood Defence Grant in Aid

Detailed explanatory notes and a spreadsheet calculator tool are available to guide practitioners through the Flood and Coastal Erosion Risk Management Grant-in-Aid application process. Up to date information, including a full table of the outcome measures and benefits under each that will qualify for national funding is available at: <https://www.gov.uk/flood-and-coastal-defence-appraisal-of-projects>.

Local Levy

Local Levy can be raised by Wessex Regional Flood and Coastal Committee by way of a levy precept on Bath & North East Somerset Council and other relevant local or unitary authorities. Local Levy funding can be used to support flood risk management projects that do not attract 100% national funding through Flood and Coastal Erosion Risk Management Grant-in-Aid, thus enabling locally important projects to be undertaken to reduce the risk of flooding within the RFCC area. Funds raised using this existing Regional Flood and Coastal Committee local levy will count as a local contribution in terms of the Flood and Coastal Erosion Risk Management Grant-in-Aid process, even though the levy is supported by funding through the Department of Communities and Local Government.

Lead Local Flood Authority Grant for New Responsibilities

In December 2010 the Department for Environment, Food and Rural Affairs announced £21million worth of grants to provide additional funding specifically to support Councils with Lead Local Flood Authority status. This was in addition to existing Formula Grant arrangements, and was aimed to allow Lead Local Flood Authorities to perform new roles and duties under the Flood and Water Management Act and Flood Risk Regulations. In 2015/16 £37,000² was allocated to Bath & North East Somerset Council, but there is no certainty of funding from Central Government beyond 2015/16. Also, once allocated, these funds are not ring-fenced so in order to access them it is important to raise awareness of flood risk and keep it near the top of the local political agenda to ensure funding can be gained.

The Communities and Local Government Department published a New Burdens Assessment establishing the payment required to ensure that Lead Local Flood Authorities will have sufficient financial resources to meet the expectations of their new statutory consultee role on planning applications in relation to surface water drainage for major development, The Department for the Environment, Food and Rural Affairs have since provided funding to all Lead Local Flood Authorities for the first year (2015/16) of their new statutory consultee role and for one off costs to prepare IT, internal systems, train stakeholders, raise awareness and develop advice. A small contribution to fund the burden of providing technical advice and administration is also expected to be provided to Lead Local Flood Authorities for the first 3 years (up to 2017/18), but this has not yet been secured.

One off grants

Government occasionally makes funding available through one-off grants and pilot projects. Working together, Risk Management Authorities within Bath & North East Somerset area should bear this in mind and be prepared to identify and apply for appropriate opportunities if and when they arise. Previous examples have included the Department for Environment, Food and Rural Affairs early action fund for surface water schemes in 2010, and the repair and renew grant following significant national flooding in 2013/14³.

² https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/294205/South_West_and_Wessex_Regional_Flood_and_Coastal_Committee_map.pdf

³ <https://www.gov.uk/government/publications/flooding-recovery-households-and-businesses-applying-for-the-repair-and-renew-grant-scheme>

Tier 2 – Economic Growth and Beneficiaries funding sources

Local Authority Revenue Funding

Local authorities have additional capital and revenue budgets which can be used to supplement investment in flood risk management. This is particularly relevant where measures or schemes, such as Sustainable Drainage Systems, can be identified which create multiple benefits across a number of Bath & North East Somerset Council's duties such as highways and public open space.

However, in the current economic times, there are budgetary constraints across Bath & North East Somerset Council area. This was highlighted in the Bath & North East Somerset Community Infrastructure Levy Funding Gap Evidence Paper⁴ where it was identified that there is a total £234 million funding gap in order to deliver key and desirable infrastructure to support planned Core Strategy growth. This includes an estimated £6.8 million gap for the ongoing support of water and drainage infrastructure.

The two primary sources of income for Bath & North East Somerset are:

- council tax collected from local residents, and;
- settlement Funding Assessments which replaced Formula Grants. Each local authority's Settlement Funding Assessment is comprised of Revenue Support Grant and Baseline Funding Levels, which is their share of the local share of business rates⁵.

Funding Sources Relating to Development and Regeneration

Section 106 Agreements

Section 106 agreements can be used to support the provision of services and infrastructure, including flood risk management measures. The agreements provide a means to ensure that a proposed development contributes to the creation of a sustainable environment, particularly by securing contributions towards the provision of infrastructure and facilities. Between 2003 and 2013 £24.4m was collected in the Bath & North East Somerset area through this method. Whilst only small amounts of this funding are directly attributable to use on flood management works, flood management and site viability is key to a developer's willingness to contribute to this type of agreement which has wider implications for development and improvements to the area. The earlier any local flood risk management costs associated with a site are identified the better as developers can then factor these costs into the price of the land and make better informed decisions as to the overall viability of the site.

Community Infrastructure Levy

The Community Infrastructure Levy is a 'tariff' style charge, which allows local authorities to charge developers to contribute to the cost of providing some of the infrastructure needed to support the development of the area where there is a demonstrable need and once this need has gone through a process of examination.

Bath & North East Somerset Council is consulting on the charging schedule for the implementation of a Community Infrastructure Levy as it has been identified that there is a funding gap to deliver Core Strategy growth for the area. Following the planned implementation of Community Infrastructure Levy in the Bath & North East Somerset area, Planning Obligations or Section 106 contributions will be replaced for many forms of infrastructure. However, Section 106 agreements will still be used for site-specific mitigation measures

⁴ http://www.bathnes.gov.uk/sites/default/files/sitedocuments/Planning-and-Building-Control/Planning-Policy/CIL/cil_evidence_background_paper.pdf

⁵ <https://www.gov.uk/government/publications/breakdown-of-settlement-funding-assessment-final-local-government-finance-settlement-2015-to-2016>

and for affordable housing provision.

Key to obtaining funding towards flood risk schemes from this source will be proactive infrastructure planning through the Infrastructure Delivery Plan process. This will provide a high level summary of anticipated major infrastructure funding requirements that the Council will be seeking to fund partially or fully through Community Infrastructure Levy. Schemes which are included in the Infrastructure Delivery Plan will be more likely to obtain Community Infrastructure Levy contributions.

Local Enterprise Partnership Funding

Local Enterprise Partnerships have been set up to provide strategic leadership and set out local economic properties to help support the Government's Local Growth White Paper. The West of England (Local Enterprise) Partnership covers the Bath & North East Somerset area.

The roles of the Local Enterprise Partnership set out in the White Paper relating to funding include:

- working with Government to set out key investment priorities;
- coordinating approaches to leveraging funding from the private sector, and;
- coordinating proposals or bidding directly for the Regional Growth Fund (expanded in section 2.4 of the White Paper).

In 2012 £11,579,541 was allocated to the West of England Partnership through the Growing Places Fund to tackle immediate infrastructure investment constraints. The main aim of this fund is to focus on housing and transport, but if for example solutions to reduce flood risk for homes are proposed these may be eligible.

From 2014 Local Enterprise Partnerships have been given responsibility for delivering part of the European Union Structural and Investment Fund, and the West of England Partnership has been allocated €68.6m to spend between 2014 and 2020. Guidance published in 2013 suggests that activities to support; innovation, research and technologic development; small businesses; employment; skills; social inclusion; or development of a low carbon economy

are the main priorities of this fund. This could potentially mean that if projects are correctly developed and targeted there could be funding available from this source to support flood risk projects. However, as yet this has not been tested.

Regional Growth Fund

The Regional Growth Fund is a £3.2 billion fund operating across England from 2011 to 2017, and aims to support eligible projects and programmes that are also raising private sector investment to create economic growth and sustainable employment. This funding source is unlikely to offer a realistic source of funding for local flood risk management schemes unless there are clear benefits to private business such as expansion and job growth through greater productivity or more available land.

Private Beneficiary Funding

Funding can be levied from private sector beneficiaries of a flood risk management scheme in a number of ways, which are outlined below.

- Business rate supplement: Bath & North East Somerset Council has the power to levy a local Business Rate Supplement and to retain the proceeds for investment in that area. Proceeds must be spent on projects which contribute to the economic development of the local area.
- Business Improvement Districts: this is a defined area within which businesses pay an additional tax or fee in order to fund improvements within the council's boundaries. Flood risk management schemes could potentially access funding from this source if they could be demonstrated to provide specific benefits to businesses within the area.
- Direct Beneficiary Contributions: There are currently limited case study examples of beneficiary contributions from companies or corporate bodies. However, one such example is the Sandwich tidal flood defence scheme, where a private company provided significant funding towards the scheme.
- Utility providers may be willing to contribute towards a flood risk management scheme, if the applicant can demonstrate the long term benefits of flooding on their customer supply.

In addition, some corporate bodies may be persuaded to contribute to flood risk management measures. There are a number of ways to approach corporate giving. However, for every penny that they provide they need to see a clear commercial benefit be it in terms of marketing, promotion, training, or reduction in flood risk.

- Employee Volunteering: Brings in very little financial support but can provide good PR and will boost volunteer numbers.
- Sponsorship: Generally provides low level support, averaging around a few thousand pounds. It is normally used to raise the profile of the company in the local community so needs to be high profile.

Tier 3 – Non Flood Risk Management Funding Sources

European Union

European Union funding is a complex and specialist field. Some authorities have invested proactively in this area of fundraising and are experienced in obtaining funds through this route; for example Cornwall and the Isles of Scilly prepared a detailed evidence base to bid for Convergence status in 2005 and thereby gained access to funding through this European economic regeneration programme. Funding from the European Union generally needs to be for projects which are innovative. Applicants need to be in a partnership that includes at least four other projects spread across the European Union and they need to demonstrate the transference of learning across the areas.

Grants tend to be in the region of a few million pounds spread across all participants. The administrative burden on the main applicant can be considerable and needs to be considered when budgeting for European Union fundraising. Relevant funding sources to be investigated include the following:

- European Regional Development Fund;
- European Agricultural Fund for Rural Development, and;
- European Social Fund

The European Investment Bank has expressed a willingness to fund flood defence projects through loans at a competitive rate, but this is only generally provided for large scale multi million pound projects.

Lottery

All the major lottery funding providers (Heritage Lottery Fund, Big Lottery, and Arts Council) have clear guidelines and funding streams. Each of these operates on slightly different timescales and has various specific requirements.

Grants ranging from a few hundred to several million (depending on the type and scale of project) are awarded to sport, heritage and community activities

and projects that make a positive contribution towards education, health and the environment in local communities. Flood risk management projects may be eligible if they can demonstrate that they do this, for example by improving social cohesion through volunteering to clean up local waterways. One example is Awards for All, which provides grants for projects that will help to improve the lives of individuals, boost creativity or encourage more people to get involved in local communities.

Land management funding sources

Countryside Stewardship is a scheme under the European Union Common Agricultural Policy and provides incentives for land managers to look after their environment. From 2015 it was opened to all eligible farmers, woodland owners, foresters and other land managers.

Under this Countryside Stewardship, water capital grants are available for farmers and land managers in priority catchments, to fund infrastructure works to help reduce water pollution from agriculture. Through this initiative up to £10,000 per holding may be made available, but the scheme is competitive and applications will be scored and accepted subject to the budget available⁷. Applications are also only open for a limited period each year. Although this is targeted funding it may be a potential source of funding for local flood risk management where water quality improvement from agricultural land can also be demonstrated.

Water Framework Directive Funding

If it can be demonstrated that local flood risk management projects can contribute towards ensuring ecological status of local waterbodies can be improved through measures to be implemented, then it may be possible to obtain funding from the Water Framework Directive. An example of this could be that through controlling soil erosion of land upstream in a catchment in an attempt to reduce local flood risk, sediment loads to a river are also controlled which would improve water quality and thus ecological status.

However, it should be noted that funding through the Water Framework Directive is assessed on a case by case basis and not guaranteed.

Non-Government Organisations and Charitable Trusts

Many local flood risk management projects are on a fairly small, localised scale and may struggle to access, or attract funding from, sources outlined here. In these instances grants or donations from sources such as Non-Government Organisations or charities can provide an additional/alternative route for funding.

A Non-Government Organisation or charitable trust could consist, for example, of local residents with a common interest in protecting their town against flood risk to undertake necessary works such as implementation of Sustainable Drainage System measures to reduce surface water flooding, or ongoing maintenance of local flood defenses.

Another route that can be utilised to drive down operation & management costs is through the establishment of partnerships that take responsibility for schemes after their completion. Schemes with a particular wildlife interest could for example be packaged to attract the support of the local Wildlife Trust or the RSPB.

Community Fundraising and Events

Community fundraising means raising money via a series of volunteer run events, sponsorship, and from established local groups. It is a time consuming way of raising small sums of money, but a great way to deliver community engagement and ownership which can in itself help a project to qualify for other sources of funding.

The connection for participant and donor needs to be immediate, obvious and usually selfless. In Cockermouth, Cumbria, the local community raised £215,000 towards the flood alleviation scheme, with contributions coming from local residents and businesses⁸.

⁷ Further details are available at: <https://www.gov.uk/government/publications/guide-to-countryside-stewardship-water-capital-grants-2015/guide-to-countryside-stewardship-water-capital-grants-2015>

⁸ <http://www.cumbriacrack.com/2013/03/18/cockermouth-flood-alleviation-scheme-funded-by-a-partnership-approach/>

Public Appeals and Volunteering

Closely allied with community fundraising, public appeals tend to be cost heavy, but can generate reasonable returns if aimed at the right target audience.

The best public appeals tap into an established community need or awareness and can be run via the local media and the internet. A ‘friends of’ scheme is often a good way to get this type of mechanism kick-started. Well run, high quality volunteering actually costs money, but by incorporating structured volunteering opportunities the project increases its community engagement and develops a sense of ownership in both the problem and solution.

Volunteering can be used to bring in funding by counting as match funding. By enhancing a volunteer project with structured training funding can be obtained from back to work schemes and government initiatives to tackle the growing number of people not in education, employment or training.

Trusts

There are thousands of grant making trusts across the country. Most, but not all, favour outcome led projects so this needs to be borne in mind when packaging up projects. Trusts are unlikely to fund large scale infrastructure projects, but they may want to fund a programme of education about the causes and prevention of flooding for example.

Potential trusts in Bath & North East Somerset who may be willing to provide sources of funding could include the National Trust, Canals and Rivers Trust, Primary Care Trust or Bath Preservation Trust. Although not technically a trust, Bath University may also be willing to provide support in the form of research for example, but this would need to be discussed based on individual project needs.

Landfill Communities Fund

If the project site is within a certain distance of a landfill site funding can be sought from a range of landfill operators.

The Landfill Communities Fund (formerly the Landfill Tax Credit Scheme) enables landfill site operators to claim tax credit for contributions they make to approved environmental bodies for spending on projects that benefit the environment. The environmental bodies are those enrolled by Entrust, the regulatory body for the scheme. Further details are available at: <http://www.entrust.org.uk/landfill-community-fund>.

Appendix F

Glossary

Aquifer

An aquifer is an underground layer of water-bearing permeable rock, rock fractures or unconsolidated materials (gravel, sand, or silt) from which groundwater can be extracted using a water well.

Catchment Flood Management Plan

A Catchment Flood Management Plan is a high-level strategic plan through which the Environment Agency seeks to work with other key-decision makers within a river catchment to identify and agree long-term policies for sustainable flood risk management.

Civil Contingencies Act (2004)

Legislation that aims to deliver a single framework for civil protection in the United Kingdom and sets out the actions that need to be taken in the event of a flood

Climate Change

A long-term change in the statistical distribution of weather patterns over periods of time that range from decades to millions of years. It may be a change in the average weather conditions or a change in the distribution of weather events with respect to an average, for example, greater or fewer extreme weather events. Climate change may be limited to a specific region, or may occur across the whole Earth.

Combined sewer

A sewer through which surface and foul water passes.

Conservation of Habitats and Species Regulations (2010)

An Act which transposed the Habitats Directive into United Kingdom law. The regulations aim to help maintain and enhance biodiversity throughout the European Union, by conserving natural habitats, flora and fauna. The main way it does this is by establishing a coherent network of protected areas and strict protection measures for particularly rare and threatened species.

Critical Infrastructure

A term used to describe the assets that are essential for the functioning of a society and economy. Most commonly associated with the term are facilities for: electricity generation, transmission and distribution; gas production, transport and distribution; oil and oil products production, transport and distribution; telecommunication; water supply (drinking water, waste water/ sewage, stemming of surface water (e.g. dikes and sluices)); agriculture, food production and distribution; heating (e.g. natural gas, fuel oil, district heating); public health (hospitals, ambulances); transportation systems (fuel supply, railway network, airports, harbours, inland shipping); financial services (banking, clearing); and security services (police, military).

Dwelling

A self-contained house, flats or other places of residents.

Elected Members

Local councillors are elected by the Bath & North East Somerset community to decide how the council should carry out its various activities.

Flood

Flooding is caused when land not normally covered by water becomes covered by water. A road or property can be flooded when:

- there is exceptional rainfall, which is greater than the capacity of drainage systems;
- drainage systems are not well maintained, or there are blockages/collapses in the drainage network;
- there is increased runoff from adjoining fields or hard standing areas, or
- a river or watercourse overflows

Flood and Water Management Act (2010)

The Act brings together the recommendations of the Pitt report and previous policies, to improve the management of water resources and create a more comprehensive and risk based regime for managing the risk of flooding from all sources. The Act states that its purpose is to “make provision about water, including provision about the management of risks in connection with flooding and coastal erosion.”

Flood Risk

Flood risk is a combination of two components: the chance (or probability) of a particular flood event and the impact (or consequence) that the event would cause if it occurred

Fluvial

The processes associated with rivers and streams and the deposits and landforms created by them

Flood Risk Regulations (2009)

Transposes the European Commission Floods Directive (Directive 2007/60/EC on the assessment and management of flood risks) into domestic law and implements its provisions. The regulations outline the roles and responsibilities of the various authorities consistent with the Flood and Water Management Act (2010) and provide for the delivery of the outputs required by the directive. The Directive requires Member States to develop and update a series of tools for managing all sources of flood risk.

Flood Zones

Nationally consistent delineation of ‘high’ and ‘medium’ flood risk. Updates are published on a quarterly basis by the Environment Agency.

Foul sewer

A sewer that is designed to carry contaminated wastewater to a sewage works for treatment.

Green belt

Protected areas of reserved open land, mainly around large cities, for the purpose of preventing urban sprawl by keeping land permanently open. Policy CP8 of our Core Strategy, adopted in 2014, details our Green Belt policy.

Grey-water recycling

Generally defined as wastewater from bathrooms and laundries, grey-water can come from our showers, baths and washing machines. With the appropriator system fitted, much of this grey-water can be reused for flushing toilets etc.

Groundwater flooding

Groundwater flooding occurs where the water levels in rock and soil become high enough for the water to appear near to or above the ground surface. This may happen, for example, where there are underlying gravels, or porous or fractured rocks, allowing water to pass through.

Lead Local Flood Authority

Lead Local Flood Authorities are county councils and unitary authorities. Under the Flood and Water Management Act (2010), Lead Local Flood Authorities are required to:

- Prepare and maintain a strategy for local flood risk management in their areas, coordinating views and activity with other local bodies and communities through public consultation and scrutiny, and delivery planning.
- Maintain a register of assets – these are physical features that have a significant effect on flooding in their area.
- Investigate significant local flooding incidents and publish the results of such investigations
- Consult on planning applications for major development.
- Issue consents for altering, removing or replacing certain structures or features on Ordinary Watercourses.
- Play a lead role in emergency planning and recovery after a flood event.

Local Flood Risk

Defined in the Flood and Water Management Act (2010) as flooding from surface water runoff, Ordinary Watercourses and groundwater

Local Flood Risk Management Strategy

A strategy which must be completed by a Lead Local Flood Authority and must:

- Assess the local flood risk.
- Set out objectives for managing local flooding.
- List the costs and benefits of measures proposed to meet these objectives, and how the measures will be paid for.

Local Flood Representatives

An individual nominated by their Parish Council or Federation of Bath Residents' Associations Group to liaise with Bath & North East Somerset Council's Drainage & Flooding team. They provide an important communication link between residents in the Parish and the Council and other Flood Risk Management stakeholders on issues of land drainage, surface water flooding, groundwater flooding and watercourse flooding.

Local Planning Authority

Body that is responsible for controlling planning and development through the planning system.

Main River

All watercourses shown on the statutory main river maps held by the Environment Agency and the Department for Environment, Food and Rural Affairs. This can include any structure or appliance for controlling or regulating the flow of water into, in or out of the channel. The Environment Agency has permissive power to carry out works of maintenance and improvement on these rivers.

National Planning Policy Framework

Framework which sets out the Government's planning policies for England and how these are expected to be applied. It acts as guidance for local planning authorities and decision-takers, both in drawing up plans and making decisions about planning applications.

National Flood and Coastal Erosion Risk Management Strategy National strategy which provides the overarching framework for future action by all risk management authorities to tackle flooding and coastal erosion in England.

Operational Flood Working Group

The purpose of the Operational Flood Working Group is to discuss and agree ways to manage flood risk from local sources. The Operational Flood Working Group will discuss specific flooding or drainage issues with a view to coming up with practical measures to improve drainage or reduce flood risk. The group consists of technical officers from the Drainage and Flooding team, the Environment Agency and Wessex Water, as well as other invited Council officers and Local Flood Representatives as required.

Ordinary Watercourse

Any section of watercourse not designated as a Main River.

Our Partners

Include: Risk Management Authorities, the West of England Local Enterprise Partnership, members of the Strategic Flood Board, Operational Flood Working Group, internal departments with Bath & North East Somerset Council, Elected Members, Local Communities and Local Flood Representatives.

Pluvial

Flows that relate to or are characterised by rainfall.

Preliminary Flood Risk Assessment

High level screening exercise to identify areas of significant local flood risk from sources including surface water, groundwater, Ordinary Watercourses and manmade structures such as canals or sewers but excluding of main rivers.

Rainwater harvesting

The harvesting of rainwater simply involves the collection of water from surfaces on which rain falls, and subsequently storing this water for later use. Normally water is collected from the roofs of buildings and stored in rainwater tanks. Water butts that capture rain water from roofs that is then used to water gardens is a common example of rainwater harvesting.

Return period

The probability of a flood of a given magnitude occurring within any one year e.g. an event with a 1 in 100 chance of occurring has a 1% probability of occurring in any given year i.e. has a 1% annual exceedance probability. It is important to note that a 1 in 100 year event could occur twice or more within 100 years, or not at all.

Riparian Owner

All landowners whose property is adjoining to a body of water have the right to make reasonable use of it and suitably maintain it.

Risk Management Authority

Defined in the Flood and Water Management Act (2010), they all have some responsibility for managing flood risk

Section 19 Investigations

Flood investigations which must be undertaken by Lead Local Flood Authorities in accordance with Section 19 of the Flood and Water Management Act (2010).

Sequential Test

Informed by a Strategic Flood Risk Assessment, a planning authority applies the Sequential Test to demonstrate that there are no reasonably available sites in areas with less risk of flooding that would be appropriate to the type of development or land use proposed.

Sewer flooding

The consequence of sewer systems exceeding their capacity during a rainfall event.**Strategic Flood Risk Assessment**

A Strategic Flood Risk Assessment is used as a tool by a planning authority to assess flood risk for spatial planning, producing development briefs, setting constraints, informing sustainability appraisals and identifying locations of emergency planning measures and requirements for flood risk assessments.

Statutory Consultee

An organisation who must provide a substantive response to the local planning authority, within a set deadline, prior to a decision being made on a planning application.

Strategic Flood Board

The Strategic Flood Board provides oversight and partnership working for flood risk management in Bath & North East Somerset. It includes representatives from Bath & North East Somerset, the Environment Agency, Wessex Water, Canal & River Trust, Bristol Water, and Avon Fire and Rescue.

Sustainable Drainage Systems

Sustainable drainage systems are approaches that manage surface water by taking into account water quantity (flooding), water quality (pollution) and amenity issues.

Surface water runoff

Rainwater (including snow and other precipitation) which: is on the surface of the ground (whether or not it is moving); and has not entered a watercourse, draining system or public sewer.

Surface Water Management Plan

A Surface Water Management Plan (Surface Water Management Plan) is a framework through which key local partners work together to understand the causes of surface water, groundwater and/or Ordinary Watercourse flooding and agree the most cost effective way of managing that risk.

UK Climate Projections 2009

UK Climate Projections 2009 (UKCP09) is a climate analysis tool, funded by the Department of Environment, Food and Rural Affairs, which features the most current comprehensive climate projections. Projections are broken down to a regional level across the UK and are shown in probabilistic form, illustrating the potential range of changes and the level of confidence in each predictions.

Updated Flood Map for Surface Water

National surface water mapping produced by the Environment Agency to facilitate analysis of areas naturally vulnerable to surface water flooding.

UNESCO World Heritage Site

Is a place (such as a building, city, complex, desert, forest, island, lake, monument, or mountain) that is listed by the United Nations Educational, Scientific and Cultural Organization (UNESCO) as being of special cultural or physical significance. The list is maintained by the international World Heritage Programme administered by the UNESCO World Heritage Committee, composed of 21 UNESCO member states which are elected by the General Assembly. The City of Bath is a UNESCO World Heritage Site and there is an international obligation to protect its outstanding heritage.

West of England Partnership

A partnership group established comprising of Bristol, Bath & North East Somerset, North Somerset, and South Gloucestershire Councils, with the purpose of producing consistent Sustainable Drainage Systems guidance across the region.

West of England Local Enterprise Partnership

A partnership group set up to support business growth across Bristol, Bath & North East Somerset, North Somerset, Somerset County Council and South Gloucestershire. Includes: business organisations, local authorities, education and training organisations, Government departments and agencies.

Wet-spots

Areas which are considered vulnerable to flooding from surface water, groundwater, and/ or Ordinary Watercourses (taken from the area-wide Surface Water Management Plan)

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Summary of the Bath & North East Somerset Local Flood Risk Management Strategy

2015-2025



Introduction

The management of flooding is an important issue across Bath & North East Somerset. Flooding can affect communities, businesses, areas with significant heritage value, the environment, and the economy. However, until recently there has been limited understanding about who is responsible for different types of flooding.

Under the Flood and Water Management Act (2010)¹, Bath & North East Somerset Council has been designated as a Lead Local Flood Authority. This means Bath & North East Somerset Council has a coordinating role for flood risk management across the region, and has an operational role for managing flooding from surface water, Ordinary Watercourses² and groundwater. These roles are in addition to the responsibilities Bath & North East Somerset Council already has for managing flooding and drainage from the highway network, and planning for emergencies.

In Bath and North East Somerset Council's coordination role we will take ownership of flood risk management. This does not mean that Bath & North East Somerset Council will act as the lead organisation on all types of flooding. Rather, Bath & North East Somerset Council will work within the legislative framework to identify the appropriate organisation to take a lead in any given location, working in partnership with other organisations as necessary. This will increase accountability to the public.

In our operational role we will take responsibility for working with communities and implementing measures on the ground to reduce flood risk from surface water, Ordinary Watercourses and groundwater. This will be done in partnership with organisations who have a responsibility for managing flooding and local communities. We will undertake this on a prioritised basis, with areas at greatest flood risk from surface water, Ordinary Watercourses and groundwater remaining our highest priority.

The majority of the functions of the Lead Local Flood Authority role are to be carried out by the Council's Drainage and Flooding Team who will act as the single point of contact on all local flood risk matters.

1 Further details on the Flood and Water Management Act, 2010, are available at: <http://www.legislation.gov.uk/ukpga/2010/29/contents>

2 An ordinary watercourse is any watercourse, ditch, or stream not classified as a Main River. Main Rivers are defined on the Environment Agency's flooding maps on their website.

3 Risk Management Authorities are defined in the Flood and Water Management Act as the Lead Local Flood Authority, the Environment Agency, water companies, the highways authority and internal drainage boards.



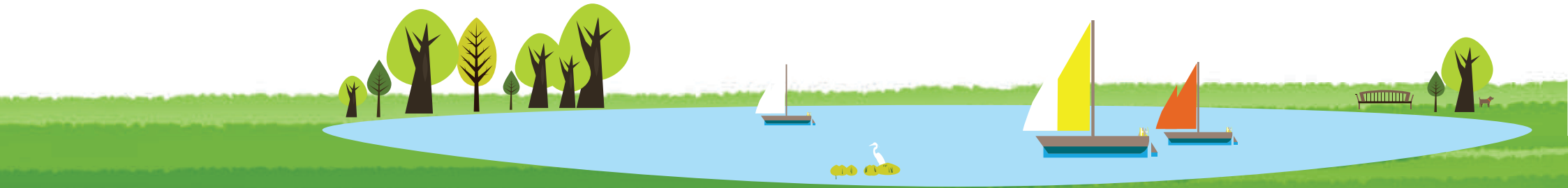
One of the primary responsibilities for the Lead Local Flood Authority under the Flood and Water Management Act is to produce a Local Flood Risk Management Strategy. The Local Flood Risk Management Strategy seeks to clarify roles and responsibilities for flood risk management, help inform all relevant authorities and communities about local flood risk, outline how it can be managed, and identify who is responsible for doing so. The Local Flood Risk Management Strategy also sets out the objectives for managing local flood risk, and identifies the key actions the Council will take to manage local flood risk. Flooding cannot be completely prevented, though its impacts can be reduced and managed through investment and good planning. Therefore, expectations about what can be done to manage local flood risk should be managed to ensure communities are aware of what actions can be undertaken, and the timeframe for doing so.

Given Bath & North East Somerset Council’s legislative responsibilities, the Local Flood Risk Management Strategy focuses on local flood risk. The Local Flood Risk Management Strategy does however also consider flood risk in line with our coordinating responsibility. As part of this, it outlines the roles of other Risk Management Authorities³ including the Environment Agency, Wessex Water, Highways England (formerly the Highways Agency) and Bristol Water. The Local Flood Risk Management Strategy identifies how the Council will work in partnership with these Risk Management Authorities. The responsibilities of Risk Management Authorities are summarised in Figure 1.

Figure 1 Organisations with responsibilities for flood risk management

Flood Source	Responsible Risk Management Authority				
	Environment Agency	Bath & North East Somerset Council	Bristol Water	Wessex Water	Highways England
Main River	✓				
The Sea	✓				
Surface Water		✓			
Surface Water (on or coming from the highway)		✓			✓
Sewer Flooding				✓	
Ordinary Watercourse		✓			
Ground Water		✓			
Reservoirs	✓		✓		

The Bath & North East Somerset area includes a number of Main Rivers including the River Avon, Cam Brook, and the River Chew. The operational management of flood risk from Main Rivers is undertaken by the Environment Agency who have developed plans and projects in partnership with other organisations. In particular, the Environment Agency has created a Bristol Avon Flood Management Plan that includes details about flood risk in Bath and other locations within Bath & North East Somerset. Wherever the Environment Agency develops plans or projects to manage flood risk on Main Rivers, Bath & North East Somerset Council will work with them as appropriate.



Objectives of the Local Flood Risk Management Strategy

The purpose of the Bath & North East Somerset Local Flood Risk Management Strategy is to ensure:

- local flood risk is managed through a coordinated approach, and;
- that communities, businesses and individuals are more aware of the risks of flooding, understand who is responsible for dealing with flooding, and are clear about the actions they can take to manage the risk of flooding.

It is helpful to describe local flood risk management in Bath & North East Somerset in three phases, which are illustrated in Figure 2. The majority of actions arising from the Local Flood Risk Management Strategy are related to managing the risks of local flooding, although there are some actions to support the planning for, warning of, and response to, flooding. The warning and responding to flooding incidents is primarily undertaken by the emergency planning authority⁴ with the support of the emergency services, including Bristol & Avon Fire and Rescue and the Police.

A series of objectives have been defined to help structure and govern the implementation of the Local Flood Risk Management Strategy. These objectives are to:

- 1. improve understanding of local flood risk;**
- 2. promote community awareness and build capability for appropriate action;**
- 3. manage local flood risk through capital and maintenance investment;**
- 4. prevent inappropriate development that creates or increases flood risk, and;**
- 5. improve flood preparedness, warning and ability to recover.**

Figure 2 identifies how each of these objectives are linked to the three phases of flood risk management. Objective 2 is an over-arching objective which needs to be promoted during all phases of local flood risk management. It is vital that local communities are aware of local flood risks, know how to prepare and respond to flooding, are empowered to take ownership of local flood risk issues, and understand the roles and responsibilities of Risk Management Authorities.

⁴ This role is undertaken by the Emergency Planning and Business Continuity department within Bath & North East Somerset Council.

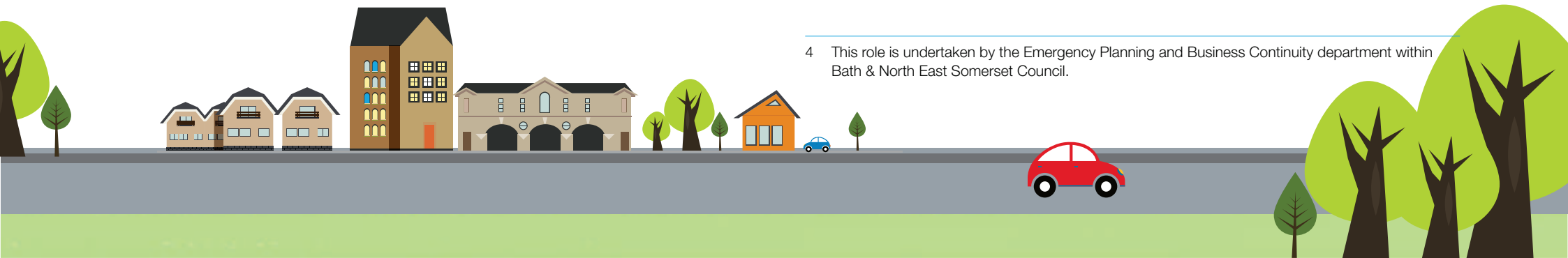


Figure 2 Three phases of flood risk management in Bath & North East Somerset



Partnership Working

A number of partnership groups have been established to help co-ordinate flood risk management in Bath & North East Somerset. These include the West of England Partnership Flood Risk Working Group, the South West Flood Risk Managers Group, the Strategic Flood Board and Operational Flood Working Group. These groups hold regular meetings, and have established lines of communication to facilitate partnership working.

It is critical to work with local communities through Local Flood Representatives. The Local Flood Representatives act as a point of contact between local communities and the Council's Drainage & Flooding Team. They provide an important communication link between residents, the Council, and other Risk Management Authorities.

All residents of Bath & North East Somerset have a role to play in helping to manage flooding. These roles include reporting flood incidents to the relevant Risk Management Authority, understanding the risks they face, ensuring property at risk has been adequately prepared for a flood incident, and helping to reduce the causes of flooding where possible (for example, through clearance of watercourses).

Flood risk in Bath & North East Somerset

The Bath & North East Somerset regional Surface Water Management Plan has been used to inform the Local Flood Risk Management Strategy. Over 990 reports of recent and relevant flooding from 2009 to 2014 were collated and analysed. The reason historic events were not included was to prevent misrepresentation of recorded flood incidents which may now have been actioned. The recent and relevant flooding data were used to develop a Recorded Flood Incident Register and Interactive Maps of Local Flood

Incidents to visualise the data. As demonstrated in Figure 3, recent and relevant flooding is widespread across the region. There are notable clusters of flooding in Bath, Keysham, Whitchurch, Chew Magna, Chew Stoke, West Harptree, Midsomer Norton and Radstock.

The Local Flood Risk Management Strategy also considers potential flood risk from a range of sources including surface runoff, ordinary watercourses, main rivers, highway drainage, reservoirs, sewers, and canals⁵. The Bath & North East Somerset regional Surface Water Management Plan identified nearly 750 residential properties estimated to be at risk of surface water flooding during a very severe rainfall event⁶, with 22 critical infrastructure⁷ also being at risk. The Local Flood Risk Management Strategy has also identified how local flood risk may change across Bath & North East Somerset in the future. These include climate change, new development, and deterioration or blockage of assets which help to manage flood risk. For example, due to the impact of climate change the number of residential properties at risk of surface water flooding could increase by up to 90%, by 2085⁸.

The areas most at risk of local flooding have been identified in the Bath & North East Somerset regional Surface Water Management Plan, and included within the Local Flood Risk Management Strategy. These are known as 'wet-spots'.

These were derived from analysis of historical flood incident data. In total 53 individual wet-spots were identified. Please refer to the Bath & North East Somerset regional Surface Water Management Plan for further details.

5 It should be noted that it is not the Council's legal duty to investigate or assess flooding from main rivers, reservoirs, sewers or canals, but the interaction between local flood risk and these has been considered.

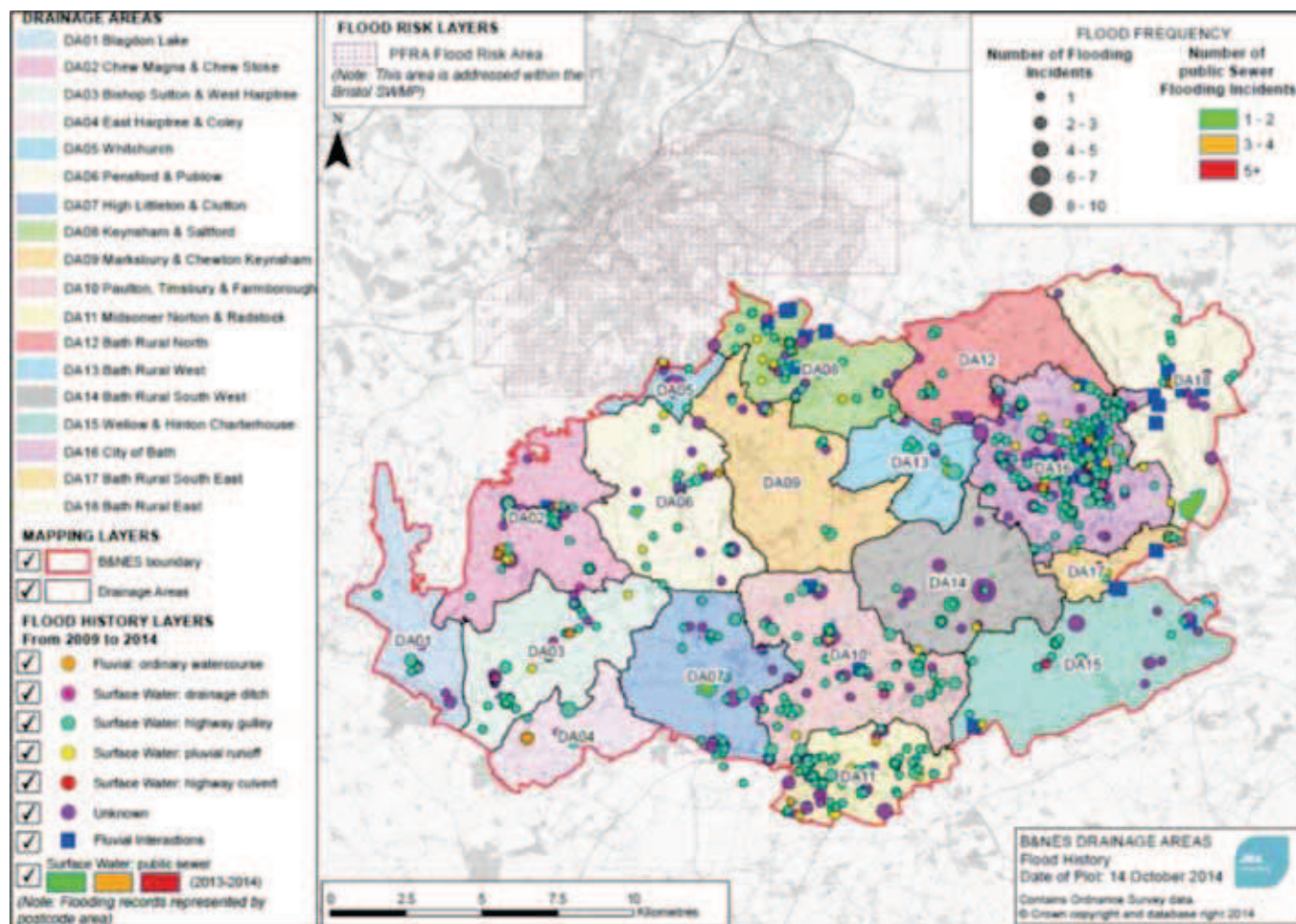
6 In this case this is defined as a rainfall event with a 1% chance of happening in any given year.

7 Critical infrastructure could include an educational building, health centre/ building, power station, sewerage or water facility, or building where vulnerable people are located, such as a shelters and nursing home.

8 Based on evidence in the Bath & North East Somerset regional Surface Water Management Plan



Figure 3 Interactive Map of Local Flood Incidents in Bath & North East Somerset mapped as part of the Bath & North East Somerset regional Surface Water Management Plan and used to inform the Local Flood Risk Management Strategy



Actions to manage local flood risk

As part of the Local Flood Risk Management Strategy an over-arching action plan (the ‘Strategy Action Plan’) has been developed which sets out the measures the Council will take, in partnership with others, to manage local flood risk and achieve the objectives of the Local Flood Risk Management Strategy. The actions proposed as part of this Strategy Action Plan are outlined in Table 1. It should be noted that actions identified in grey have already been completed and those assigned with an asterisk are a statutory duty under the Flood and Water Management Act.



Table 1 Strategy Action Plan

Phase of Local Flood Risk Management (See Figure 2)	Link to Objective	Action Title (including reference no.)
All phases	Objective 2 Promote community awareness and build capability for appropriate action	2a Establish clearer routes for communicating with communities and businesses about the roles and responsibilities for flood risk 2b Help communities understand their own flood risk and their responsibilities for managing flooding 2c Raise awareness of land drainage and riparian responsibilities 2d Develop a network of Local Flood Representatives to act as a point of contact in the community on flooding issues 2e Ensure communities know what to do in the event of a flood
Manage the risks of local flooding	Objective 1 Improve understanding of local flood risk	1a Complete a regional Surface Water Management Plan 1b Continue to develop an updated flood reporting system 1c Improve the use of visual tools (e.g. GIS) to record and analyse flooding incidents 1d Continue to complete investigations of flood incidents, where the appropriate criteria is met 1e Ensure that appropriate data on flooding is shared between organisations, and between organisations and communities
	Objective 3 Manage local flood risk through capital and maintenance investment	3a Continue to work with partners, including adjacent authorities, to develop long term approaches to manage flood risk 3b Deliver the actions in the the Bath & North East Somerset regional Surface Water Management Plan 3c Continue to develop a register of assets which significantly affect local flood risk 3d Designate structures that effect local flood risk, to protect them from alteration or removal 3e Continue to assess applications for works on ordinary watercourses, through the land drainage consent process 3f Identify catchments where improved land management could reduce flood risk and/or improve the wider environment



Table 1 Strategy Action Plan

Phase of Local Flood Risk Management (See Figure 2)	Link to Objective	Action Title (including reference no.)
	Objective 3 Manage local flood risk through capital and maintenance investment	3g Identify critical highway drainage assets, in order to undertake targeted maintenance and respond to issues as the Local Highways Authority 3h Prioritise maintenance and clearance works to culverts and watercourses 3i Evaluate flood reports to identify where drainage improvements or other mitigation works are possible
	Objective 4 Prevent inappropriate development that creates or increases flood risk	4a Continue to review planning applications to make recommendations for surface water drainage and managing flood risk 4b Publish the West of England Sustainable Drainage Systems Guidance for developers, and work across the West of England to co-ordinate sustainable drainage system implementation 4c Include SuDS planning policy within the Council's Placemaking Plan/ Core Strategy 4d Continue to provide guidance at the pre-application stage on flooding issues 4e Consider the need for additional planning guidance on flooding specific to Bath & North East Somerset 4f Identify areas that are sensitive to surface water flood risk and develop appropriate surface water drainage and flood risk requirements for any proposed development in these areas
Plan for flooding / Warn & respond to flooding	Objective 5 Improve flood preparedness, warning and ability to recover	5a Help develop a multi-agency flood plan for high risk areas in Bath & North East Somerset 5b Communicate information to communities, businesses and individuals on flood preparedness and recovery 5c Promote uptake of the Environment Agency's Floodline Warnings Direct service 5d Improve warnings and proactive mitigation in response to predicted rainfall

In addition, the Bath & North East Somerset regional Surface Water Management Plan has identified location specific actions for each wet-spot. These will be taken forward as part of the action plan, which will set out the actions the Council will take to manage local flood risk. The action plan will be updated annually to reflect progress, and any additional actions for the forthcoming year.



How will the Council fund measures in the action plan

Flood risk related projects are determined on an annual basis. Where the risks are associated with property flooding and/or health and safety issues these will be scored more highly and prioritised accordingly. In most cases small drainage works can be funded from the Council's revenue and capital funding streams. However, the Council may also seek to secure other dedicated flood risk management funding from Government⁹ where a project is of sufficient magnitude to justify additional funding or it is likely to qualify for funding.

Even with these funding sources in place there may still be a funding gap for some flood risk management projects. Where this is the case, other funding sources may need to be considered depending on the direct beneficiaries of investment, or the wider economic growth opportunities a flood risk management project could bring. Relevant funding sources could include, for example:

- West of England Local Enterprise Partnership where a scheme can directly contribute towards economic growth;
- Section 106 agreements can be used to support provision of infrastructure where they are directly related to development, necessary to make the development acceptable, and relevant to planning;
- Bath & North East Somerset Community Infrastructure Levy, and;
- Beneficiaries of the scheme (e.g. homeowners, businesses or utility providers).

The Council will engage with relevant organisations early to identify potential funding based on the benefits of flood risk management investment.

Wider, non-flood risk management funding sources may also need to be considered to contribute towards a project. To access these will require thinking about the wider benefits such as biodiversity, amenity, health/wellbeing, recreation, and education. Sources could include Lottery funding, money raised by the community, and from potential European Union funding sources.

⁹ This could include Flood and Coastal Erosion Risk Management Grant in Aid funding from Central Government, or funding from the Regional Flood and Coastal Committee



Monitoring the Local Flood Risk Management Strategy

The Local Flood Risk Management Strategy will remain live for a 10 year period to 2025, after which it will be reviewed and updated where necessary. A mid-term update of the Local Flood Risk Management Strategy will take place after five years, in 2020, to check progress against the strategy objectives and update the document where required. The update of the Local Flood Risk Management Strategy in 2020 will be reviewed by the Flood Risk Scrutiny Panel.

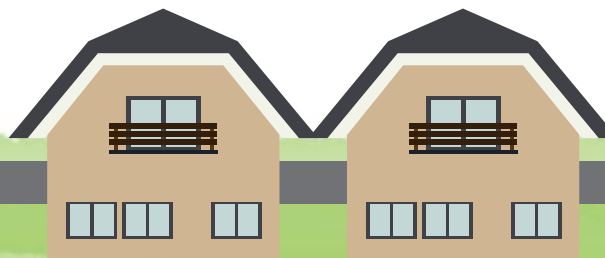
In the interim Bath & North East Somerset will monitor the progress of the Local Flood Risk Management Strategy on an annual basis through preparation of the annual action plan, which will be presented to, and agreed by, the Strategic Flood Board. The annual action plan will identify:

- progress against strategy objectives;
- whether actions have been delivered and can therefore be removed from the action plan;
- any changes to legislation or understanding of flood risk, and the implications of this, and;
- set the actions for the forthcoming year.

Prior to 2020, the Local Flood Risk Management Strategy will only be updated if the objectives are not being met, significant flooding occurs, there are significant updates to available data, there are regulatory changes which affect the roles and responsibilities, or there are changes to the funding landscape.

Contact

For further information on how we are managing flood risk in Bath & North East Somerset please visit our website at <http://www.bathnes.gov.uk/services/environment/land-drainage>.



What's changed – Summary of changes made following feedback Received on the Local Flood Risk Management Strategy for Bath & North East Somerset Council

PREPARED FOR:	Drainage & Flooding Team
COPY TO:	Jim McEwen, Jim Collings, Simon Morrissey, Daniel Parr (Bath & North East Somerset Council's Drainage and Flooding team)
PREPARED BY:	Jemma Bennett, Ali Cotton (CH2MHill)
DATE:	November 20, 2015
PROJECT NUMBER:	483500.01.01
REVISION :	Final

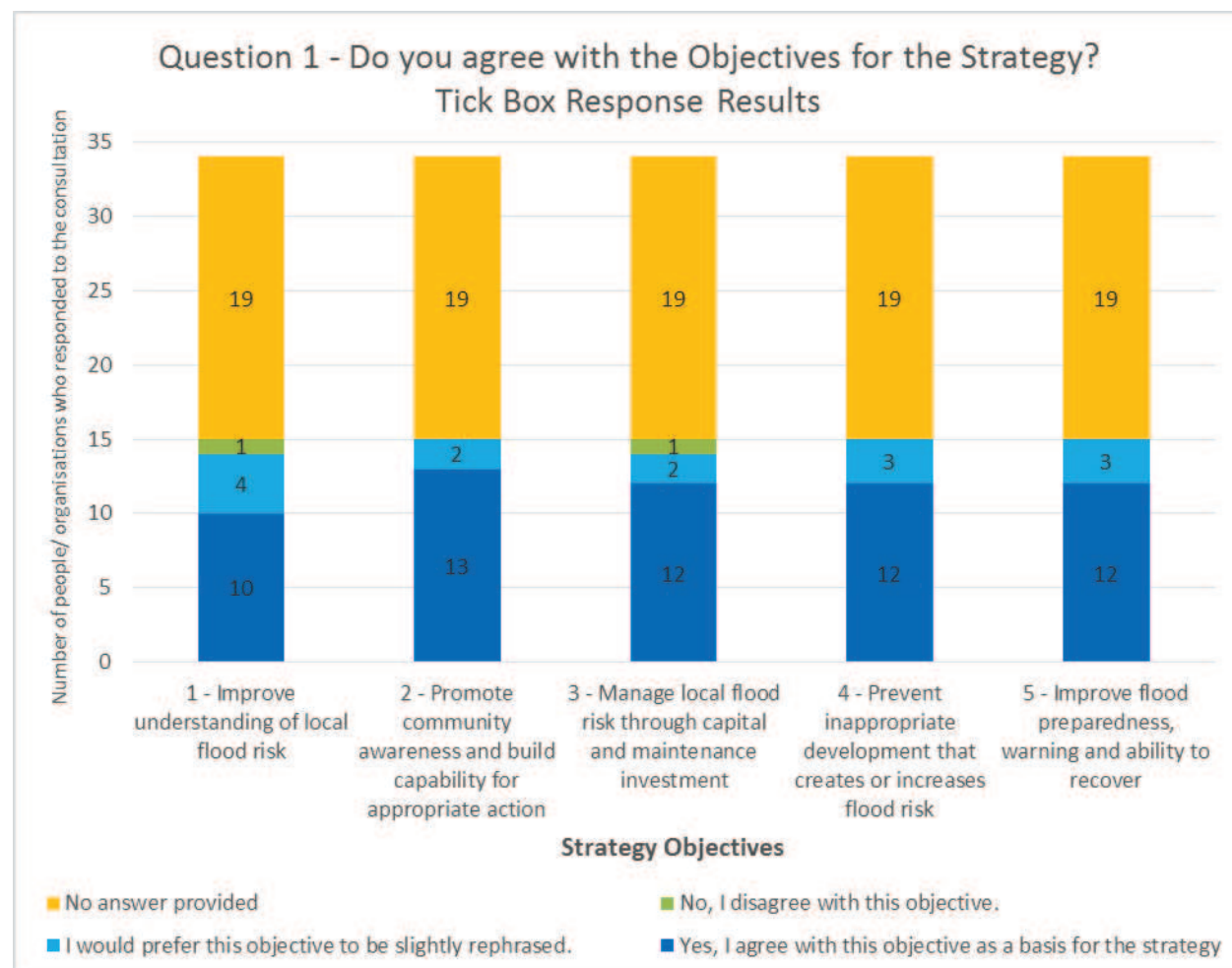
The feedback received from the public consultation on the Local Flood Risk Management Strategy has been analysed, and this document provides a summary of how the feedback has been used to inform changes to the Bath & North East Somerset Local Flood Risk Management Strategy.

The responses to the tick box questions asked during the consultation have been tallied and the results combined in staked column charts. Consultation comments received for each question have been listed, and the responses from the Drainage & Flooding Team have been listed alongside each of these consultation comments. The consultation comments have also been colour coded, based on key below, to highlight what action has been made.

Key summarising the action taken for each consultation comment:

Colour Code	Action required
	Change made to the Strategy
	No change required/ made to the Strategy

Question 1 - Do you agree with the objectives for the Strategy?



Objective 1 - Comments:

	Consultation Comments:	Drainage & Flooding Team Response:
Comment 1 :	I am currently on this page and suggest the objectives 1 and 5 be along the lines of "Improve understanding to the stage where it identifies the actions needed and who is responsible for taking them." I am a resident of Henrietta Road.	Change – the wording has been amended in the introduction of the objective (e.g. Section 2.1) to more clearly highlight that this is the aim of this objective. The objective itself will not be amended.

Comment 2:	1. It is not clear whose understanding is to be improved. Is it local government's or does it also include the community as well?	Change – in the introduction to the objective (Section 2.1) it has now been clarified that <u>all parties</u> understanding of flood risk is to be improved. This is already reflected in the actions for this objective.
Comment 3:	This objective is fundamentally flawed because it has ignored the extensive recorded information about major flooding incidents in the city of Bath	No change – the records of flooding around Bath have been considered, but only for the period from 2009 to 2014. The reason for this, as outlined in the Strategy, was to prevent misrepresentation of recorded flood incidents which may now have been actioned. If this comment has occurred as a result of reading the location specific actions for Bath, it should be noted that this has now been updated. The wording may have suggested that flooding was not well documented, when in fact what was meant was that due to the way records have been historically recorded they do not always provide all the information required to inform understanding and improvement action.

Objective 2 - Comments:

	Consultation Comments:	Drainage & Flooding Team Response:
Comment 1 :	2. This implies excessive reliance on community awareness - whereas in fact some of the areas most at risk in the city of Bath are areas with the most transient and therefore least informed residents.	No change – the actions include the word 'communities' and it is expected that transient communities such as students would be included in this.

Objective 3 - Comments:

	Consultation Comments:	Drainage & Flooding Team Response:
Comment 1 :	"Reducing flood risk is not just about capital and maintenance investment. The council should also ensure that it has expertise and knowledge within its own domain. This is about human resources and skills, which appear not to have been mentioned in the Strategy."	Change - a paragraph on resources has been included in Section 7.1.

Comment 2:	3. This objective is vague and uninformative - it should make it clear that the partners referred to are agencies with flood responsibilities and NOT developers as currently could be included.	Change – make it clearer that the partners could include any relevant partner who is appropriate to manage flood risk in a particular area. This could include other agencies, communities or developers.
Comment 3:	In Objective 3 (p 18), State clearly what has been undertaken so far and what is being achieved for risk reduction for Bath residents in cooperation with the Environment Agency. The lack of any comment here and the mention of new committees gives the impression that B&NES has not recognised or taken action against such risks in the past. This is the reality but the document implies otherwise. How will such new committees reduce flood risk?	Change – we do not feel it is appropriate to detail everything that has been undertaken by the Environment Agency to protect Bath residents, but have now added a new section (1.4.1) which outlines the need for us to work in partnership with the EA as they lead on flood risk management improvements on Main Rivers.

Objective 4 - Comments:

	Consultation Comments:	Drainage & Flooding Team Response:
Comment 1 :	4. This objective should be a genuine and primary objective to address flood risk in areas where existing residents are at risk and not as effectively an objective to assist developers.	No change. We appreciate that this is obviously an important issue which is why we have made it one of the objectives of the Strategy, but we do not feel it is appropriate to make it the primary objective of the Strategy.
Comment 2:	Traditional construction should not be developed in the flood-prone areas however innovative construction technologies use in the Netherlands, Thailand & the US e.g. amphibious foundations should be considered appropriate in such areas as long as there is no increase in surface water runoff impacting lower in the catchment.	This is an interesting point, but not relevant as part of the Strategy. Through development control such innovative construction could be considered.

Objective 5 - Comments:

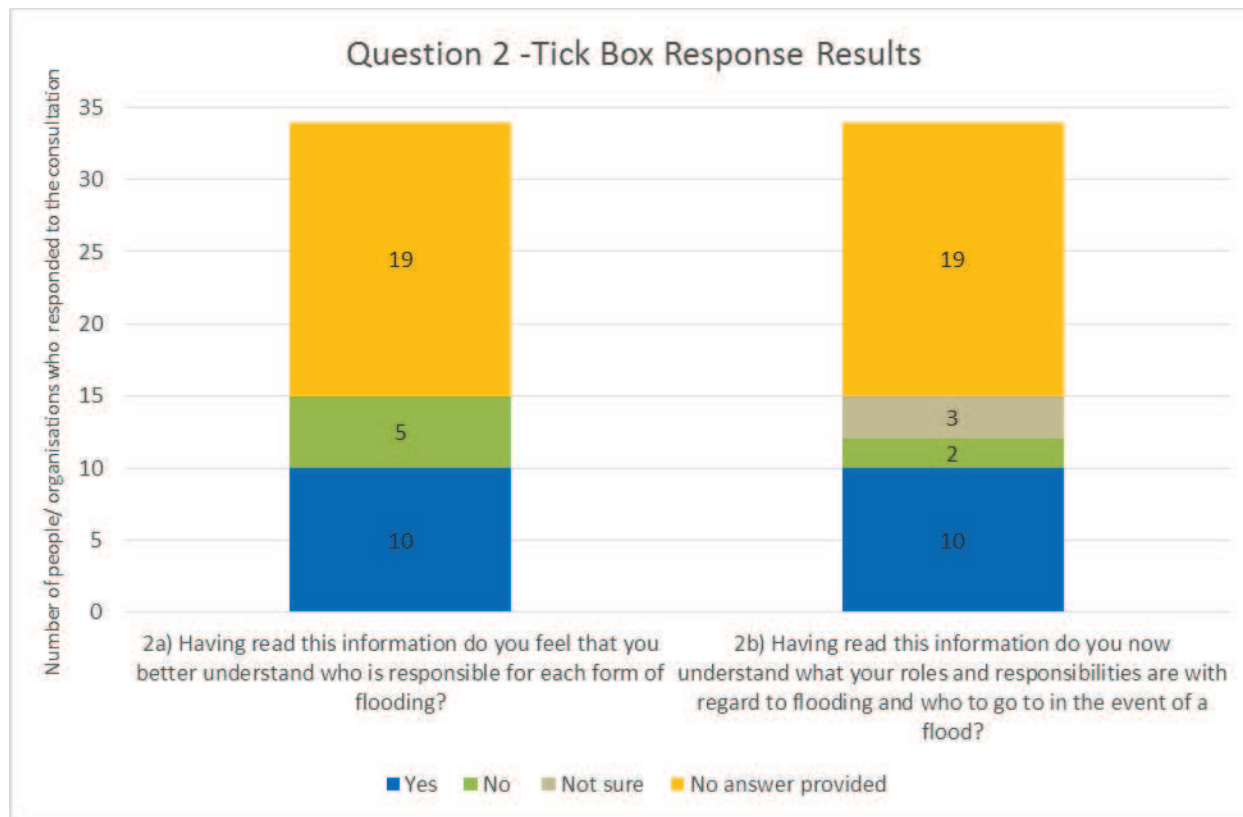
	Consultation Comments:	Drainage & Flooding Team Response:
Comment 1 :	This implies excessive reliance on community awareness - whereas in fact some of the areas most at risk in the city of Bath are areas with the most transient and therefore least informed residents.	Already covered in objective 2 comments.
Comment 2:	In Action Plan (p60) LFRMS-5b should be given the highest priority.	Change – LFRMS-5b has been given high priority as it is important, but will not be given the 'highest' priority.

General comments:

	Consultation Comments:	Drainage & Flooding Team Response:
Comment 1 :	The aims outlined in the document are laudable. The issue is whether they will be delivered	No change - the flood risk committee will hold us to account on the Strategy and its objectives. We are therefore confident that the aims will be delivered in an appropriate timeframe.
Comment 2:	Although I agree with the 5 objectives as a reasonable start point for the strategy I think more emphasis needs to be placed on the key actions required in the strategic plan than on awareness.. objectives 1, 3, 4 and 5 should all be bullet pointed as 'key' objectives and number 2 as a 'key enabling objective'.	No change – we have highlighted in the summary that objective 2 is important and leads through all objectives, but each objective is important in its own right.
Comment 3:	I live in Weston in the flood risk area, I have worked with Officers looking at ways to address the local flood risk and support this strategy	No change, but this is good to hear.
Comment 4:	Please see FoBRA's response to question 5.	No change – refer to comments to question 5.
Comment 5:	I don't think enough is being done to inform people about the risk of flooding. I do not take the local paper as most of the contents are outdated with it being a weekly paper. Therefore I know little about the proposed plans to remove the sluice gates and alter the line if the weir. A publication should be produced and issued to all residence. As I live alongside the river on the London Road the area is subject to flooding. Removing or altering the defences at at Pulteney Weir could have an adverse effect upstream.	No change – there is plenty of readily available information on these subjects on the internet which are up to date. Appropriate links are provided in the Strategy for more strategic issues, but information for specific issues such as Pulteney Weir is available on our website http://democracy.bathnes.gov.uk/documents/s36763/RiverOptionsStudyJune2015.pdf .
Comment 6:	Traditional construction should not be developed in the flood-prone areas however innovative construction technologies use in the Netherlands, Thailand & the US e.g. amphibious foundations should be considered appropriate in such areas as long as there is no increase in surface water runoff impacting lower in the catchment.	No Change – see previous comment on this point that it is not relevant as part of the Strategy. Through development control such innovative construction could be considered.

Comment 7:	Stop repeating the misleading "One in a hundred years" statement. IT IS A PERCENTAGE RISK ie 1/100 chance.	Change – we have updated references in the Strategy to ensure probabilities for annual exceedance are stated instead of return periods. The Glossary did explain this issue, but we have now reiterating this throughout the report.

Question 2 – Feedback



Question 2a - Having read this information do you feel that you better understand who is responsible for each form of flooding? Comments:

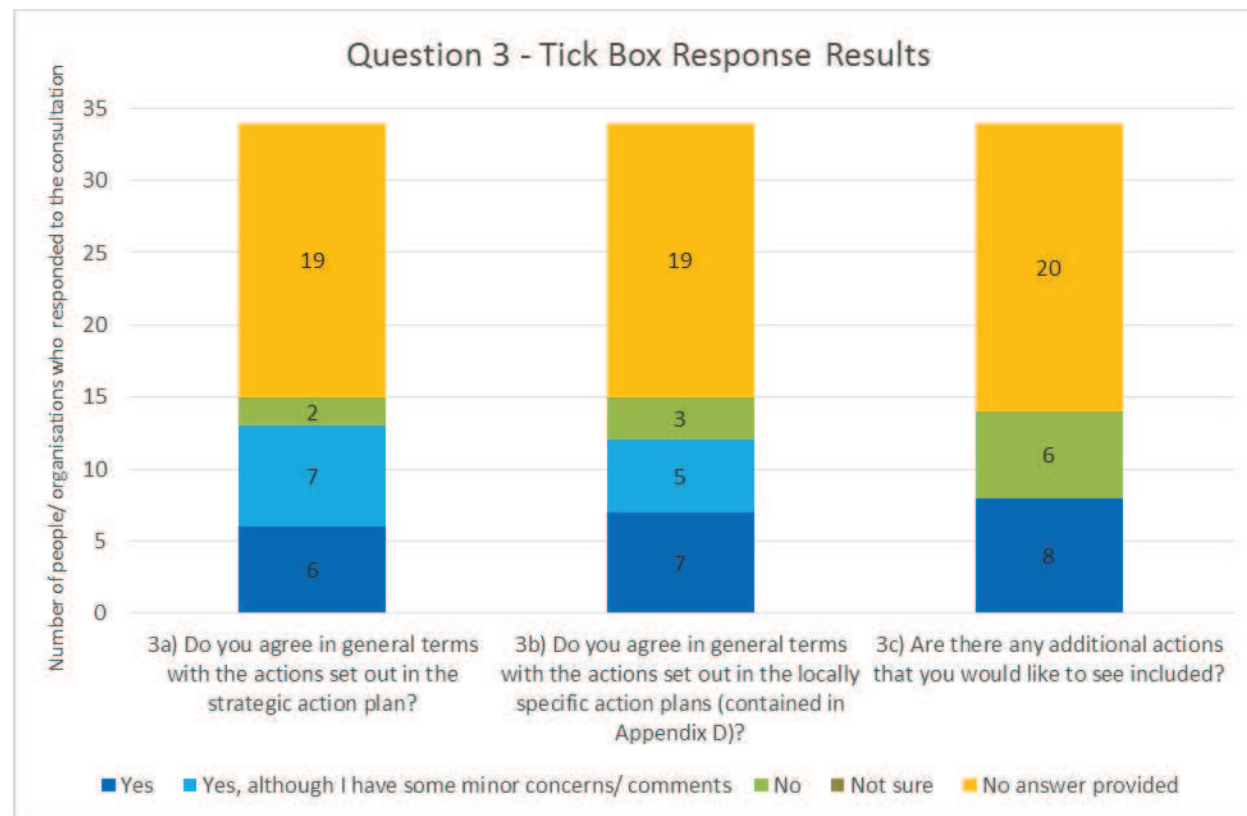
Tick box response:	Consultation Comments:	Drainage & Flooding Team Response:
Yes	Yes but not sure they are doing enough. Hugh developments alongside the river from Midland Bridge down to Newbridge must have an effect on the river and sewerage	No Change – planning policy has been strengthened over recent years and as outlined in the Strategy the effect of new development are considered appropriately by our trained staff prior to planning approval being given. The Environment Agency and Wessex Water will also be consulted as appropriate. If development has an adverse impact then the developer will either have to take steps to mitigate or remove the risks, or else approval will not be given.
No	But I did work for the Environment Agency and predecessors for 41 years, including being the author of the original "Living on the Edge". In saying No I do so to point out that in a potential major flood situation many of these responsibilities are overlapping and I am concerned at the current lack of cross agency co-working. The Strategy needs to point out how inter agency working is going to work and clearly detail the processes for this eg specific liaison committee meetings, clarification of touch points etc etc	No change. Change – it should have been clear from reading the Strategy that we are co working with other agencies. To make this point clearer we have updated Section 3.1 to better explain the role and operation of the Strategic Flood Board & Operational Flood Working Group. We have also improved clarity in Section 1.2 that where there is overlap in responsibilities we will work with other agencies and ensure the appropriate agency takes the lead and brings in appropriate parties as required.

	The Strategy appears intentionally to imply B&NES has less responsibility than it has. For example in many places there are references to responsibility of Highways England for highways flooding without making it clear that locally B&NES Highways dept is effectively responsibility. Also, the frequent assertions that somehow fluvial flood waters will in a major flood event be distinguishable from surface water, groundwater etc (as though different coloured) is ridiculous and is used to camouflage the fact that much of the flooding in such an event will be from causes that B&NES are responsible for - this is apparent from studies of past major floods in Bath from which it is clear that those floods typically occur when not only is the river high but the water table is high because of lengthy periods of rainfall. B&NES has framed its strategy as though such flooding from groundwater and surface water is not its responsibility, whereas under the relevant legislation it is. It is notable that other responsible regions have not adopted this narrow and misleading approach.	Change – we do not believe we are taking less responsibilities than we have, but perhaps the wording in certain areas of the Strategy could be clearer. We have improved Section 1 to highlight we have a coordinating role for flood risk management across the county and work in partnership to enable appropriate person/ organisation to undertake action. We have also improved Section 3 (Roles and Responsibilities) to ensure it is clear what our responsibilities are as the Local Highways Authority (e.g. B&NES Highways department).
	1) Why does B&NES list of "wet spots" omit densely populated London Road properties especially those in Kensington Place, Ringswell Gardens, Walcot Buildings and Bedford Street. Millions of pounds worth of properties - many of them Listed- lie within the River Avon Flood Plain upstream of the Pulteney Bridge and the Radial Sluice Gate. There are increasing concerns that tampering with the Radial Gate may increase flood risk upstream in addition to the predicted 25% increase in river flow due to Climate Change. 2) At this stage it is a matter of concern whether B&NES enjoys the necessary close co-operation with neighbouring authorities (ref. Table 7.1 Black and Veitch Assessment of Environmental Effects of Local FRM strategy August 2015). PARTICULARLY WILTSHIRE which is where the River Water comes from !	1) No Change – the areas listed are outside of scope of this Strategy document. We appreciate that flooding in these areas is not straight forward, but these areas are predominantly flooded by the River Avon which is a main river which the Environment Agency have operational responsibility for. We will however increase the size of the map already included to illustrate areas at flood risk (at an appropriate scale). 2) No Change - flows in the River Avon from Wiltshire are outside of the scope of this Strategy document, but the Environment Agency have operational responsibility and not Wiltshire Council. The Environment Agency also already have plans which cover the entire River Avon.

Question 2b - Having read this information do you now understand what your roles and responsibilities are with regard to flooding and who to go to in the event of a flood? Comments:

Tick box response:	Consultation Comments:	Drainage & Flooding Team Response:
	This is again misleading for the reasons in 2a (i.e. The Strategy appears intentionally to imply B&NES has less responsibility than it has. For example in many places there are references to responsibility of Highways England for highways flooding without making it clear that locally B&NES Highways dept is effectively responsibility. Also, the frequent assertions that somehow fluvial flood waters will in a major flood event be distinguishable from surface water, groundwater etc (as though different coloured) is ridiculous and is used to camouflage the fact that much of the flooding in such an event will be from causes that B&NES are responsible for - this is apparent from studies of past major floods in Bath from which it is clear that those floods typically occur when not only is the river high but the water table is high because of lengthy periods of rainfall. B&NES has framed its strategy as though such flooding from groundwater and surface water is not its responsibility, whereas under the relevant legislation it is. It is notable that other responsible regions have not adopted this narrow and misleading approach.)	Change – as before we have clarified our role and made it clear we have a coordinating role for flood risk management across the county and work in partnership to enable appropriate person/ organisation to undertake action. We have also updated Section 3 (Roles and Responsibilities).
Not Sure	If my house is flooding how do I know whether this is due to surface water a BANES responsibility or ' backwash' from the River Avon? I live one hundred yards from the river. If my problem was more minor eg blocked drain then my answer would have been 'yes'.	Change - These complexities are acknowledged and as already outlined above we have updated the Strategy to try and make it clear that significant flooding (as defined in Section 3.4.6) would trigger us to undertake an investigation regardless of source.

Question 3 – Feedback



Question 3a - Do you agree in general terms with the actions set out in the strategic action plan? Comments:

Tick box response:	Consultation Comments:	Drainage & Flooding Team Response:
Yes, although I have some minor concerns/ comments	Many of your surface water flooding problems adjacent to main rivers are exacerbated during high river flows. Therefore it is essential that Wilts CC is included in your partnerships, as the Avon catchment in Wiltshire needs to be positively managed to help B&NES, especially in light of climate change. Wilts don't even feature in the SW Flood Risk Managers Group.	No change – the Environment Agency, who have operational responsibilities regarding the River Avon as a main river, are a representative of Strategic Flood Board and can therefore address issues or concerns regarding the River Avon catchment. Wiltshire Council do not have any statutory responsibility for the River Avon.

Local Flood Risk Management Strategy: What's changed (Consultation feedback)

	What is not clear... When faced with difficult choices or major planning decisions the council may be entirely dependent on external advice and expertise, especially in regard to engineering and technical subjects. The external advice is likely to come from partner organizations who are not independent but are in fact stakeholders with their own priorities and budgets. Does the council understand the possible conflicts of interest?	Change – we have included a new section (7.1.1) in the Strategy on resources which highlights the internal technical expertise is provided to the Local Planning Authority from the Lead Local Flood Authority.
	The focus of the plan seems to be surface water flood risk and not the flood risk from watercourses.	No change.
	Dunkerton Parish Council has yet to receive a report from its Cllr with responsibility for liaison with flood risk management agencies on the proposed action plan and debate it. No major issues are anticipated.	No change.
	P39 table 4:1, is the risk assessment of return period the wrong way round? A 1 in 30 year return period should be higher risk than 1 in 1000 year. Please refer to the Climate Change Risk Assessment 2017: Projections of future flood risk in the UK. Project A: Report prepared for the Committee on Climate Change, UK. October 2015. Sayers & Partners LLB et al. p viii states that authorities at present base actions & adaptations on 1 in 200 year period, whilst effective to reduce risk to infrastructure up to 2020s & 2050s it will not reduce risk for 2080s. Authorities should base plans on 1 in 75 year return period to effectively reduce risk.	Change - we have amended table 4.1 to be in line with the Environment Agency classification of high, medium and low risk. The way the table was laid out was not wrong, but for consistency we have amended the headings.
No	I initially thought this action plan and strategy was going to cover all flood risks for me and my family at our house in Bath. As this is not the case I find this extremely disappointing, As It appears it is only to cover the BANES related activities. I now see that my house/ family are at the mercy of other agencies for other aspects of flooding not specifically covered by BANES. Hence my earlier comments about the essential need to identify how cross agency working is to work..	No change. We had already identified how cross agency working is undertaken, but have tried to make this clearer within the Strategy. If significant flooding (as defined in Section 3.4.6) occurs then we will undertake an investigation regardless of source and ensure the appropriate authority/ person responsible takes appropriate action. It should be noted that home owners do have their own responsibilities for protecting their properties which are outlined in the Strategy.

	The entry for Bath suggests that flooding in Bath is not well-documented. There is much documentation of past flood events, much of it held in Bath library. This should have been researched and the actions informed by it. The actions should also take account of the large number of people at threat in Bath city centre (10000 plus) by having much more comprehensive and proactive actions. The actions should also take account of the importance of the World Heritage Site and potential for damage to heritage buildings. There is no action relating to the Roman Baths. In past floods, the drainage from the Roman Baths has failed and the Baths have flooded. (NB this is NOT fluvial flooding but a failure of the drainage) Any action should surely take account of this threat to Bath's tourism income and reputation.	Change - reference to "not well documented" refers to the quality of the data in the wet spot analysis which means that although there is a great deal of information about flooding occurring in Bath, unfortunately due to the way it was recorded means it is difficult for us to use it to properly aid our understanding. We have clarified / improve the wording in the local specific action appendix to make this clearer.

Question 3b - Do you agree in general terms with the actions set out in the locally specific action plans (contained in Appendix D)? Comments:

Tick box response:	Consultation Comments:	Drainage & Flooding Team Response:
Yes, although I have some minor concerns/ comments	How will the Cumulative Impact of various planning proposals DOWNSTREAM of Pulteney Bridge upon properties UPSTREAM of the latter be assessed? Table Top Computer Modelling ? Proper Hydrology Studies?	Change – we have added a new section on main rivers to the Strategy to make clear the Environment Agency has operational responsibility for taking the lead on main river projects, plans and policies. Although we have been involved with projects such as Pulteney Bridge it is not appropriate in the Strategy to detail specific schemes. Further information can be found on the internet and at http://democracy.bathnes.gov.uk/documents/s36763/RiverOptionsStudyJune2015.pdf .
	What is not clear... When faced with difficult choices or major planning decisions the council may be entirely dependent on external advice and expertise, especially in regard to engineering and technical subjects. The external advice is likely to come from partner organizations who are not independent but are in fact stakeholders with their own priorities and budgets. Does the council understand the possible conflicts of interest?	See the answer provided for the same comment for Question 3a above.
	As above, Dunkerton Parish Council has yet to fully discuss and understand the action plan	No Change - Check status of Flood Rep

	As above concerning CCRA October 2015 - assessment of risk.	Change – Table 4.1 has been updated so headings are high, medium and low, rather than based on return periods, to make them more consistent with the Environment Agency.
No	I found it very difficult to understand the key risk areas (did they even get a mention?) and how was I meant to link them to my neighbourhood as I couldn't clearly see it in the map in the summary?	Please see previous comments regarding improving the quality of the map provided and improving signposting of the Environment Agency's flood risk maps.
	The action plan for the main areas of Camerton Parish affected by floods does not seem to address at all the risks from watercourse related flooding, which is the primary concern in the Parish. All the actions which are covered by item DA10C (for example) address only surface water. The adequacy of measures taken to ensure that the Cam Brook runs freely and to address the pinch point at the county bridge are not covered at all. Recent extensive flooding of Durcott Lane at both its ends must surely point to this being a significant issue.	No change- we appreciate that it is different to understand the complexities of different authorities being responsible for different aspects of flooding, but although we will take a role to ensure flood risk from all sources is appropriately managed, we will not take the lead on all flooding. We will work with partners (such as the Environment Agency who have operational responsibility for the Cam Brook) to develop joint schemes where it is necessary/ appropriate to do so.
	The entry for Bath suggests that flooding in Bath is not well-documented. There is much documentation of past flood events, much of it held in Bath library. This should have been researched and the actions informed by it. The actions should also take account of the large number of people at threat in Bath city centre (10000 plus) by having much more comprehensive and proactive actions.	Change - reference to "not well documented" refers to the quality of the data in the wet spot analysis. We have clarified / improved the wording related to the Bath City Centre Action location specific action.

Question 3c - Are there any additional actions that you would like to see included? Comments:

Tick box response:	Consultation Comments:	Drainage & Flooding Team Response:
Yes	In partnership with Wilts CC, improve flood plains upstream from Bath. Investigate improving surface water storage in non damaging locations (parks etc) to reduce property damage.	No change – this is outside of the scope of the Strategy. Wiltshire are not responsible for the River Avon, the Environment Agency have operational responsibility and they are a member of the Strategic Flood Board that help govern flooding in the Bath & North East Somerset region.

My understanding is that the main river, the Avon at bath is outside the remit of a local plan the responsibility of the Environment Agency. I hope that the co-operation between local and national organisations is achievable and clear lead taken on this. Please see my comments below regarding the proposed removal of the radial gate at Pulteney weir.	No change. Please be assured that appropriate channels from cross agency working have been set up and will ensure appropriate action on flooding can be taken within the Bath & north East Somerset region.
I would like to see the key risks in my neighbourhood much more clearly identified. If there is then something that I can about mitigating these personally (or by holding BANES or some other agency to account) I would then volunteer to take action with the appropriate authorities.	Change – we have added to section 3.1 that if you wish to become a Flood Risk Representative for your local area then please contact your local Parish Council. There are also plenty of measures you can implement to protect your own home, these are communicated in Section 3.5.2.
Address the flood risk posed by the Cam Brook (which is assessed as High on the EA website) and which could affect a number of properties.	Change – we have added Section 1.4.1 which highlights that the Cam Brook is a main river and therefore the Environment Agency has operational responsibility. However, regardless of sources, if flooding meets the criteria laid out section 3.4.6 it would trigger us to undertake an investigation and ensure appropriate action is taken to mitigate risks by the appropriate person/ authority.
More information to residences	We are unclear what is meant by this comment. There are a number of actions laid out in this Strategy which relate to helping residences understand their risks, who is responsible for associated risks and where to look for further information.
We should consider the introduction of penalties on riparian owners who do not adequately maintain their watercourses. This action might be ameliorated by the re-introduction of grant aiding ditch and agricultural land drainage maintenance, abandoned in the early 1980s. The environmental lobby may need persuading that these actions are not necessarily a contradiction of habitat protection.	There is such a measure in place under the Land Drainage Act 1991.

No	I would like to see the criteria for S19 investigation properly explained to make it clear that multiple occupation single buildings with internal flooding will not qualify for investigation since this is what appears to have been applied in the past.	Change – we have amended the terminology in Section 3.4.6 to clarify the criteria is based on number of dwelling (e.g. a self-contained house, flats or places of residents), rather than number of properties.

Question 4 - Are you undertaking any actions to help mitigate or prevent flooding?

Comments:

	Consultation Comments:	Drainage & Flooding Team Response:
Comment 1:	I am looking to BANES to identify what needs to be done by whom in this respect.	No change. The Strategy outlines the responsibilities of residents, businesses and authorities.
Comment 2:	FoBRA has been active in pressing B&NES Council to take seriously the very real danger from flooding by the river Avon in the city upstream of Pulteney Bridge; and to invest in its mitigation. Nowhere is this mentioned in the Strategy.	Change - we have provided a new Section (1.4.1.) which hopefully makes it clearer that issues relating to Main Rivers, including the River Avon, are the operational responsibility of the Environment Agency. We recognise the importance of the City in the Bath and North East Somerset region, but it is not appropriate to mention in the Strategy specific items related to the Pulteney Bridge.
Comment 3:	Consider the effects upstream of the Pulteney Weir	This is an Environment Agency led project. For some further information on this scheme please look online or see http://democracy.bathnes.gov.uk/documents/s36763/RiverOptionsStudyJune2015.pdf .
Comment 4:	In periods of prolonged wet weather, Dunkerton village suffers predictable and historic flooding of the Cam Brook at the old bridge near All Saints Church. Local residents maintain an informal flood watch at such times and work together to avoid and deal with issues as they arise, eg residents being cut off from roads out of the village	No change – this is a Main River issue, but details to be passed to the Environment Agency.
Comment 5:	The London Road and Snow Hill Partnership have consistently raised concerns most recently at the 20th July 2015 Planning, Housing & Economic Development Scrutiny Panel regarding possible removal of the Radial Gate.	No change - this is a Main River issue, but details to be passed to the Environment Agency.

Comment 6:	I am a resident of Compton Dando and our parish hall is liable to flooding as a result of the historical replacement of the ford through the village with a stone conduit of insufficient capacity. We have just refurbished the hall after flooding in late 2013 and we took advantage of this to 'flood proof' the building as far as possible with raised foul and grey water outlets, an impermeable floor skin and removable flood barriers across the two exterior doors. Additionally, we have two debris grids across the offending stream which need regular clearing by volunteers as the annual council clearance is insufficient. We also regularly making out ditches at the rear of the building. Most importantly, we have a 'flood watch' rota of villagers who, in theory, will erect the flood barriers across the doors of the hall and alert able-bodied villagers to come and control the floodwater flow. It should be noted though that it is increasingly difficult to get people to commit to this.	No change – this type of proactive action is good to hear about. We appreciate that it is challenging for communities to continue to take strong action to protect themselves, but is much needed.

Question 5 - Do you have any other thoughts about what is in our Local Flood Risk Management Strategy?

Comments:

	Consultation Comments:	Drainage & Flooding Team Response:
Comment 1:	I haven't done the questions as I feel the most important thing in flood management is that the river is dredged as nothing has been done for forty years, or do the council want another Somerset Levels where the EA didn't listen to the locals and I am a true local I remember the 68 flood. When I walk along the river I can see the silt build up and it is cobbles that the river is self-cleaning it doesn't flow fast enough to do that.	No change - your comments will be passed onto the Environment Agency.
Comment 2:	The map on page 8 of the Summary has been rendered at such a low resolution that it just appears as a blur at least in the online version. As this is such an important piece of information I think this needs to be fixed immediately.	Change – this has been improved.
Comment 3:	There are 48 parishes not 49 as stated 3 times in the document. Section 1.2 final paragraph – add the word education so that it reads: "Flooding cannot be completely prevented, though its impacts can be reduced and managed through investment, education and good planning"	Change – a correction has been made to ensure 48 parishes are stated instead of 49, and 'education' has been added to the final paragraph of Section 1.2 as suggested.
Comment 4:	I have reviewed this comprehensive Strategy Document, the only minor comments I have are: Please note it is the Canal & River Trust. I understand it is the collective noun form. In places the document refers to Canals and Rivers Trust. p57 LFRMS – 4a not sure of the Action Supporter 'Canal & River Trust Emergency Planning Authority' is there a comma missing?	Change – appropriate updates have been made within the Strategy.
Comment 5:	Typo... Page 63, table 5-2, DA16B – London Road	Change – action DA16B has been updated to 'London Road'.
Comment 6:	the table in the LFRMS only shows Highways England. Do we need to show the LHA as Statutory Duty Section 41 of the Highways Act 1980 imposes a duty on Highway Authorities to maintain the highway. The duty extends to all Highways maintainable at the public expense, with the exception of trunk roads. This Section 41 duty is not absolute; a Highways Authority must take such care in all the circumstances as is reasonably required to ensure the Highway is not dangerous for traffic. What is reasonable will depend on a number of factors, including those set out in Section 58 (defence against action for non-repair of the Highway). To ensure compliance with section 41 of the Highways Act 1980 the Council operates a comprehensive inspection and repair regime in accordance with the National Code of Practice. Suggestion to include Highways Agency in table summarising those with flood risk duties.	Change – information on the roles and responsibilities of the Highways Authority have now been updated within Section 3 of the Strategy.

Comment 7:	General comment to improve presentation of section 3.4 so that it is a simpler, clearer and easier way for members of the public to find out who to call with different flooding issues. We have previously talked about the idea of creating a kind of - 'cut and and keep' contact sheet. This will require some design work.	Change – Section 3.5.1 & 3.5.2 have been updated to try and make it easier for the public to understand who to report flooding to and how to prepare for flooding.
Comment 8:	It's been highlighted to me that Report 6 Appendix E makes reference to S106 funding of £24.4m collected by B&NES between 2003 & 2013. As this is not wholly funding for flooding and actually is allocated in the main to other projects this could easily be misinterpreted. As such could we tweak the wording on this section from: Funding Sources Relating to Development and Regeneration Section 106 Agreements Section 106 agreements can be used to support the provision of services and infrastructure, including flood risk management measures. The agreements provide a means to ensure that a proposed development contributes to the creation of a sustainable environment, particularly by securing contributions towards the provision of infrastructure and facilities. Between 2003 and 2013 £24.4m was collected in Bath & North East Somerset area through this method. Site viability is key to a developer's willingness to contribute to this type of agreement. The earlier any local flood risk management costs associated with a site are identified the better as developers can then factor these costs into the price of the land and make better informed decisions as to the overall viability of the site. To Funding Sources Relating to Development and Regeneration Section 106 Agreements Section 106 agreements can be used to support the provision of services and infrastructure, including flood risk management measures. The agreements provide a means to ensure that a proposed development contributes to the creation of a sustainable environment, particularly by securing contributions towards the provision of infrastructure and facilities. Between 2003 and 2013 £24.4m was collected in Bath & North East Somerset area through this method. Whilst only small amounts of this funding are directly attributable to use on flood management works, flood management and site viability is key to a developer's willingness to contribute to this type of agreement which has wider implications for development and improvements to the area. The earlier any local flood risk management costs associated with a site are identified the better as developers can then factor these costs into the price of the land and make better informed decisions as to the overall viability of the site. Many thanks, Sarah	Change – the text in Appendix E has been updated accordingly.

Comment 9:	I understand that there are plans for the radial gate at Pulteney Weir is to be replaced. Given the projected increase in flood risk associated with climate change I do not understand why removal of an effective measure would be of benefit. As I live up-stream from this I would like assurance that removal will not increase the risk of my property flooding and that the commissioning agency will compensate me for any increase in insurance premium or associated damage to my property if it does.	No change - See previous comments regarding Pulteney Weir. Your comments will be passed onto the Environment Agency.
Comment 10:	I object to the replacement of the sluice gate at Pulteney Bridge with a fixed weir which will not protect the buildings upstream (London Road area) to the same extent as it is currently. As I am currently on the edge of the flooding zone, I may well in future be affected by flooding if this decision is taken. If the council goes ahead and provides worse flooding protection than is currently available, I would like to know what compensation the council will give to properties adversely affected by that decision and why is it that the areas downstream of the weir are being prioritized over the areas upstream?	No change - See previous comments regarding Pulteney Weir. Your comments will be passed onto the Environment Agency.
Comment 11:	1. Please identify key risks for every neighbourhood area in BANES and then show us your mitigation plans for each risk. 2. Please communicate to yes as individuals and as neighbourhoods what you want us to to to help identify key risks and how to help you mitigate them. 3. Please identify finances available and show us in the strategy how you are apportioning theses to the key risks and articulate how you arrived at that conclusion. 4. Please do no be passive about cross agency working or limit yourself solely to what you see as your (BANES) responsibilities. We want to see a fully joined up approach eg at present your cross working with EA seems to focus overly on downstream from Pulteney Weir. What is the focus upstream?	1) - No change 2) - Change – Section 3.1 has been updated to highlight that if anyone is interested in becoming a Local Flood Represented they should talk to your Parish Council. 3) – Section 6 has been updated to state that our annual budget will be spent on prioritised work and where internal budgets do not fullfull the costs associated then additional funding sources will be identified and applied for. 4) - See previous comments regarding partnership working.
Comment 12:	Apart from the above comments and on an environmental note I suggest that all the documents which are involved in the LFRMS should be available in a format which does not require gallons of multicoloured printer inks/toners if it should be produced in	No change – we will make it clear when we publish the Strategy that we

	hard copy. It looks very pretty but is irresponsible.	can provide printed copies on request
Comment 13:	General Comments: The draft strategy document is misleading to Bath residents, as it is NOT about flooding in the city. However, nowhere is this made clear and the words “River Avon” appear only twice in its 130 pages. The document is, in fact, a strategy for drainage in the whole Local Authority area, and does not attempt to tackle the actual flood risk to the residents of Bath (which is overwhelmingly due to the river). FoBRA appreciates that this may technically be the statutory position but it needs to be made clear from the outset. Specific comments: 1) It should be made very clear, in both the title and the introduction, that this document has no bearing on the major flood risk to Bath residents which is recognised as being from the River Avon. 2) In Objective 3 (p18), it should be stated clearly what has been undertaken so far and what risk reduction is being achieved for Bath residents in cooperation with the Environment Agency. The lack of comment here, and the mention of new committees, gives the impression that B&NES has not recognised or taken action against such risks in the past. 3) In Action Plan (p60) Objective 5 (“Improve Flood Preparedness, Warning and Ability to Recover”). Sub-objective 5b (“Communicate information to communities, businesses and individuals on flood preparedness and recovery”) is presently given a “Low” priority. This should be raised to the highest priority. 4) Appendix D (p112) Wetspot DA 16g: The comment that “sources of flooding have not been well documented” with regard to Bath City Centre cannot be true. There is boundless evidence, stretching over years. This also points to a gap in the document regarding the interplay of river levels and drains consequentially backing up. This will likely be a significant factor in Bath flooding and should be mentioned. Robin	See previous re What is covered vs what is not covered and why and where else to get that information. Also city of Bath 3) Change - Low to High (also change Action 2b from Medium to High 4) See previous re use of 'not well documented
Comment 14:	Well presented, easy to read.	No change – thank you. This is good to hear.
Comment 15:	There needs to be a great improvement in recording of flood incidents since multiple incidents that have been reported to the Council Action line in Bath in our area do not appear to have been included in the list of incidents in the Surface Water Management plans that are linked to in the panel on the right hand side of the consultation page. This should be an essential part of the Strategy since incomplete recordal of incidents will	No change – the procedure for recorded incidents being input into our systems is currently being involved and is outlined by the actions provided under objective 1. This will ensure that

	obviously result in a failure of the strategy.	this issue does not occur in the future.
Comment 16:	We await your responses following your discussions with Wiltshire.	No change – if the need arises for us to talk directly with Wiltshire Council then we will do this, but we do not plan to do this at present. The Environment Agency are operationally responsible for the River Avon.
Comment 17:	The document sets out a forward looking strategy. It sets out a sound framework with appropriate systems for identifying, monitoring, managing and reducing the impact of flood risk to the community. We support the objectives of the Strategy and acknowledge our role as a risk management authority under the Flood and Water Management Act. Table 3.1 – unable to access live Asset Register link. Please can you advise if this is a temporary service problem or local system failure. Is the LLFA going to review the status of flood risk assets before publishing? Flooding investigations under S19 for 5 properties is consistent with adjacent LLFA proposals. Section 3.5 – on surface water run-off. This appears to be misleading or confusing subject to interpretation. Can we review the wording of this paragraph? 4.2 – we note rising groundwater is unlikely to be a significant source of flood risk within the authorities area. 4.7 Wet Spots & Table 5.2 – DA05A is assigned to Wessex Water. We understand the these actions to be addressed with recent requisition schemes which include some capacity for land drainage flows, however this may not resolve all flooding from land drainage systems at this location. 7.3 Allows for updating on a 5 yr rolling period. We are aware of increased planning and development work by LLFA staff, who now act as statutory consultee for development management. If any further information is required please advise.	Change – we are working on issues with the live Asset Register link. Hopefully these will be resolved shortly. With regard to your comment on Section 3.5 we have amended the text and removed reference to the 'Law of Tort'. We will update the status of actions on an annual basis and will update the status of D05A at this point.
Comment 18:	Regional Surface Water Management Plan???? Do they means BANES Surface Water Management Plan? Page 13 – No mention of Flood Risk Management Plans Page 16 – The warning and responding to flooding incidents is primarily undertaken by	Change – we have updated references to our SWMP to 'Bath and North East Somerset regional Surface Water Management Plan' to make this

	the emergency planning authority. Flood warnings issued by EA!! Page 30. Table 3-2 - Imminent or current flooding of property from Main Rivers or sea/tidal sources Page 31 – Table 3-3 - All households in areas at risk from coastal or Main River flooding (classified as Flood Zones 2 and 3) should have been contacted notifying them of this and, unless they have chosen to opt-out, will receive flood warnings from the Environment Agency when the risk of river or coastal flooding is high. We no proactively write to people informing them that they are in FZ2 or 3 even when we update our flood maps. We notify residents if we create a new flood warning area that they are automatically added to our system to receive flood warnings and giving them an option to opt out. Taking measures to ensure that your house is protected, or the impacts will be reduced, through use of property level protection – include - creation of a personal/property level flood plan. Page 79 – Typo – should read – a river overflowing it's banks or being breached. Page 98 – Typo – should read - major* Page 100 – bullet point 4 - should read - responsible for consenting for work or operation conducted in, over or under the bed of, or within 8 meters of the top of a bank of a Main River. Page 100 – Remove points 4 and 5 and replace with above. Page 127 – Flood Zones – Updates are published on a quarterly basis Page 129 – Formatting issues e.g. Sequential Test and Sewer Flooding	point clearer. Page 13 – Agreed. We have now mentioned the relevant Flood Risk Management Plans in Table 1.2 and Appendix A. Page 16 – we agree and have updated the emergency planning section to try and highlight this further. Page 31 – agree. We have incorporated this into Table 3.2. Page 79 - No change. This is correct as it is. Page 98 – Agreed. This 'r' has been amended. Page 100 – Agree. This section has been updated. Page 127 – Agree. We have updated the Glossary accordingly. Page 129 – Agreed. This has been amended.

Comment 19:	Hi, a well presented document. Thank you for inviting our comments. A few suggestions to promote the positive aspects of the LFRMS and include safeguards for the HE. Hope of use. Sincere regards, Thank you for providing an opportunity to consider and comment on the emerging LFRMS and its associated SEA, of particular interest to Historic England for the following reasons: 1. The vulnerability of most heritage assets (designated and non-designated) to flooding, including occasional flooding, and the potential harm to or loss of their significance. 2. The potential impact of flood risk management measures on heritage assets and their settings, and including impacts on water-related or water-dependent heritage assets. 3. The potential impact of changes in groundwater flows and chemistry on preserved organic and palaeo-environmental remains. Where groundwater levels are lowered as a result of measures to reduce flood risk this may result in the possible degradation of remains through de-watering, whilst increasing groundwater levels and the effects of re-wetting could also be harmful. 4. The opportunities for conserving and enhancing heritage assets as part of an integrated approach to flood risk management and catchment based initiatives, including sustaining and enhancing the local character and distinctiveness of historic townscapes and landscapes. 5. The opportunity for increasing public awareness and understanding of appropriate responses for heritage assets in dealing with the effects of flooding as well as the design of measures for managing flood risk and improving resilience. 6. The opportunities for improving access, understanding or enjoyment of the historic environment and heritage assets as part of the design and implementation of flood risk management measures. With the above in mind I have the following observations on the SEA and LFRMS. LFRMS Strategic Environmental Assessment I note the following extracts:- • SEA objective no.6 - <i>To Protect and enhance features that define the cultural heritage of B&NES</i> • Recognition of the significance of the District's historic environment	Change – we have now reference to heritage within the Strategy in Section 1.2, 1.5, 1.6, the text of action LFRMS 3c.

	• Those heritage assets in B&NES at risk from flooding • The potential harm to the significance of heritage assets from insensitive 'structural engineering schemes' • The recommended mitigation (to avoid harm) • The suggested monitoring Local Flood Risk Management Strategy 1. Unlike the SEA, reference to the historic environment in the LFRMS is limited. 2. For example, there is no objective relating to the historic environment. Perhaps there is the scope for a Sub Objective to the LFRMS Objective no. 3, such as, 3. <i>To reduce the risk of flooding of the District's heritage assets (World Heritage Site, Scheduled Monuments, Listed Buildings, Conservation Areas, Battlefields, Registered Parks and Gardens, and non-designated assets), and ensure that the measures for managing flooding minimise harm to and, where appropriate, enhance their significance.</i> 4. We would encourage the LFRMS to emphasise the need for flood alleviation schemes and other proposed initiatives in the Action Plan, Surface Water Management Plan and relating to catchment land management proposals (where appropriate), to be informed by relevant <i>heritage</i> expertise (e.g. /i.e. B&NE Conservation Team) to ensure appropriate solutions are considered. 5. Could we encourage consideration of point s 1-6 above and how the LFRMS might also reflect how the SEA has considered the implications for the HE (both positively and potentially negatively).	
Comment 20:	Thanks for consulting with us on your Local Flood Risk Management Strategy. We have reviewed the document and have identified some areas where we might want to work together in the future in terms of sharing information or looking at mitigation measures. You have identified Chew Magna as an area that is vulnerable to flooding. The upper catchment that drains to the village is partly located in North Somerset, where we have some issues with very localised flooding in Winford. Your proposed measures are to monitor and record flood incidents in this area. There might be benefits in sharing flood incident information in this location to help understand mechanisms and catchment impacts in terms of flood risk. This may assist with identifying suitable solutions and also providing other opportunities to implement source control measures within the catchment. There are likely to be benefits in continuing to work together through the West of	Agree - Discuss 'Chew Magna' Actions and relevant partners. Include North Somerset as an 'Action Supporter' in location specific.

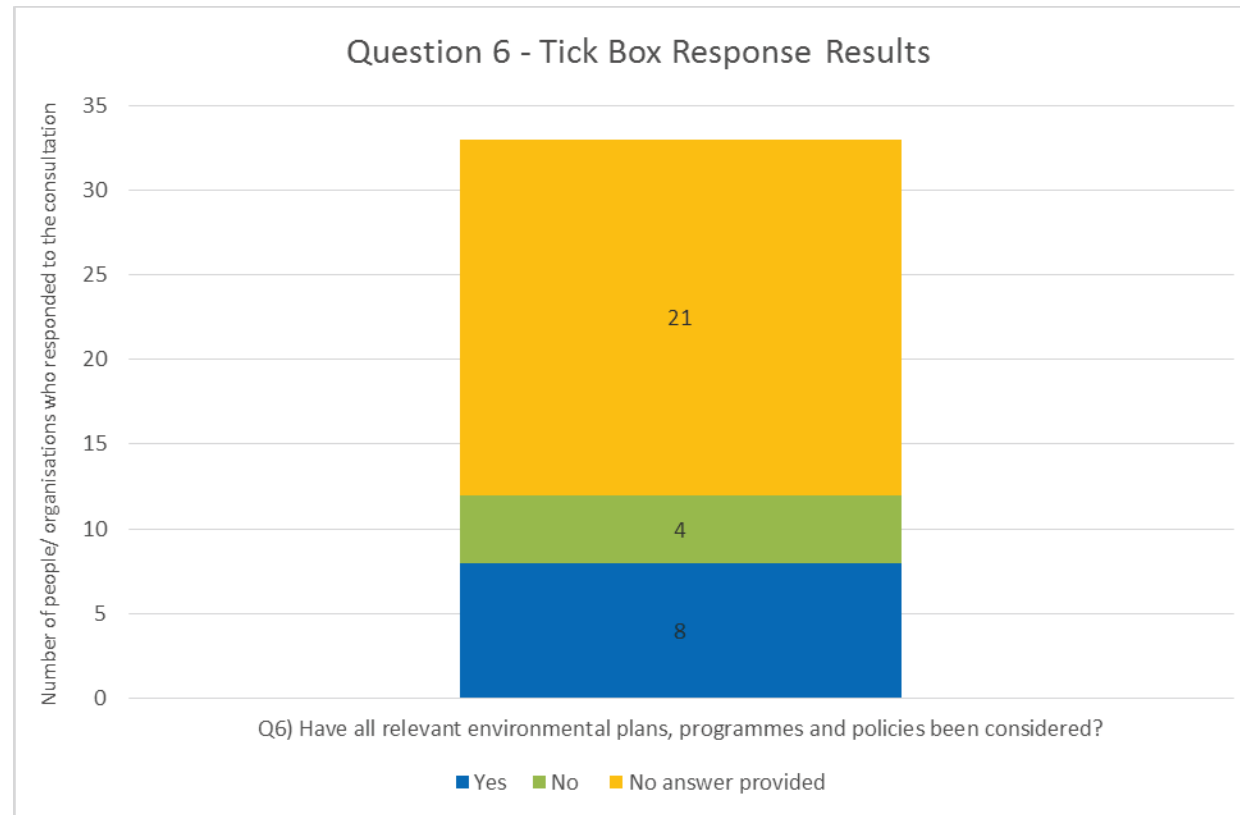
	England flood working group to share information on these issues and to explore synergies in our future activities.	
Comment 21:	• We welcome the draft strategy but as investment in flood prevention measures saves costs associated with flood damage including the reduction in interruptions to business activity reassurance is needed that the funding to implement the necessary maintenance and other works to mitigate flooding will be given sufficient priority. • We ask what resources are available to support Local Flood Representatives (Objective 2a). • We ask whether as an alternative to a Local Flood Representative, where one is not identified or forthcoming, a Parish or Town Council, for example, might have a role as an information portal for receiving and passing on flood prevention maintenance issues to the relevant authorities.	Change - we prioritise funding on a risk based analysis. Flood risk to properties and/ or those which cause health and safety concerns scoring the most highly. If internal funding cannot fund the entire project then we would look for external sources of flooding. We have amended text in Section 6 of the report to highlight this. It is not relevant to discuss resources for Local Flood Representatives in the Strategy. Please discuss this directly with your Parish Council if you wish to be involved. Thank you for your point regarding Parish Council's acting as a portal for passing on information. This is something that will hopefully result from the actions outlined.
Comment 22:	Many thanks for your email and the information. This was discussed at our October meeting. The Council wished me to make you aware of the flooding which has occurred in Stitchings Shord Land and Ham Lane and have asked me to send you a link (below) to footage of this flooding which has occurred in these lanes. https://www.youtube.com/watch?v=ME6FbjAVUQs	No change - Thank you. This will be highlighted at our next Operational Flood Working Group meeting.
Comment 23:	Thank you for the opportunity to comment on the draft Local Flood Risk Management Strategy and please treat the following as an official response: World Heritage is not referenced in the draft Local Flood Risk Management Strategy and this is considered to be an omission. Whilst it is acknowledged briefly in the Strategic Environmental Assessment this is a supporting document and does not	Change – thank you. We have updated the Strategy to include reference to Bath as a UNESCO World Heritage site and appropriate plans. Changes have been made in

	remove the need to provide reference in the main strategy. World Heritage is the highest global accolade that can be bestowed on a heritage site, and Bath is exceptional in that the entire city is inscribed. Within Europe only Venice provides a comparable example. As in Venice, environmental protection and conservation of globally important heritage are inter-connected. World Heritage status is first and foremost a significant responsibility for B&NES (as principal site steward) but it is also worth millions of pounds to the economy of the district. Flooding is a recognised threat to the World Heritage Site and UNESCO expects us to have management measures in place. In this respect the draft Local Flood Risk Management Strategy is very welcome but there should be clear cross-reference between this document and the City of Bath World Heritage Site Management Plan. This will deliver your objective of ensuring 'that local flood risk is managed through a coordinated approach' and demonstrate a holistic response to environmental protection. The World Heritage Site management Plan (endorsed by Full Council) is delivered through a partnership body which includes many of the stakeholders involved in the production of the flood plan and I believe these stakeholders would expect to see this cross referencing. I would be happy to work with you to draft minor alterations to the draft strategy which will address the above concern. I am also aware that my colleagues in the Historic Environment team may wish to assist you in strengthening references to how the strategy impacts on our statutory duties to protect archaeology and historic structures. Finally, the glossary in the Strategic Environmental Assessment relating to World Heritage Sites is inaccurate and I suggest the following amendment: Current: A natural or man-made site, area or structure recognised as being of outstanding international importance and therefore as deserving special protection. Sites are nominated to and designated by the World Heritage Convention (an organisation of UNESCO). Suggested replacement: A cultural or natural site deemed to be of outstanding universal value, the protection of which is important to all humanity. Sites are nominated globally by the United Nations Educational, Scientific and Cultural Organisation (UNESCO) who also put in place operational guidelines for management and protection.	Section 1.6 and Appendix A as a result.
Comment 24:	There would appear to be insufficient power in our planning regulations to control and limit hard surface run off. NB: Although not part of the scope of this report, it is worth noting that any flooding threat nowadays is exacerbated by a change of attitude to impending the risk. 25 years ago, when our hall was flooded, the resulting mud was allowed to dry before being	No change – thank you for the feedback. The National Planning Policy Framework makes reference to managing surface water runoff from new developments.

	swept out and, in the mean time, people simply wore gumboots to events!	
Comment 25:	The document is, by the very title, misleading to Bath residents. The presentation that preceded the drafting of this strategy began with the direct statement: "this is NOT about flooding in Bath". Nowhere is this made clear and the words "River Avon" appear only twice in 130 pages. The document is, in fact, a strategy for drainage in the whole B&NES area and never attempts to tackle the actual flood risk to the residents of Bath. This is based on a strictly literal but artificial interpretation of the statutory position under the Flood and Water Management Act 2010 but to the greater population of Bath the "Local" flood risk is overwhelmingly from the River Avon, and it is notable that other neighbouring regions do not appear to have adopted this over-literal and artificial approach. See for example the equivalent Bristol document. We believe it is at best questionable whether B&NES is entitled to adopt this literal approach under the FWMA2010, apparently disregarding all related duties and obligations under other legislation and guidelines such as the Civil Contingencies Act 2004. Although this fine distinction is covered in the definitions on page 3 the casual observer will note that this is given a backdrop of a river with a canal narrow boat. In the B&NES area this can only be the River Avon. A small point but it is important that the residents of Bath are not given the impression that this document means that B&NES has a strategy for flood alleviation in Bath. Other than the collateral protection from the Bath Quays scheme this is not the case. Specific comments: 1) It should be made very clear, both in the title and introduction, that this document has no bearing on the major flood risk to Bath residents which is recognised as being from the River Avon. 2) In Objective 3 (p 18), State clearly what has been undertaken so far and what is being achieved for risk reduction for Bath residents in cooperation with the Environment Agency. The lack of any comment here and the mention of new committees gives the impression that B&NES has not recognised or taken action against such risks in the past. This is the reality but the document implies otherwise. How will such new committees reduce flood risk? 3) In Action Plan (p60) LFRMS-5b should be given the highest priority. 4) P112 DA 16g. The comment that "sources of flooding have not been well documented" with regard to Bath City Centre is not credible. This also points to a gap in the document regarding the interplay of river levels and	1) Change - we are sorry that you find the Strategy misleading, but the title does state Bath & North East Somerset Council as our responsibility is for the whole of the region and not just Bath. We have however now included a section on main rivers (which the River Avon is) to clarify the position on main river issues. We have also improved Section 1.2 to highlight that we will take a role in ensuring flood risk is appropriately managed regardless of source, but this does not necessarily mean we will lead projects as it would be inappropriate for us to do this. 2) – we have now signposted people to the fact that the Environment Agency have their own plans in place, but it is not appropriate for us to list each of these in this Strategy. 3) Change – we have changed the action priority to High, but its priority is not considered to be higher than any of the other high priority actions. 4) please see previous comments about this issue which state we have amended the text as it is not that there are limited records, but that the quality of records is poor.

	drains backing up. This will be a significant factor in flooding in Bath. Further comments. The link to the Flood Asset Register on page 26 of the main document does not work for us. We are concerned that the process for making sure that sensitive assets appear on the register is not robust and reliable? We have reason to believe that our frequent reports of flooding at the gulleys outside Villa Magdala on Henrietta Road for example – do not appear on a list of apparent incidents at http://www.bathnes.gov.uk/sites/default/files/siteimages/banes_surface_water_management_plan_150827_-_appc.pdf This strategy does not address the interplay of rising river levels, blocked drains and groundwater levels due to a full water table. These factors are clearly linked and cannot be addressed separately. Studies of past floods in Bath show this to be the case. We refer again to neighbouring strategies that do not take this unreasonably narrow and artificial approach. We consider this a lost opportunity to finally begin to address the long standing and growing threat to public safety in Bath. It will in fact enable further inaction due to the vagueness of the objectives and their interpretation. We urge a reconstruction of the document and inclusion of planning toward a holistic approach to flood alleviation in Bath.	
Comment 26:	I understand that there are plans for the radial gate at Pulteney Weir is to be replaced. Given the projected increase in flood risk associated with climate change I do not understand why removal of an effective measure would be of benefit. As I live up stream from this I would like assurance that removal will not increase the risk of my property flooding and that the commissioning agency will compensate me for any increase in insurance premium or associated damage to my property if it does.	Please see previous comments regarding this issue. This is a main river issue. Your concerns will be passed on.
Comment 27:	I object to the replacement of the sluice gate at Pulteney Bridge with a fixed weir which will not protect the buildings upstream (London Road area) to the same extent as it is currently. As I am currently on the edge of the flooding zone, I may well in future be affected by flooding if this decision is taken. If the council goes ahead and provides worse flooding protection than is currently available, I would like to know what compensation the council will give to properties adversely affected by that decision and why is it that the areas downstream of the weir are being prioritized over the areas upstream?	Please see previous comments regarding this issue. This is a main river issue. Your concerns will be passed on.

Question 6 - Have all relevant environmental plans, programmes and policies been considered?

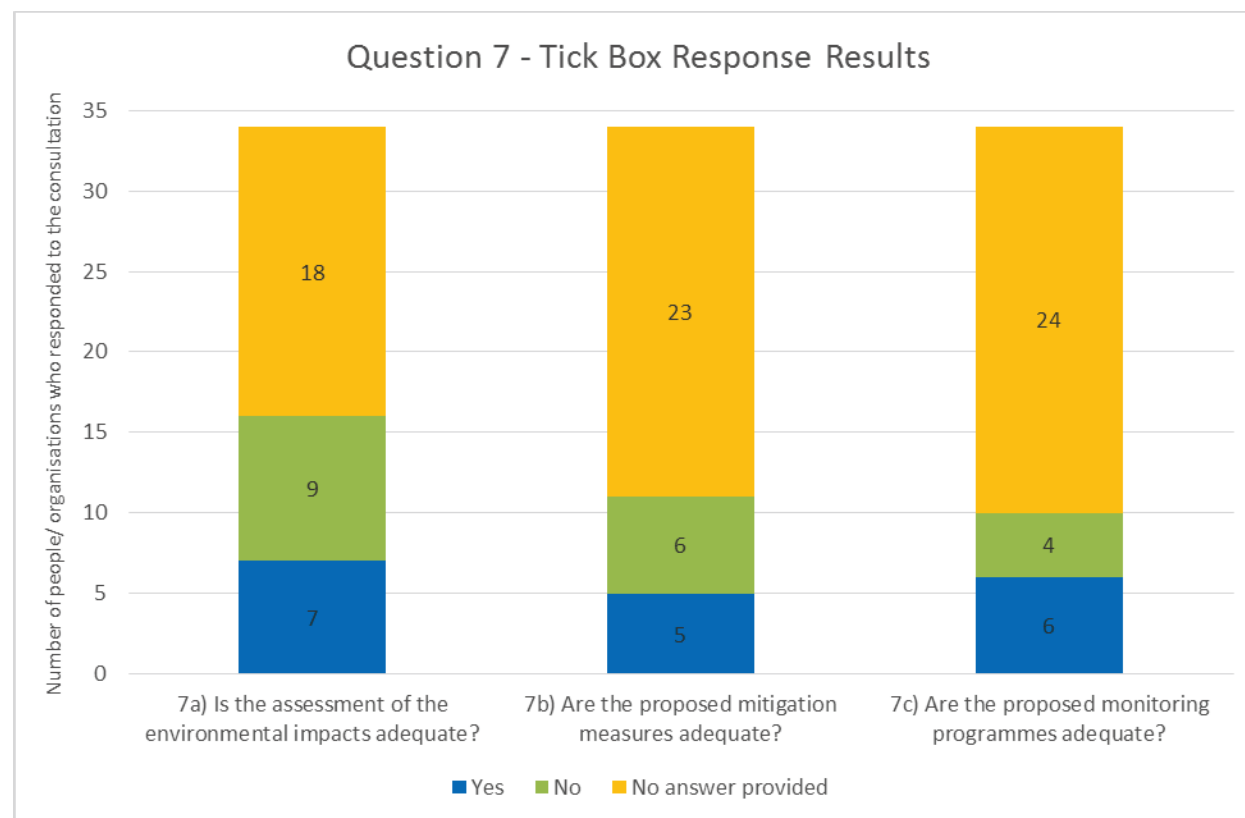


Comments:

Tick box response:	Consultation Comments:	Drainage & Flooding Team Response:
Yes	I assume they have	No specific comment so no change.
	Maybe but as a local community group we are unable to comment.	
No	Don't know!	No change – this specific concern should be addressed as part of planning process.
	It mentions in the strategy that objective 4 is to deny inappropriate planning proposals. Does the option appraisal for the eastern Park and Ride fit into this? If not why not?	
	Please see FoBRA's response to question 5. (see comment 13 of Question 5 responses)	No specific comment so no change.

	The Strategy appears to have been drafted artificially in isolation of B&NES's responsibilities under Contingencies Act 2004 and National Flood Framework guidelines.	Change – we do not believe this to be the case, but have updated Section 3.4.4 to make roles undertaken by the Emergency Planning Authority clearer.
No answer provided	I am not qualified to answer this	No specific comment so no change.

Question 7 – Questions regarding the Strategy Environmental Assessment (SEA)



Question 7a – is the assessment of the environmental impacts adequate? Comments:

Tick box response:	Consultation Comments:	Drainage & Flooding Team Response:
Yes	I assume they are	No specific comment so no change.
	At the strategic level, yes	No change – we are glad agree.
	As a baseline now but does not take account of change of climatic factors by 2050 (guestimates) page 49. How robust are the latter estimates?	No change – we have accounted for climate change within our approaches and based assumptions on current guidance within the National Planning Policy Framework.
No	Don't know.	No specific comment so no change.
	The strategy barely gives a mention to cross agency working re the EA responsibilities with the River Avon. That is a key strategic environmental issue, so why not?	Change – we have mentioned cross agency working in Section 3.1, but have now strengthen the wording in Section 1.2. and 3.1 to make this clearer.
	Please see FoBRA's response to question 5. (see comment 13 of Question 5 responses)	No specific comment so no change.
	The Strategy appears to have been drafted artificially in isolation of B&NES's responsibilities under Contingencies Act 2004 and National Flood Framework guidelines.	Change – we do not believe this to be the case, but have updated Section 3.4.4 to make roles undertaken by the Emergency Planning Authority clearer.
No answer provided	I don't know	No specific comment so no change.

Question 7b - Are the proposed mitigation measures adequate? Comments:

Tick box response:	Consultation Comments:	Drainage & Flooding Team Response:
Yes	I assume they are but they are yet to be tested	No change
	At the strategic level, yes	No change. We are glad you agree.
No	We have recently purchased a home on St John's Road, Bathwick, Bath BA2 6PZ. We understand that the basements of a couple of homes have been flooded by the drains. Could this not be avoided by Wessex Water have one way non-return valves fitted in the drainage system?	No change. Your concern will be passed on to Wessex Water. It is not appropriate to address this specifically within this Strategy.
	Don't know.	No specific comment so no change.
	As previously mentioned the mitigation plans in this strategy are non existent.	No change – please refer to Appendix D for location specific action plans.
	Please see FoBRA's response to question 5. (see comment 13 of Question 5 responses)	No change

	The Strategy appears to have been drafted artificially in isolation of B&NES's responsibilities under Contingencies Act 2004 and National Flood Framework guidelines.	As per this same comment previous - Change – we do not believe this to be the case, but have updated Section 3.4.4 to make roles undertaken by the Emergency Planning Authority clearer.
	Because we do not know the unknown. ie planning proposals downstream and possible measures by Wiltshire upstream.	No change. As outlined the Environment Agency are operationally responsible for main rivers which includes the River Avon. It is not the responsibility of Wiltshire Council.
No answer provided	I don't know	No specific comment so no change.

Question 7c - Are the proposed monitoring programmes adequate? Comments:

Tick box response:	Consultation Comments:	Drainage & Flooding Team Response:
Yes	So long as they are implemented	No change. As highlighted in Section 7.1 there is a governance approach in place to ensure the Strategy is adequately reviewed/ monitored.
No	Don't know.	No specific comment so no change.
	Without cross agency structures and processes the strategy is sadly lacking. I think it would also be useful to publish progress against plans in Council Connect, say 3 times a year.	No change. We have highlighted that cross agency working is happening. The Strategy will be reviewed annually and Action Plan updates published on our website.
	Please see FoBRA's response to question 5. (see comment 13 of Question 5 responses)	No specific comment so no change.
	The Strategy appears to have been drafted artificially in isolation of B&NES's responsibilities under Contingencies Act 2004 and National Flood Framework guidelines.	As per this same comment previous - Change – we do not believe this to be the case, but have updated Section 3.4.4 to make roles undertaken by the Emergency Planning Authority clearer.
No answer provided	Don't know	No specific comment so no change.
	As a community group we are not in a position to answer.	No specific comment so no change.

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**Bath and North East Somerset Council
Surface Water Management Plan**

Final Report

July 2015

JBA Project Manager

Lucy Nicholson
Nelson House
Langstone Business Village
Priory Drive
Newport
South Wales
NP18 2LH

Revision History

Revision Ref / Date Issued	Amendments	Issued to
V1.0 23/10/2014	Draft Preliminary Report – Main SWMP sections only	Stella Davies
V2.0 15/04/2015	Draft report including all sections	Stella Davies / Jim McEwen
V3.0 22/06/2015	Final report including Strategic Flood Board Comments	Stella Davies
V3.1 15/07/2015	Final report incorporating B&NES final comments and amended section 9.0	Jim McEwen
V4.0 03/08/2015	Final amendments approved	Jim McEwen

Contract

This report describes work commissioned by Stella Davies, on behalf of Bath and North East Somerset Council, by an email dated 07/05/2014. B&NES Council representatives for the contract were Stella Davies and Jim McEwen. Peter May, Lucy Nicholson, Georgina Willis and Jenny Hill of JBA Consulting carried out this work.

Prepared by Gina Willis / Jenny Hill / Lucy Nicholson

Reviewed by Peter May

Purpose

This document has been prepared as an Area-wide Surface Water Management Plan for Bath and North East Somerset Council. JBA Consulting accepts no responsibility or liability for any use that is made of this document other than by the Client for the purposes for which it was originally commissioned and prepared.

Acknowledgements

JBA would like to acknowledge and thank, Wessex Water, the Canal and River Trust the Environment Agency and Bath and North East Somerset Council for all their assistance during this project.

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Executive Summary

Bath and North East Somerset (B&NES) Council has identified the need for an Area wide Surface Water Management Plan (SWMP) to be used as an overarching framework to assist with the identification and management of flood risk from local sources within the B&NES area boundary.

This report has been prepared in accordance with the Department for Environment Food and Rural Affairs (DEFRA) Surface Water Management Plan (SWMP) Technical Guidance² and forms the strategic stages of the SWMP process.

A Surface Water Management Plan is a study to understand the flood risk that arises from local flooding, which is defined by the Flood and Water Management Act 2010⁷ as flooding from surface runoff, groundwater, and Ordinary Watercourses.

SWMPs are led by a partnership of flood risk management authorities (RMAs) who have responsibilities for aspects of local flooding, including the Council, Sewerage undertaker, Environment Agency and other relevant authorities.

The SWMP Technical Guidance outlines three levels of SWMP, Strategic Assessment, Intermediate Assessment and Detailed Assessment. This Area wide SWMP forms a Strategic Level Assessment.

The main aim of the SWMP is to produce a long term, area wide high level Action Plan to manage local sources of flooding within the Bath and North East Somerset area.

As part of this SWMP study, it has been essential to identify the links to other local and regional delivery plans which may influence or be influenced by the SWMP. The SWMP will seek to integrate and support these plans and processes to provide a clear and robust path to delivering flood risk management objectives throughout Bath and North East Somerset.

The Local Flood Risk Management Strategy (LFRMS) for the B&NES area is currently being prepared. The B&NES area wide SWMP will feed into the LFRMS by providing an improved understanding of the risk of flooding from local sources and from interactions with Main River flooding. The SWMP will be used as a basis for identifying priorities and affordability of measures which will be included in the Local Flood Risk Management Strategy.

Within the B&NES area, flood risk is managed by multiple agencies, including the Council, the Environment Agency and the Sewerage Undertaker, Wessex Water. Often surface water flooding is caused by multiple mechanisms, which fall under the jurisdiction of different agencies.

To fully understand flood risk in the B&NES area the SWMP has strived to collate all the available data related to flood incident records and modelled flood risk. This data has been collected from the RMA project partners. Understanding the uncertainty associated with flood data is an important part of the SWMP process, as decisions are made based on the findings. Flood incident data collected through the SWMP process has been scored according to its quality.

Source-Pathway-Receptor modelling has been applied and the data has been mapped to identify key flooding locations or 'wet-spots'. Using the flood incident data, an Action Plan has been drawn up which attributes specific project partners as owners of the action.

The B&NES area wide SWMP has also highlighted a number of drainage areas where further investigation is required to provide a better understanding of flood risk.

The Bath and North East Somerset Strategic Flood Board and Operational Flood Working Group, consisting of B&NES Council, the Environment Agency, Wessex Water, Bristol Water and the Emergency Services is well placed to lead on the delivery of the SWMP Action Plan. Co-ordination of the Action Plan requires action owners to ensure that the Plan is undertaken in a timely and cost effective manner and that the tables are 'live' documents which are updated when actions are complete and / or reviewed as and when new or more up to date information becomes available.

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Abbreviations and Terms

AONB	Area of Outstanding Natural Beauty
AStGWF	Areas Susceptible to Groundwater Flooding
AStSWF	Areas Susceptible to Surface Water Flooding
AutoFEH	JBA automated generation of statistical flow estimates used in JFlow
B&NES	Bath and North East Somerset
BGS	British Geological Survey
CAM	Condition Assessment Manual
CFMP	Catchment Flood Management Plan
CIL	Community Infrastructure Levy
DAP	Drainage Area Plan
DRN	Digital River Network
DTM	Digital Terrain Model
FRA	Flood Risk Assessment
FRIS	Flood Reconnaissance Information System
FRISM	Flood Risk Metrics
FMfSW	Flood Map for Surface Water
JFes	JBA Flood Estimation System
JFlush	JBA tool to apply urban ReFH method
JFlow	JBA broad scale two dimensional flood modelling software
LLFA	Lead Local Flood Authority
LFRMS	Local Flood Risk Management Strategy
NLPG	National Land and Property Gazetteer
NPPF	National Planning Policy Framework
NRD	National Receptors Database
ReFH	Revitalised Flood Hydrograph method
RFCC	Regional Flood and Coastal Committee
RMA	Risk Management Authority
SFRA	Strategic Flood Risk Assessment
SuDS	Sustainable Drainage Systems
SWMP	Surface Water Management Plan
uFMfSW	updated Flood Map for Surface Water
Exception Test	A test applied under National Planning Policy in Flood Risk Assessment when it is not possible to the development to be located in areas with a low probability of flooding.
Flood Risk	A combination of the probability (likelihood) and consequences of flooding
Flood Frequency	There are several different terms which can be used to describe the likelihood and magnitude of flood events. All of these terms are based on probabilities derived from recorded flood records and the fact that larger, more severe flood events occur less frequently than

smaller ones. The three main terms used within the Flood Risk Management industry are:

- Return period.....The average number of years between events of similar magnitude
- Chance of Occurrence.....The likelihood, expressed as odds, of a flood event of a particular magnitude occurring in any one year. e.g. there is a 1 in 100 chance of flooding in any one year; OR each year there is a 1 in 100 chance of flooding
- Annual Exceedance Probability (AEP)..... The chance of a flood greater than a certain magnitude happening in any one year, expressed as a %.

The table below shows how Return Period, Chance of Occurrence and % Annual Exceedance Probability relate to each other for three different magnitudes of flooding

Return Period	Chance of Occurrence	% Annual Exceedance Probability
2 year	1 in 2	50
30 year	1 in 30	3.33
75 year	1 in 75	1.33
100 year	1 in 100	1.0
1000 year	1 in 1000	0.1

National Receptor

Database A spatial dataset which contains information on land use, including types of buildings, transport and utilities.

Pluvial Runoff Surface water runoff

Riparian Owner The owner of the land which a watercourse flows through. The rights and responsibilities of riparian owners are detailed in the Environment Agency's document "living on the Edge"

Sequential Test Sequential approach applied under the National Planning Policy Framework to steer new development to areas with the lowest probability of flooding.

Wet Spot Areas which include clusters of reported local flood incidents and are therefore considered vulnerable to flooding from Ordinary Watercourses, surface water or groundwater.

1 Introduction

1.1 Terms of Reference

Bath and North East Somerset Council (B&NES) has identified the need for an Area wide Surface Water Management Plan (SWMP) to be used as an overarching framework to assist with the identification and management of flood risk from surface water within the B&NES boundary.

JBA Consulting was appointed to produce the B&NES Area-wide SWMP in May 2014. This SWMP study forms the strategic stages of the SWMP process for the whole of the B&NES area as described in section 2 below.

1.2 Surface Water Management Plan

A Surface Water Management Plan is a study to understand the flood risk that arises from local flooding, which is defined by the Flood and Water Management Act 2010⁷ as flooding from surface runoff, groundwater, and ordinary watercourses.

SWMPs are led by a partnership of Risk Management Authorities who have responsibilities for aspects of local flooding, including the Council, Sewerage undertaker, and other relevant authorities.

Table 1.1 lists the various flood risk management authorities and summarises their responsibilities

Table 1.1 Flood risk management authorities and their responsibilities

Flood Risk Management Authority	Responsibilities
The Environment Agency	Responsible for taking a strategic overview of the management of all sources of flooding and coastal erosion. The Agency also has operational responsibility for managing the risk of flooding from Main Rivers, reservoirs, estuaries and the sea, as well as being a coastal erosion risk management authority
Lead Local Flood Authorities (Unitary Authorities or District Councils)	Responsible for developing, maintaining and applying a strategy for local flood risk management in their areas and for maintaining a register of flood risk assets. LLFAs also have lead responsibility for managing the risk of flooding from surface water, groundwater and ordinary watercourses.
District Councils (None within the B&NES area)	Key partners in planning local flood risk management and can carry out flood risk management works on minor watercourses, working with Lead Local Flood Authorities and others, including through taking decisions on development in their area which ensure that risks are effectively managed. Districts and Unitary Councils in coastal areas also act as coastal erosion risk management authorities.
Internal Drainage Boards (None within the B&NES area)	Independent public bodies responsible for water level management in low lying areas, also play an important role in the areas they cover (approximately 10% of England at present), working in partnership with other authorities to actively manage and reduce the

	risk of flooding.
Highways Authorities	Responsible for providing and managing highway drainage and roadside ditches, and must ensure that road projects for not increase flood risk.
Water and Sewerage Companies	Responsible for managing the risks of flooding from water and foul or combined sewer systems providing drainage from buildings and yards.

Under the Flood and Water Management Act 2010 all Risk Management Authorities in the table above have a duty to co-operate with each other and to share data. A key theme of the Pitt Review was for flood risk management authorities to work in partnership to deliver flood risk management better to the benefit of their communities.

Within the study are Bath and North East Somerset Council, which is a Unitary Authority, fulfil the roles of Lead Local Flood Authority, District Council and Highways Authority. There are no Internal Drainage Boards within the B&NES area. The Water and Sewerage Companies are Bristol Water and Wessex Water. Wessex Water is a Water and Sewerage Company and Bristol Water is a Water Company operating within the Wessex Water Area.

The purpose of a SWMP is to identify what the local flood risk issues are, what options there may be to prevent them or limit the damage they cause and who should take these options forward. This is presented in an Action Plan which lists the partners who are responsible for taking the various options forward. The Action Plan, which will be reviewed periodically, is agreed by all project partners to tackle the flood risks that are identified.

The Local Flood Risk Management Strategy (LFRMS) for the B&NES area is currently being prepared. The B&NES area wide SWMP will feed into the LFRMS by providing an improved understanding of the risk of flooding from local sources and from interactions with Main River flooding. The SWMP prioritised Action Plan together with the LFRMS Action Plan will form an overarching flood risk management Action Plan for the B&NES area.

The framework for undertaking a SWMP study is illustrated using a wheel diagram, reproduced from the Defra guidance² as shown in Figure 1.1.



Figure 1.1: Surface Water Management Plan Wheel (Defra guidance²)

The SWMP process is formed of four main principles:

- Preparation
- Risk Assessment
- Options
- Implementation and Review

This report has been prepared across a series of three of the stages, as follows:

- **Preparation:** Building a partnership approach to local flood risk management through integrated working between the risk management authorities (RMAs). Gathering evidence of and information about flooding
- **Risk Assessment:** An initial assessment to determine the highest risk locations and the key issues upon which the action plan should focus. We will be using publicly available datasets in combination with local records of flooding to inform this assessment
- **Action Plan:** Preparation of an action plan that will aim to identify a range of recommended actions for the reduction of flood risk across the SWMP area. The action plan will:
 - outline the actions required and where and how they should be undertaken;
 - set out which partner(s) or stakeholder(s) is/are responsible for implementing the actions and who will support them;
 - provide indicative costs; and
 - identify priorities.

1.3 Surface Water Flooding

1.3.1 Surface Water

The SWMP technical guidance² states that surface water flooding includes:

- surface water runoff; runoff as a result of high intensity rainfall when water is ponding or flowing over the ground surface before it enters the underground drainage network or watercourse, or cannot enter it because the network is full to capacity, thus causing flooding (known as pluvial flooding);
- flooding from groundwater where groundwater is defined as all water which is below the surface of the ground and in direct contact with the ground or subsoil;
- sewer flooding; flooding which occurs when the capacity of underground systems is exceeded due to heavy rainfall, resulting in flooding inside and outside of buildings. Note that the normal discharge of sewers and drains through outfalls may be impeded by high water levels in receiving waters as a result of wet weather or tidal conditions;
- flooding from any Ordinary Watercourse not designated a "Main River", including culverted watercourses which receive most of their flow from inside an urban area and perform an urban drainage function;
- overland flows from the urban/rural fringe entering the built-up areas; and
- overland flows resulting from groundwater sources.

This SWMP aims to consider surface water flooding issues in the B&NES area. Section 6 of this report summarises local flood risk issues. However it should be noted that flood risk can arise from a number of different sources, and often flooding originates from a combination of flood mechanisms. Although Main River flooding will feature within section 6, further investigation of flooding from Main River only is outside of the remit of this report.

Information on Main River flooding within the B&NES area is covered under other strategic planning documents such as the Strategic Flood Risk Assessment Level 1 for Bath and North East Somerset⁹.

1.4 Policy Framework

Guidance on the preparation of Surface Water Management Plans was prepared by Defra in 2010². Since the publication of this guidance the following institutional policy and responses have been influential:

- The Flood and Water Management Act 2010⁷
- The Preliminary Flood Risk Assessment (PFRA) Guidance, 2011⁶
- The introduction of Resilience Partnership Funding, 2011
- The updated Flood Map for Surface Water (uFMfSW), 2013
- The National Planning Policy Framework (NPPF), 2012⁴
- The web-based Planning Practice Guidance on Flood Risk and Coastal Management, March 2014.

In addition to these National documents, the following local documents are also taken into consideration during this SWMP:

- Avon Catchment Flood Management Plan (CFMP), June 2012^{15, 16}
- The Severn District River Basin Management Plan, 2009
- B&NES Level 1 and Level 2 Strategic Flood Risk Assessments (SFRA), 2008 – 2009⁹⁻¹²
- B&NES Flood Risk Management Strategy, June 2010¹⁴
- B&NES Preliminary Flood Risk Assessment (PFRA), 2011¹⁸
- Section 19 Investigation Reports (various dates)

1.4.1 Flood Risk Regulations 2009

The Flood Risk Regulations 2009 (FRR) transpose the European Floods Directive 2007/60EC into English and Welsh law and bring together key partners to manage flood risk from all sources and in doing so reduce the consequences of flooding on key receptors. Local Authorities are assigned responsibility for management of surface water flooding.

As part of the ongoing cycle of assessments, mapping and planning, the FRR requires the undertaking of a PFRA. National guidance was published by the Environment Agency in 2011.

1.4.2 Flood and Water Management Act 2010

The Flood and Water Management Act places the responsibility for managing the risk of local floods on the Upper Tier or Unitary Authorities, in their role as Lead Local Flood Authorities (LLFAs), but allows for the delegation of Flood Risk Management functions to other Statutory Authorities.

The Act also seeks to encourage the uptake of Sustainable Drainage Systems (SuDS) by agreeing new approaches to the management of drainage systems and allowing, where delegated, for District Councils and Internal Drainage Boards (IDBs) to adopt SuDS for new developments and redevelopments.

Sustainable Drainage Systems (SuDS)

Sustainable Drainage Systems are used to manage rainfall runoff from impermeable surfaces. SuDS encompass a range of techniques which aim to mimic the natural processes of runoff and infiltration as closely as possible. These techniques can include green roofs, permeable paving, soakaways swales and ponds. Any SuDS scheme should integrate with existing drainage systems and be easily maintainable. SuDS schemes should be based on a hierarchy of methods termed “the SuDS treatment train”. Guidance recommends that the management of surface water should use a combination of site specific and strategic SuDS measures, encouraging source control where possible to reduce flood risk and improve water quality.

1.4.3 National Planning Policy Framework

The National Planning Policy Framework and associated Technical Guidance require that new development should not increase flood risk and requires developers to prioritise the use of sustainable surface water drainage systems (SuDS).

The National Planning Policy Framework states that “When determining planning applications, local planning authorities should ensure flood risk is not increased elsewhere and only consider development appropriate in areas at risk of flooding where, informed by a site-specific flood risk assessment, following the Sequential Test, and if required the Exception Test it can be demonstrated that:

- Within the site, the most vulnerable development is located in areas of lowest flood risk unless there are overriding reasons to prefer a different location; and
- Development is appropriately flood resilient and resistant, including safe access and escape routes where required, and that any residual risk can be safely managed, including by emergency planning; and it gives priority to the use of sustainable drainage systems”.

A SWMP will support this by informing the Local Planning Authority (LPA) of areas at risk of surface water flooding and by providing an evidence base to aid the consideration of future development options.

1.4.4 Local Planning Policy Framework

The current Planning Policy Framework for the B&NES area stated that applications for planning permission must be determined in accordance with the development plan unless material considerations indicate otherwise. This gives considerable weight to Development Plan documents

The Development Plan for Bath and North East Somerset comprises:

- Bath and North East Somerset Adopted Core Strategy – Core policies include CP5 Flood Risk Management which states that “Development in the district will follow a sequential approach to flood risk management, avoiding inappropriate development in areas at risk

from flooding and directing development away from areas at highest risk in line with Government Policy (NPPF). Any development in areas at risk of flooding will be expected to be made safe throughout its lifetime, by incorporating mitigation measures, which may take the form of on-site flood defence works and / or a contribution towards or a commitment to undertake such off-site measures as may be necessary. All development will be expected to incorporate sustainable drainage systems to reduce surface water run-off and minimise its contribution to flood risks elsewhere. All development should be informed by the information and recommendations of the B&NES Strategic Flood Risk Assessments and Flood Risk Management Strategy.

- Saved Policies from the Bath and North East Somerset Local Plan (2007)
- West of England joint Waste Core Strategy (2011)

Placemaking Plan

The purpose of the placemaking¹⁹ plan is to complement the strategic framework in the Core Strategy by setting out detailed development principles for identified development sites and other policies for managing development across Bath and North East Somerset.

The Core Strategy forms Part One of the Local Plan and the Placemaking Plan forms Part Two of the Local Plan.

The Bath and North East Somerset Placemaking Plan¹⁹ Sustainable Drainage Systems Policy, SU.1 links with the Core Strategy Key Policy CP5 Flood Risk Management and CP7 Green Infrastructure and requires that all sites are expected to incorporate sustainable drainage systems to reduce surface water runoff and minimise its contribution to flooding.

In addition, there are site specific requirements for the Core Strategy Strategic Sites allocations and for the site allocations proposed within the Placemaking Plan.

The aims of the Placemaking Plan Sustainable Drainage System Policy are to:

- Set out the high level principles for drainage designs incorporating SuDS features and the SuDS hierarchy that will be used in the B&NES area.
- Provide a basis for the incorporation of SuDS in development schemes through the planning system, ensuring that SuDS features are considered at an early stage and incorporated into a scheme design.
- Identify key considerations and requirements for developers which should be addressed via development management.

West of England Sustainable Drainage Developers Guide

The West of England Sustainable Drainage Developers Guide (available on the B&NES Council website) provides information for developers, planners, designers and consultants on the requirements for design, approval and adoption of SuDS in the West of England and Somerset. The guidance provides information on the planning, design and delivery of attractive, high quality and well integrated SuDS schemes, promotes the need for early consideration of SuDS, and introduces the use of a “proof of concept” process to gain agreement in principle at an early stage from the approving authority

1.5 Drivers for Change

Bath & North East Somerset Council are undertaking this SWMP in order to:

Better understand the risks and consequences of surface water flooding in Bath and North East Somerset so this can be shared and used as part of an evidence base for Local Development Frameworks and the Local Flood Risk Management Strategy;

To assist in meeting some of the requirements on B&NES Council as Lead Local Flood Authority under the Flood Risk Regulations 2009 and the Flood and Water Management Act 2010.

The implementation of the SWMP and Action Plan can help to provide significant economic and environmental benefits to the community through better preparation against extreme rainfall events and surface water flooding. The SWMP process also allows the opportunity to enhance the condition of urbanised catchments helping to improve water quality.

2 Scope of the Bath and North East Somerset SWMP

2.1 Aims and Objectives

The main aim of the SWMP is to produce a long term, area wide high level plan to manage surface water for Bath and North East Somerset Council. The SWMP will be used as a basis for identifying priorities and affordability of measures which will be included in the Local Flood Risk Management Strategy.

The main objectives of this assessment are to:

1. Engage with partners and stakeholders;
2. Collect, collate and map all available flood data and its availability for future use, including an assessment of the reliability of the data
3. Identify, where possible from the available data, flood-prone areas to inform spatial and emergency planning functions
4. Identify areas where flood risk originates from a combination of sources
5. Prepare a source-pathway-receptor model for all the risks and sources that have been identified in objective 3 and 4
6. Identify locations where there may be opportunities for 'quick wins' without the need for further more detailed analysis
7. Provide data which will support the development of a Local Flood Risk Management Strategy
8. Identify any proposed or allocated developments within the study area and the likely impact on flood risk that they may have
9. Identify opportunities for SuDS and WSUD (Water Sensitive Urban Design)
10. Make recommendations for the next steps

2.2 Geographic Extent

This SWMP has been undertaken for the whole of the Bath and North East Somerset area as shown in Figure 2.1.

Bath and North East Somerset covers an area of approximately 35,000 hectares and includes the urban centres of Bath, Keynsham, Midsomer Norton and Radstock as well as numerous villages and hamlets spread across 49 rural parishes.

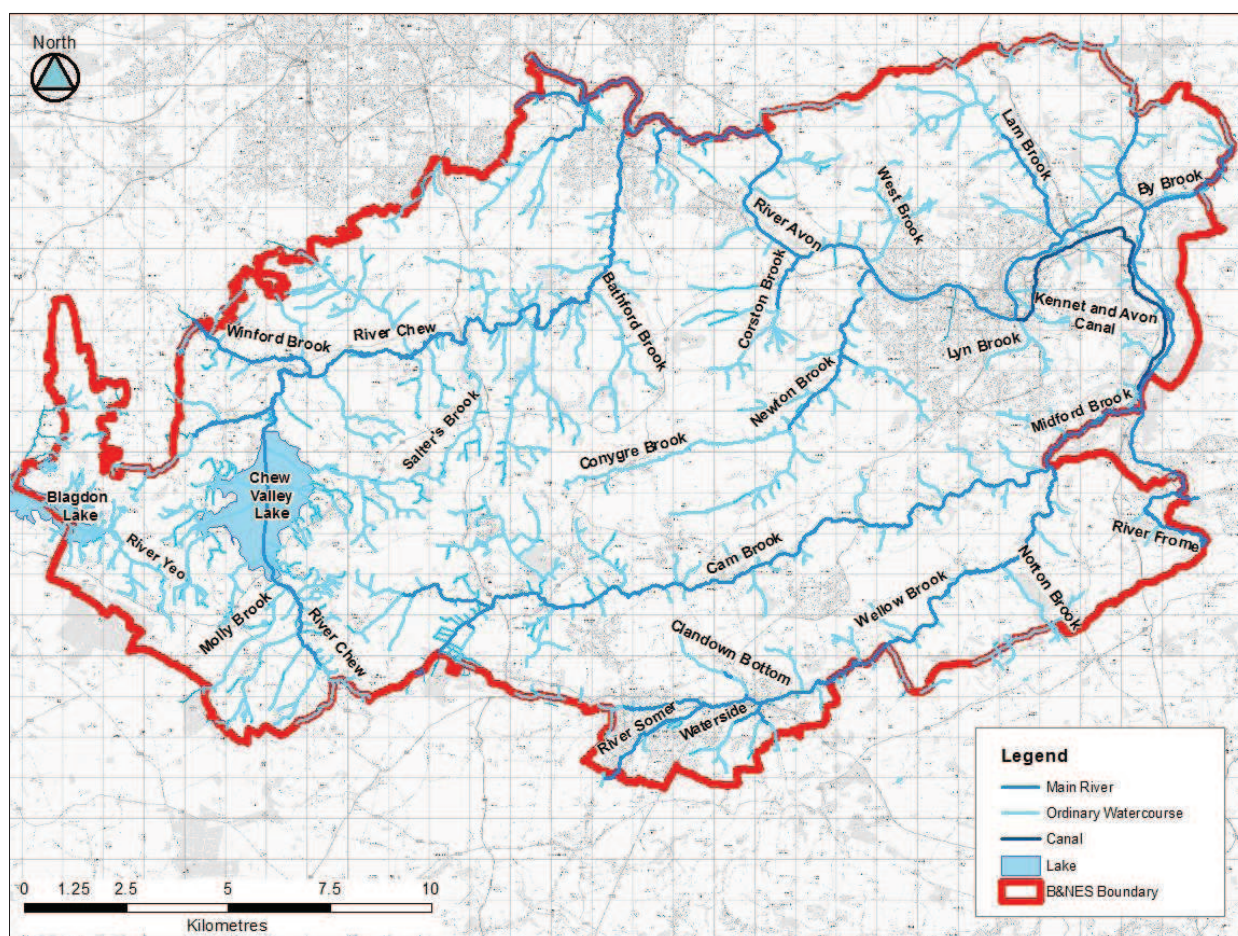


Figure 2.1: Bath and North East Somerset Area

3 Partnership Engagement

3.1 Partnership Working

The formation of partnerships has an important role in the undertaking of a SWMP, and is required under Defra's SWMP technical guidance. This guidance gives details of those partners and/or organisations which should be involved and what their roles and responsibilities should be. The following sections describe the partners involved in the B&NES area wide SWMP, their roles and responsibilities.

Within the B&NES area, flood risk is managed by multiple agencies, including the Council, the Environment Agency and the Sewerage Undertaker, Wessex Water. Often surface water flooding is caused by multiple mechanisms, which fall under the jurisdiction of different agencies. Therefore, a holistic approach is required to solve a flooding issue. As such, partnership working is a key emphasis in the B&NES SWMP process.

To fully understand flood risk in the B&NES area the SWMP has strived to collate all the available data related to flood incident records and modelled flood risk. This data has been collected from the project partners. Data collection and collation is discussed further in Section 5 of this report.

Using the flood incident data, an Action Plan has been drawn up which attributes specific project partners as owners of the action. Again, the importance of partner engagement is crucial here so that agreed actions are followed through to completion. The Action Plan is discussed further in Section 8 of this report.

The partnership approach embodied by the Strategic Flood Board and the Operational Flood Working Group, also enables effective resource allocation and efficiencies to be achieved by sharing common duties between co-operating agencies.

3.2 Partnership Approach

For the purpose of this project, partners are defined as organisations with responsibility for the decision that needs to be taken to manage flood risk. The partners involved in the B&NES SWMP are listed in Table 3.1.

Table 3.1 Partners involved in the SWMP process

Organisation	Representative(s)
Bath and North East Somerset Council	Stella Davies, Alison Szajdzicka, Jim McEwen, Jim Collings and Daniel Parr
Environment Agency	Nigel Smith, Jody Grabham and Tracy Walton
Wessex Water	Dave Ogborne

The project partners have supplied the data to inform this SWMP and have been identified as action owners in the SWMP Action Plan where appropriate.

3.3 Stakeholders

In addition, we have involved some key stakeholders in the SWMP. These parties are not responsible for managing flood risk but do hold information useful to the SWMP process. These stakeholders are listed in Table 3.2.

Table 3.2 Stakeholders involved in the SWMP process

Organisation	Representative
Canal and River Trust	John Kearsey

3.4 Data Sharing and Licensing

A number of specific agreements have been put in place for the SWMP to facilitate the sharing of data between partners:

- GIS licences for mapping and data supplied by B&NES Council;
- Environment Agency standard data

4 Need for a Bath and North East Somerset SWMP

4.1 Previous documents and reports

As part of this study, it has been essential to identify the links to other local and regional delivery plans which may influence or be influenced by the SWMP. The SWMP will seek to integrate and support these plans and processes to provide a clear and robust path to delivering flood risk management objectives throughout Bath and North East Somerset.

4.1.1 Bath and North East Somerset Core Strategy⁸

The Core Strategy was published in October 2009 and has undergone a period of consultation which ended in January 2010. Following on from this a summary report was produced in December 2010.

The Strategy identifies flooding as a key issue for B&NES Council, which also takes into account the effects of climate change. The Core Strategy prioritises the management of flood risk and will therefore be supported by evidence of Strategic Flood Risk Assessments (SFRAs) (Level 1 & 2), which are detailed in later sections, as well as a Flood Risk Management Strategy, detailed later in Section 4.1.6.

4.1.2 SFRA of Bath and North East Somerset - Level 1⁹

The SFRA Level 1 for Bath and North East Somerset was completed in April 2008. The aim of the study was to provide an assessment of the extent of flood risk and its application to planning as the study would help inform the formation of the Local Development Framework.

The study investigated flooding from Main Rivers, sewers, surface water, groundwater and artificial sources.

The main findings of this report were that surface water flooding is the second largest source of flooding, with flooding incidents occurring in the impermeable upland areas of the B&NES area, and in particular along roads. The main areas affected by surface water flooding include Chew Magna, West Harptree, Compton Martin, Priston and Midsomer Norton.

4.1.3 SFRAs for Bath and North East Somerset - Level 2 for Bath (July 2009)¹⁰, Keynsham (May 2009)¹¹, Midsomer Norton and Radstock (July 2009)¹².

The Level 2 SFRAs were completed in 2009, building upon the technical information and methodology in the Level 1 SFRA. The Level 2 SFRAs investigated 'critical areas' at risk from flooding in Bath, Keynsham, Midsomer Norton and Radstock from Main Rivers, sewers, surface water, groundwater and artificial sources. These reports investigate flood hazards in potential development areas where it may be necessary to apply the NPPF Exception Test.

In Bath, the incidents of surface water flooding are located close to watercourses, particularly the River Avon, indicating that Main River flooding may also contribute to these incidents. Sewer flooding incidents also occur in relatively high numbers within the city centre and near the River Avon, indicating the sewer infrastructure plays an important role in surface water flooding in Bath. Locations of sewer flooding include; central Bath, Larkhall, Walcot, Locksbrook, Weston Park and Southdown.

Keynsham and Midsomer Norton / Radstock are both considered to be prone to surface water flooding based on topography and soil characteristics, however there are no recorded incidents of surface water flooding in these areas. This may be due to a lack of reporting rather than a lack of surface water flooding. Sewer flooding also represents a higher than average number of recorded incidents.

4.1.4 Bath and North East Somerset: Flood Risk Management Strategy- Scoping Study¹³

In May 2009, B&NES Council commissioned a Scoping Study for the preparation of a Flood Risk Management Strategy (Section 4.1.6) in support of the Local Development Framework. The Scoping Study is a high level assessment which identifies potential flood risk management (FRM) options for 'critical areas' of Bath, Keynsham and Midsomer Norton / Radstock. These options provide an initial assessment and recommendations for the next stages of Strategy development.

The report describes the sources of flooding such as Main River, surface water and sewer flooding. Surface water and sewer flooding are significant in Bath, Keynsham, Midsomer Norton, Radstock and Chew Magna. However the report notes that there is less certainty in assessing surface water and sewer flooding risk at a strategic level. The three main options for these areas included increasing the standard of protection of existing flood walls and embankments, as well as building regulations and developing a Surface Water Management Plan.

4.1.5 Place Making Plan

The purpose of the placemaking¹⁹ plan is to complement the strategic framework in the Core Strategy by setting out detailed development principles for identified development sites and other policies for managing development across Bath and North East Somerset.

The Core Strategy forms Part One of the Local Plan and the Placemaking Plan forms Part Two of the Local Plan.

The Bath and North East Somerset Placemaking Plan¹⁹ Sustainable Drainage Systems Policy, SU.1 links with the Core Strategy Key Policy CP5 Flood Risk Management and CP7 Green Infrastructure and requires that all sites are expected to incorporate sustainable drainage systems to reduce surface water runoff and minimise its contribution to flooding.

In addition, there are site specific requirements for the Core Strategy Strategic Sites allocations and for the site allocations proposed within the Placemaking Plan.

The aims of the Placemaking Plan Sustainable Drainage System Policy are to:

- Set out the high level principles for drainage designs incorporating SuDS features and the SuDS hierarchy that will be used in the B&NES area.
- Provide a basis for the incorporation of SuDS in development schemes through the planning system, ensuring that SuDS features are considered at an early stage and incorporated into a scheme design.
- Identify key considerations and requirements for developers which should be addressed via development management.

4.1.6 Bath and North East Somerset Flood Risk Management Strategy¹⁴

In June 2012, Atkins completed the B&NES Flood Risk Management Strategy report. This report builds upon previous work carried out such as those reports discussed in previous sections, as well as the Scoping Report, detailed in Section 4.1.4. The FRM Strategy also contributes towards the Infrastructure Delivery Plan for B&NES Council and should inform the allocation of strategic development sites, providing an approach to manage flood risk. The options of FRM were assessed, and opportunities for the implementation for SUDS were identified.

4.1.7 Bristol Avon CFMP^{15, 16}

The Bristol Avon Catchment Flood Management Plan (CFMP) was published by the Environment Agency in December 2009, with a summary report published later in June 2012. The River Avon catchment covers 2200km² and is predominantly rural, with major urban areas such as Bristol and Bath. There are also other smaller urban areas such as Chippenham, Frome and Keynsham.

In the B&NES area, the main sources of flood risk were identified as:

- River flooding from the River Avon and its tributaries, particularly in Bristol, Bath, Chew Magna and Midsomer Norton.
- Surface water flooding in Bath and other towns
- Sewer flooding in Bath, Keynsham, Radstock and Midsomer Norton.
- Groundwater flooding is unlikely to be a significant issue

A number of flood risk management policy options were identified across the whole catchment, and those options covering areas within the B&NES area are listed in Table 4.1.

Table 4.1 Findings of Bristol Avon CFMP related to B&NES area

Area	Recommendations
Bath	Policy 5 - Areas of moderate to high flood risk where we can generally take further action to reduce flood risk
Lower Avon	Policy 3 - Areas of low to moderate flood risk where we are generally managing existing flood risk effectively
Mendip Slopes and Long Ashton (partially within the B&NES area)	Policy 4 - Areas of low, moderate or high flood risk where we are already managing the flood risk effectively but where we may need to take further actions to keep pace with climate change

4.1.8 Bath and North East Somerset Preliminary Flood Risk Assessment (PFRA)¹⁸

The Flood Risk Regulations 2009 implement the requirements of the Floods Directive and came into force in England and Wales on 10th December 2009. Part 2 of the Regulations sets out provisions in relation to the preparation of Preliminary Flood Risk Assessments (PFRA) and sets out the responsibilities for both the Environment Agency and Lead Local Flood Authorities.

The PFRA is designed as a high level screening exercise and for LLFAs includes all local flood risk from surface water, groundwater, Ordinary Watercourses and manmade structures such as canals or sewers. The purpose of the report is to provide evidence for identifying significant Flood Risk Areas.

The PFRA will aid in the development of a Local Flood Risk Management Strategy (LFRMS).

A map of published Significant Flood Risk Areas within England and Wales was produced by the Environment Agency. These are areas where significant harmful consequences are expected to occur in a flooding event. Bath and North East Somerset is not identified as one of the 10 significant Flood Risk Areas and does not meet the National criteria for creating new areas, therefore no amendments to the indicative Flood Risk Areas are proposed and as a result no Flood Risk Areas have been recorded in Annex 3 of the PFRA. There are 10 of these areas within England although no stand-alone Flood Risk Area falls within the B&NES area. The closest Flood Risk Area to B&NES is Bristol, a small portion of which extends within the western-most extent of the B&NES administrative boundary. B&NES Council has discussed this area with Bristol City Council and it has been agreed that Bristol will take the lead on reviewing this Flood Risk Area on the basis that the area falls predominantly within the Bristol City Council administrative boundary.

A number of local flood risk areas within the B&NES area have been identified as being at risk of surface water flooding. It is recommended that those sites will be addressed within the LFRMS. It is also recommended that these areas should also be investigated further to determine whether any improvement works can be implemented to manage or to reduce the risk in the future.

The PFRA highlights the importance of establishing data recording and sharing protocols between the different authorities and partners and promotes the recording of all flooding incidents from local sources.

4.1.9 Section 19 Investigation reports – Chew Stoke, Chew Magna and Broadmead Lane Industrial Estate

Under the Flood and Water Management Act 2012, Lead Local Flood Authorities have a duty to investigate flood events that occur within its area. As Lead Local Flood Authority, B&NES Council has established it will carry out a Section 19 flood investigation when either five or more properties suffer internal flooding at any urban location, or when two or more properties suffer internal flooding at any rural location.

Chew Magna Flood Investigation Report 2013

In February 2013, B&NES Council commissioned a Section 19 Flood Investigation Report following the multiple flooding incidents in 2012 in Chew Magna.

The main findings of the flood investigation report are:

- During the floods of 2012, the prime source of flooding in Chew Magna was from the Winford Brook and the River Chew;
- Flooding was exacerbated by saturated conditions for much of 2012 leading to an excess of surface water on the roads as there was insufficient drainage capacity to cope with the heavy rainfall and runoff from agricultural land;
- Flooding was also exacerbated by flooding from the smaller tributary Ordinary Watercourses, surface water and groundwater.
- Flooding involves a number of different sources that cannot be easily distinguished from each other. As such a number of risk management authorities are involved in addressing flood risk. This requires a continuation of the close partnership working and collaboration to manage this risk in the future;
- A number of actions are proposed to mitigate the impacts and flood risk in the future.
- It is recommended that B&NES Council maintain their coordinating role and responsibility as the LLFA and establish a flood risk management partnership group to take a strategic view of the whole catchment system.

Chew Stoke Flood Investigation Report

In August 2013, a Section 19 report was produced following the 2012 flooding in Chew Stoke.

The main findings of the flood investigation report are:

- The source of flooding was from a combination of surface water, groundwater and fluvial sources
- Flooding was exacerbated by saturated conditions for much of 2012 leading to an excess of surface water on the roads as there was insufficient drainage capacity to cope with the heavy rainfall and runoff from agricultural land;
- There was little lead time for flood warnings
- A number of actions are proposed to mitigate the impacts and flood risk in the future.
- It is recommended that B&NES Council maintain their coordinating role and responsibility as the LLFA and establish a flood risk management partnership group to take a strategic view of the whole catchment system.

Broadmead Lane Industrial Estate, Keynsham Flood Investigation Report

In June 2014, B&NES Council produced a Section 19 report for Broadmead Lane Industrial Estate, Keynsham, following flooding in December 2013 and January 2014.

Broadmead Land Industrial Estate is situated approximately 1km North of Keynsham and lies adjacent to the River Avon. The Industrial Estate is within the functional floodplain of the River Avon and is described by the Environment Agency as being at 'High risk', having a greater than 1 in 30 chance of flooding each year.

The industrial Estate has been affected by fluvial flooding over many years and there are reports that flooding events have been more frequent in recent years.

The main findings of the Section 19 report were:

- Flooding of the Industrial Estate occurred as a consequence of the River Avon exceeding bank-full capacity;
- The Industrial Estate became inundated by flood plain water ponding on surrounding land as opposed to direct bank overtopping;
- The access road to the site became impassable, resulting in a high level of risk to people and properties in the Industrial Estate;

- Flood warnings were issued to the Industrial Estate units, however the Christmas holidays meant that response by property owners / occupiers was limited.

The Section 19 report has been passed to the Environment Agency as the Flood Risk Management Authority responsible for Main River flooding.

4.2 Local Flood Risk Management Strategy (2014)

The B&NES Local Flood Risk Management Strategy (LFRMS) is currently being produced. The B&NES area wide SWMP will feed into the LFRMS by providing an improved understanding of the risk of flooding from local sources and from interactions with Main River flooding. The SWMP prioritised Action Plan will also feed into the LFRMS Action Plan.

The LFRMS will explore the following themes:

- Improve the understanding of the risk of flooding from local sources, with a consideration of main rivers, canals and reservoirs;
- Manage local flood risk;
- Help local communities, individuals and businesses to better understand and manage their flood risks;
- Prevent inappropriate development that creates or increases flood risk;
- Improve flood prediction, warning, post flood recovery and resilience.

The LFRMS will involve significant consultation with the B&NES Strategic Flood Board and Operational Flood Working Group. As these groups include the same Partners and Stakeholders as those involved in the SWMP, and the LFRMS will be the format in which local flood risk management is taken forward, it was decided that, to avoid 'consultation overload', consultation for the SWMP would be limited to data collection and Action Plan sign off with the key Risk Management Authorities.

5 Evidence Base

5.1 Recorded flooding in Bath and North East Somerset

One of the purposes of a SWMP is to identify what the local flood risk issues are, and to summarise the recorded local flood incidents and predicted flood risk to the area. Flood risk can arise from a variety of different sources, as listed in this section. Often however, flooding originates from a combination of sources as flood mechanisms are integrated.

The following sections outline the flooding incidents recorded within the Bath and North East Somerset area within the context of the definition given in Section 1.3.1. This outline of recorded flood incidents should be read in conjunction with the Flood Incident Register (see Chapter 6). The recorded flooding within this report is based on the information supplied by the partners and stakeholders involved in this SWMP up to January 2014; the occurrence of flooding is not static and therefore the recorded flooding represents incidents up to this date only.

The flood incident records have been analysed and rationalised so that only recent and relevant records are included. Records of flooding prior to 2009 have been removed to prevent any misrepresentation of recorded flood incidents which may now have been actioned.

There have been over 990 reports of flooding with various sources and receptors from 2009 to 2014 within the B&NES area. All the affected locations have been grouped into a number of 'wet-spots', these are detailed in Section 6 and 7. These wet-spots can also be viewed using the interactive Map of Local Flood Incidents in Appendix B.

5.1.1 Surface Water Runoff

Surface water runoff occurs when rainfall fails to infiltrate to the ground or enter the drainage system, causing water to pond or flow over the ground surface. The likelihood of flooding is dependent on the rate of runoff and the condition of the surface water drainage system.

Locations of recorded surface water runoff incidences were provided by a number of sources, including B&NES Council and the Environment Agency.

5.1.2 Main River

A Main River is any watercourse which is designated as such on the Environment Agency's Main River Map (available online as at <http://maps.environment-agency.gov.uk/wiyby/>) and for which the Environment Agency has responsibilities and powers. Main Rivers are generally the larger arterial watercourses but smaller watercourses can be designated if they pose a significant flood risk. Where fluvial flooding from main rivers is the sole source of flooding, it is the responsibility of the Environment Agency.

Actions to mitigate fluvial flooding from Main River are outside the scope of a SWMP, and are addressed in a Catchment Flood Management Plan, or other more detailed local studies. However, interactions between Main River and Surface Water flooding has been included as an additional consideration to this SWMP to highlight where fluvial flooding interacts with and influences the other local flood sources.

5.1.3 Ordinary Watercourses

An Ordinary Watercourse is a statutory watercourse type in England and Wales. They include rivers, streams, ditches and drains which do not form part of a Main River. B&NES Council have permissive powers to carry out works on Ordinary Watercourses and also have responsibilities in relation to consenting and enforcement.

Within the B&NES catchment there are a number of Ordinary Watercourses which drain into the Main Rivers, see Figure 5.1 below.

5.1.4 Groundwater

In the context of surface water management plans is defined as all water which is below the surface of the ground and in direct contact with the ground or subsoil. This includes flooding from groundwater rising up from aquifers as well as sub surface flow and interflow through soils.

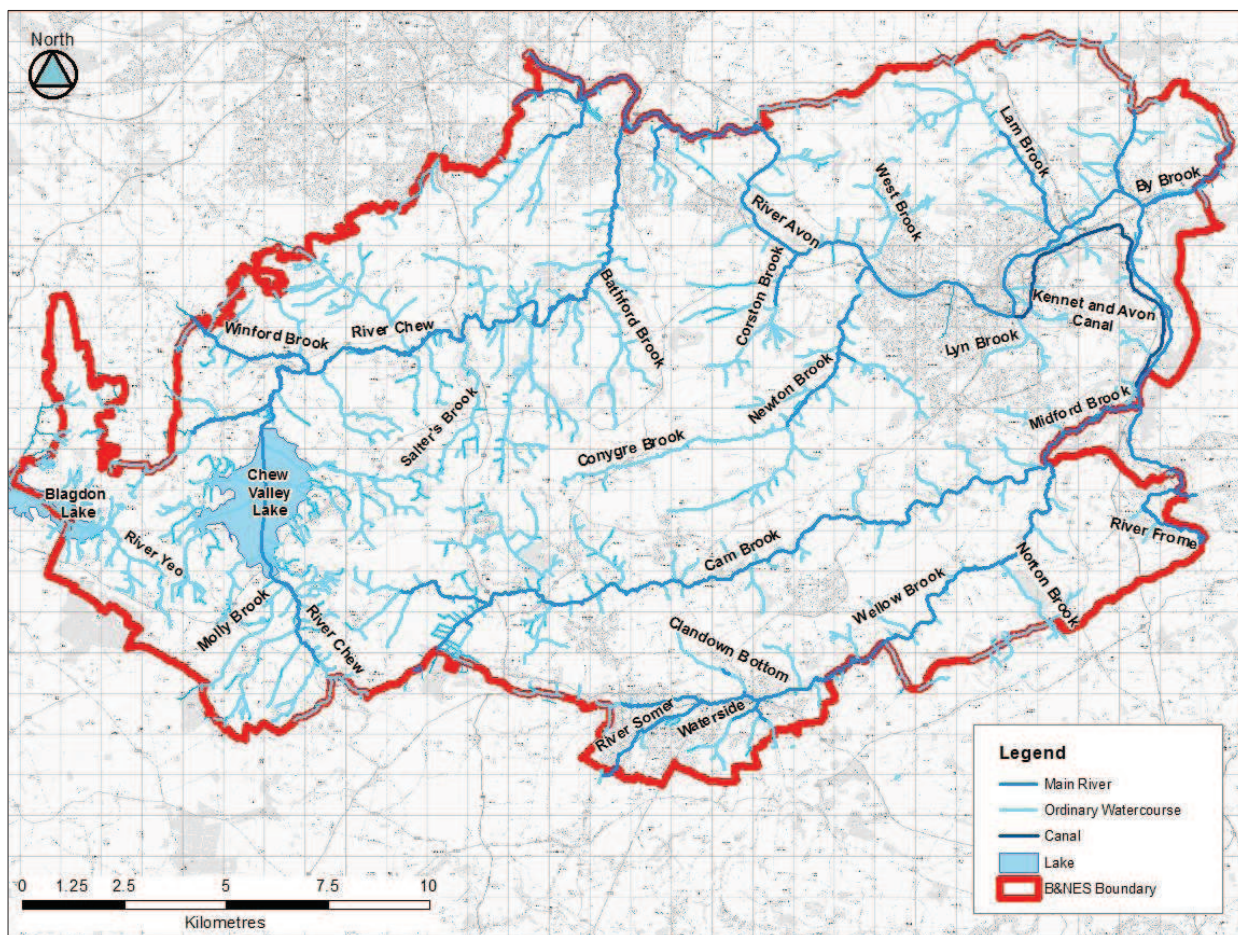


Figure 5.1: A map to identify the location of all the watercourses in Bath and North East Somerset

5.1.5 Sewers

Sewers are the underground network of pipes which remove waste water from properties. They are categorised by the type of waste water they remove. The categories include:

- Foul sewer
- Surface Water sewer
- Combined sewer
- Treated effluent

Foul sewers and treated effluent both convey waste water. Surface water sewers convey collected surface runoff and combined sewers convey a mixture of both foul water and surface water. For the purpose of this study, the surface water sewer network is the main emphasis. The performance of this drainage network relates directly to the proportion of rainfall which forms pluvial runoff and the inflow to ordinary watercourses from drainage network discharges.

Wessex Water is responsible for the Public sewer networks in this area. As partners in the SWMP process, Wessex Water has provided a list of sewer flooding incidents for the B&NES area for the period 2013-2014. These records include sewer flooding attributable to surface water. Wessex Water provided the postcode locations for 44 occurrences of sewer flooding between 2013 and 2014, this ensures confidentiality as it prevents pin pointing the exact properties which are affected.

5.2 Indicators of Potential Surface Water Flood Risk

5.2.1 EA updated Flood Map for Surface Water

In 2013 the Environment Agency produced and published the updated Flood Map for Surface Water (uFMfSW). This is the third national surface water map following on from the Areas Susceptible to Surface Water Flooding (first generation) and the Flood Maps for Surface Water (second generation). The uFMfSW assesses flood scenarios as a result of rainfall with the following chance of occurring in any given year: 1 in 30 (high risk), 1 in 100 (medium risk) and 1 in 1000 (low risk). The uFMfSW only indicates flooding caused by local rainfall and does not account for flooding that occurs from overflowing watercourses, drainage systems or public sewers.

5.3 Assets

Information on assets has been provided by stakeholders which can also be used as potential indicators of flood risk:

- Culverts and trash screens which may be susceptible to blockage;
- Watercourses which can become blocked and full of debris;
- Highway assets such as gullies, manholes etc. which may have insufficient capacity during storm events or can become blocked and full of debris;
- Sewers which may have insufficient capacity during storm events.

5.4 Maintenance Regimes

Bath and North East Somerset Council²¹

B&NES Council Highways department are responsible for routine maintenance of the highway drainage system. Gullies and their immediate pipe connection are emptied and cleansed as part of an annual proactive maintenance programme. Highway drainage with persistent problems are programmed for a greater cleansing frequency.

B&NES Council Drainage and Flooding team carry out a programme of annual watercourse maintenance on Ordinary Watercourses that are deemed to be critical in terms of flood risk (normally due to their proximity to property or infrastructure). This involves the removal of debris or vegetation that may have an impact on flow capacity and flood risk. Trash screens on these watercourses are also cleared and any build-up of trash is removed reactively.

Environment Agency

The Environment Agency carries out maintenance on rivers and streams designated as Main Rivers. Their annual maintenance programme can be found on the Environment Agency's website.

Wessex Water (sewers)

Wessex Water carries out maintenance on public sewers. More details on sewer maintenance can be sourced through the Wessex Water website www.wessexwater.co.uk

Role of Riparian Owners

If a property is adjacent to or backs onto a river, stream or other watercourse, then it is likely that the land owner will be the riparian owner and as such own the land up to the centre of the watercourse.

Riparian owners have a right to protect their property from flooding and erosion, but will need to discuss the method of doing this with the Lead Local Flood Authority within B&NES or the Environment Agency depending on the classification of the watercourse. Where the watercourse is classified as a Main River, any potential works should be discussed with the Environment Agency. Where the watercourse is classified as an Ordinary Watercourse, any potential works should be discussed with the Lead Local Flood. Riparian Owners also have responsibility for maintaining the bed and banks of the watercourse and ensuring there is no obstruction, diversion or pollution to the flow of the watercourse.

More information on Riparian Ownership responsibilities can be found in the EA document 'Living on the edge' available at:

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/403435/LIT_7114.pdf

6 Data Collection and Collation

6.1 Data Collection for the study

A full list of all the data received during the B&NES area SWMP is available in Appendix A - Data Register. The data is separated into:

- Data held by the Local Authority (B&NES Council)
- Data held by Partner Organisations
- Environment Agency National Data Sets

6.1.1 Sources:

Data was provided by:

- Bath and North East Somerset Council
- Environment Agency
- Wessex Water
- Canal and River Trust

6.1.2 Data Quality and Restrictions

The SWMP technical guidance emphasises the importance of understanding the quality of the data used to inform the SWMP. Data uncertainty can arise throughout any risk assessment and risk management process. Types of uncertainty can include:

- Model - models may not be accurate or complete;
- Environmental - natural variability may not be represented by conceptual model assumptions;
- Knowledge – scientific data may be incomplete;
- Sample - sample measurements may be inaccurate or the validity may be queried;
- Data - data may be extrapolated or interpolated from other sources;
- Scenario - scenarios might not fully describe the problem.

Understanding the uncertainty is an important part of the SWMP process, as decisions are made based on the findings. It is important that all project partners and stakeholders are clear about what the limitations of the findings are before making decisions on the level of investment (resources and funding) that may be needed in the future.

The SWMP guidance therefore presents a scoring system to rank the data according to its quality. For the B&NES area SWMP, this scoring system has been modified. The modified scoring system (in Table 6.1) was required because the majority of the data received a quality score of 2 and assumptions made with the data scored 3. The result was that there was nothing to distinguish between the value of the data sources. Therefore, a refined scoring system was developed to provide a more informative data score.

Table 6.1 Data quality scoring system

Data Quality Score	Description	Sub-category	Example
1	Best possible, no better data available	N/A	LIDAR Rain gauge data Surveyed data
2	Data with known deficiencies	2a) the known deficiencies are missing or duplicated data	
		2b) the known deficiencies are missing and duplicated data	
3	Assumption based on available data	3a) Assumptions confirmed with local data	
		3b) Assumed data confirmed by cross referencing with other records	
		3c) Assumed data based on a single dataset	
4	Educated guess based on experience	N/A	Ground roughness for a 2D model

Under this scoring system all supplied data receive a data quality score of 1 or 2. Information that has been assumed from the data received scored a 3 or 4. The sub-categorisation of the data score into the categories a) and b) distinguishes the relative quality of the data.

This confidence scoring system can be applied to the received data, the source-pathway-receptor model and the selected wet-spot areas (Wet-spot area are areas which are considered more vulnerable to surface water flooding, these are discussed further in section 7).

The flood incident data used to inform this SWMP has been scored according to the data which was provided, and that which was missing. Table 6.2 lists the data provided for the B&NES area SWMP and the data quality scored associated with it.

Table 6.2 Received data and allocated quality score

Data	Data Quality Score
Environment Agency	2a
Bath and North East Somerset Council	3b
Wessex Water	1

6.1.3 Data Format

Existing

Data was supplied for the study in a variety of formats, and these are also detailed in Appendix A - Data Register and Quality Score. Data was obtained in the following formats:

- GIS (both ArcGIS and MapInfo)
- ASCII
- PDF
- Excel

All data was supplied both electronically and hard copy format, this data was collated and stored. The majority of data supplied was in GIS format, this was advantageous when it came to communicating the risk as data could be geospatially displayed. Mapping the flood incidents spatially allowed the identification of key themes such as repeat flood mechanisms and interactions between flood sources. Furthermore, mapping is an effective method for

communication as it puts the risk into some context. This helps create a useful product for communication with the project partners.

6.1.4 Data Gaps and Limitations

One key limitation that has been recognised is the differing formats of the data which was received between the partners and stakeholders. This was most apparent when data was provided in PDF format, resulting in the need for increased processing to digitise the information into a GIS format.

In addition to this, the databases also needed extensive processing and cleaning before the source-pathway-receptor model could be applied. Some datasets had duplicated and/or inappropriate data, with one dataset containing maintenance incidents rather than flood incidents. Many flooding incidents did not contain co-ordinates so this data needed geo-referencing before converting to GIS. Some flooding incidents contained complete addresses and geo-references which made the source-pathway-receptor model easy to apply. Others contained incomplete and/or missing information in terms of flood source or location so it was difficult to determine the Source-Pathway-Receptor model. Those incidents that were too vague to process were removed to avoid assumptions.

Future Data Management

The relevant flood risk and incident data will be supplied to B&NES Council as part of the SWMP; it is recommended that B&NES Council remain the curator of this data and through this role is responsible for coordinating the maintenance of the databases.

It is recommended that, alongside the information already collected by flood risk management partners in order to carry out their individual roles, a common database format is to record flood incident data for the purposes of reporting to B&NES Council and updating the SWMP. This will ensure that updates to the source-pathway-receptor model and SWMP can be made efficiently in the future.

A recommended table of fields to be populated when recording flood incident data to report to B&NES Council is provided in Appendix E – Flood Incident Data Collection Fields. This data should ideally be provided to B&NES Council within a GIS database, or a Microsoft Excel table.

6.2 Flood Incident Register

As part of the SWMP, a Flood Incident Register was developed to show the recorded flood events within the B&NES area. The Source-Pathway-Receptor model concept was used to standardise the flood incident data. The Source-Pathway-Receptor model is a concept that can provide an understanding of all sources of flood hazard and is illustrated in Figure 6.1 below. It is particularly useful in this context as it can be used to generalise the data gathered from numerous sources.

- Source - the origin of flood water
- Pathway - a route or means by which a receptor can be affected by flooding
- Receptor - something that can be adversely affected by flooding

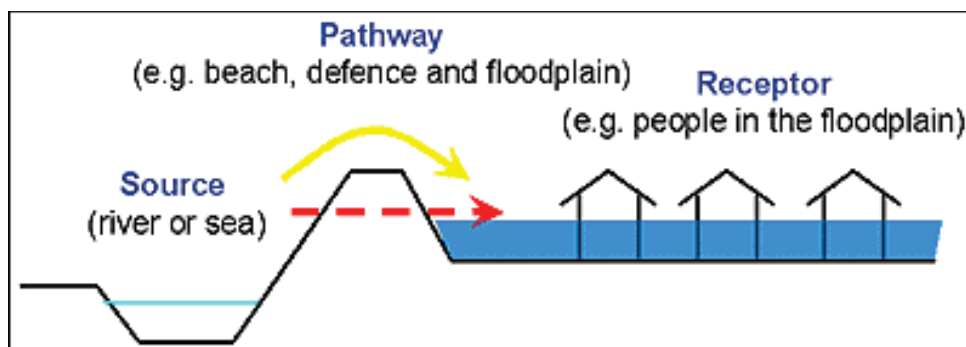


Figure 6.1 Source Pathway Receptor Model

Having applied the Source-Pathway-Receptor model it is possible to mitigate the flood risk by addressing the source (often very difficult), blocking or altering the pathway and even removing the receptor e.g. steering development away from flood risk areas.

6.2.1 Applying the source-pathway-receptor model

As mentioned previously, the information contained within each flood incident table varies between sources of data. Data from the Environment Agency and Wessex Water contained specific details on the flood source, pathway and the receptor, so in these instances the source-pathway-receptor model could be informed wholly from the recorded data and requires no assumptions. However, data provided from B&NES Council required an element of assumption. In the case where flood incidents had been fully recorded in terms of source of flooding, the pathway, and the location which was affected, no assumptions have been made. Where exact locations were missing, flood incidents were geo-referenced indicatively or based on postcodes. Therefore, the flood incident register contains approximate grid references that may not be the exact location of the flood incident. Those records with no information regarding the source of flooding were classified as 'unknown'. Data which was provided with little or no useful information was completely disregarded and removed due to low confidence in the data.

6.3 Interactive Map of Local Flood Incidents

For the SWMP to be an effective document, the risk needs to be clearly communicated.

As mentioned in Section 6.1.3, the majority of the flood incident data was supplied in database format which could be easily converted into a GIS format. The flood incidents were processed so they could be geospatially displayed.

Mapping the flood incidents spatially allowed key themes to be identified, such as repeat flood mechanisms and interactions between flood sources. Furthermore, mapping is an effective method for communication as it puts the risk into context.

Interactive Maps of Local Flood Incidents have been produced using the GeoPDF format to communicate this risk and recorded flood incidents. The advantage of using maps is that a lot of data can be displayed in a manner which is easily viewed. The advantage of using a PDF is that it cannot be edited. A GeoPDF embodies both advantages and in addition, enables some basic GIS software functionality. A GeoPDF can be opened in any PDF viewer, software which is freely available.

6.3.1 Data displayed

Recorded Local Flood Incidents

The flood incident points have been compiled from all the data received. The source-pathway-receptor model was applied to each point and the total number of repeated flood incidents was tallied. The database of flood incident points was reduced to only include flood incidents from the past 5 years, rather than the full data set which dated back to the 1960s. This prevented misrepresentation of recorded flood incidents which may now have been actioned.

The flood incident points were then thematically mapped. The colour of the flood point was dependent on the flood source, whereas the size of the flood point was dependent on the frequency of the flood incidents recorded at that location, from the same source. The colour coding and scaling allows a lot of data to be communicated simultaneously, in a clear and decipherable way. The flood points in clusters of different colours indicate flood risk from combined sources, whereas the scaling of flood incident points by frequency indicates flood prone areas.

The flood sources are descriptive of both the type of flooding (e.g. surface water) and the type of asset (e.g. highway culvert). This sub division has been made so that the Risk Management Authority (RMA) responsible for the flooding incidents is easily identified.

All the flood sources used in the B&NES area SWMP are listed in Table 6.3. This also includes the colour coding system used in each of the Interactive Maps of Local Flood Incidents.

Table 6.3 Sources of flooding colour coding system

Flood Source	Symbol	Colour
Fluvial Flooding: ordinary watercourse	○	Orange
Surface Water: drainage ditch	○	Pink
Surface Water: highway gulley	○	Teal
Surface Water: pluvial runoff	○	Yellow
Surface Water: highway culvert	○	Red
Unknown	○	Purple
Fluvial Interactions	□	Dark Blue

The size of the points depends on the number of instances. The number of recorded incidents has been divided into five categories. This scaling system has been added to the Interactive Map of Local Flood Incidents to instantly show re-occurring flood mechanisms, which can help prioritise actions.

Incidents of flooding that were recorded by the Environment Agency and attributed to interactions between Main River flooding and local sources, were also included within the analysis. These incidents are shown as blue squares on the Interactive Map of Local Flood Incidents. The inclusion of these incidents ensures that locations where several Risk Management Authorities, including the Environment Agency, need to be involved are included within the wet-spot identification and action plan in sections 7 and 8 of this report.

Sewer flooding incidents are represented by polygons of the postcode area in which flooding took place, rather than points at the affected properties. This is an approach taken by Wessex Water to protect their customers' confidentiality. It is important to note that these polygons are not representative of the extent of flooding.

The same colour and scaling system cannot be used for sewer flooding as the flood point data. Instead, the regions have been colour coded by source of flooding and number of occurrences. The polygon outline is coloured by flood source, with blue representing surface water flooding. The polygon interior colour is based on number of recorded incidents following a traffic light system.

- A low frequency event with only one or two incidents is green;
- A mid frequency event with three to four incidents recorded is amber;
- A high frequency event with five plus incidents is red.

This colour coding system is shown in Table 6.4.

It should be noted that Wessex Water report on incidents relating to hydraulic capacity, this dataset therefore excludes incidents related to blockage which are managed by Wessex Water.

Table 6.4 Sewer flooding incidents, colour coding system

Flood Source	Number of recorded incidents	Symbol
Surface Water: sewer flooding	1 – 2	Green
	3 – 4	Yellow
	5+	Red

Figure 6.2 shows an example of the Interactive Map of Local Flood Incidents with the different symbols used.

Note there were no flood incidents attributed to groundwater flooding within the flood incident records, however it is likely that interactions between ordinary watercourses, pluvial runoff and

sub-surface flows do take place for a number of flood incidents. This is believed to be the case in Chew Magna.

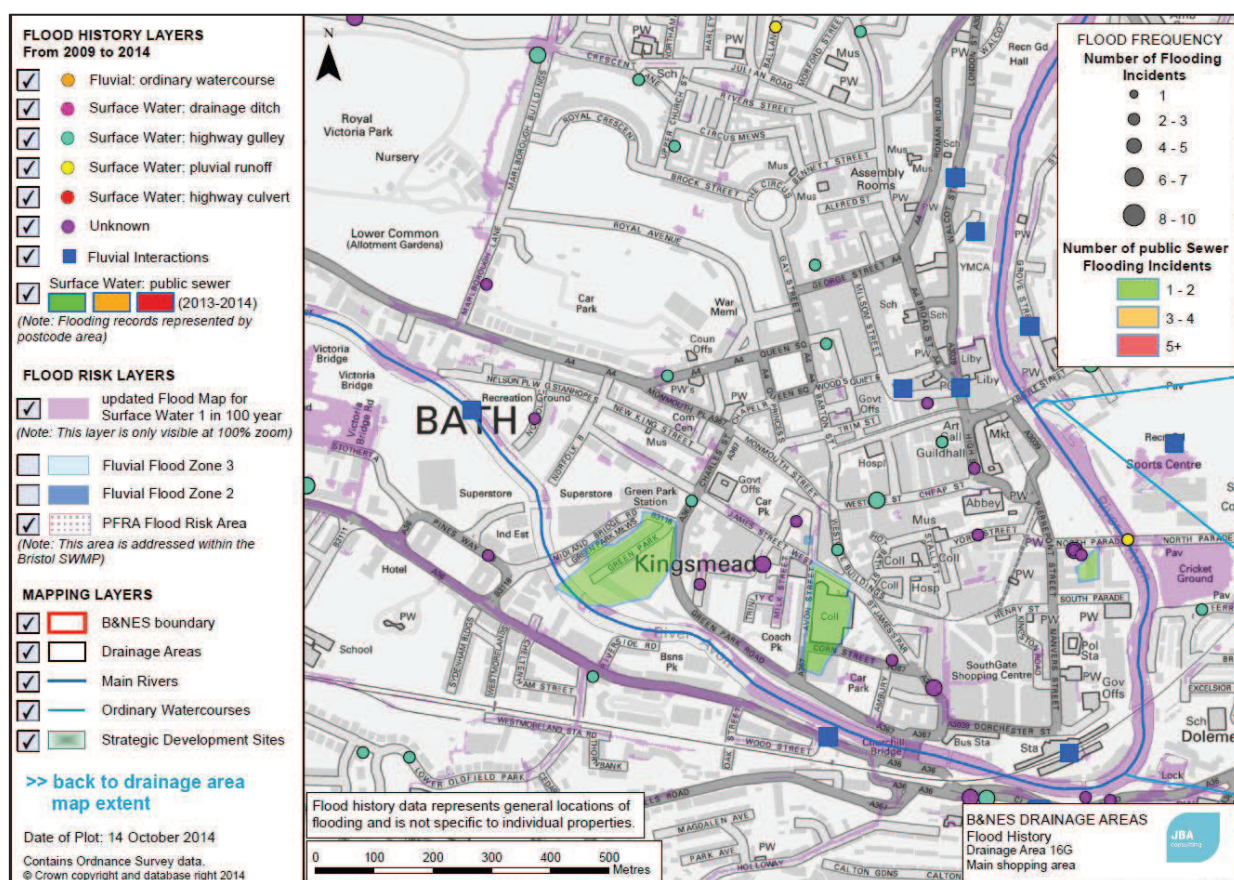


Figure 6.2 Extract from the Interactive Map of Local Flood Incidents

Flood Risk Data and Catchment mapping layers

Additional mapping layers have been added for context. These include the updated Flood Map for Surface Water, Fluvial Flood Zones, Main Rivers and Ordinary Watercourses derived from the Digital River Network (DRN), the study boundary of the B&NES area as well as boundaries for each of the drainage areas. In addition, areas allocated for strategic development and the PFRA Flood Risk Area have also been marked.

6.4 Drainage Areas and Wet Spot Selection

The principal purpose of the strategic assessment is to identify areas which are considered more vulnerable to surface water flooding. These areas are termed 'wet-spots' and the most vulnerable wet-spots will be taken through for further investigation and assessment.

The B&NES area has been split into 18 drainage areas based on hydrological catchments and the distribution of flood incidents within the Interactive Map of Local Flood Incidents. Each drainage area has then been further split into 'wet-spot' areas according to the clustering patterns of flood incidents.

As part of the Action Plan process described further in section 8.0, the flood sources and frequencies of each in the 'wet-spot' areas have then been analysed to identify appropriate actions to reduce flood risk.

7 Wet-spot Verification and Prioritisation

7.1 Approach

Wet-spots have been identified through the analysis of flood incident data described in section 6.0. These wet-spots, which are derived from analysis of recorded flood incident data, have been verified and prioritised through an analysis of the predicted surface water flood risk areas identified by the updated Flood Map for Surface Water and information on flood receptors held within the National Receptors Database. This section details the verification and prioritisation process of the wet-spots.

7.2 Quantifying surface water flood risk

The national scale updated Flood Map for Surface Water (uFMfSW) has been used in conjunction with the National Receptor Database (NRD) to produce a count of receptors which would intercept overland flow routes. This analysis has been carried out using JBA's Flood Risk Metrics (FRISM) tool which produces results in excel and GIS formats.

FRISM is an in-house software package developed by JBA as a cost effective tool to measure flood risk and summarise key statistics such as the number of properties flooded and flood damages. The damage calculations are based on the latest MCM2013 depth-damage curves. For this project, the capability of FRISM was used to automate and accelerate the process of identifying the number of properties within flood extents. A property is defined as "within the flood extent" as soon as the building footprint intersects in any way with the flood extent in question. National Receptor Dataset information correlating to the building footprints was used to divide the properties at risk into the three groups: dwellings (residential properties); critical infrastructure; and emergency services.

The analysis includes flood extents from all available return periods, 1 in 30 year, 1 in 100 year and 1 in 1000 year and includes dwellings, vulnerable receptors and emergency receptors.

It should be noted that the updated Flood Map for Surface Water does not include flood risk from groundwater.

7.2.1 Quantifying surface water flood risk in B&NES

The area analysed covers all of the B&NES area as illustrated in Figure 7.1. The outputs have been produced at a 250 m grid size.

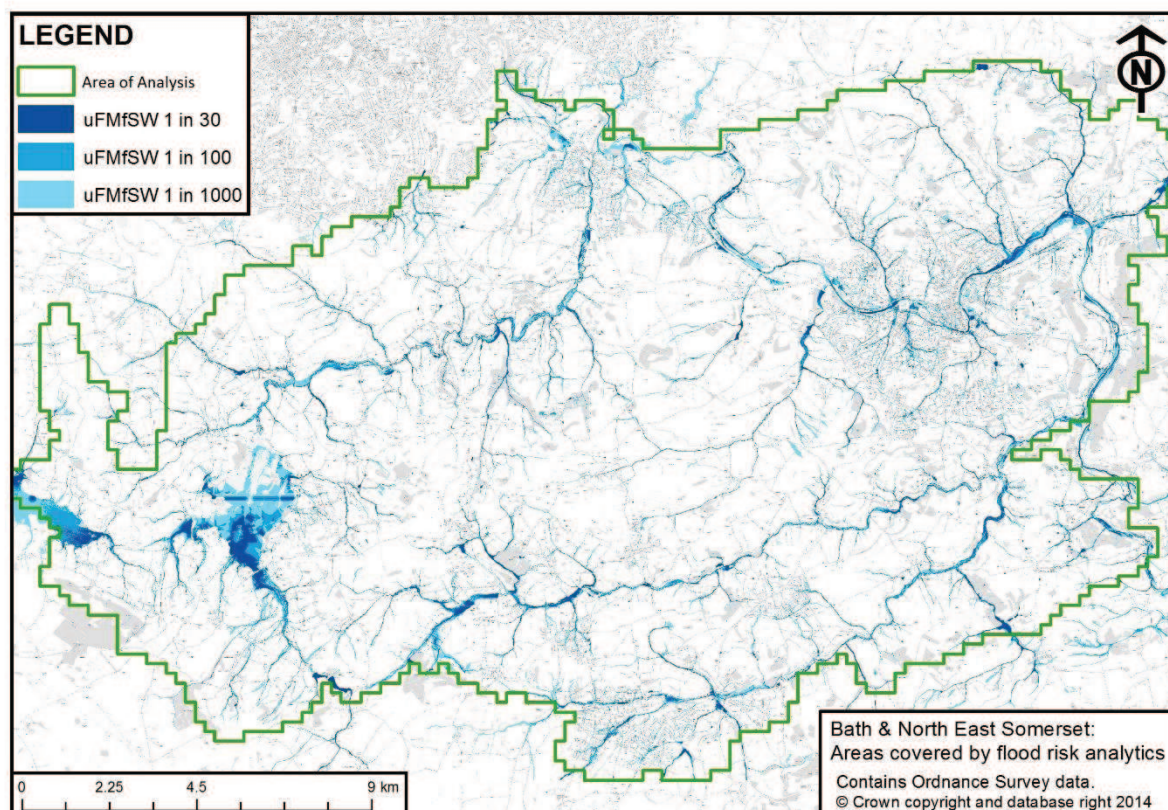


Figure 7.1: A map of area covered by the surface water flood risk quantification analysis

The receptors were extracted from the Environment Agency's National Receptor Database (NRD). All property points with type 'dwelling' have been selected to count the flood risk to homes. Dwellings at risk to surface water flooding have been counted as they are vulnerable receptors and represent the greatest potential risk to people. Furthermore, the number of receptors which are classified as "critical infrastructure" and "emergency responders" at risk to surface water flooding have also been counted (receptors considered for these categories have been listed below in Table 7.1). This will help B&NES Council understand where the greatest risk is and prioritise their emergency planning.

Table 7.1 Receptors considered as critical infrastructure and emergency responders

Critical Infrastructure	Sub-class
Education	Nursery
	Infant school
	Pre-school
	School
	Special school
	Primary school
	Private primary school
	High school
	Sixth form college
	Education
	Higher education
	University
Health	Hospital
	Hospice
	Surgery
Power	Electricity sub-station
Sewage	Sewage treatment
	Sewage storage
	Sewage pumping
	Sewage filtration
Water	Water treatment
	Water storage
	Water filtration
	Water distribution
	Reservoir
Vulnerable people	Nursing home
	Shelter
Emergency Responders	Sub-class
Police service	Police station
Fire service	Fire tower
Health service	Ambulance station

Table 7.2 displays the receptor count at risk from surface water for all of the B&NES area

Table 7.2 Estimated number of receptors in the B&NES area at risk from surface water flooding

Return Period	Residential Properties (NRD)	Critical infrastructure (NRD)	Emergency responders (NRD)
30	302	11	0
100	737	24	0
1000	3039	77	2

The figures show that the number of dwellings at risk from surface water flooding at a 1 in 30 year return period is relatively low as only 302 properties are predicted to be at risk. However, at a 1 in 100 year return period this value increases, with flooding is predicted to affect 737 properties. For 1 in 1000 year return period the values increase significantly with 3039 residential properties potentially at risk.

The number of critical infrastructure sites at risk from surface water flooding also increases with return period. The number of critical infrastructure sites at a 1 in 30 year event is low (11) considering the B&NES area wide scale of the analysis. However, at a 1000 year event this increases to 77 critical infrastructure sites at risk.

The locations of the emergency blue-light responders are outside the surface water flood map extent on the 30 and 100 year return periods. However, at a 1 in 1000 year return period there is surface water flood risk to 2 emergency responders across the B&NES area.

To illustrate where flood risk is most significant, the results from the dwelling receptor counts are shown in Figure 7.2 **Error! Reference source not found.** – Figure 7.4 where darker blue colours represent a greater concentration of properties predicted to be at risk of surface water flooding.

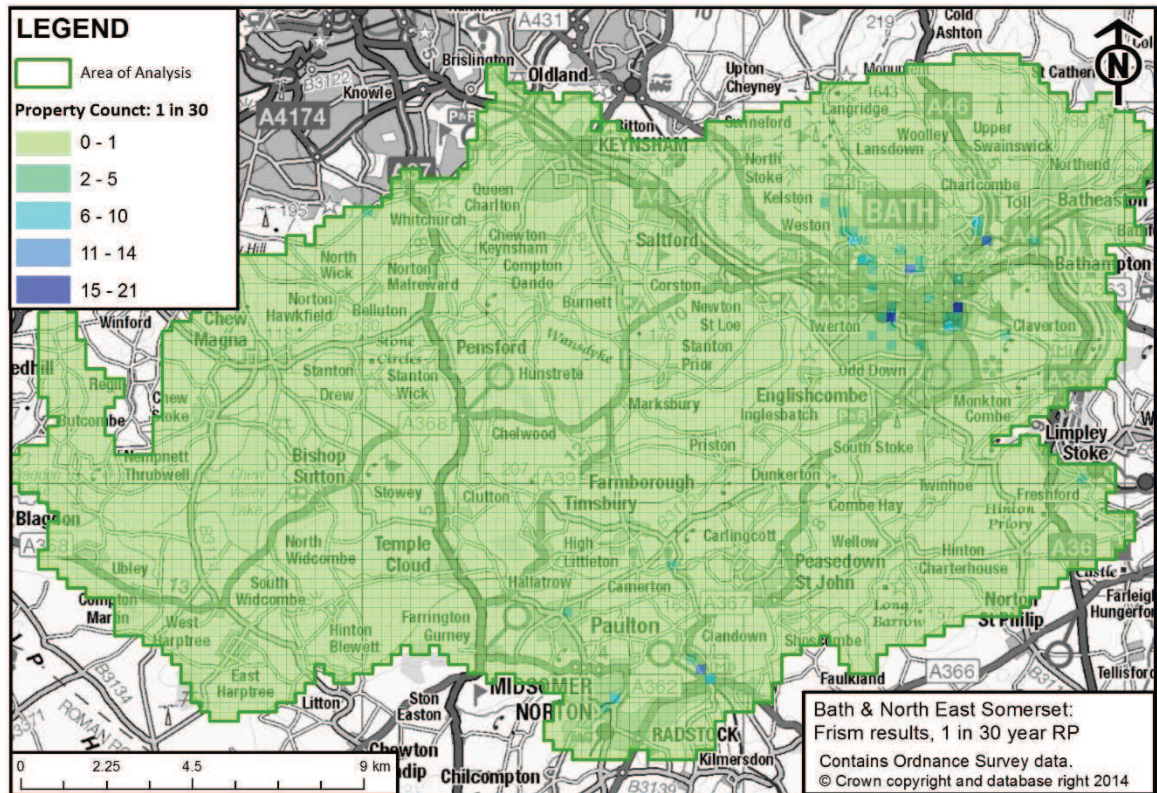


Figure 7.2 FRISM dwelling count results for the 1 in 30 year return period

The FRISM results for each return period display a consistent trend. The predominant cluster of surface water flood risk to dwellings is in Bath. In addition, there are also clusters of surface water flood risk to dwellings in Keynsham, Radstock, Midsomer Norton, Paulton and some surface water flood risk in Chew Magna.

The locations of these 'wet spot' areas are consistent with the areas identified within the Interactive Map of Local Flood Incidents discussed in section 6.0 above.

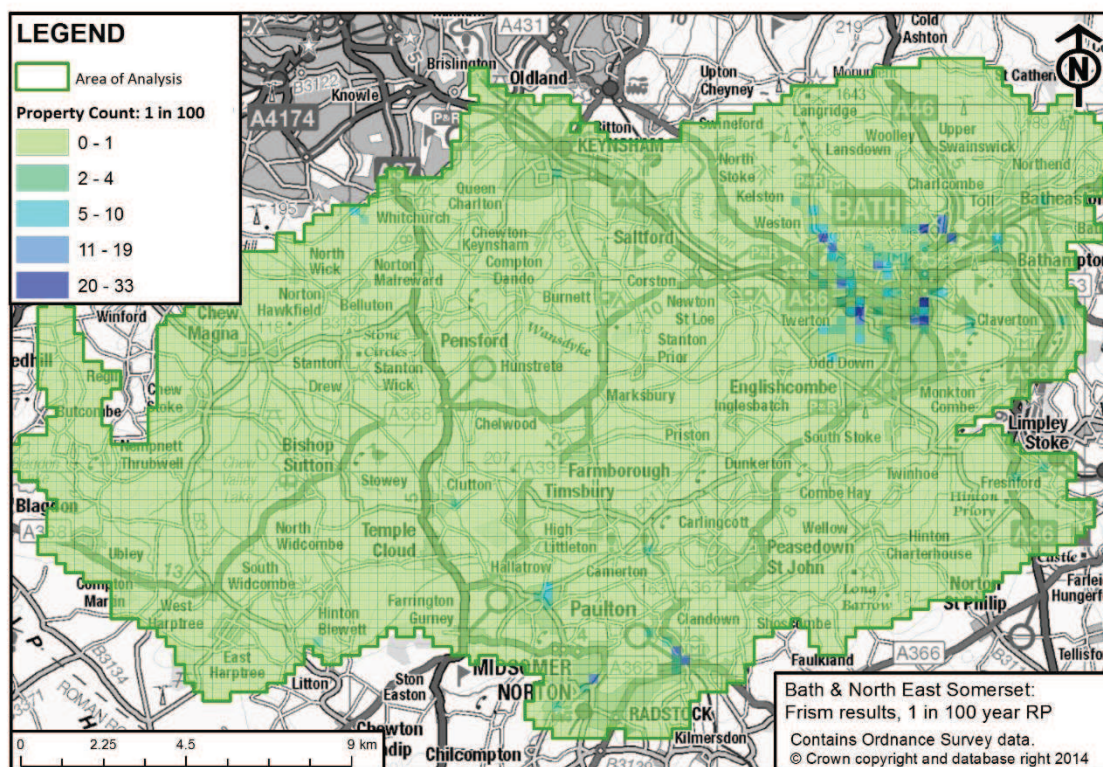


Figure 7.3: FRISM dwelling count results for the 1 in 100 year return period

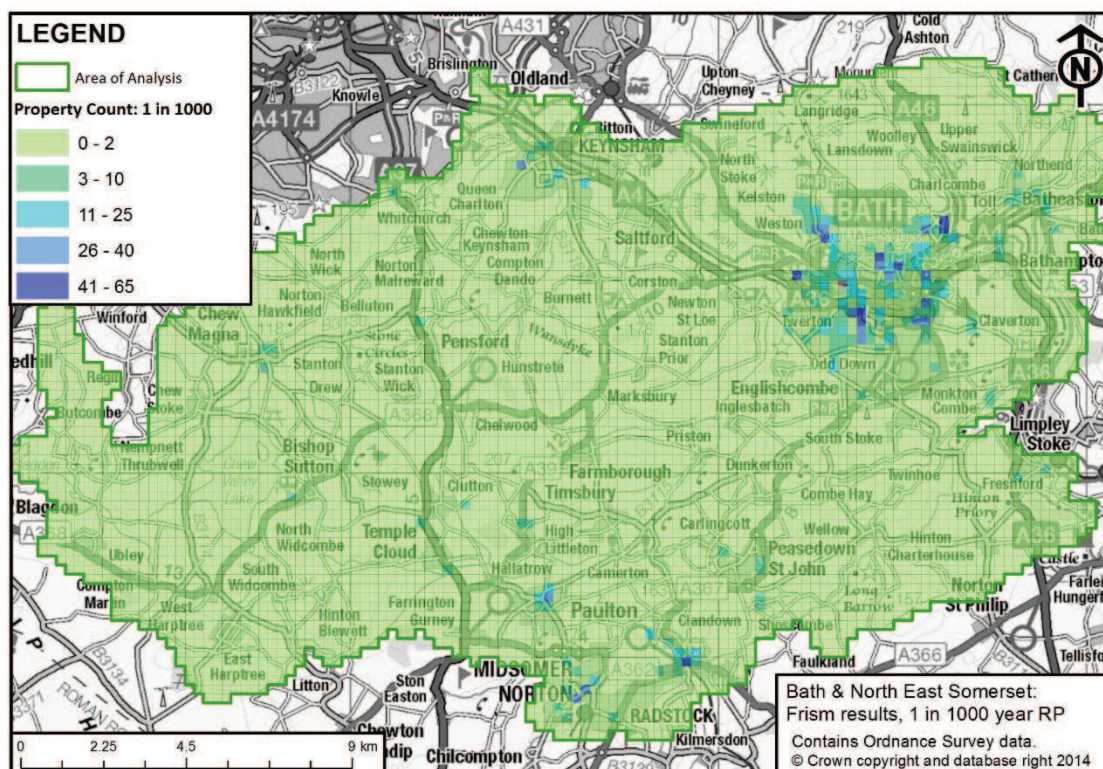


Figure 7.4: FRISM dwelling count results for the 1 in 1000 year return period

7.3 Updated Flood Map for Surface Water with Climate Change Allowance

An additional exercise carried out for this SWMP was to re-run the updated Flood Map for Surface Water (uFMfSW) modelling for the B&NES area with a 30% increase in rainfall to allow for climate change.

The results show that climate change is likely to have a notable impact on flood risk across the B&NES area. Flood outlines for the 1 in 100 year return period rainfall event are slightly larger than present day outlines in all of the flooding wet-spot locations. Increases in flood extents are generally more pronounced in flatter valleys where water would spread further at lower depths. In steep-sided valleys, flood extents do not increase significantly, however flooding becomes deeper.

Figure 7.5 shows the difference between the present day and the climate change outline for the Bath area.

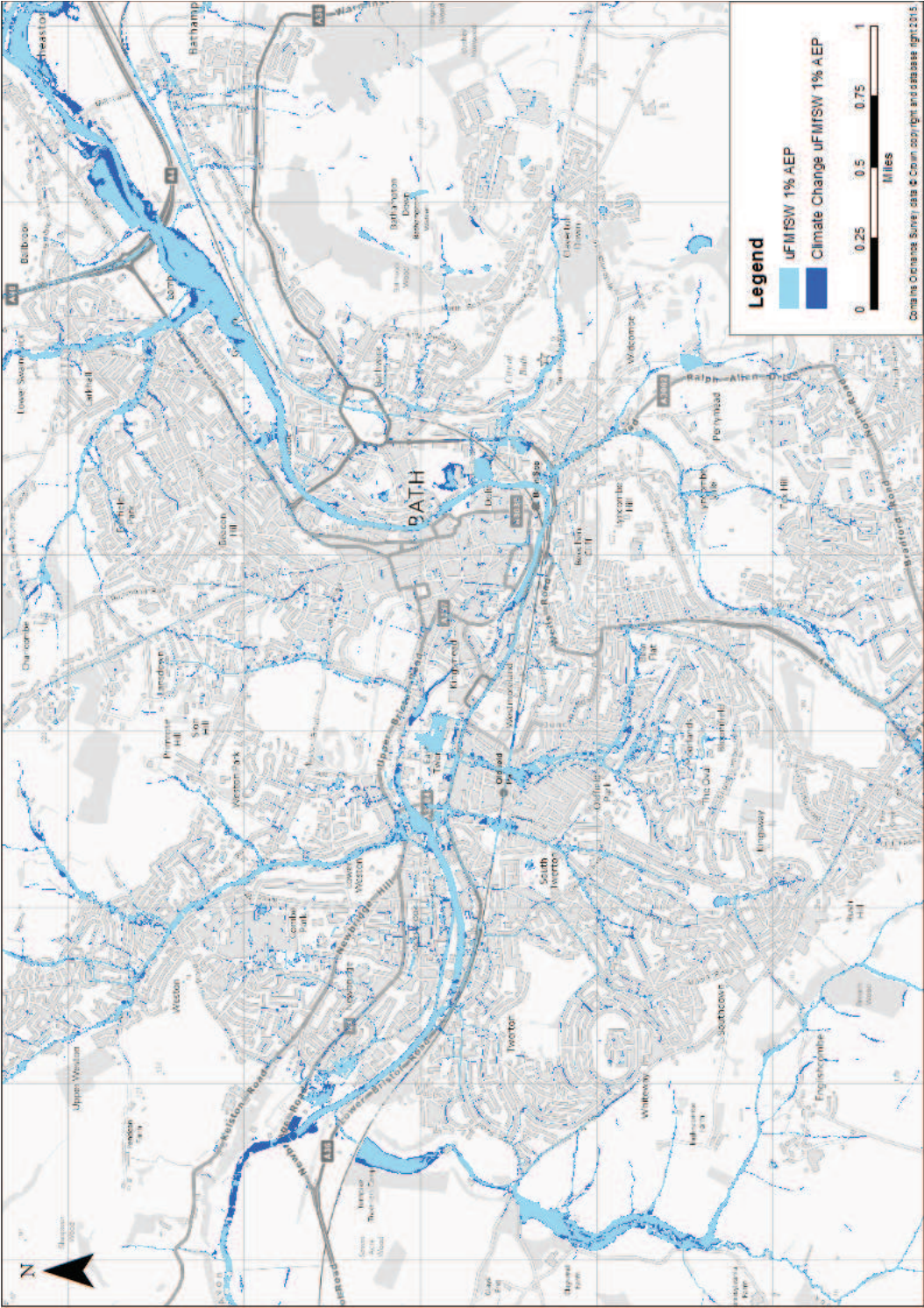


Figure 7.5 Present day and climate change updated Flood Map for Surface Water extents

The climate change outlines have been used, in conjunction with the National Receptor Database ((Version NRD 2011) to establish the additional number of properties, critical infrastructure and emergency responders across the B&NES area that may be at risk from flooding when taking climate change into account. The results of the analysis, compared with the present day numbers of properties at risk, are presented in **Error! Reference source not found..**

Table 7.3 Increase in numbers of properties at risk from surface water flooding taking climate change into account

Return Period	Residential Properties (NRD)	Critical infrastructure (NRD)	Emergency responders (NRD)
100	737	24	0
100 + Climate Change	1393	46	2
Additional properties potentially at risk	656	22	2

Due to climate change, by 2085 an additional 656 residential properties within the B&NES area may potentially be at risk from surface water flooding. Flood risk to critical infrastructure and emergency responders within the area will also increase with an additional 22 critical infrastructures and two emergency responders at risk from flooding following a 1 in 100 year return period rainfall event.

8 Next Steps - Action Plan

The Action Plan uses all the information collated during the SWMP process, together with information and knowledge held within B&NES Council's Drainage and Flooding Team, to recommend measures to investigate, reduce or mitigate the flood risk in the B&NES area that can be delivered in a phased programme. The actions have been developed according to the flood source (where known).

8.1 Co-ordinating the Action Plan

The Operational Flood Working Group, consisting of B&NES Council, the Environment Agency and Wessex Water, are well placed to lead on the delivery of the SWMP action plan. Each individual Action in the Plan identifies an Action Owner whose responsibility it is to ensure that the Action is undertaken in a timely and cost effective manner. The Action Plan is a 'live' document which is updated by B&NES Council when actions are complete and / or reviewed as and when new or more up to date information becomes available.

8.2 Action criteria

Any actions included on the Plan will have met the following criteria:

- The Action must relate to a specific known flooding problem (unless a Strategic or Operational Action)
- If the flooding source includes an interaction between surface water and fluvial (river) flooding then a single Action Owner must be identified
- The Action must be specific and achievable in terms of resource, practicality and time
- The Action Plan includes two types of Action:
 1. Investigative Actions that will lead to a greater understanding of the flood mechanism.
 2. Works Actions that will directly reduce flood risk at that locality

8.3 Communicating the Action Plan

The action plan has been produced as a table (Appendix D). The details specified are:

- Wet-spot ID: to allow cross reference with the Interactive Map of Local Flood Incidents;
- Location: providing location context;
- Driver: providing justification of the action;
- Action: an outline of the mitigation measure required;
- Implementation Plan: step by step plan of tasks required to complete the action, split into numbered phases (1-4)
- Plan Progress at April 2015: The step on the implementation plan that each action is at, at the time of publication of this report. This column will be updated by B&NES Council as actions progress.
- Action Owner: sets out which partner or stakeholder is responsible for implementing the actions;
- Action Supporter: sets out which partner or stakeholder will support the implementation of the action;
- Indicative Costs: sets out the approximate price band of the action;
- Identifies priorities: sets out what order the actions should be undertaken.

Note: In the context of Action Owner, departments within B&NES Council have been distinguished from one another. The B&NES Council Drainage and Flooding team, who undertake Lead Local Flood Authority duties, have been referred to as LLFA. The Highways department within B&NES Council has been referred to as Highways Mtc.

8.3.1 Prioritising the actions

A suitable action has been set for every wet-spot on the B&NES area Interactive Flood Incident Record Maps. However, to enable effective delivery of the action plan, it has been prioritised by considering frequency of flooding and vulnerability of receptors. There are four classifications of action priority: high, medium, low and complete:

- **High:** Recent flood events with a high frequency, affecting a More Vulnerable receptor
- **Medium:** high frequency flooding affecting Less Vulnerable receptors OR lower frequency flooding affecting More Vulnerable receptors
- **Low:** One off flood events affecting Low Vulnerability receptors
- **Complete:** The completed actions had been added to include where work has already been undertaken, to avoid duplicating efforts and track progress.

The vulnerability classifications are based on the definitions within the National Planning Policy Framework Technical Guidance and Planning Policy Statement 25

8.3.2 Indicative costs

Indicative costs have been included to give an approximate, potential cost band for each of the actions. The indicative costs are broad range estimates of how much an action could cost the action owner and are divided into three categories, Low Medium and High where:

- Low: £0 - £5,000
- Medium: £5,001 - £10,000
- High: > £10,001

8.4 Strategic and Operational Action Plan

Strategic and Operational actions have been identified which can be applied in general to address flood risk. These are detailed in Table 8.1 below.

Table 8.1 B&NES Area Generic Action Plan

Ref	Action	Informer	Implementation Plan	Plan Progress at April 2015	Action Owner	Supporter	Priority*	Indicative Cost (£)**
SOAP01	Improve Flood Reporting and Recording. Take key information from callers when they report a flood incident. Information to include; date, location, duration, an idea of the flood source, description of the flood extent and depth.	There are a number of areas where flooding has been recorded, but there are limited details describing the incidents.	1. Review the JBA database summarising flooding understand key information	4	LLFA	Highway Mtc Council Connect, EA, WW	High	Low
			2. Review B&NES Council flood incident reporting system					
			3. Update reporting system to include prompts for key information.					
			4. Undergo annual review of flood reporting and update as appropriate					
SOAP02	Consider the impact of development on flood risk at planning stage.	Development is planned within the B&NES area. Further development could exacerbate the existing surface water problems as the drainage networks receive more flows from areas of hard standing.	1. Ensure new developments consider all flood risk. Promote SuDS in accordance with the NPPF, the B&NES Council Place Making Plan, West of England SuDS Guidance and other relevant sustainable drainage requirements.	1	LPA	LLFA	High	Medium
			2. Work with developers and Planning departments to implement the most appropriate drainage strategy.	2	LLFA	EA, LPA, WW		

Ref	Action	Informer	Implementation Plan	Plan Progress at April 2015	Action Owner	Supporter	Priority*	Indicative Cost (£)**
SOAP03	Strategic Flood Board	<i>A strategic Flood Board has been established in line with the responsibilities of the Lead Local Flood Authority.</i>	1. Schedule regular meetings of the Flood Board	1	LLFA	EA, WW, Highways Mtc. LPA	HIGH	Low
SOAP04	Operational Flood Working Group		1. Schedule regular meetings of the Operational Flood Working Group	1	LLFA	EA, WW, Highways Mtc.	HIGH	
SOAP05	Improve understanding of flood risk assets		1. B&NES Council to produce an updated Flood Risk Asset Register and Record. Iterative process.	1	LLFA	EA, WW, Highways Mtc.	Medium	High
SOAP06	Establish method of identifying critical highway drainage assets, in order to undertake cost-effective targeted maintenance.		1. Investigate highway drainage flooding events to identify the critical assets. 2. Develop a revised maintenance regime for these critical assets; OR Identify assets that require replacement or improvement	1	LLFA	Highways Mtc.	High	Low
SOAP07	Flood and weather warnings		1. Develop a timely and appropriate response to flood and severe weather warnings.	1	LLFA	Highway Mtc.	HIGH	Low

Ref	Action	Informer	Implementation Plan	Plan Progress at April 2015	Action Owner	Supporter	Priority*	Indicative Cost (£)**
SOAP08	Community Engagement		1. Invite Parish's and Federation of Bath Residents Associations (FOBRA) to nominate Local Flood Representatives as a communication channel between the Operational Flood Working Group and communities. Work with Local Flood Representatives	1	LLFA	Parish council network	Medium	Low

LLFA: Bath and North East Somerset Drainage and Flooding team	EA: Environment Agency	WW: Wessex Water	Highways Mtc: Bath and North East Somerset Highways

8.5 Joint Action Plan

Analysis of the information collated for the SWMP has identified a number of 'Wet Spots' where appropriate actions are common to all. These actions have been grouped to form a Joint Action Plan.

There are a total of 42 Joint actions listed on the Action Plan, 13 of these are high priority; 15 are medium priority and 14 are low priority actions.

The full joint Action Plan is shown in Appendix D, Table 8.2 below summarises the high priority Joint Actions.

Table 8-2 Joint Action Plan – Summary of High Priority Actions

Wet spot ID	Location	Action	Implementation Plan	Implementation Phase	Action Owner	Supporter	Priority	Indicative cost
DA06A	Publow Lane and Pensford Hill	Improve highway / land drainage	1. Monitor 2. Check cyclic maintenance has been carried out 3. Investigate performance of highway / land drainage system, identifying any maintenance or design requirements. 4. Carry out required maintenance OR design and construct engineering scheme 5. Implement continued maintenance programme	2	LLFA	Highways Mtc	Low	High
DA07B	Wells Road, Hallatrow			2	LLFA		Low	
DA07C	Rush Hill, Farrington Gurney			4	LLFA			
DA10C	Durcott Lane, Camerton and Radford			2 and 3	LLFA			
DA10D	Brookside, Paulton			2	LLFA		Low	
DA11A	Hayes Park area, Midsomer Norton			3	LLFA			
DA14A	Vicinity of Crossways, Dunkerton			1	LLFA			
DA11D	Fortescue Road, Radstock				(Radstock Regen)			
DA16B	Charlcombe Lane and Landon Road, Larkhall and Fairfield			1	LLFA			
DA16E	Camden Crescent, Walcot			1	LLFA			
DA16F	Bathwick Street, Bathwick			1	LLFA			
DA16H	Lymore Avenue, South Twerton			1	LLFA			
DA16J	Wellsway, Bloomfield			1	LLFA			

LLFA: Bath and North East Somerset Drainage and Flooding team	EA: Environment Agency	WW: Wessex Water	Highways Mtc: Bath and North East Somerset Highways

8.6 Location specific Action Plan

The location specific Action Plan describes the action plan for specific locations. The full site specific Action Plan is shown in Appendix D. The Action Plan has been divided by those actions which can be undertaken in the short term and those that are recommended for future plans of work, and can be undertaken in the longer term.

There are a total of 21 location specific actions listed on the Action Plan, 17 of these are high priority and 4 are medium priority actions.

Table 8.3 summarises the location specific actions for the B&NES area.

Table 8-3 Location Specific Action Plan

Wet-spot ID	Location	Driver	Action	Implementation Plan	Plan Progress at April 2015	Action Owner	Action Supporter	Indicative Cost*	Priority**
DA02A	Chew Magna	Chew Magna suffers from significant flood risk. The local flood risk mechanisms are integrated with main river flooding. Investment has been made in PLP measures to reduce the damage caused by flooding in this area.	Maintenance of drainage assets to enable effective drainage and source control.	1. Asset inspection: is the gully or pipework blocked	1	LLFA	Highway Mtc	Medium	High
				2. Undertake necessary maintenance					
				3. Implement a continued asset maintenance programme					
				4. Implement source control measures to reduce surface water runoff					
DA02A	Chew Magna	Chew Magna suffers from significant flood risk. The local flood risk mechanisms are integrated with main river flooding. The Environment Agency has carried out extensive fluvial flood modelling for the catchment.	Use EA modelling to inform potential surface water schemes.	1. Analyse fluvial model in relation to surface water	1	LLFA	EA, WW	Low	High
				2. Identify potential schemes to reduce surface water flood risk					

Wet-spot ID	Location	Driver	Action	Implementation Plan	Plan Progress at April 2015	Action Owner	Action Supporter	Indicative Cost*	Priority**
DA02D	Chew Stoke	Properties on Wallycourt Road have experienced flooding from pluvial runoff.	Engineering scheme to improve capacity and conveyance route.	1. Implement drainage scheme.	2	LLFA	Highway Mtc, EA,	Low	High
				2. Add upgraded highway gullies to Special Attention maintenance list.					
DA02D	Chew Stoke	Billie Close has experienced flooding from pluvial runoff. Curo (housing association) has made investment in PLP measures to reduce the damage caused by flooding in this area.	PLP to be installed	1 Curo (housing association) to install PLP for residents	1	Curo	LLFA		
DA03C	West Harptree	West Harptree has experienced flooding as a result of blocked highway gullies.	Maintenance of drainage assets to enable effective drainage.	1. Asset inspection: is the gully or pipework blocked	1	LLFA	Highway Mtc	Medium	High
				2. Undertake necessary maintenance					
				3. Implement a continued asset maintenance programme					

Wet-spot ID	Location	Driver	Action	Implementation Plan	Plan Progress at April 2015	Action Owner	Action Supporter	Indicative Cost*	Priority**
DA03C	West Harptree	West Harptree has experienced flooding as a result of surcharging surface water sewers and gullies.	Undertake scheme to improve capacity and conveyance of drainage system.	1. Engage community on potential scheme(s). 2. Implement drainage scheme. 3. Monitor performance of new systems.	1	LLFA	Highway Mtc	High	High
				1. Engage the community and inform how they can contribute to managing flood risk 2 Source control measures are required to Ridge Lane and Cowleaze Lane.					
DA03C	Ridge Lane and Cowleaze Lane, West Harptree	West Harptree has experienced flooding as a result of surcharging culverted watercourses and highway drains.	Undertake scheme to improve capacity and conveyance of existing system.	1. Design a drainage scheme which will work within the current restrictions	1	WW	LLFA, LPA	Low	High
				1. Design a drainage scheme which will work within the current restrictions					
DA05A	Whitchurch	Development is planned on the fringe of Whitchurch.	Upgrade surface water sewer system for the area	1. Design a drainage scheme which will work within the current restrictions	1	Developer	LLFA, LPA	High	High

Wet-spot ID	Location	Driver	Action	Implementation Plan	Plan Progress at April 2015	Action Owner	Action Supporter	Indicative Cost*	Priority**
DA05A	Whitchurch	This area is defined as a Flood Risk area (FAWMA) and Bristol LLFA is taking the lead on the Flood Risk Management Plan.	Any proposed developments must consider the Flood Risk Management Plan for the area.	1. Inform developers of the Flood Risk status	1	LLFA	Bristol City LLFA, LPA	Low	High
DA08B	Keynsham	East Keynsham (A4) has experienced flooding from a number of sources including pluvial runoff and highway gulley blockage.	Monitor future flood incidents in this area, if flooding continues to cause disruption, upgrade works to highway drainage may be required.	1. Monitor flooding at this location 2. Understand the cause of flooding 3. Assess the need for upgrade works to the drainage network	1	LLFA	Highway Mtc., EA, WW	Low	High
DA10B	Timsbury	Bloomfield Road has experienced surface water flooding, particularly as a result of blocked highway gullies.	Maintenance of drainage assets to enable effective drainage.	1. Asset inspection: is the gully or pipework blocked 2. Undertake necessary maintenance 3. Implement a continued asset maintenance programme	1	B&NES Council Highways		Medium	High

Wet-spot ID	Location	Driver	Action	Implementation Plan	Plan Progress at April 2015	Action Owner	Action Supporter	Indicative Cost*	Priority**
DA11A	Midsomer Norton	Midsomer Norton has experienced flooding from a number of sources across the town.	Undertake detailed SWMP to understand interactions in the flood mechanisms.	1. Commission detailed SWMP	1	LLFA	Highway Mtc,, EA, WW	High	High
				2. Undertake integrated hydraulic modelling					
DA16A	Weston and Upper Weston	Significant areas of development are planned on the fringes of Upper Weston and Weston.	Manage the risk of exacerbating an existing surface water problem by considering drainage at master planning stage.	1. Establish the current status of the planning applications	1	LLFA		Low	High
				2. Inform the developers of the wetspot status					
				3. Design a drainage scheme which will work within the current restrictions		Developer		High	
DA16A	Weston village	This is a steep catchment. There is a potential flood risk stemming from maintenance of a culverted watercourse through village.	Undertake study of flooding issues and identify potential measures.	1. Engage local community 2. Commission study 3. Identify potential improvements 4. Identify funding opportunities	1&2	LLFA	WW, EA,	Medium	High

Wet-spot ID	Location	Driver	Action	Implementation Plan	Plan Progress at April 2015	Action Owner	Action Supporter	Indicative Cost*	Priority**
DA16D	Weston Park	Weston Road has experienced flooding. The sources have not been well documented but includes highway gulley blockage.	Maintenance of drainage assets to enable effective drainage.	1. Asset inspection: is the gulley or pipework blocked	3	LLFA		Medium	High
				2. Undertake necessary maintenance					
				3. Implement a continued asset maintenance programme					
DA16G	Bath City Centre	Bath City Centre has experienced flooding. The sources have not been well documented, however likely sources include fluvial, surface water / pluvial, groundwater and highway gulley blockage.	Continue to monitor future flood incidents, if flooding continues to cause disruption, upgrade works to highway drainage may be required.	1. Monitor flooding at this location	1	B&NES Council	B&NES Council Highways, EA, WW	Low	High
				2. Understand the cause of flooding					
				3. Assess the need for upgrade works to the drainage network					

Wet-spot ID	Location	Driver	Action	Implementation Plan	Plan Progress at April 2015	Action Owner	Action Supporter	Indicative Cost*	Priority**
DA16G	Lower Bristol Road	Surface water flooding and highway drainage issues known. Significant development and associated river Avon flood risk improvements planned.	Ensure any development/ flood risk scheme appreciates surface water flood risk.	1. Ensure developer is aware of surface water flooding issues (and potential interaction with river Avon).	1	B&NES Council Major projects	EA, LLFA	High	High
DA18A	Batheaston and Bathford	London Road East has experienced fluvial flooding from Main River.	Education of riparian owners on their rights and responsibility.	1. Engage the community and inform how they can contribute to managing flood risk 2. Explain the importance of maintenance to ditches	1	EA	LLFA, Local Flood Reps	Low	High

LLFA: Bath and North East Somerset Drainage and Flooding team	EA: Environment Agency	WW: Wessex Water	Highways Mtc: Bath and North East Somerset Highways

These prioritised actions address a number of flood sources. Many of the prioritised actions address flood incident points with unknown sources. This highlights the importance of better data collection across the B&NES area. Many of the high priority actions address flooding from highway gullies. These can be considered as 'Quick Wins' as asset cleaning of these wet-spot areas can be achieved relatively easily. In addition, another source of flooding identified is flooding from drainage ditches or ordinary watercourses. Often this is due to poor asset condition. As a result, this Action Plan suggests the education of Riparian owners on their rights and responsibility. It is recommended that the Operational Flood Working Group work with Local Flood Representatives to disseminate this information.

8.7 Detailed SWMP

The B&NES area wide SWMP has highlighted a number of drainage areas where more detailed Level 2 SWMPs would provide a better understanding of flood risk. These areas, in order of priority are:

- Midsomer Norton – Further investigations;
- Weston in Bath (Rudmore Lane area) – detailed SWMP.

8.8 Sources of funding

Funding for local flood risk management may come from a wide range of sources. In the B&NES area these may include:

- Defra (Flood Defence Grant in Aid)
- Industrial estate owners and businesses
- B&NES Council (highways)
- Local communities
- New developments (directly through the developer or through CIL)
- Wessex Water
- Local Levy from the RFCC
- Environment Agency where combined sources involved dominated by Main River
- Natural England (catchment sensitive farming grants)

It is likely that in the B&NES area many of the actions will be collaboratively funded by the project partners as multiple benefits could be achieved. Additional funding streams are available when project deliverables include improvements to highways, public open spaces and biodiversity.

8.9 Ongoing monitoring

The Strategic Flood Board and Operational Flood Working Group partnership arrangements established as part of the LFRMS and SWMP processes will continue beyond the completion of the SWMP in order to discuss the implementation of the proposed actions, review opportunities for operational efficiency and to review any legislative changes.

There may be circumstances which might trigger a review and/or an update of the action plan in the interim, for example:

- Occurrence of a surface water flood event
- Additional data or modelling becoming available, which may alter the understanding of risk within the study area
- Outcome of investment decisions by partners is different to the preferred option, which may require a revision to the action plan
- Additional (major) development or other changes in the catchment which may affect the surface water flood risk

9 Development and Surface Water Management

9.1 Impact of urbanisation

In terms of flood potential, urbanisation is probably the most significant land use change that can be made to a catchment. In recognition of this B&NES Council has provided much of the information in this chapter to highlight the risks and make the linkages to current planning policy.

The development of an urban area, covering the ground with impermeable surfaces can have a significant effect on evaporation / transpiration and surface runoff processes. This has implications for flooding and water quality with consequences including:

- **Increased runoff volume.** Urban surfaces are typically less permeable than rural surfaces, so runoff volumes are greater;
- **Faster runoff.** Urban development includes drainage works (for example, gutters, pipes, sewers and channel improvements) to convey runoff away from the source. Rainfall runs off impermeable surfaces more rapidly and the response is faster to peak. This means that the catchment becomes sensitive to shorter duration storms;
- **Antecedent catchment wetness less influential.** Urban surfaces wet-up more readily than rural surfaces, so pre-storm catchment conditions are less influential.
- **Less recharge.** An increase in impermeable surfaces leads to a reduction in natural groundwater recharge; river base flows are correspondingly reduced.
- **Interaction with soil type.** Urban effects tend to be greater for naturally permeable catchments (which have a low percentage runoff and slow response) than for impermeable catchments (which already have a typically urban high percentage runoff and fast response).
- **Interaction with return period.** Floods of all return periods are, in general, increased. Urban effects tend to be more pronounced in the response to small, short return period storms (which otherwise yielded low percentage runoff and little overland flow). Severe, high return period storms, which already have a typically urban high percentage runoff and increased overland flow, can be expected to produce a response more typical of the original catchment state.
- **Seasonality.** Rural catchments tend to respond to longer duration rainfall events, more often associated with frontal rainfall; these are more prevalent in winter (November to April). Urbanised catchments tend to respond to short duration intense rainfall events, most commonly convective storms; these are more frequent in summer (May to October). Thus, the seasonality of flooding may move from winter to summer.
- **Possible separation effect.** Where urban development is highly localised within the catchment, a separation effect can arise, particularly on naturally permeable catchments. The flood hydrograph then comprises two components: a short-term intense response from the urban area and a longer-term more attenuated response from the rural area. On catchments where a two-part response typically occurs, it may be flood frequency rather than flood magnitude that increases due to urbanisation. The location of settlements with respect to the outfall can have various effects, downplaying or emphasising the separation effect. Urbanisation in upstream areas may result in a rapid urban response which coincides with and reinforces the slower rural response from downstream, so that the effect on flood frequency may be intensified. In contrast, urbanisation in downstream areas may cause the urban response to pass before the slow rural response from upstream arrives, so that the effect on flood frequency may be less extreme. However, observed storms can consist of two or more bursts and, in some instances, the urban response from the downstream areas may reinforce the upstream rural response to an earlier burst.
- **Loss of floodplain storage.** Where urban development encroaches on to the floodplain, possibly associated with levee construction, the available overbank storage is reduced, leading to increased flooding downstream.
- **Impacts on water quality.** The rapid runoff of storm water is likely to cause pollutants and sediments to be washed off the surface or scoured by the river. In an urban area there are likely to be more pollutants on the catchment surface than there would be on the surface of a rural catchment thus increasing the risk.

Impermeable areas are defined as roads, roofs, and hard standing / paving; permeable areas account for everything else (for example, gardens and open spaces). The impacts of urbanisation will not always be the same due to differences in the characteristics (permeability, porosity) of various urban surfaces. Mitigating works such as Sustainable Drainage Systems (SuDS) can be implemented to reduce the impact of urbanisation on surface water flooding and can result in an overall reduction in peak flows in heavily urbanised areas.

One of the objectives for the SWMP is to ensure the level of future development does not exacerbate existing problems and to identify opportunities for new development to provide benefits in terms of flood risk management.

Planners, consultants and developers will need to consider the most appropriate surface water discharge method during the initial site planning process. Early consideration of the proposed drainage strategy is imperative as it will likely determine the site layout and drainage land take requirements.

The Council recognises that one of the greatest challenges for managing flood risk and surface water management is the legacy of drainage networks that struggle to cope with the increase in surface water volumes due to increased urbanisation and climate change. The proper consideration of surface water runoff as part of all developments, and the use of sustainable drainage systems (SuDS), is key to the successful management of both existing and future flood risk.

9.1.1 Identification of potential surface water flood risk

Many potential development sites fall within or are in close proximity to areas at risk of surface water flooding. In light of this it will be essential that site specific Sustainable Drainage Strategies are undertaken for any sites that are within or close to areas at risk of surface water flooding, in order to ensure that each development takes due account of the potential flood risk and the importance of the appropriate surface water management.

The Interactive Flood Incident Maps (Appendix B) and the Environment Agency Flood Map for Surface Water give an indication of the likelihood of surface water flood risk. See Chapters 6 and 7 for more details.

9.1.2 Opportunities to reduce flood risk

Another important aspect for the Council to be aware of is where development sites present opportunities to manage and mitigate local flood risk beyond the proposed development site boundary. Applicants / Developers of the major development sites should always seek to provide betterments on their site and reduce the risk of flooding.

New development should not increase the rate of run off from a site's undeveloped state and redevelopment should reduce run off rates. The topography of a development site should be managed so as not to introduce new flow paths that will increase flood risk.

9.1.3 B&NES Sustainable Drainage Systems Policy and Guidance

The Bath and North East Somerset Placemaking Plan¹⁹ sets out the Development Management Policies to which B&NES will work. The Sustainable Drainage Systems Policy links with the Core Strategy Key Policy CP5 Flood Risk Management and CP7 Green Infrastructure and requires that all sites are expected to incorporate sustainable drainage systems to reduce surface water runoff and minimise its contribution to flooding.

In addition, there are site specific requirements for the Core Strategy Strategic Site allocations and for the site allocations proposed within the Placemaking Plan.

The Placemaking Plan Sustainable Drainage Systems policy is supported by the West of England Sustainable Drainage Developer Guide, which provides standards and guidance for developers, planners, designers and consultants on the requirements for design, approval and adoption of SuDS in the Somerset and the West of England. The guidance provides information on the planning, design and delivery of attractive, high quality and well integrated SuDS

schemes, promotes the need for early consideration of SuDS, and introduces the use of a “proof of concept” process to gain agreement in principle at an early stage from the approving authority.

The aims of the Placemaking Plan Sustainable Drainage System Policy are to:

- Set out the high level principles for drainage designs incorporating SuDS features and the SuDS hierarchy that will be used in B&NES.
- Provide a basis for the incorporation of SuDS in development schemes through the planning system, ensuring that SuDS features are considered at an early stage and incorporated into a scheme design.
- Identify key considerations and requirements for developers which should be addressed via development management.

Table 9.1 Surface water drainage policies and legislation for development

Policy / Legislation
National Planning Policy Framework (NPPF)
Sustainable drainage systems policy: Written statement (HCWS161) 18 December 2014
Bath and North East Somerset Council emerging Placemaking Plan: Policy SU1
Building Regulations Part H (HM Government, 2010)
Bath and North East Somerset Council's Core Strategy

Table 9.2 Surface water drainage guidance for development

Guidance
Planning Practice Guidance (Department for Communities and Local Government)
Non-Statutory technical standards for sustainable drainage systems (Department for Environment, Food and Rural Affairs, 2015)
West of England Sustainable Drainage Developer Guide (West of England Partnership, 2015)
Environment Agency Local Flood Risk Standing Advice for Bath and North East Somerset (Environment Agency, 2014)

9.1.4 Infiltration Potential maps

The Discharge Hierarchy (see West of England Sustainable Drainage Developer Guide) identifies infiltration as the most sustainable method of surface water drainage and ranks alternative means of disposal in order of sustainability.

Runoff must be discharged in order of priority:

- Into the ground by infiltration
- Into a surface water body such as a river, ditch, pond or stream
- Into a surface water sewer
- Into a combined sewer

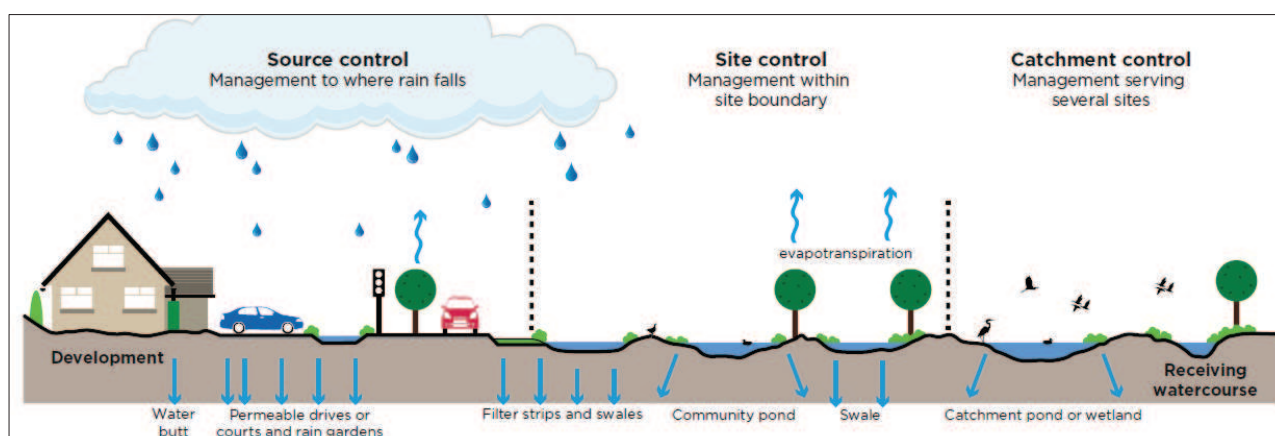


Figure 9.1 The Discharge Hierarchy, taken from the West of England Sustainable Drainage Developer Guide (Section .3)

In order to aid developers in their ‘proof of concept’ and / or sustainable drainage strategy, this SWMP has produced a series of Infiltration Potential Maps to identify where infiltration needs to be considered, and areas where it need not be considered.

The Infiltration Potential maps use British Geological Survey data to highlight areas that may be suitable for infiltration drainage techniques and recommends the steps that should be taken to confirm site specific infiltration potential.

It must be noted that these maps are provided as a guide only and ultimately site specific infiltration tests and ground investigations will need to be conducted and provided to the Local Planning Authority for review.

In addition to infiltration rates, any proposal to use infiltration drainage must consider a number of other influencing factors, including:

- Depth to water table
- Contaminated material / groundwater protection
- Risk of landslips

This information should be established by way of ground investigations.

9.1.5 How to use the Infiltration Potential maps

The maps are colour coded according to their likely infiltration potential. Depending on what colour band your development site falls into, you will need to either make further investigations or move down the Drainage Hierarchy.

Table 9.3 Decision Matrix for using the Infiltration Potential Maps

Colour band	Infiltration potential	Action
Green	Highly compatible for infiltration SuDS	Infiltration testing required to confirm design parameters.
Orange	Probably compatible for infiltration SuDS	Infiltration testing required. Test results needed to justify any move down the discharge hierarchy
Red	Very significant constraints are indicated	As infiltration SuDS are unlikely to be viable, a move down the Drainage Hierarchy to the next destination would be acceptable without further justification.

Figure 9.2 below shows the Infiltration Potential Map for the entire Bath and North East Somerset area. Appendix F – Infiltration Potential Maps then includes enlarged Infiltration Potential Maps for the different Drainage Areas in Bath and North East Somerset.

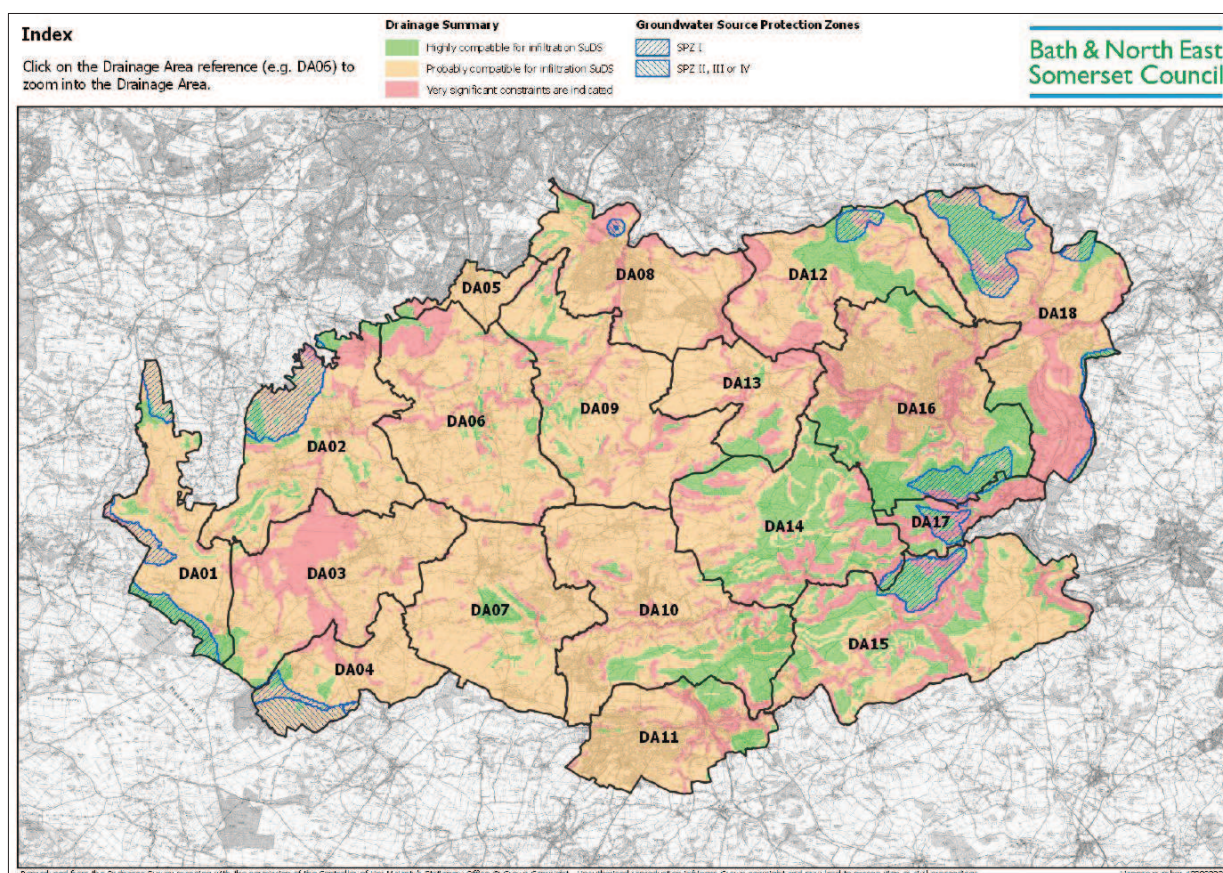


Figure 9.2 Infiltration Potential Overview Map - Supplied by B&NES Council (see Appendix F for Infiltration Maps at a Drainage Area scale)

9.1.6 Groundwater source protection

In addition to the infiltration potential, the Infiltration Potential Maps also include information about Groundwater Source Protection Zones. Groundwater Source Protection Zones identify areas where groundwater is highly sensitive to contamination (commonly because the groundwater is used as a source for drinking water). The Infiltration Potential Maps highlight:

- Groundwater Source Protection Zone I - where there is a 50 day travel time from any point below the water table to the source. This zone has a minimum radius of 50 metres.
- Groundwater Protection Zones II, III, IV – areas with a longer travel time than in Zone I, or areas identified as a 'zone of special interest'.

More information about Groundwater Protection Zones can be obtained from the Environment Agency.

If a development is likely to interact with a sensitive water body or a Groundwater Source Protection Zone (I, II, III, or IV), a water quality risk assessment will be required to quantify the potential risk. The water quality risk assessment could form part of a wider Water Framework Directive compliance assessment if required at the planning stage.

9.2 Climate Change

The nature of climate change will vary at a regional level. In the UK projections of future climate change indicate that more frequent short-duration, high-intensity rainfall and more frequent periods of long-duration rainfall of the type responsible for the 2000 floods could be expected. These changes will have implications for surface water flooding.

To help organisations (including local authorities and regional planning bodies) to assess their vulnerability to climate change and plan appropriate adaptation strategies, the Government established the UK Climate Impacts Programme (UKCIP).

Recommended precautionary sensitivity ranges for climate change are provided in the Defra document 'FCDPAG3 Economic Appraisal Supplementary Note to Operating Authorities – Climate Change Impacts'. Global sea level will continue to rise, depending on greenhouse gas emissions and the sensitivity of the climate system. The relative sea level rise in England also depends on the local vertical movement of the land, which is generally falling in the south-east and rising in the north and the west.

The suggestion is that winters will become wetter over the whole of the UK, by as much as 20% in the 2050s. A shift in the seasonal pattern of rainfall is also expected, with summer and autumn becoming much drier than at present. Snowfall amounts will decrease significantly throughout the UK, but the number of rain-days and the average intensity of rainfall are expected to increase. Although average seasonal wind speeds could increase over most of the country, there is currently much less certainty regarding the potential for greater storminess and the consequences for sea surges or extreme wave activity on coasts.

In making an assessment of the impact of climate change on flooding from the land, rivers and sea as part of a flood risk assessment, the sensitivity ranges in Table 9.4 below should be used to provide an appropriate precautionary response to the uncertainty about climate change impacts on rainfall intensities and river flow.

Table 9.4 sensitivity ranges for climate change

Parameter	1990 to 2025	2025 to 2055	2055 to 2085	2085 to 2115
Peak rainfall intensity	+5%	+10%	+20%	+30%
Peak river flow	+10%	+20%		

Source: Environment Agency, September 2013, 'Climate change allowances for planners', Table 2.

9.2.1 Urban Creep

Urban creep is the conversion of permeable surfaces to impermeable over time e.g. surfacing of front gardens to provide additional parking spaces, extensions to existing buildings, creation of large patio areas. Much research has been carried out in to the effect of urban creep and its effect on the drainage systems which cater for urban areas. It has been shown that, over the lifetime of a development, urban creep can increase impermeable areas by as much as 10%.

Whilst we have always considered the impermeable areas proposed on new development sites and accounted for climate change we have not, previously, accounted for urban creep. From April 2015 an allowance for urban creep is required as part of the surface water drainage proposals for new developments and redevelopments.

The consideration of urban creep should be assessed on a site by site basis but is limited to residential development only.

The appropriate allowance for urban creep must be included in the design of the drainage system over the lifetime of the proposed development.

The allowances set out below must be applied to the impermeable area within the property curtilage:

Table 9.5 Urban Creep allowances

Residential development density (dwellings per hectare)	Change allowance (% of impermeable area)
≤ 25	10
30	8
35	6
45	4
≥50	2
Flats and apartments	0

Source: *West of England Sustainable Drainage Developer Guide, Section 1 p 26.*

Where the inclusion of the appropriate allowance would increase the total impermeable area to greater than 100%, 100% should be used as the maximum. “Curtilage” means area of land around a building or group of buildings which is for the private use of the occupants of the buildings.

9.3 Conclusions / Recommendations

Urbanisation and climate change have the potential to significantly impact surface water flood risk within the B&NES area.

Climate change is likely to increase surface water flood risk throughout the B&NES area, particularly in those areas that are already at risk and identified as flooding wet-spots.

Future development also has the potential to increase flood risk. It is therefore important that surface water flood mitigation measures are included in any development plans, following B&NES SuDS policy.

Appropriate development management policies are already in place to minimise the potential impact of urbanisation and climate change and it will be important for these to continue to be implemented for all new developments within the B&NES area.

10 Effects of Interference to Flow from Bridges and Structures

Bridges and structures that are within close proximity to, or cross a watercourse or overland flow route, have the potential to interfere with flows, re-directing flood water and in some cases, particularly where structures become blocked, potentially exacerbating flood risk.

A high level assessment of the effects of interference to surface water flow from bridges and structures owned and operated by B&NES Council has been carried out as part of this study to identify structures that could be having a significant impact on surface water flows and exacerbating flood risk.

Information from the B&NES Council asset register has been collected and analysed to identify potentially critical structures based on the following criteria:

- Flood incidents in proximity to a structure on the B&NES Council Asset Register
- Where properties could be affected in the event of blockage of a structure
- Where climate change results suggest that structure blockage could affect a significant number of properties
- Where properties affected are in an area of high deprivation
- Structures where there is a risk of critical infrastructure being affected in the event of blockage.

10.1 Analysis results

There are a total of 178 structures listed on the B&NES Council asset register, 137 of these are Bridges, 36 are Culverts and 5 are Screens.

10.1.1 Assessment of flood incidents in proximity to a structure on the B&NES Council Asset Register

An analysis of the 178 structures (bridges, culverts and screens) that are listed on the B&NES Council asset register was carried out to determine how many of the structures are within close proximity of a flood incident shown on the Interactive Map of Local Flood Incidents. The results of this analysis are shown in Table 10.1 below.

Table 10.1 Numbers of structures in proximity of a flood incident on the Interactive map of local flood incidents.

Structure Types on the B&NES Council Asset Register	Number of structures within a proximity of a 100m of a flood incident
Bridges	55
Culverts	9
Screens	3

A total of 67 structures - 55 bridges, 9 culverts and 3 screens - are located close to a recorded flood incident and could potentially exacerbate flooding in these areas if the structures became blocked.

10.1.2 Assessment of where properties could be affected in the event of a structure blockage

A further analysis was carried out to establish which of the 67 structures that are located close to a recorded flood incident are also located close to a residential property.

The results of this analysis are shown in Table 10.2 below.

Table 10.2 Number of structures within close proximity to a recorded flood incident AND residential properties.

Structure Types on the B&NES Council Asset Register	Number of structures within 100m of a residential property
Bridges	30
Culverts	4
Screens	2

A total of 36 structures - 30 bridges, 4 culverts and 2 screens - are located within close proximity to residential properties and a recorded flood incident shown on the Interactive Map of Local Flood Incidents. Blockage of these structures has the potential to exacerbate flooding affecting residential properties.

10.1.3 Assessment of where the properties affected are in an area of high deprivation

The Indices of Multiple Deprivation (IMD) are a long standing method used by the government to develop a single understanding of deprivation at a local level by allowing a relative comparison of all areas in England. Deprivation in these terms is used to cover a wide range of issues and looks at unmet needs across a number of issues (or “domains”). The Bath and North East Somerset Council Indices of Deprivation 2010 provides an update to this data for the 2010 indices published in March 2011.

Bath and North East Somerset is one of the least deprived authorities in the country ranking 247 out of 326 English authorities. It is ranked 49 out of 56 unitary authorities. Despite these relatively low levels of deprivation, pockets of high deprivation remain within the area. The areas of “higher” deprivation (most deprived 40%) within the B&NES area are shown in

Figure 10.1 below.

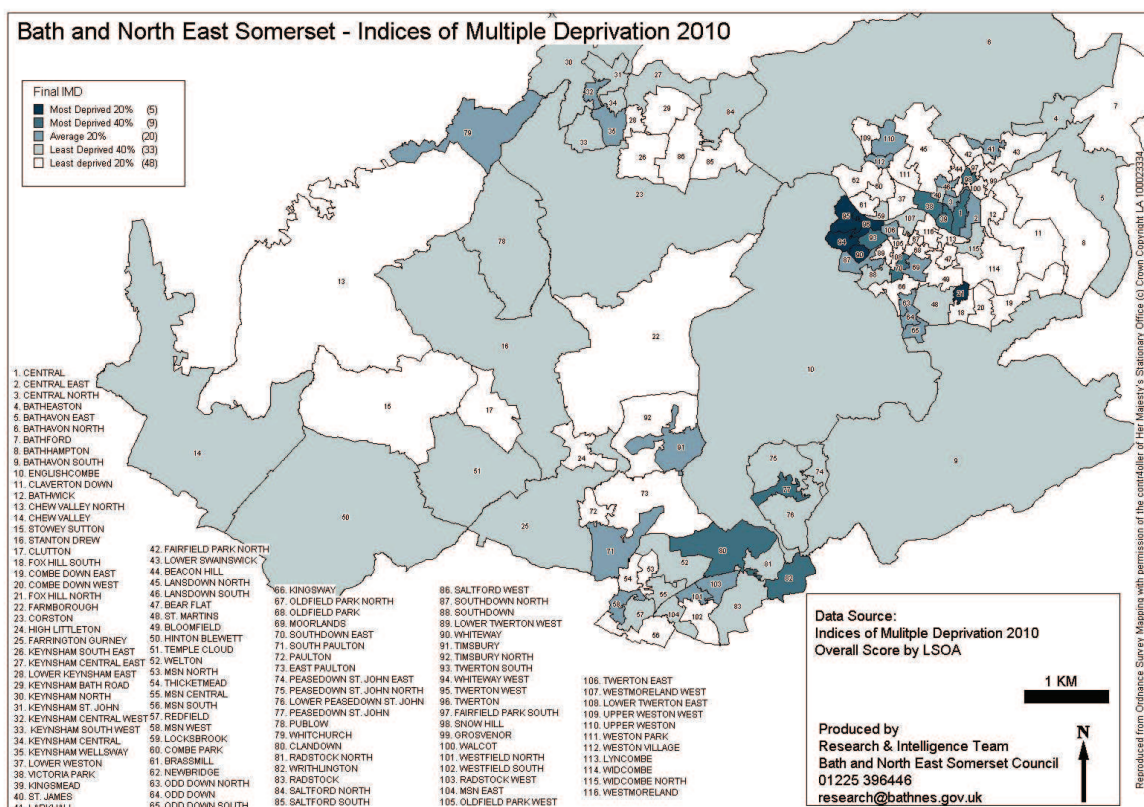


Figure 10.1 Bath and North East Somerset – Indices of Multiple Deprivation.

Five areas are within the most deprived 20% of the country with a further nine within the most deprived 40%.

An analysis was carried out to identify structures on the B&NES Council asset register that are within close proximity of a recorded flood incident, close to a residential property and within an area of deprivation.

The results are summarised in Table 10.1 below.

Table 10.3 Structures that are located within close proximity of a recorded flood incident, close to residential properties AND within an area of deprivation

Structure Types on the B&NES Council Asset Register	Number of structures within 100m of a residential property and in an area of high deprivation
Bridges	7
Culverts	0
Screens	0

There are 7 bridges within close proximity to a recorded flood incident shown on the Interactive Map of Local Flood Incidents, close to residential properties and within an area of deprivation. These structures can be considered critical for maintenance as they have to potential to exacerbate flooding to residential properties in areas of high deprivation should they become blocked.

10.1.4 Assessment of where climate change results suggest that flooding could affect a significant number of properties

The predicted flood outlines from the updated Flood Map for Surface Water with climate change allowance have been used to identify structures that are close to residential properties where flood extents are increased with climate change taken into account.

The results of the analysis are shown in Table 10.4 below.

Table 10.4 Structures which are close to residential properties where flood extents are likely to increase with climate change

Structure Types on the B&NES Council Asset Register	Number of structures within 100m of a residential property affected by climate change
Bridges	7
Culverts	0
Screens	0

There are 7 bridges that are close to residential properties and within an area where climate change is likely to increase flood extents. These structures can be considered critical for maintenance as flood risk is likely to increase in the future and flooding to properties could be exacerbated in the event of structure blockage.

10.1.5 Assessment of structures where Critical Infrastructure could be affected by structure blockage

Items which are classified as “Critical Infrastructure” within the National Receptor Database are listed in Table 7.1 and include Schools, Hospitals, Power Stations, Electrical sub-stations and Sewage and Water Treatment Works.

An analysis was carried out to identify bridges, culverts and screens on the B&NES Council asset register that are close to critical infrastructure. The results of the analysis are shown in Table 10.5 below.

Table 10.5 Structures close to Critical Infrastructure

Structure Types on the B&NES Council Asset Register	Number of structures within 100m of critical infrastructure
Bridges	20
Culverts	2
Screens	2

24 structures - 20 Bridges, 2 culverts and 2 screens - are located close to critical infrastructure. These structures can be considered critical in terms of their requirement for regular maintenance as they have the potential to exacerbate flood risk to critical infrastructure in the event of structure blockage.

10.2 Critical structures

Based on the analysis results, a total of 27 structures (2 screens, 2 culverts and 23 bridges) have been identified as potentially critical in terms of their requirement for regular maintenance. Due to the location of these structures, close to a recorded flood incident, close to residential properties and in areas of deprivation, close to residential properties in areas affected by climate change, or close to critical infrastructure, these structures have the potential to cause significant flooding if they become blocked. These structures should therefore be prioritised for maintenance to ensure that, as far as possible, they remain clear of blockages. Some of the structures are critical for more than one of the criteria analysed.

The potentially critical structures are summarised in Figure 10.2 and Table 10.6 below.

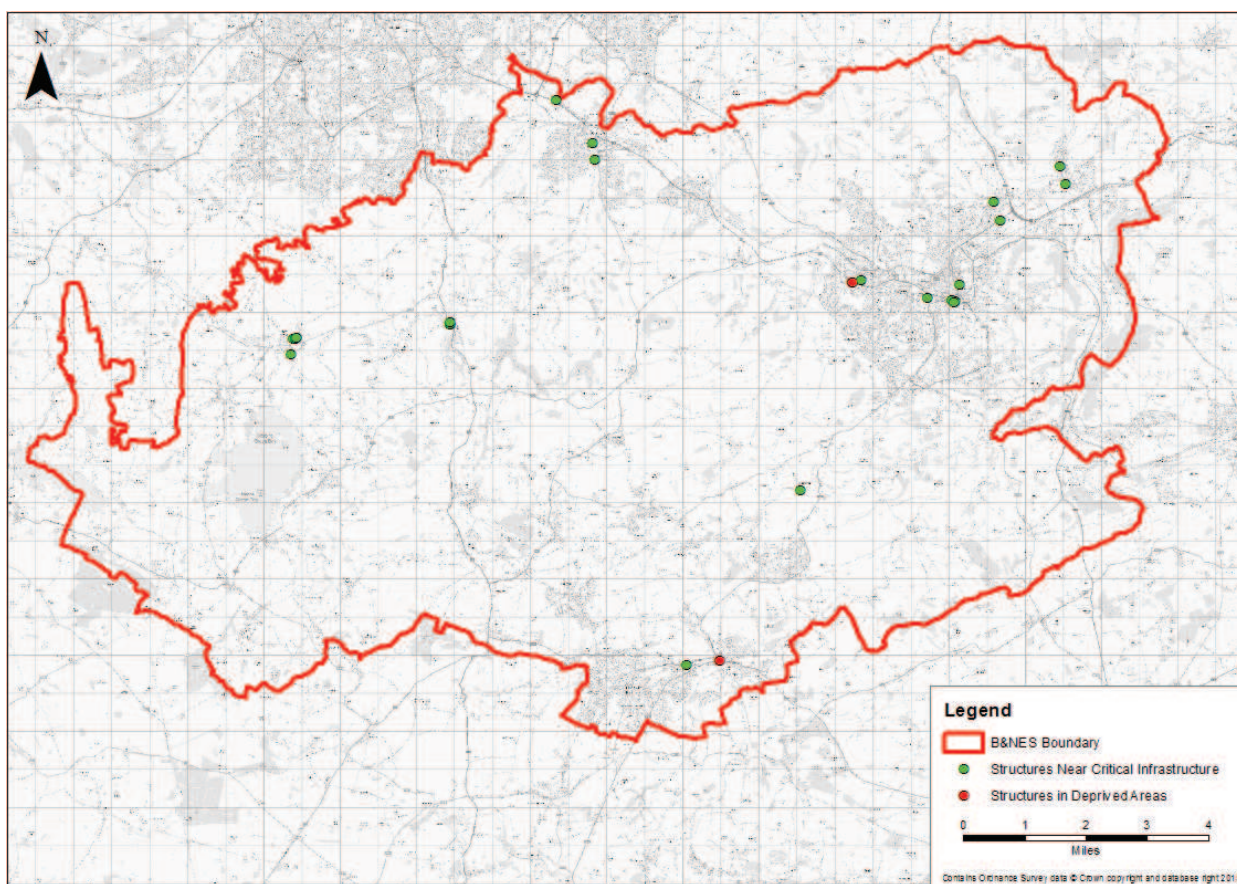


Figure 10.2 Structures near Critical Infrastructure and in Deprived Areas

Table 10.6 Structures that could be considered critical for maintenance to avoid blockage

Criteria	Easting	Northing	Asset Register ID	Name	Owner	Type	Associated Watercourse / Road
Potential to exacerbate flooding to properties in areas of deprivation and to critical infrastructure	372444	164802	76087	Connection Road (Railway) Bridge	Railtrack	Bridge	Connection Road
Potential to exacerbate flooding to critical infrastructure and with climate change	357759	163320	56021	Gasworks (Silver Street) Bridge	B&NES Council	Bridge	Winford Brook
	357824	163325	56067	The Batch Footbridge	B&NES Council	Bridge	Stream
	357846	163369	56123	School Lane Footbridge	B&NES Council	Bridge	Stream
	378056	167402	76006	Stambridge Bridge	B&NES Council	Bridge	St. Catherine's Brook
	376165	166913	76114	Brooklyn Road Bridge	B&NES Council	Bridge	Lam Brook
Potential to exacerbate flooding to properties in areas of deprivation	368975	154883	65091	Radstock Co-op Bakery Bridge	Radstock Co-operative	Bridge	Wellow Brook
Potential to exacerbate flooding to critical infrastructure	368101	154755	-	Welton Road	B&NES Council	Screen	-
	357748	163441	23	Chew Magna	B&NES Council	Screen	-
	377917	167866	76058	School Lane Culvert	B&NES Council	Culvert	St Catherine's Brook
	361882	163711	66048	Side Stream (Salters Brook Culvert)	B&NES Council	Culvert	Salters Brook
	375274	164742	76161	Terrace Walk / Parade Gardens	B&NES Council	Bridge	-
	357694	162912	56043	Tun Bridge	B&NES Council	Bridge	River Chew
	375156	164304	76182	Skew Rail Bridge	Railtrack	Bridge	River Avon and Footpath
	375067	164332	76071	Churchill (Avon Services) Footbridge	B&NES Council	Bridge	River Avon
	374435	164398	76096	Lower Oldfield Park Rail Bridge	Railtrack	Bridge	Lower Oldfield Park

	376343	166435	76005	Lambridge Bridge	B&NES Council	Bridge	Lam Brook
	375104	164276	76072	Claverton Street Subway	B&NES Council	Bridge	Footway
	372687	164869	76048	Weston Cut (Canal) Footbridge	British Waterways	Bridge	Weston Cut
	371080	159346	75004	Dunkerton Church Bridge	B&NES Council	Bridge	Cam Brook
	365696	168031	66060	Cooks (Steel Mill) Bridge	B&NES Council	Bridge	River Chew
	365637	168459	66029	Chew Bridge (Keynsham)	B&NES Council	Bridge	River Chew
	361868	163718	66047	Pensford Old Bridge	B&NES Council	Bridge	River Chew
	361869	163765	66016	Pensford New Bridge	B&NES Council	Bridge	River Chew
	364681	169592	66109	Durley Lane Railway Bridge	Railtrack	Bridge	Durley Lane
Potential to exacerbate flooding with climate change	373554	165064	0	Windsor Footbridge	B&NES Council	Bridge	River Avon
	373568	165067	76043	Windsor Road Bridge	B&NES Council	Bridge	River Avon

It should be noted that these results are based on a very broad scale, high level analysis and that further more detailed assessments should be carried out in order to establish the actual impact of structure blockage. There are various methods available for the purpose depending on the level of detail of existing information.

11 References

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- ² Defra (2012) Surface Water Management Plan Technical Guidance
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- ⁴ Department for Communities and Local Government (2012) National Planning Policy Framework
- ⁵ Defra (2005) Making Space for Water: Taking for a new Government Strategy for flood and coastal erosion risk management in England
- ⁶ Environment Agency (2010) Preliminary Flood Risk Assessment (PFRA) Final Guidance
- ⁷ Defra (2010) Flood and Water Management Act Section 9 - Local Flood Risk Management Strategies
- ⁸ B&NES Core Strategy (2009)
- ⁹ Capita Symonds (2008) SFRA Level 1 for Bath and North East Somerset
- ¹⁰ Capita Symonds (2009) SFRA Level 2 for Bath
- ¹¹ Capita Symonds (2009) SFRA Level 2 for Keynsham
- ¹² Capita Symonds (2009) SFRA Level 2 for Midsomer Norton and Radstock
- ¹³ Capita Symonds (2009) Bath and North East Somerset Flood Risk Management Strategy Scoping Study
- ¹⁴ Atkins (2010) Bath and North East Somerset Flood Risk Management Strategy Report
- ¹⁵ Environment Agency (2009) Bristol Avon CFMP
- ¹⁶ Environment Agency (2012) Bristol Avon CFMP Summary Report
- ¹⁷ B&NES Environmental Sustainability and Climate Change Strategy 2012-2015
- ¹⁸ B&NES Preliminary Flood Risk Assessment March 2011
- ¹⁹ Bath and North East Somerset Placemaking Plan - Part 2 of the Local Plan – Options Document, November 2014.
- ²⁰ Marshall, D.C.W. and Bayliss, A.C. June 1994. Report No. 124. Flood estimation for small catchments. Institute of Hydrology, Wallingford
- ²¹ <http://www.bathnes.gov.uk/services/streets-and-highway-maintenance/drains/report-drainage-issue#programme>
- ²² Environment Agency, Living on the Edge, 5th Edition 2014
- ²³ National SUDS Working Group, July 2004, Interim Code of Practice for Sustainable Drainage Systems
- ²⁴ Environment Agency and Department for Environment Food and Rural Affairs, Rainfall runoff management for developments, Report – SC030219, October 2013

Appendix A - Data Register and Quality Score

Appendix B – Interactive Map of Local Flood Incidents

Appendix C – Local Flood Incident Table

Appendix D - Action Plan

Appendix E – Flood Incident Data Collection Fields

Appendix F – Infiltration Potential Maps

Offices at

Coleshill

Doncaster

Edinburgh

Exeter

Haywards Heath

Limerick

Newcastle upon Tyne

Newport

Saltaire

Skipton

Tadcaster

Thirsk

Wallingford

Warrington

Registered Office

South Barn

Broughton Hall

SKIPTON

North Yorkshire

BD23 3AE

t: +44(0)1756 799919

e: info@jbaconsulting.com

Jeremy Benn Associates Ltd

Registered in England

3246693



Visit our website
www.jbaconsulting.com

BATH & NORTH EAST SOMERSET'S LOCAL FLOOD RISK MANAGEMENT STRATEGY

STRATEGIC ENVIRONMENTAL ASSESSMENT

ENVIRONMENTAL REPORT

B&V PROJECT NO. 122434

PREPARED FOR



Bath & North East Somerset Council

NOVEMBER, 2015



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Bath & North East Somerset's Local Flood Risk Management Strategy

Strategic Environmental Assessment

Environmental Report

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Abbreviations and Glossary

Abbreviation / Term	Definition
AONB	Area of Outstanding Natural Beauty
BANES	Bath & North East Somerset
DWI	Drinking Water Inspectorate
EA	Environment Agency
EIA	Environmental Impact Assessment
EU	European Union
FRM	Flood Risk Management
HMWB	Heavily Modified Water Body
LFRMS	Local Flood Risk Management Strategy
LLFA	Lead Local Flood Authority
LNR	Local Nature Reserve
PFRA	Preliminary Flood Risk Assessment
PPP	Policies, Plans and Programmes
RBMP	River Basin Management Plan
SEA	Strategic Environmental Assessment
SAC	Special Area of Conservation
SPA	Special Protection Area
SSSI	Site of Special Scientific Interest
SuDS	Sustainable Drainage System
SWMP	Surface Water Management Plan
UNESCO	United Nations Educational, Scientific and Cultural Organization
UK	United Kingdom
WFD	Water Framework Directive
Biodiversity	The living component of the natural world and embraces all plant and animal species and communities associated with terrestrial, aquatic and marine habitats. It also includes genetic variation within species.
Biodiversity Action Plan	An agreed plan for a habitat or species, which forms part of the UK's commitment to biodiversity in response to the Convention on Biological Diversity, Rio de Janeiro 1992.
Conservation Area	An area designated under the Town and Country Planning Act, 1990 to protect its architectural or historic character.
Cultural Heritage	The legacy of physical artefacts and intangible attributes of a group or

	society that are inherited from past generations, maintained in the present and bestowed for the benefit of future generations.
Cumulative Effects	The combined effects of several policies, plans or programmes, which individually may not be significant, but together amount to a significant impact.
Deprivation	The damaging lack of material benefits considered to be basic necessities in a society.
Environmental Impact Assessment	EIA applied at the project level is a process intended to ensure that environmental impacts of schemes are identified prior to the work being carried out so that proposals can be modified or managed in such a way that adverse impacts are avoided or minimised.
Flood Risk	The combination of the likelihood of a flood happening and the impact it would have.
Flood Risk Management	Activities that are undertaken to reduce the impact of flooding
Habitat	A place where an organism lives; a type of environment inhabited by a particular species and/or communities; often characterised by dominant plant forms, physical characters, or a combination of these.
Historic England	Government statutory advisor on the historic environment, funded jointly by the government and by revenue from properties and members.
Landscape Character	The distinct pattern and arrangement of landscape elements or features that collectively create a sense of place.
Local Flood Risk Management Plan	Under the Flood and Water Management Act (2010) Bath & North East Somerset Council has been designated as a Lead Local Flood Authority and is now responsible for managing flood risk from local sources including surface run-off ordinary watercourses and groundwater. The Local Flood Risk Management Strategy focusses on this local flood risk and outlines the roles of other Risk Management Authorities including the Environment Agency, Wessex Water Highways England and Bristol Water.
Natural England	Natural England is an Executive Non-departmental Public Body responsible to the Secretary of State for Environment, Food and Rural Affairs. Their purpose is to protect and improve England's natural environment and encourage people to enjoy and get involved in their surroundings. Their aim is to create a better natural environment that covers all of our urban, country and coastal landscapes, along with all of the animals, plants and other organisms that live with us.

Notable Species and Habitats	A list of species and habitats which are of principle importance for the purpose of conserving biodiversity. This list is part of the National Environment and Rural Communities Act 2006.
Mitigation measures	Steps that may be taken to minimise, eliminate or compensate the adverse effects of a development. 'Should only be considered when all options for the avoidance of impacts have been exhausted or have been deemed to be impracticable. This may be achieved by examining alternatives (e.g. alternative equipment may be quieter) or by the addition of mitigation measures to the existing proposal (e.g. bunds, odour abatement technology and tree planting)' (IEMA 2004).
Objective	A statement of what is intended, specifying the desired direction of change in trends.
River Basin Management Plan	A plan prepared under the Water Framework Directive that sets out the mitigation measures and actions that are needed for water bodies to reach good ecological status
Receptor	A component of the human or built environment that may be potentially affected by a development. Receptors include human population, animals, plants, soil, water, air, climate, material assets, landscape and cultural heritage.
Riparian	Area of land or habitat adjacent to rivers and streams
Scheduled Monument	Nationally important historic sites, buildings or monuments identified by Historic England and designated by the Secretary of State for Culture, Media and Sport. Any work affecting a scheduled monument must gain consent from Historic England under the Ancient Monuments and Archaeological Areas Act (1979).
Scoping	Process of identifying the key issues in an environmental impact assessment/strategic environmental assessment. Issues that are identified as not significant by the scoping process do not need to be considered further in the environmental assessment.
Screening	The process of determining which developments require a statutory environmental impact assessment to be carried out.
Sequential Test	The aim of sequential testing is to steer new development toward areas with the lowest probability of flooding.
Site of Special Scientific Interest (SSSI)	Nationally important sites designated for their flora, fauna, geological or physiographical features under the Wildlife and Countryside Act (1981) (as amended) and the Countryside Rights of Way (CROW) Act (2000).

Special Area of Conservation (SAC)	Sites of European importance for habitats and non-bird species. Above mean low water mark they are also SSSIs.
Special Protection Area (SPA)	An area designated for rare or vulnerable birds, or migratory birds and their habitats, classified under Article 4 of the EC Directive on the Conservation of Wild Birds (79/409/EEC). They are also SSSIs.
Strategic Environmental Assessment	A process carried out according to the requirements of the Strategic Environmental Assessment Directive 2001/42/EC designed to ensure that significant environmental effects arising from proposed plans and programmes are identified, assessed, subjected to public participation, taken into account by decision-makers, and monitored.
Sustainable Drainage Systems	Drainage solutions that provide an alternative to the direct channelling of surface water through networks of pipes and sewers to nearby watercourses. They manage surface water by taking into account water quantity (flooding), water quality (pollution) and amenity issues.
Water Framework Directive (WFD)	The WFD (EC Directive (2000/60/EC)) sets out environmental objectives for water status based on ecological and chemical parameters, common monitoring and assessment strategies, arrangements for river basin administration and planning and a programme of measures in order to meet the objectives.
Wet spots	Areas which include clusters of reported flood incidents which are considered vulnerable to flooding from surface water, groundwater, and/ or Ordinary Watercourses (taken from the area-wide Surface Water Management Plan).
World Heritage Site	A cultural or natural site deemed to be of outstanding universal value, the protection of which is important to all humanity. Sites are nominated globally by the United Nations Educational, Scientific and Cultural Organisation (UNESCO) who also put in place operational guidelines for management and protection.

1 Introduction

1.1 Local Flood Risk Management Strategy

As a Lead Local Flood Authority (LLFA), Bath & North East Somerset Council is required under Section 9 of the Flood and Water Management Act 2010 to develop, maintain, apply and monitor a Local Flood Risk Management Strategy. The Local Flood Risk Management Strategy must address potential flood risk arising from all local sources including: surface water run-off, groundwater and ordinary watercourses. The Study Area includes the entire area within the Bath & North East Somerset (see Figure 1.1). This covers a total area of 352km² of which two-thirds is classed as green belt.



Figure 1.1 Bath & North East Somerset Area

Flood risk arising from the sea, main rivers and reservoirs is outside of the scope of the Local Flood Risk Management Strategy and is managed by the Environment Agency. The Environment Agency has produced the National Flood and Coastal Erosion Risk Management Strategy, which describes how national flood risk and coastal erosion risk will be managed for England and Wales; the Local Flood Risk Management Strategy must be consistent with this document. Potential interactions between local flood risk sources and other sources must also be considered within the Local Flood Risk Management Strategy.

The objectives of the Local Flood Risk Management Strategy are:

1. Improve understanding of local flood risk
2. Promote community awareness and build capability for appropriate action
3. Manage local flood risk through capital and maintenance investment.
4. Prevent inappropriate development that creates or increases flood risk.
5. Improve flood preparedness, warning and ability to recover.

1.2 Strategic Environmental Assessment

A Strategic Environmental Assessment has been undertaken to support the Local Flood Risk Management Strategy. This document is the Strategic Environmental Assessment Environmental Report, which describes the outcomes of the Strategic Environmental Assessment.

Strategic Environmental Assessment is a systematic process for evaluating and anticipating the consequences of decision-making, such as policies, plans, strategies and programmes prior to the implementation stage. Its purpose is to ensure that environmental considerations and alternatives are addressed as early as possible alongside economic and social factors during policy, plan or programme development.

The Strategic Environmental Assessment has been undertaken in line with the Strategic Environmental Assessment Directive (2001) (European Commission Directive 2001/42/EC) (the 'Strategic Environmental Assessment Directive'). The Directive was adopted in June 2001 and aims to:

- Increase the level of protection for the environment;
- Integrate environmental considerations into the preparation and adoption of plans and programmes; and
- Promote sustainable development.

The Directive was transposed into UK Legislation by the Environment Assessment of Plans and Programmes Regulations 2004 (the 'Strategic Environmental Assessment Regulations').

Discussion on whether Strategic Environmental Assessment is needed for Local Flood Risk Management Strategies is covered in the Local Government Association (2011) Framework to Assist the Development of the Local Strategy for Flood Risk Management. This document states:

“The Strategic Environmental Assessment (Strategic Environmental Assessment) Directive (2001) (EC Directive 2001/42/EC) is legislation which aims to increase the consideration of environmental issues during decision making related to strategic documents such as plans, programmes or strategies. The Strategic Environmental Assessment identifies the significant environmental effects that are likely to result due to the implementation of a plan, programme or strategy. Local strategies are statutory plans and Strategic Environmental Assessments are subject to the requirements of Strategic Environmental Assessment. LLFAs should take a proportionate approach to applying Strategic Environmental Assessment to local strategies particularly when environmental effects are not evident in the early stages of plan development. As the detail of plans develop, Strategic Environmental Assessment should be reviewed”

In line with the Local Government Association Framework guidance, a proportionate Strategic Environmental Assessment of the Local Flood Risk Management Strategy has been undertaken that takes into consideration the high level nature, and limited structural elements, of the proposals, whilst noting the key environmental sensitivities of the district.

1.3 General Limitations of the Strategic Environmental Assessment Process

There are general technical limitations associated with the Strategic Environmental Assessment process. These limitations along with measures to reduce their potential effect should be considered in order to increase the validity of the assessment. These limitations include the following:

1. Strategic Environmental Assessments cover large geographical areas making data collection and analysis time-consuming and complex;
2. Strategic Environmental Assessments are often subject to greater levels of uncertainty compared to project-scale Environmental Impact Assessments (EIAs) i.e. uncertainties relating to future conditions, developments and technologies;
3. Strategic Environmental Assessments are often limited by what information is available; and
4. Strategic Environmental Assessments are often not as detailed, rigorous or scientific as one would want as the Strategic Environmental Assessment process must be responsive and adaptable.

Section 7.1 identifies specific limitations encountered during this Strategic Environmental Assessment process along with the actions taken to reduce their potential effects.

1.4 Structure of the Strategic Environmental Assessment Environmental Report

Table 1.1 gives the structure of the Environmental Report including a summarised content for each section.

Table 1.1 The structure of the Environmental Report.

Section	Contents
Non-technical summary	Summarises the Strategic Environmental Assessment Environmental Report
Section1: Introduction	Provides an introduction to the Local Flood Risk Management Strategy, this Strategic Environmental Assessment, its structure and general limitations
Section 2: Strategic Environmental Assessment Process	Identifies relevant Strategic Environmental Assessment Guidance and provides detail on the Stages of Strategic Environmental Assessment
Section 3: Local Flood Risk Management Strategy Action Plan	Summarises the actions proposed as part of the Local Flood Risk Management Strategy and associates Surface Water Management Plan Actions
Section 4: Reviewing Relevant Policies, Plans and, Programme	Reviews relevant policies, plans and programmes
Section 5: Assessing the Environmental Effects of the Local Flood Risk Management Strategy	Provides the methodology for the assessment of potential environmental effects, followed by the assessment of the effects of the Local Flood Risk Management Strategy upon the environmental topics, along with any required mitigation and monitoring.
Section 6: Compatibility testing between the Local Flood Risk Management Strategy Objectives and Strategic Environmental Assessment Objectives	Tests the compatibility of the Local Flood Risk Management Strategy Objectives and Strategic Environmental Assessment Objectives
Section 7: Conclusion	Summarises the environmental effects of the Local Flood Risk Management Strategy, identifies the limitations encountered as part of this Strategic Environmental Assessment, and explains the next steps in the process.

2 Strategic Environmental Assessment Process

2.1 Strategic Environmental Assessment Guidance

The methodology applied to this Strategic Environmental Assessment incorporates the requirements described in Annex I of the 'Strategic Environmental Assessment Directive' (see Table 2.1).

This Strategic Environmental Assessment Environmental Report has been developed in accordance with the following guidance documents:

- *A Practical Guide to the Strategic Environmental Assessment Directive* (Office of the Deputy Prime Minister, 2006)
- *Guidelines for Cumulative Effects Assessment in Strategic Environmental Assessment of Plans* Environmental Policy and Management Group Occasional Paper 04/LMC/CEA (Imperial London College 2004)
- *Guidelines for the Assessment of Indirect and Cumulative Impacts as well as Impact Interactions* (European Commission, 1999)
- *Strategic Environmental Assessment and Biodiversity: Guidance for Practitioners* (Countryside Council for Wales, English Nature, Environment Agency and RSPB 2004)
- Local Government Association (2011) Framework to Assist the Development of the Local Strategy for Flood Risk Management

2.2 Overview of Strategic Environmental Assessment Stages

The Strategic Environmental Assessment process is iterative and involves five sequential stages, which relate to each other (see Table 2.1). These stages are shown on Figure 2.1. The Strategic Environmental Assessment for the Local Flood Risk Management Strategy commenced in January 2012 in conjunction with the development of the Local Flood Risk Management Strategy. Table 2.1 also shows how the development of the Local Flood Risk Management Strategy has been linked to the Strategic Environmental Assessment tasks.

Table 2.1 Stages in the Strategic Environmental Assessment process and how they have been addressed through the Strategic Environmental Assessment and Local Flood Risk Management Strategy development

Strategic Environmental Assessment Stages and Tasks	Strategic Environmental Assessment Outputs	Local Flood Risk Management Strategy Development
Stage A Setting the context and objectives, establishing the baseline and deciding on the scope		
A1: Identifying other relevant policies, plans, programmes and environmental protection legislation	Stage A tasks were largely undertaken during the Scoping stage. During the Stages B-D, feedback received during the scoping consultation process was used to refine the information gathered during Scoping stages A1-A4. Further information is provided in Section 6.	Identifying pieces of linked legislation, planning documents and policies. Setting the Local Flood Risk Management Strategy objectives
A2: Collection of baseline information		
A3: Identifying environmental issues and problems. Scoping in or out of topics -		
A4: Developing the Strategic Environmental Assessment objectives		
A5: Consultation on the scope of the Strategic Environmental Assessment		
Stage B: Developing and refining options and assessing effects		
B1. Testing the Local Flood Risk Management Strategy objectives against the Strategic Environmental Assessment Objectives.	Compatibility tests of the Local Flood Risk Management Strategy Objectives and Strategic Environmental Assessment Objectives have been undertaken throughout the Local Flood Risk Management Strategy development; refer to Section 5.	Setting the Local Flood Risk Management Strategy Objectives
B2. Developing strategic alternatives.	There are no ‘reasonable alternatives’ to the objectives included in the Local Flood Risk Management Strategy. Scenarios of ‘Do Nothing’ or ‘Business as Usual’ were not appropriate because the Local Flood Risk Management Strategy is required by the Flood and Water Management Act 2010, which dictates a large proportion of its content ensuring that action is taken to manage local flood risk	
B3. Predicting the effects of the plan or programme, including alternatives.	During Stage A, potentially significant issues associated with the implementation of the Local Flood Risk Management Strategy were identified.	Ensuring that the Action Plan avoids issues.

Strategic Environmental Assessment Stages and Tasks	Strategic Environmental Assessment Outputs	Local Flood Risk Management Strategy Development
B4. Evaluating the effects of the plan or programme, including alternatives.	During Stage B, the significance of environmental effects of the scenarios has been assessed fully in relation to each environmental topic. Further details of the Strategic Environmental Assessment methodology and the likely significant effects on the environment are set out in Sections 4 and 6.	Ensuring that the Action Plan avoids issues.
B5. Considering ways of mitigating adverse effects.	The Strategic Environmental Assessment has identified potential measures to prevent and reduce likely adverse effects. Further details of mitigation measures are in Section 6.	
B6. Proposing measures to monitor the environmental effects of plan /programme implementation.	Section 6 includes indicators for monitoring the environmental effects of the Local Flood Risk Management Strategy.	
Stage C: Preparing the Environmental Report		
	The structure and content of this Environmental Report was outlined in the Scoping Report. The structure is summarised in Section 1.4.	Preparing the Draft Local Flood Risk Management Strategy
Stage D: Consulting on the draft plan or programme and the Environmental Report		
D1: Consulting on the draft Local Flood Risk Management Strategy and draft Environmental Report with the public and consultation Bodies.	The Draft Strategic Environmental Assessment Environmental Report was issued for public consultation and feedback from 1 September – 31 October 2015.	Consulting on the Draft Local Flood Risk Management Strategy
D2: Assessing significant changes	Any significant changes that are made to the Local Flood Risk Management Strategy from consultation was taken into account within this Final Environmental Report.	Finalising the Local Flood Risk Management Strategy
D3: Making decisions and providing information		
Stage E: Monitoring the significant effects of implementing the Local Flood Risk Management Strategy		
E1: Developing the aims and methods for monitoring	The Environmental Report has provided potential indicators for monitoring environmental effects of the Local Flood Risk Management Strategy. Following consultation these will be amended where appropriate.	Monitoring the Local Flood Risk Management Strategy
E2: Responding to the adverse effects	Review and update the Environmental Report	Review and update the Local Flood Risk Management Strategy Action Plan

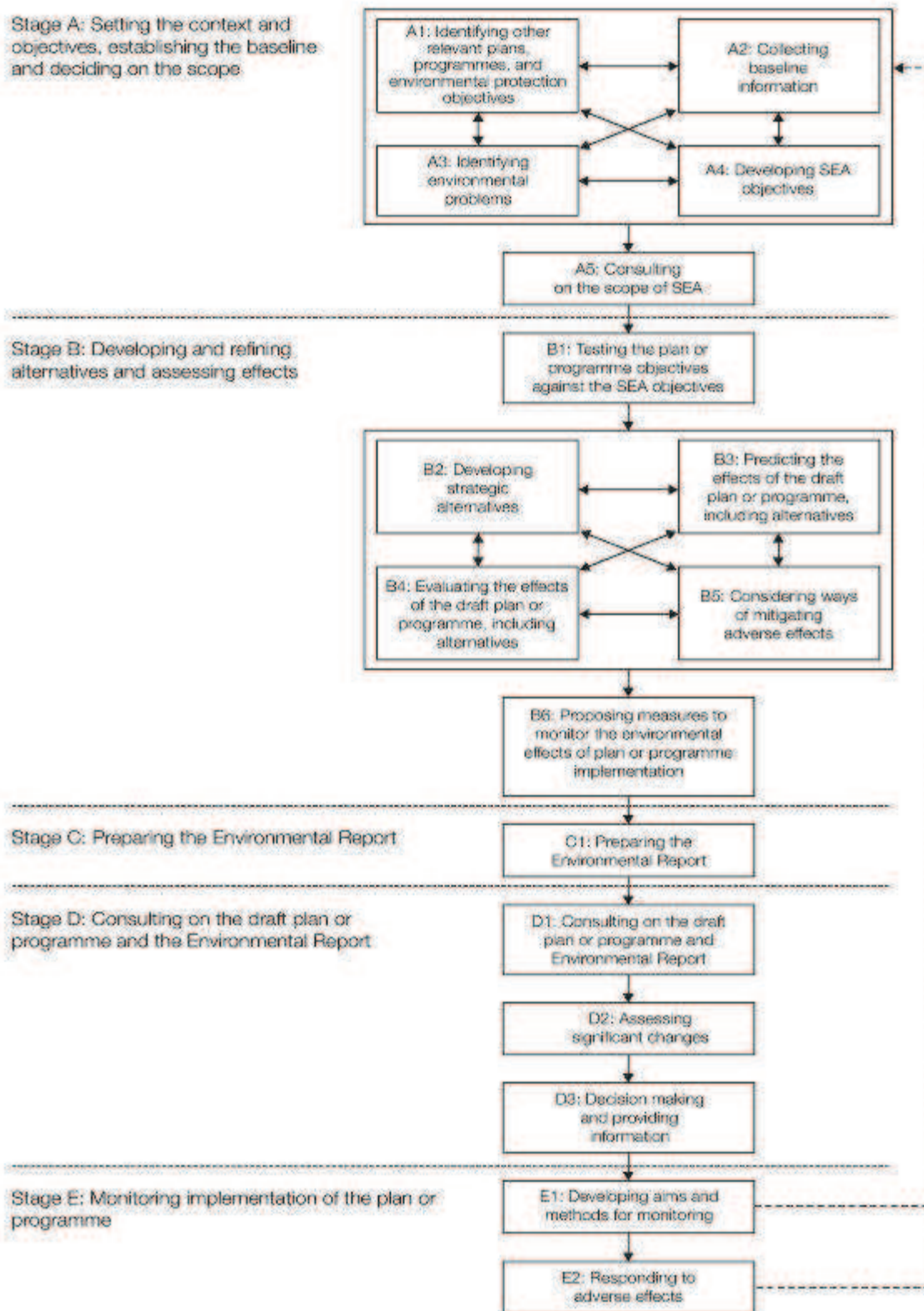


Figure 2.1 Relationship between tasks for each Strategic Environmental Assessment stages. Source: 'A Practical Guide to the Strategic Environmental Assessment Directive' (ODPM 2005).

2.3 Stage A: Setting the context and objectives, establishing the baseline and deciding on the scope

2.3.1 Scoping Report

A Strategic Environmental Assessment Scoping Report was prepared and consulted upon with the three statutory consultees (Natural England, the Environment Agency and English Heritage (now Historic England)) in June 2013. A summary of the scoping exercise which incorporated Strategic Environmental Assessment Tasks A1 – A4 is provided below.

The Strategic Environmental Assessment Scoping Report was subject to a five week consultation period (Stage A; Task A5) during which the three statutory Strategic Environmental Assessment consultees (Environment Agency, Historic England (formerly English Heritage) and Natural England) had the opportunity to comment on the scope, content and level of detail of the Scoping Report. Feedback was received from each of the statutory consultees in July 2013 and is provided in Appendix A along with how this feedback has been considered in this Strategic Environmental Assessment process and Environmental Report.

2.3.2 Collection of Baseline Information

Baseline information was collected and examined for the governance area of Bath & North East Somerset during the Strategic Environmental Assessment scoping stage (see Chapter 4 for a summary of baseline conditions for each scoped-in Strategic Environmental Assessment topic). This dataset forms an evidence base against which potential environmental effects of the Local Flood Risk Management Strategy can be measured, assessed, mitigated against and monitored if necessary.

The baseline information collected relates to the broad topics outlined in the Annex 1(f) of the 'Strategic Environmental Assessment Directive'. These topics are as follows:

- Water;
- Flooding;
- Population and human health;
- Biodiversity and landscape;
- Climatic factors;
- Material assets (i.e. housing, economy, agriculture, mineral resources and transport);
- Cultural heritage; and

- Air.

Within each of these topics, information was collected based on its:

- Relevance and appropriateness to the spatial scale of the Local Flood Risk Management Strategy;
- Contribution to identifying key environmental issues for Bath & North East Somerset and environmental issues relevant to the Local Flood Risk Management Strategy; and
- Relevance to the Strategic Environmental Assessment objectives and indicators.

Where possible, trends in each topic were examined in order to assess potential future environmental issues.

Chapter 4 provides a summary of baseline information collected during the scoping stage of this Strategic Environmental Assessment for each scoped-in Strategic Environmental Assessment topic. More detailed baseline information is available in the Scoping Report. Where appropriate, additions to the description of the baseline environment have been made in this report following consultation comments.

2.3.3 Scoping in or out of topics

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Information collected in the review of baseline conditions and other relevant policies, plans, and programmes at scoping stage was used to identify environmental issues and opportunities in Bath & North East Somerset and subsequently to take into consideration when determining the scope of the Strategic Environmental Assessment (Task A3).

The Strategic Environmental Assessment Regulations identify environmental topics which must be initially considered for all Strategic Environmental Assessments. This formed a starting point from which topics and receptors have been scoped out of, or into, the Strategic Environmental Assessment, depending on whether or not they are considered likely to affect or be affected by the Local Flood Risk Management Strategy. The topics include:

- Population and Human Health;
- Biodiversity, flora and fauna;
- Soil;
- Water;
- Air;

- Climatic factors;
- Material assets;
- Cultural, architectural and archaeological heritage;
- Landscape; and the
- Inter-relationship between the above factors.

The Strategic Environmental Assessment of the National Flood and Coastal Erosion Risk Management Strategy concluded that it is unlikely that any significant impacts on air quality would occur as a result of the national strategy. The topic of air quality was subsequently scoped out of the Strategic Environmental Assessment for the national strategy. Potential impacts on air quality arising from local flood risk and the Local Flood Risk Management Strategy were considered and it was concluded that significant impacts are unlikely to occur. As such air quality was scoped out of the Strategic Environmental Assessment. All other topics identified in the Strategic Environmental Assessment Regulations have been included in the Strategic Environmental Assessment, as shown in Table 2.2.

Table 2.2 Strategic Environmental Assessment Topics scoped into or out of the Strategic Environmental Assessment

Strategic Environmental Assessment Topic	Strategic Environmental Assessment Topic Sub-division	Scoped In or Out?
Water	Water Quality and Resources	In
Flooding	Flood Risk	In
Population and Human Health	Population	In
	Deprivation and Human Health	In
Biodiversity and Landscape	Nature Conservation	In
	Landscape Character	In
Cultural heritage	Cultural Heritage	In
Climatic Factors	Climatic Factors	In
Material Assets	Housing	In
	Economy	In
	Agriculture	In
	Mineral Resources	In
	Waste Management	In
	Transport Infrastructure	In
Air	Air Quality	Out

2.3.4 Development of the Strategic Environmental Assessment objectives

A total of ten Strategic Environmental Assessment objectives were proposed in the Scoping Report as part of Task A4. These Strategic Environmental Assessment objectives relate to

the key Strategic Environmental Assessment topics and environmental issues within Bath & North East Somerset identified in the review of baseline conditions at Strategic Environmental Assessment scoping stage. The statutory consultees made no comments on the Strategic Environmental Assessment objectives, so these have not been modified since scoping stage. The Strategic Environmental Assessment objectives are provided in Table 2.3.

Table 2.3 Strategic Environmental Assessment Objectives

Strategic Environmental Assessment Topic	Strategic Environmental Assessment Objective (s)
Water Quality and Resources	Objective 1: Protect and enhance the ecological and chemical status of watercourses and water bodies in Bath & North East Somerset in accordance with Water Framework Directive, whilst promoting the sustainable use of water as a natural resource
Flood Risk	Objective 2: Understand and manage flood risk from ordinary watercourses, surface water runoff, groundwater and artificial sources within Bath & North East Somerset.
Population, Health and Deprivation	Objective 3: Maintain and enhance a positive health profile for Bath & North East Somerset.
Nature Conservation	Objective 4: Protect and enhance biodiversity and geodiversity across Bath & North East Somerset, especially in relation to statutory and non-statutory designated sites. Special consideration to be given to priority species.
Landscape Character	Objective 5: Maintain and enhance characteristic landscape features, with special emphasis on the landscape features of AONBs located within Bath & North East Somerset.
Cultural Heritage	Objective 6: Protect and enhance features that define the cultural heritage of Bath & North East Somerset (i.e. listed buildings, scheduled monuments and registered parks and gardens).
Climatic Factors	Objective 7: Manage, plan and adapt for the impacts of climate change.
Material Assets (Housing, Economy, Agriculture, Mineral Resources, Waste Management and Transport Infrastructure)	Objective 8: Ensure that new development in Bath & North East Somerset is located with respect to the sequential test. Objective 9: Maintain and enhance accessibility to essential services across Bath & North East Somerset by providing an efficient transport infrastructure. Objective 10: Protect and enhance high quality agricultural land across Bath & North East Somerset.

2.4 Stage B: Developing and refining options and assessing effects

An internal draft of the Local Flood Risk Management Strategy was produced in March 2012, which included a full set of draft objectives for the Local Flood Risk Management Strategy. An initial compatibility test of the Local Flood Risk Management Strategy

objectives against the Strategic Environmental Assessment Objectives was undertaken, and the findings and recommendations were discussed with the Drainage and Flooding Team. As a result, the Local Flood Risk Management Strategy objectives were redrafted.

A key function of a Strategic Environmental Assessment is to assist in the development of reasonable options (or 'alternatives') for implementing a respective plan or programme (Stage B, Task B2-B4). However, in this instance there are no 'reasonable alternatives' to the objective and actions included in the Local Flood Risk Management Strategy. Scenarios of 'Do Nothing' or 'Business as Usual' were not appropriate because the Local Flood Risk Management Strategy is required by the Flood and Water Management Act, which dictates a large proportion of its content ensuring that action is taken to manage local flood risk..

An evaluation has been undertaken of the predicted effects of the Local Flood Risk Management Strategy on the identified environmental topics and receptors (Stage B: Task B4) and is included in Section 5.

Mitigation measures have been proposed for potential negative effects that may arise from the implementation of the Local Flood Risk Management Strategy (Stage B: Task B5) (Section 5). Monitoring indicators have been proposed (Stage B: Task B6) (Section 5). The nature and magnitude of a potential environmental effect may be uncertain and the proposed monitoring programmes will attempt to address this uncertainty.

The link between the Local Flood Risk Management Strategy action implementation and the achievement of wider environmental benefits is discussed in the Local Flood Risk Management Strategy *Chapter 5.4 Maximising the wider benefits of flood risk management*).

2.5 Stage C: Preparing the Environmental Report

This is the Strategic Environmental Assessment Environmental Report (Stage C), which has been finalised following public consultation.

2.6 Stage D: Strategic Environmental Assessment Consultation

The draft Strategic Environmental Assessment Report was subject to a two month consultation period alongside the draft Local Flood Risk Management Strategy from 1 September 2015 to the 31 October 2015. Where necessary the Environmental Report was amended following the results of the consultation exercise and this report is the finalised

document, which includes the following changes following consultation on the draft Environmental Report:

- Addressing comments in relation to climate change, regarding the fact that the Local Flood Risk Management Strategy is to be implemented over the next ten years, and therefore it is unlikely that predicted climatic changes will be realised within this timeframe.
- Addressing comments from Historic England by:
 - Explaining that there will be no discernible change to the flow or quality of groundwater resulting from the Local Flood Risk Management Strategy which could lead to effects on the historic environment.
 - Referencing opportunities that the LFRMS could deliver for the historic environment.
- Inclusion of reference to cross agency working.

2.7 Stage E: Strategic Environmental Assessment Monitoring

The final stage in the Strategic Environmental Assessment process involves monitoring of any potential significant effects arising from the implementation of the Local Flood Risk Management Strategy. Monitoring is essential in order to:

- Track the environmental effects of the Local Flood Risk Management Strategy;
- Indicate whether or not the environmental effects of the Local Flood Risk Management Strategy are as predicted in the assessment;
- Identify the actual adverse effects; and
- Prepare for appropriate responses where adverse effects are identified.

The information will mostly be collected as part of pre-existing monitoring programmes. Therefore the reliability of the monitoring information will need to be considered when assessing the actual effects of the Local Flood Risk Management Strategy. If residual effects are identified, action should be taken to minimise their impact. The indicators listed in Section 6 will be used to monitor the actual effects of the implemented Local Flood Risk Management Strategy.

3 Summary of Local Flood Risk Management Strategy Action Plan

The overall aim of the Local Flood Risk Management Strategy is to ensure that flood risk is properly managed through a coordinated approach whereby communities, individuals, voluntary groups, and private and public sector organisations work together. The actions that form the Action Plan to implement this aim are summarised in Table 3.1. Further details of the Local Flood Risk Management Strategy Action Plan are provided in the main Local Flood Risk Management Strategy (Bath & North East Somerset, 2015). Many of the actions are related to engagement with the public, developers and other partners and improving the recording of flood events.

Table 3.1 Local Flood Risk Management Strategy Action Plan

Action Ref	Action
1a	Complete a regional Surface Water Management Plan
1b	Continue to develop an updated flood reporting system
1c	Improve the use of visual tools (e.g. GIS) to record and analyse flooding incidents
1d	Continue to complete investigations of flood incidents, where the appropriate criteria is met
1e	Ensure that appropriate data on flooding is shared between organisations, and between organisations and communities
2a	Establish clearer routes for communicating with communities and businesses about the roles and responsibilities for flood risk
2b	Help communities understand their own flood risk and their responsibilities for managing flooding
2c	Raise awareness of land drainage and riparian responsibilities
2d	Develop a network of Local Flood Representatives to act as a point of contact in the community on flooding issues, including in areas with transient populations.
2e	Ensure communities know what to do in the event of a flood, including in areas with transient populations.
3a	Continue to work with partners, including adjacent authorities, to develop long term approaches to manage flood risk
3b	Deliver the actions in the regional Bath & North East Somerset Surface Water Management Plan
3c	Continue to develop a register of assets which significantly affect local flood risk
3d	Designate structures that effect local flood risk, to protect them from alteration or removal
3e	Continue to assess applications for works on ordinary watercourses, through the land drainage consent process

Action Ref	Action
3f	Identify catchments where improved land management could reduce flood risk and/or improve the wider environment
3g	Identify critical highway drainage assets, in order to undertake targeted maintenance and respond to issues as the Local Highways Authority
3h	Prioritise maintenance and clearance works to culverts and watercourses
3i	Evaluate flood reports to identify where drainage improvements or other mitigation works are possible
4a	Continue to review planning applications to make recommendations for surface water drainage and managing flood risk
4b	Publish the West of England Sustainable Drainage Systems Guidance for developers, and work across the West of England to co-ordinate sustainable drainage system implementation
4c	Include SuDS planning policy within the Council's Placemaking Plan/ Core Strategy
4d	Continue to provide guidance at the pre-application stage on flooding issues
4e	Consider the need for additional planning guidance on flooding specific to Bath & North East Somerset
4f	Identify areas that are sensitive to surface water flood risk and develop appropriate surface water drainage and flood risk requirements for any proposed development in these areas
5a	Help develop a multi-agency flood plan for high risk areas in Bath & North East Somerset
5b	Communicate information to communities, businesses and individuals on flood preparedness and recovery
5c	Promote uptake of the Environment Agency's Floodline Warnings Direct service
5d	Improve warnings and proactive mitigation in response to predicted rainfall

The Local Flood Risk Management Strategy Action 1a, to complete a regional Surface Water Management Plan (SWMP) for Bath & North East Somerset has been undertaken. A significant number of the wet-spots identified in the SWMP had common actions around improvements to highways and/or land drainage. For these 42 wet-spots the following five stage implementation plan was identified in the SWMP:

1. monitor flooding at this location;
2. check cyclic maintenance has been carried out;
3. investigate performance of highway/land drainage system, identifying any maintenance or design requirements;
4. carry out required maintenance or design and construct engineering scheme, and;
5. implement continued maintenance programme.

In addition, a further 15 wet-spots identified in the SWMP have been assigned specific actions and have been adopted for the Local Flood Risk Management Strategy. In these wet-spots the actions are bespoke to each area, and range from inspection and investigation, through to scheme design and build. The 15 wet-spots with specific actions are:

- Bath City Centre;
- Batheaston and Bathford;
- Chew Magna;
- Chew Stoke;
- Clandown;
- West Harptree;
- Whitchurch;
- Keynsham;
- Lower Bristol Road;
- Timsbury;
- Midsomer Norton;
- Weston and Upper Weston;
- Weston Village;
- Weston Park, and;
- White Cross Farm (Bristol Road).

4 Reviewing Relevant Policies, Plans, Programmes and Environmental Protection Legislation

The Local Flood Risk Management Strategy must comply with current relevant policies, plans, programmes (PPPs) and environmental protection legislation at international, national and local levels. A review of relevant PPPs was undertaken as part of the Strategic Environmental Assessment scoping process (Task A1). The review identified any potential inconsistencies or constraints between PPPs and the Local Flood Risk Management Strategy, which have been taken account of during the Local Flood Risk Management Strategy development. The relevant at international, national and local PPPs are listed in Tables 4.1, 4.2 and 4.3 respectively, and the full review is detailed in Appendix B. The list of PPPs is not definitive and will be up-dated throughout the Strategic Environmental Assessment process where possible.

The Local Flood Risk Management Strategy compliments or contributes towards the achievement of the objectives and requirements outlined in the relevant PPPs and complies with all environmental protection legislation. The key common links and themes identified between other relevant PPPs and the Local Flood Risk Management Strategy can be broadly summarised in the following categories:

- Protecting and enhancing the historic and natural environment. Ensuring that no harm is brought to nature conservation sites or heritage sites in the Bath & North East Somerset area designated at the European level;
- Sustainable consumption and use of natural resources,
- Protecting and enhancing open spaces and recreational opportunities, including access to the countryside;
- Achieving economic prosperity,

Table 4.1 Relevant International policies, plans, programmes and environmental protection legislation along with related Strategic Environmental Assessment topic sub-divisions

Strategic Environmental Assessment Topic Sub-division	International Plans and Programmes
Flood risk	EU Floods Directive – Directive 2007/60/EC on the Assessment and Management of Flood Risk, 2007
Water Quality and Resources, Nature Conservation	EU Water Framework Directive – Directive 2000/60/EC of the European Parliament and of the Council Establishing a Framework for the Community Action in the Field of Water Policy, 2000 EU Habitats Directive – Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora.

Table 4.2 Relevant national policies, plans, programmes and environmental protection legislation along with related Strategic Environmental Assessment topic sub-divisions 1

Strategic Environmental Assessment Topic Sub-division	National Plans and Programmes
All*	National Planning Policy Framework (March 2012)
Flood Risk, Water Quality and Resources, Nature Conservation, Material Assets	National Standards for Sustainable Drainage (Defra, 2011)
All*	The National Flood and Coastal Erosion Risk Management Strategy for England (May 2011)
All*	Flood and Water Management Act 2010
Nature Conservation, Water Quality and Resources	Biodiversity 2020: A Strategy for England's Wildlife and Ecosystem Services
Water Quality and Resources, Flood Risk	Water for People and the Environment; Water Resources Strategy for England and Wales, 2009
Water Quality and Resources, Flood Risk, Material Assets	Future Water, The Government's water strategy for England, 2008
Flood Risk, Climatic Factors	Adapting to Climate Change in England, A Framework for Action, 2008
Flood Risk	Civil Contingencies Act 2004

¹ All* Strategic Environmental Assessments topic sub-divisions are: water quality and resources, flood risk, population, deprivation and human health, nature conservation, landscape character, cultural heritage, climatic factors and material assets (housing, economy, agriculture, mineral resources, waste management and transport infrastructure).

Strategic Environmental Assessment Topic Sub-division	National Plans and Programmes
Water Quality and Resources	Water Act, 2003
Flood Risk, Water Quality and Resources, Nature Conservation, Material Assets	Environment Agency Policy: Sustainable Urban Drainage Systems, 2002
Flood Risk	Land Drainage Act, 1991, (as amended 2004)

Table 4.3 Relevant sub-national, regional and local policies, plans, programmes and environmental protection legislation along with related Strategic Environmental Assessment topic sub-divisions

Strategic Environmental Assessment Topic Sub-division	Regional and local Plans and Programmes
Water Quality and Resources	River Basin Management Plan Severn River Basin District (December 2009) County of Avon Act 1982
Flood Risk	Bath & North East Somerset Council Preliminary Flood Risk Assessment March 2011 (Bath & North East Somerset Council, 2011)) Bath & North East Somerset Council Surface Water Management Plan June 2015 (Bath & North East Somerset Council (2015) Bristol Avon Catchment Flood Management Plan December 2009 (Environment Agency 2009b) Somerset County Council Local Flood Risk Management Strategy (Somerset County Council, 2014) South Gloucestershire Local Flood Risk Management Strategy (Draft in press) City of Bristol Local Flood Risk Management Strategy November 2014 (City of Bristol, 2014) Wiltshire Local Flood Risk Management Strategy (Wiltshire County Council, 2014) North Somerset Local Flood Risk Management Strategy (North Somerset Council 2014)
Water Quality and Resources, Nature Conservation and Landscape Character	Bath & North East Somerset Draft Green Infrastructure Strategy (Bath & North East Somerset Council 2013)
All*	Bath & North East Somerset Core Strategy (July 2014) and Saved Local Plan Policies
Flood Risk, Nature Conservation and Landscape Character, Material Assets	Bath & North East Somerset Flood Risk Management Strategy Report (June 2010)
Flood Risk	Bristol Avon Catchment Flood Management Plan (December 2009b)

Strategic Environmental Assessment Topic Sub-division	Regional and local Plans and Programmes
Nature Conservation and Landscape Character, Cultural Heritage, Climatic Factors, Material Assets	Mendip Hills Area of Outstanding Natural Beauty Management Plan 2009-2014
Nature Conservation and Landscape Character, Cultural Heritage, Climatic Factors, Material Assets	Cotswolds Area of Outstanding Natural Beauty Management Plan 2008-2013
Flood Risk	Strategic Flood Risk Assessment of Bath & North East Somerset Volume 1 Technical Report April 2008 (Bath & North East Somerset, 2008)
All	Sustainable Communities Strategy
Cultural Heritage	City of Bath World Heritage Site Management Plan (The City of Bath World Heritage Site, 2010) The City of Bath World Heritage Site Setting Supplementary Planning Document (SPD) August 2013

5 Assessing the Environmental Effects of the Local Flood Risk Management Strategy

5.1 Methodology for assessing potential effects

Task B3 of the Strategic Environmental Assessment is to predict the environmental effects of the Local Flood Risk Management Strategy. The predicted effects of the Local Flood Risk Management Strategy were assessed in terms of their significance. The detailed assessment tables are provided in Appendix C.

The assessment of significance has been made by reviewing the potential effects on each receptor against the criteria listed in Appendix II of the Strategic Environmental Assessment Directive (Box 1). These assessments were based upon both quantitative and qualitative information, as well as expert judgement. The criteria in Appendix II of the Strategic Environmental Assessment Directive are only explicitly defined for the purpose of determining whether or not Strategic Environmental Assessment is needed. However, as they principally relate to the nature of the effects arising from the plan, and the value and vulnerability of the receptors affected, they are also applicable to the assessment of significant environmental effects and have thus been used for this purpose during this Strategic Environmental Assessment. This is recognised in the UK Strategic Environmental Assessment Practical Guide.

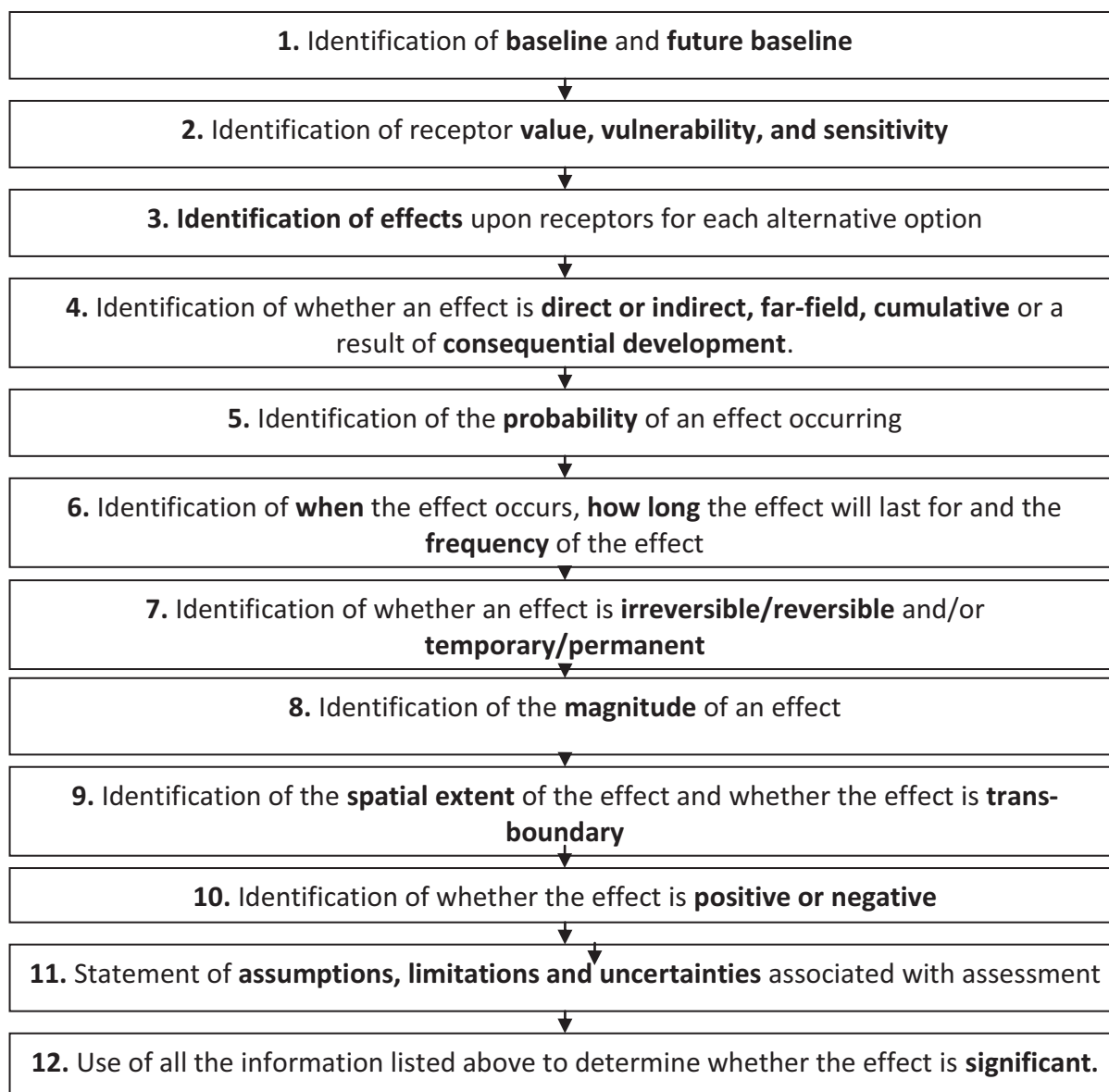
Box 1: Criteria listed in Appendix II of the Strategic Environmental Assessment Directive

When determining the likely significance of effects on the environment, the Appendix II of the Strategic Environmental Assessment Directive includes the following criteria:

2. Characteristics of the effects and of the area likely to be affected, having regard, in particular, to

- (a) the probability, duration, frequency and reversibility of the effects;*
- (b) the cumulative nature of the effects;*
- (c) the transboundary nature of the effects;*
- (d) the risks to human health or the environment (for example, due to accidents);*
- (e) the magnitude and spatial extent of the effects (geographical area and size of the population likely to be affected);*
- (f) the value and vulnerability of the area likely to be affected due to -*
- (g) special natural characteristics or cultural heritage;*
- (h) exceeded environmental quality standards or limit values; or*
- (i) intensive land-use; and*
- (j) the effects on areas or landscapes which have a recognised national, Community or international protection status.*

The flow chart below summarises the steps that have been undertaken to complete the significance assessment:



The following paragraphs explain in more detail how the steps set out in the flow chart above have been undertaken during the assessment of likely significant effects upon the environmental topics. The paragraphs below have been numbered to correspond with the numbers within the flow chart.

1. Identification of the baseline and future baseline

This is the approach taken to establish the characteristics of the area likely to be affected, or 'baseline', and its likely evolution in the absence of the proposed Local Flood Risk

Management Strategy. Key to the approach is the development of an understanding of the baseline, as defined by a series of 'receptors'. A 'receptor' is an entity that may be affected by direct or indirect changes to an environmental variable. Relevant receptors were identified during the Strategic Environmental Assessment scoping stage.

2. Identification of receptor value

In forming a judgement on effect significance, it is necessary to assign the attributes of 'value', 'vulnerability' and 'sensitivity' to each receptor. For the purposes of this Strategic Environmental Assessment, the following definitions were used:

- Value: the value of a receptor (either high or low) is based on the scale of geographic reference, rarity, importance for biodiversity, social or economic reasons, and level of legal protection;
- Vulnerability: the vulnerability of a receptor (either high, medium, low or none) is based on likelihood of a receptor being exposed to an environmental effect from the implementation of the Local Flood Risk Management Strategy, and the receptor's tolerance and resilience to a given environmental effect;
- Sensitivity: the sensitivity of a receptor is determined as being either high, medium, low or none, based on the combination of the receptor value and vulnerability as defined in Table 5.1.

3. Identification of effects upon receptors:

During the Scoping stage, key constraints and opportunities were identified for each environmental topic. These have been used as the starting point for the assessment of significant effects in this assessment stage of the Strategic Environmental Assessment.

Table 5.1 Calculation of receptor sensitivity

		Value	
		High – receptor is rare, important for social or economic reasons, legally protected, of international or national designation	Low – receptor is common, of local or regional designation
Vulnerability	High e.g. potential pathways exist for environmental change in receptors as a result of Local Flood Risk Management Strategy, receptor is in a declining condition, dependent on a narrow range of environmental conditions	High	Medium
	Medium e.g. few pathways exist for environmental change in receptors as a result of Local Flood Risk Management Strategy, receptor is only expected to recover from disturbance over a prolonged period of time, if at all	Medium	Medium
	Low e.g. limited or no pathways exist for environmental change in receptors as a result of Local Flood Risk Management Strategy, receptor is in stable or favourable condition &/ or dependent on wide range of environmental conditions	Medium	Low
	None e.g. no pathways exist between environmental changes and receptors, receptor is insensitive to disturbance	None	None

4. Identification of whether an effect is direct or indirect, far-field, cumulative or a result of consequential development.

The Strategic Environmental Assessment Directive specifies that the assessment of effects should include ‘*secondary, cumulative, synergistic... effects*’ (Appendix I (f)). The UK Practical Guide to Strategic Environmental Assessment recognises that some of these terms are not always mutually exclusive and for the avoidance of doubt, within this Strategic Environmental Assessment the following assessment approaches were undertaken.

- Indirect effects are those which are not a direct result of the implementation of the Local Flood Risk Management Strategy, but occur away from the original effect or as a result of a complex pathway. This Strategic Environmental Assessment does not use the term ‘secondary effects’ as this is covered by indirect effects.
- There is the potential for effects to extend large distances from the Local Flood Risk Management Strategy areas. The assessments of these ‘far-field’ effects have

greater uncertainty attached and this should be described alongside the assessment of effects.

- Cumulative effects arise, for instance, where several developments each have insignificant effects but together have a significant effect. For the Strategic Environmental Assessment, cumulative effects are dealt with through the consideration of the implementation of the Local Flood Risk Management Strategy in relation to the future environmental baseline conditions and other policies, plans, programmes, and projects that are likely to act in combination with the Local Flood Risk Management Strategy. Therefore, the assessment of cumulative effects is embedded within the assessment of effects.
- This Strategic Environmental Assessment has not used the term ‘combined’ effects, as these are considered to be included within cumulative effects, nor has it used the term ‘synergistic’ effects, as these are contained within direct, indirect and cumulative effects.
- Improvement of flood risk management could facilitate or attract other developments, which may themselves pose significant environmental effects. These developments are described as ‘consequential developments’. These consequential developments are not well-defined and only a high-level qualitative assessment of the likely effects is possible.

5. Identification of the probability of an effect occurring:

The probability of whether an effect will happen has been recorded as high, medium, low or very low. Table 5.2 sets out the guideline framework which was used for these classifications.

Table 5.2: Guidelines for determining probability of effect

	Probability of effect			
Classification	High	Medium	Low	Very Low
Guideline	>90%	50-90%	10-50%	<10%

6. Identification of when the effect occurs; how long the effect will last for; and frequency of effect.

The Strategic Environmental Assessment Directive specifies that the assessment of effects should include ‘...short, medium and long-term...effects’ (Appendix I (f)). The timing of

effects relates to the period of the project lifecycle during which time an effect will happen. This is described as either the construction, operation or decommissioning stage. The duration is the length of time that effect would last. Table 5.3 sets out the guidelines for describing the project phase and duration of effects.

An indication of the frequency of predicted effects has been undertaken, through consideration of whether the effect will be continual or intermittent over the period of time identified.

Table 5.3: Guidelines for determining the period of the project lifecycle

	Duration of effect			
Classification	Long Term	Medium Term	Short Term	Very Short Term
Guideline	10+ years	3-10 years	1-3 years	<12 months
Project phase	Operation and Decommissioning	Operation	Construction (or part thereof)	Part of construction period

7. Identification of whether the effect is irreversible / reversible and temporary / permanent:

The Strategic Environmental Assessment Directive specifies that the assessment of effects should include ‘...*permanent and temporary*...effects’ (Appendix I (f)).

Effects have been described as reversible or irreversible referring to whether the effect could be removed if deliberate action were taken to do so. This judgement has been based on the timescale for a receptor’s return to baseline conditions following removal of the source of the effect, in relation to a human lifetime. If the timescale for a receptor’s return to baseline condition is greater than 50 years then it has been considered irreversible, if it is less it has been considered reversible.

Effects have been described as temporary or permanent, according to whether or not the effect is expected to last for an indefinite period of time. Note that it is possible for an effect to be reversible-permanent (such as the visual effects of a water control structure, as it would be a permanent fixture that could be removed; which would thereby reverse the effect).

8. Identification of the magnitude of an effect

The assessment of the magnitude of an effect considers the percentage of the receptor affected and is categorised as high, medium, low or very low. Where no effect was

predicted, this has been recorded as 'no change'. The definitions for thresholds of magnitude of effect are classified as high, medium, low, very low or none, and are provided Table 5.4 below.

Table 5.4: Guidelines for determining the magnitude of effects

	Magnitude of effect				
Classification	High	Medium	Low	Very low	None
Guideline	Change to 90%+ of receptor	Change to 50-90% of receptor	Change to 10-50% of receptor	Change to <10% of receptor	No change in receptor

9. Identification of the spatial extent of the effect

The spatial scale of the effect has been defined as whether the effect is local, unitary authority regional or national. Definitions of the spatial scales used within the Strategic Environmental Assessment are provided in Table 5.5. The area or location of the effect has been identified where relevant. Where there is a trans-boundary effect on an adjacent county, this has also been identified.

Table 5.5: Definitions of spatial scale

Spatial extent of effects	Definitions
National (England)	Effects extending beyond region
Regional	Effects on the adjacent unitary authority areas
Unitary Authority	Effects within Bath & North East Somerset
Local	Effects confined to a local area, typically <1km from source

10. Identification of whether the effect is positive or negative

The Strategic Environmental Assessment Directive specifies that the assessment of effects should include '*...positive and negative effects*' (Appendix I(f)).

A positive effect has been defined as one that is favourable or otherwise beneficial to the condition of a receptor. A negative effect is one that is unfavourable or otherwise adverse to the condition of a receptor.

11. Statement of assumptions, limitations and uncertainties associated with assessment

The Strategic Environmental Assessment Directive also specifies that '*...a description of how the assessment was undertaken including any difficulties (such as technical*

deficiencies or lack of know-how) encountered in compiling the information' is provided in the Environmental Report.'

Where assumptions have been made, limitations observed, and/or uncertainty remained, this has been recorded. Confidence limits, or other suitable approaches, have been applied during environmental topic assessments to ensure that relevant uncertainties are acknowledged.

12. Use all the information to determine whether the effect is significant

This is the final stage of the assessment process. A decision on whether or not an effect on a receptor is significant has been made based on all the preceding criteria, expert judgement, and feedback from consultation. A conclusion was made as to whether a significant effect was likely, or not. Gradations of significance are not provided for within the Strategic Environmental Assessment Directive.

If a negative effect is identified, potential mitigation measures have been examined. Where positive effects have been identified, enhancement measures will be examined. .

5.2 Assessment of Effects of the Local Flood Risk Management Strategy

5.2.1 Water Quality and Water Resources

Baseline Conditions

Information on water quality and water resources in Bath & North East Somerset was collected and presented in the Strategic Environmental Assessment Scoping Report. The baseline conditions have been updated below where appropriate.

Water Framework Directive Waterbodies

The Water Framework Directive (WFD) (2000/60/EC) is implemented in England and Wales by The Water Environment (WFD) (England and Wales) Regulations 2003 (SI 3242/2003.). River Basin Management Plans (RBMP) set out measures to achieve the aims of the WFD, to ensure that by 2015 water bodies within England and Wales achieve 'Good Status'.

Good status is defined as being 'Good Ecological Status' for natural water bodies and 'Good Ecological Potential' for Heavily Modified Water Bodies (HMWB) or artificial waterbodies. Overall ecological status (or potential) is made up of a number of biological, hydromorphological and chemical quality characteristics called quality elements. The overall status is determined by the lowest quality element status. The Environment Agency is the competent authority in England and Wales responsible for delivering the WFD. The WFD needs to be taken into account in the planning of all new activities in the water environment.

The Severn River Basin District RBMP (2009) incorporates the Bath & North East Somerset authority area (EA, 2009a). The RBMP stated that:

- Four water bodies out of the 27 (15%) covering the Main Rivers in Bath & North East Somerset are in Good Ecological Status/Potential. Eight out of the 27 (30%) are in poor ecological status/potential.
- 22% of surface water bodies in the Bristol Avon and North Somerset catchment (of which Bath & North East Somerset is part) have good or better ecological status.
- 78% of groundwater water bodies in the Bristol Avon and North Somerset catchment have good chemical status.

- 75% of groundwater water bodies in the Bristol Avon and North Somerset catchment have good quantitative (i.e. water level) status.

Nationally in 2011, 33% of water bodies in England had a Good Ecological Status (EA 2012a), which means that the ecological status of waterbodies in Bath & North East Somerset are potentially below the national average as only 15% have Good Ecological Status/Potential.

The Severn RBMP included a target for the percentage of surface water bodies in Bristol Avon and North Somerset catchment with Good Ecological Status to increase by 27% being in good or better ecological status by 2015.

The Chew Valley Lake is a heavily modified water body and is classified in the RBMP as having Poor Ecological Potential.

The first cycle of the RBMP was completed in 2015, with new RBMPs awaited. It is not yet known whether targets in the current Severn RBMP have been met.

Surface Water

Bath & North East Somerset contains two notable lakes, Chew Valley and Blagdon Lake. Chew Valley Lake is a freshwater reservoir and functions as a major water source for the Bristol Area. Some of the water in the lake is used to maintain the flow in the River Chew. The lake is an important wildlife and recreational resource. Blagdon Lake provides drinking water and acts as a fishing lake and nature reserve. The Kennet and Avon Canal flows through the eastern part of Bath & North East Somerset.

Ground Water

Six aquifers in the Bath & North East Somerset area are at risk of groundwater pollution due to the leaching potential of their overlain soil. The only hot springs found in Britain are located in the City of Bath to the north of the River Avon. At this location, thermal water rises up from three hot springs (King's Spring, Hetling Spring and Cross Bath Spring) through a geological fault in the limestone beneath (Bath & North East Somerset Council, 2012)

Assessment Results

Likely Effects

There is potential for the actions identified in the Local Flood Risk Management Strategy to cause indirect pollution of WFD water bodies, leading to a reduction in ecological status of water bodies and contributing to failures in regional targets. Nevertheless, any negative effects are likely to be of low probability and very low magnitude, as any engineering scheme will be designed to ensure compliance with the WFD and any construction activities will be done under the Environment Agency's Pollution Prevention Guidelines. As a result, no significant effects upon the ecological status of WFD waterbodies are anticipated. Indeed, the implementation of effective flood risk management and SuDS throughout the district would potentially positively contribute to achieving WFD water quality targets (as noted below).

There is likely to be a direct, low magnitude positive effect on surface and ground water quality across the district arising from the implementation of the Local Flood Risk Management Strategy due to a likely reduction in the mobilisation of pollutants. It is likely these effects would be realised in the short term and would continue to benefit water quality in the long term. Effective flood risk management would reduce the likelihood of contaminated land, sewerage networks and agricultural land being flooded, which would subsequently reduce the mobilisation of pollutants, fertilisers and pesticides and their discharge into nearby watercourses and groundwater bodies. The Local Flood Risk Management Strategy Action Local Flood Risk Management Strategy-4c is for the publication of regional SuDS guidelines and an approval process, which will ensure the proper implementation of SuDS across Bath & North East Somerset. These combined measures will promote the sustainable use of water as a resource and is anticipated to have a significant effect upon the overall enhancement of water quality in Bath & North East Somerset through the reduction in diffuse pollution from urban runoff. In terms of cumulative effects from associated plans and projects that also aim to improve water quality and resources, good communication, collaboration of efforts and information sharing between partners within and outside Bath & North East Somerset would further contribute to the improvement of water quality and resources for the entire Bristol Avon catchment - while managing flood risk in the most effective way.

There is the potential for short term localised negative effects on surface and ground water quality and resources from construction of engineering solutions arising from the Local Flood Risk Management Strategy. The use of certain hard engineering solutions or land disturbance in flood risk management may adversely affect the physical nature of water bodies in Bath & North East Somerset and subsequently their water quality and resource capacity. This may lead to indirect effects upon ecology and geomorphological regime. For instance, hard structures or barriers in watercourses designed to control flow and reduce flood risk can affect the supply and transport of sediments. This in turn can indirectly affect the watercourse's water quality and associated ecology (Environment Agency 2012). Due to the localised nature of these likely negative upon water quality, they are not anticipated to be significant.

Proposed Mitigation Measures

To minimise effects on water quality and resources, capital works or maintenance implemented by the Council, its partners or developers under the Local Flood Risk Management Strategy will be done in compliance with the Environment Agency's Pollution Prevention Guidelines. Where appropriate, flood defence consent or land drainage consent will be obtained for engineering schemes. Environmental issues including flood risk, wildlife conservation, fisheries, damage to the hot springs and reshaping of rivers and landscape must be considered in the process of obtaining consents. Larger projects may be subject to statutory Environmental Impact Assessment which would identify any additional mitigation (for example SuDS) needed to minimise the risk of pollutants entering a watercourse or water body as a consequence of construction work undertaken.

The consideration of measures that incorporate natural processes into flood risk management (e.g. the creation of wetlands for SuDS) may benefit water quality and positively contribute to the achievement of the WFD targets. These measures may avoid the negative impacts associated with other hard engineering solutions in flood risk management and instead enhance current water quality in the medium to long term in Bath & North East Somerset. Good communication between partners in the Bristol Avon catchment may facilitate opportunities to effectively manage flood risk, while benefiting water quality, across the catchment.

The Local Flood Risk Management Strategy has outlined the preferred surface water management strategy following the development of the regional Surface Water

Management Plan. This plan has led to the improved management of surface water flood risk in Bath & North East Somerset which in turn is likely to result in a reduction in the amount of pollution entering watercourses. The Surface Water Management Plan provides a framework for the management of flood risk and water quality.

Proposed Monitoring

The actual effects arising from the implementation of Local Flood Risk Management Strategy on water quality and resources can be monitored by measuring the following indicators:

- Changes in the water quality and ecological / chemical status of watercourses and water bodies in Bath & North East Somerset; and
- Changes in the quantitative status (i.e. water levels) of water bodies and watercourses in Bath & North East Somerset

The EA undertake an annual water quality monitoring programme for the main rivers, lakes, surface water and groundwater in the Severn River Basin District (of which Bath & North East Somerset is part of). This monitoring programme is a function of the WFD and will continue on until 2027 over three six-year cycles, the first of which ends in 2015. It assesses the current condition of watercourses and water bodies in England and Wales and identifies where improvements need to be made (Environment Agency 2009a). British Waterways also contributes to this monitoring programme. The Drinking Water Inspectorate (DWI) is responsible for regulating drinking water quality in England and Wales. The water suppliers Wessex Water and Bristol Water are responsible for monitoring the water quality of their sites and the environmental impacts associated with their activities. They also must provide monthly reports to the DWI.

It is anticipated that current and future monitoring programmes would sufficiently monitor any potential effects on water quality and resources arising from the implementation of the Local Flood Risk Management Strategy. These monitoring programmes are completed by other organisations outlined above and not Bath & North East Somerset. However, the sharing of information will ensure that Bath & North East Somerset will be informed of any adverse effects identified.

5.2.2 Flood Risk

Baseline Conditions

Information on current baseline conditions for flood risk in Bath & North East Somerset was collected and presented in Section 4.2 of the Scoping Report. Since the Scoping Report, the Surface Water Management Plan has been produced along with the Level 2 Strategic Flood Risk Assessments for Bath (Captia Symons, 2009a and 200b), Keynsham (Capita Symonds 2009c), Midsomer Norton and Radstock (Capita Symonds 2009c). The paragraphs below provide a summary of the flood risk in Bath & North East Somerset:

According to the Preliminary Flood Risk Assessment (PFRA) river flooding accounts for approximately 82% of the total recorded flood incidents in Bath & North East Somerset. Surface water flooding is estimated to account for the remaining 18% (Bath & North East Somerset, 2011).

The main areas listed in the Bath & North East Somerset SWMP affected by surface water flooding are Chew Magna, West Harptree, Compton Martin, Priston and Midsomer Norton. The SWMP identifies 57 Wet Spots in Bath & North East Somerset where action is required to address flood risk.

Critical areas at risk from flooding from main rivers, sewers, surface water, groundwater and artificial sources are Bath, Keynsham, Midsomer Norton and Radstock.

Assessment Results

Likely Effects

There are likely to be significant direct, positive effects on flood risk management in Bath & North East Somerset arising from the implementation of the Local Flood Risk Management Strategy. The Local Flood Risk Management Strategy proposes actions to greatly increase the understanding of, and response to, flood risk within Bath & North East Somerset, and control flood risk through structural measures as well as improved water resources management. The effect is likely to be felt through the Bath & North East Somerset Area in the long term. It should be noted that there is uncertainty over whether water resources will be consistently managed across the district to reduce flood risk. As noted in Section 3.5 of the Local Flood Risk Management Strategy, under common law, land or property owners are responsible for the drainage of their own land. Therefore it is not possible to guarantee

that landowners will take measures to control runoff rates in carrying out their land drainage practices.

The implementation of the Local Flood Risk Management Strategy could result in engineering schemes constructed within the flood plain; this could lead to negative in-direct effects on flood plain storage and flood water movement. This effect is not considered to be significant as the likelihood of its occurrence is very low considering the nature of the actions proposed in the Strategy. Any potential project effects would ensure any effects are mitigated via the implementation of flood risk assessments.

One of the Local Flood Risk Management Strategy Objectives is to prevent inappropriate development which creates or increases flood risk. The actions which achieve this objective will lead to a direct, positive, long term effect on flood risk management throughout Bath & North East Somerset.

This Local Flood Risk Management Strategy is being developed alongside similar planning initiatives to manage and alleviate flood risk (for example Multi-agency flood plans and Catchment Flood Management Plans developed by the Environment Agency for the River Avon), summarised in Section 1.6 of the Strategy. The cumulative effect of these cross agency initiatives being enacted in combination will cause the magnitude and probability of effects upon flood risk to be increased, with resulting collective improvements in flood risk management on a regional scale.

Proposed Mitigation Measures

As the potential significant effects arising from the implementation of the Local Flood Risk Management Strategy on flood risk are all positive, it is not necessary to propose mitigation measures.

Proposed Monitoring

The actual effects arising from the implementation of Local Flood Risk Management Strategy on flood risk can be monitored by measuring the following indicators:

- Changes in the number of incidences of flooding in Bath & North East Somerset and their sources;
- Changes in the number of residential or non-residential properties and critical services at risk of flooding;

- Number of flood defence schemes developed;
- Number of Sustainable Drainage Schemes (SuDS) implemented since the publication of Local Flood Risk Management Strategy

The monitoring will be completed by Bath & North East Somerset Drainage and Flooding Team and other organisations such as the Environment Agency. If any adverse effects are identified by other organisations or individuals, Bath & North East Somerset FRM and Drainage Team will be informed, for example through the Local Resilience Forums or Strategic Flood Board & Operational Working Group that are being set up as part of the Local Flood Risk Management Strategy.

5.2.3 Population and Human Health

Baseline Conditions

Information on current baseline conditions for population and human health in Bath & North East Somerset was collected and presented in Section 4.3 of the Scoping Report. This information has been updated where applicable in the following paragraphs:

The 2011 census states that the population of Bath & North East Somerset is approximately 179,700 residents. Extrapolating from recent population increases, it is anticipated that the population of Bath & North East Somerset will rise by 12% to 198,800 people by 2026. Bath & North East Somerset has a higher population density than the rest of the south west of England and England as a whole (South West Observatory, 2012). The most densely occupied wards are in Bath (i.e. Abbey, Westmorland, Kingsmead and Walcot).

The health profile of Bath & North East Somerset is positive when compared to the national health profile of England. Bath & North East Somerset is also considered to be one of the least deprived authorities in England. However the areas of Twerton West, Whiteway, Twerton, Fox Hill North and Whiteway West are considered deprived areas when looking at a more local scale (Bath & North East Somerset, 2011).

Assessment Results

Likely Effects

There are likely to be significant, permanent direct benefits from implementation of the Local Flood Risk Management Strategy on human health in Bath & North East Somerset. Effects will result from the improved management of flood risk and better education regarding property level flood protection measures. This in turn will result in less flood events causing significant property damage which can be stressful and potentially lead to injury.

There will also be positive, medium magnitude effects from the indirect effects of flooding through the improved management of sewer flooding preventing the risk of untreated water entering homes which could lead to ill health. Reducing flooding in areas could mean that the risk of potable water supplies being affected is minimised.

Proposed Mitigation Measures

As the potential significant effects arising from the implementation of the Local Flood Risk Management Strategy on population and human health are all positive, it is not necessary to propose mitigation measures.

Proposed Monitoring

Population and human health can be monitored by measuring the following indicators:

- Changes in the occurrence and severity of flooding events;
- Changes in the number of residential and commercial properties at risk of flooding;
- Changes in the number of flood related health issues, injuries and fatalities.

It is anticipated that current and future monitoring programmes would sufficiently monitor any potential effects on population and human health arising from the implementation of the Local Flood Risk Management Strategy. These monitoring programmes will be completed by other organisations as well as Bath & North East Somerset Drainage and Flooding Team.

5.2.4 Biodiversity and Landscape

Baseline Conditions

Information on current baseline conditions for biodiversity and landscape in Bath & North East Somerset was collected and presented in Section 4.3 of the Scoping Report. This baseline information has been updated following changes to the local planning framework and the implementation of the Post-2010 Biodiversity Framework', (2012) which has succeeded the UK Biodiversity Action Plan. The paragraphs below provide a summary of the identified receptors.

Landscape Character

Bath & North East Somerset is a richly varied District in the South West of England. It stretches from the edge of Bristol, south into the Mendip Hills and east to the southern Cotswolds Hills and Wiltshire border. Over 90% of the district is rural and it contains 47 rural parishes.

The District's main urban centre is the city of Bath which is a key economic centre and a World Heritage Site, designated for its rich cultural and built heritage.

Keynsham is a significant town in Bath & North East Somerset which has retained its identity and is surrounded by countryside and is protected by the Bristol / Bath Green Belt.

The Somer Valley houses around 25% of the population of Bath & North East Somerset and covers the urban areas of Midsomer Norton, Westfield and Radstock, together with a rural hinterland containing the principal villages of Peasedown, St John and Paulton. The Somer Valley was formally part of the North Somerset Coalfield and retains a rich industrial heritage.

Areas of Outstanding Natural Beauty (AONB)

Approximately one third of Bath & North East Somerset is within the Cotswolds AONB and Mendip Hills AONB.

Habitats and Species

Bath & North East Somerset Planning Services has a key role in protecting and enhancing the environment through the Wildthings Partnership. The partnership has developed a long list of species and habitat within Bath & North East Somerset. The short list of priority

habitats and species in Table 5.6 has been agreed with the Species and Habitats Working Group.

Table 5.6: Short list of Priority Species and Habitats

<u>Species</u>	<u>Habitats</u>
• All bat species • Bath asparagus • Bee-fly • Blue carpenter bee • Chalkhill blue butterfly • Dormouse • Great crested newt • Red hemp-nettle • Skylark • Water vole • White clawed crayfish	• Ancient and / or species rich hedgerows • Broadleaved woodlands • Post-industrial sites • Species-rich arable farmland • Species-rich grassland

Statutory Nature Conservation Sites

Designated sites within Bath & North East Somerset include;

- The Bath and Bradford on Avon Bats Special Area of Conservation (SAC)
- North Somerset and Mendip Bats SAC
- Chew Valley Lake Special Protection Area (SPA)
- 22 Sites of Special Scientific Interest (SSSI),
- Seven Local Nature Reserves.

According to the PFRA (Bath & North East Somerset, 2011):

- The Chew Valley Lake SPA and three SSSIs are at risk from future groundwater flood events;

- The Bath and Bradford on Avon and North Somerset and Mendips Bat SACs, the Chew Valley Lake SPA and 17 SSSIs are at risk from surface flooding in a 1 in 200 year (annual probability of occurrence) event.
- The Chew Valley Lake SPA and six SSSIs are at risk from flooding from ordinary watercourses in a 1 in 100 year (annual probability of occurrence) event.

Ancient Woodlands

Ancient woodlands are found in scattered locations across Bath & North East Somerset. They account for approximately 1.1% of the total area.

Green Belt

Approximately two thirds of the overall area of Bath & North East Somerset is classed as the Avon Green Belt. The Green Belt circles the city of Bath and protects the setting of the World Heritage Site. Keynsham is isolated from Bristol by the Bristol/Bath Green Belt.

5.2.5 Assessment Results

Likely Effects

There are unlikely to be any significant effects from the implementation of the Local Flood Risk Management on the landscape of Bath & North East Somerset or the AONBs. This is due to the fact that the proposed actions which may lead to engineering schemes are of a very small scale and are likely to be located within highways and therefore the probability and magnitude of any effect is considered to be very low.

There could be negative effects on species and their habitats through the implementation of engineering schemes. These effects could be either very short term (e.g. dispersal, damage or death) to medium term (e.g. loss of bat commuting corridor whilst reinstatement planting stabilises) and could affect species of medium sensitivity; however, negative effects would be a low probability and magnitude considering the limited scale of the engineering schemes which are likely to occur through the implementation of the Strategy.

There are likely to be positive, long term effects on biodiversity associated with the implementation of the Local Flood Risk Management Strategy. The use of natural flood alleviation measures such as SuDS will provide direct opportunities to develop new habitats and enhance biodiversity across the district, with associated positive effects of medium magnitude. This will enable a more sustainable approach to flood risk management and an

effective use of resources in Bath & North East Somerset – i.e. coupling flood risk management with improvements in biodiversity.

There will be significant positive effect on statutory nature conservation sites from measures to manage flood risk as part of the Local Flood Risk Management Strategy. The statutory nature conservation sites within Bath & North East Somerset are of medium sensitivity and it is known from the PFRA that many of the SSSIs, the Chew Valley SPA, the Bath and Bradford on Avon Bats SAC and the North Somerset and Mendip Bats SAC are at risk from local flooding; therefore the probability of permanent positive effects is high and magnitude is medium.

Managing flood risk could lead to a positive, long term effect from reduction in the risk of pollution entering watercourses indirectly i.e. from highways which can often be sources of hydrocarbon pollutants or from sewer floods. The probability of this effect being realised is high as the actions in the Local Flood Risk Management Strategy are focussed around highway flooding issues and sewer flooding.

Proposed Mitigation Measures

Any significant engineering schemes will require consent, a proportionate environmental assessment and potentially a statutory Environmental Impact Assessment (EIA) before commencement. The need for a statutory EIA will be decided via a screening exercise to determine the likelihood of significant impacts resulting from a scheme.

Natural England as part of their consultation response to the draft Environmental Report specified the following principles are adopted that to ensure there will be no significant impacts resulting from engineering schemes:

- For each engineering project, consideration of what structures or assets may be affected (disturbed, altered or removed) will be conducted. Liaison will be then be held with the Bath & North East Somerset's ecologist or Natural England if they have the potential to house roosting bats.
- For each engineering project, consider what vegetation will need to be removed or cleared and liaise with the Bath & North East Somerset's ecologist or Natural England if the vegetation could be suitable for roosting bats (eg mature trees or shrubs adjacent to a water course or adjacent to an asset or structure which may be used by bats) or where removal of vegetation could lead to a gap in a linear feature

for bats which they are using to commute to foraging areas (e.g. trees or shrubs which form a linear feature so that there will be a gap in the linear feature following their removal.

If any impacts are identified, mitigation strategies will be developed to ensure that there are no residual effects on species and habitat, for example by avoiding the area or through ecological supervision.

Although effects are considered unlikely, if engineering schemes are required in the AONBs, the respective AONB partners must be consulted in order to ensure that no potential negative impacts on Bath & North East Somerset's landscape character and AONBs occur.

Proposed Monitoring

Biodiversity can be monitored by measuring the following indicators:

- Numbers and distributions of the short list of Priority Species and Habitats;
- Status of SACs, SPA, SSSIs, Ancient Woodlands and Nature Reserves within Bath & North East Somerset; and
- Number of designated sites potentially at risk from future flood event.

It is anticipated that current and future monitoring programmes would sufficiently monitor any potential effects on biodiversity and landscape character arising from the implementation of the Local Flood Risk Management Strategy. These monitoring programmes will be completed by organisations such as Natural England and the Bath & North East Somerset Planning Department.

Predicted impacts on the designated cultural heritage sites which form part of the landscape character of Bath & North East Somerset will be monitored using the impacts described in Section 5.2.6.

The monitoring of AONBs is set out in the management plans produced by the respective AONB partnerships for the Cotswolds and Mendip Hills.

5.2.6 Cultural Heritage

Baseline Conditions

Information on current baseline conditions for cultural heritage in Bath & North East Somerset was collected and presented in Section 4.5 of the Scoping Report. English Heritage (now Historic England) felt that the baseline conditions given in the Scoping Report required further development (as noted in the comments on the Scoping Report provided in Appendix A. Therefore the baseline conditions have been reviewed below and a new plan has been produced to show the geographical spread of cultural heritage features within the district; the plan is provided in Appendix D.

Bath World Heritage Site

The city of Bath was designated in 1987 as a UNESCO World Heritage Site owing to its special culture and historic interest. The City of Bath World Heritage Site Management Plan (The City of Bath World Heritage Site, 2010) seeks to protect the Outstanding Universal Value of the site and its setting. The significance of the World Heritage Site derives from the city's Hot Springs, its Roman Archaeology, Georgian Town Planning; Georgian Architecture; and the green setting of the City within a landscape bowl. The World Heritage Site status provides the city of Bath with international importance and all proposed plans, programme and projects must ensure that its historical and cultural features are not undermined. According to the PFRA, the World Heritage Site is at risk from surface water, ordinary watercourse and groundwater flooding (Bath & North East Somerset 2011).

Conservation Areas

There are 36 designated Conservation Areas in the Bath & North East Somerset district. These are listed in Table 5.7 below.

Conservation Areas are '*areas of special architectural or historic interest, the character or appearance of which it is desirable to preserve or enhance*' - Planning (Listed Buildings and Conservation Areas) Act 1990. Planning permission is required for certain external works to dwellings which would not normally be required elsewhere. Consent is also required for tree works in Conservation Areas. .

Table 5.7 Conservation Areas in Bath & North East Somerset

Bath	Fresford (incl Sharpstone)	Queen Charlton
Bathampton	Hinton Blewett	Radstock (incl. Braysdown/ Clandown)
Batheaston (incl. Northend)	Hinton Charterhouse	Saltford
Bathford	(incl. The Green)	Southstoke
Charlcombe	Kelston	Stanton Drew
Chew Magna	Keynsham (Dapps Hill)	Timsbury
Chew Stoke	Keynsham (High Street)	Ubley
Claverton	Midsomer Norton & Welton	Upper Swainswick
Combe Hay	Monkton Combe	Wellow
Compton Martin	Newton St Loe	West Harptree
Corston	North Stoke	Woollard
East Harptree	Paulton (incl. Paulton Basin)	
Englishcombe	Pensford	

National Heritage Sites

There are a significant number properties and items in Bath & North East Somerset including in the National Heritage List for England (as shown on the plan in Appendix D). These can be divided into:

- 3,728 Listed Buildings
- 57 Scheduled Monuments
- 16 registered Parks and Gardens
- One Historic Battlefield

Historic England produces an annual ‘heritage at risk’ survey, which assesses the current condition of cultural interest features in England. The findings of this survey contribute to official government statistics. According to the risk register, a total number of 25 cultural heritage features in Bath & North East Somerset are considered to be ‘at risk’, i.e. in poor condition and vulnerable to further deterioration.

The PFRA, using data supplied by the Environment Agency, assessed the number of heritage sites at risk from future flood events in Bath & North East Somerset (excluding flooding from Main Rivers). The results of the assessment are given in Table 5.8.

Table 5.8 Potential Number of National Heritage Sites in Bath & North East Somerset at risk from future flood events in Bath & North East Somerset

Feature Potentially impacted	Data set		
	Flood Map for Surface Water 1 in 200 deep	Flood Map Zone 3 Ordinary Watercourses	Areas Susceptible to Groundwater Flooding
Scheduled Monument	18	3	4
Listed Building	148	11	597
Registered Parks and Gardens	10	1	5

Assessment Results

Likely Effects

Structural engineering schemes could result in a negative effect from direct damage to sites which are features of the World Heritage Site, or could lead to negative in-direct effects from changing the setting of these features. For example, without mitigation an engineering project could lead to damage of an unknown archaeological site leading to a direct, long term, high magnitude effect. The probability of this effect occurring is low as the wet spots where action is proposed in the World Heritage Site are within roads primarily. The setting of the landscape bowl of Bath could be affected by tree removal to enable a scheme. This effect is thought to have a low probability considering the nature of the proposed actions and the magnitude of change is very low as removing trees will not change the bowl shape of the City of Bath which is a geographical feature.

The World Heritage Site and its features will benefit from continued and increased protection from flooding. The effect will be highly probable and have a medium magnitude as areas in the centre of Bath where flood risk management measures are proposed lie within the World Heritage Site (e.g. Larkhall, Bathwick, South Twerton). There will be no discernible change to the flow or quality of groundwater resulting from the LFRMS which could lead to effects on the historic environment.

Engineering schemes could, if inappropriately implemented, lead to a negative impact on Conservation Areas in BANES which have a medium sensitivity. Engineering schemes are proposed in the following 12 Conservation Areas: Bath; Batheaston (incl. Northend); Bathford; Chew Magna; Chew Stoke; Keynsham; (Dapps Hill); Keynsham (High Street); Midsomer Norton & Welton; Paulton (incl. Paulton Basin); Radstock (incl. Braysdown/Clandown); Timsbury; and West Harptree. Effects from the disturbance to structures or removal of trees may occur, however any effects are considered to be insignificant, with a low probability and magnitude, considering the location of the wet spots where schemes may result and the likely scale of proposed works. .

There is likely to be a positive effect on National Heritage Sites arising from the implementation of the Local Flood Risk Management Strategy. A reduction in flooding and its severity would reduce the likelihood of damage to cultural heritage features (e.g. listed buildings, scheduled monuments and registered parks and gardens) occurring.

There is the potential for negative effects on cultural heritage features arising from the implementation of the Local Flood Risk Management Strategy. No scheduled monuments, registered parks and gardens or listed buildings are likely to be directly affected by structural engineering works. Nevertheless, vibration caused by construction activities at wet spots could potentially cause indirect damage to cultural heritage features (notably listed buildings) in proximity to proposed works. Any effect would be long term and of a high magnitude and probability.

There are also potential opportunities in relation to the historic environment which could be realised through the implementation of flood risk management measures, where initiatives to improve access, understanding or enjoyment of the historic environment could be included as part of scheme design and implementation. In a wider context the implementation of the strategy as part of an integrated cross agency approach to flood risk management could lead to an enhancement of the local character of Bath & North East Somerset. There are additional opportunities through the implementation of the strategy to increase public awareness and understanding of appropriate responses for heritage assets in dealing with the effects of flooding as well as the design of measures for managing flood risk and improving flood resilience. The wider integrated cross agency approach will also ensure the maintenance of the distinctiveness of historic townscapes and landscapes.

Proposed Mitigation Measures

Consents must be obtained from Bath & North East Somerset Planning Department prior to undertaking construction work for any engineering schemes which could affect Conservation Areas. In addition, Listed Building Consent is required where proposals are likely to affect a listed building. This procedure of obtaining consent will reduce the likelihood of construction works negatively impacting any cultural heritage features. A statutory Environmental Impact Assessment would be required for major works or works that could significantly impact a sensitive area.

Appropriate mitigation measures would be identified as part of consenting, for example, avoidance of the heritage asset or sensitive design and construction to complement the heritage offered by the site.

Proposed Monitoring

The effects of the Local Flood Risk Management Strategy on cultural heritage can be monitored by measuring the following indicator:

- Numbers of cultural heritage features at risk from flooding i.e. listed buildings, scheduled monuments, registered parks and gardens.

It is anticipated that current and future monitoring programmes would sufficiently monitor any potential effects on cultural heritage arising from the implementation of the Local Flood Risk Management Strategy. These monitoring programmes will be completed by the Environment Agency and not Bath & North East Somerset. However, Bath & North East Somerset will be notified if any adverse effects are identified.

5.2.7 Climatic Factors

Baseline Conditions

Information on current baseline conditions for climatic factors in Bath & North East Somerset was collected and presented in Section 4.3 of the Scoping Report. The paragraphs below provide a summary of the identified receptors.

Climatic Factors

By 2050 (South-West England) under the medium emissions scenario (UK Climate Change Projections 2009) the following changes in climatic factors are predicted:

- Average summer temperature to increase by 2.7°C;
- Average winter temperature to increase by 2.1°C;
- Average summer rainfall rate decrease by 20%; and
- Average winter rainfall rate to increase by 17%.
- Sea level at Cardiff Bay and the Severn Estuary is predicted to rise by 21.8cm.

Climate change is likely to result in an increase in the occurrence of more extreme flood events across the UK. Climate change may indirectly result in water scarcity issues as a consequence of decreased rainfall levels and increased temperature in the summer time.

It is noted that the Local Flood Risk Management Strategy will be implemented over the course of the next ten years, and therefore it is unlikely that many of the predicted climatic changes noted above will be realised within this timeframe.

Carbon Footprint

The carbon footprint of Bath & North East Somerset in 2008 was calculated to be over 1 million tonnes of CO₂ (or 5.8 tonnes of CO₂ per person). This had dropped by 7.9% since 2005 despite an increase in population size (Bath & North East Somerset, 2009).

Assessment Results

Likely Effects

There is unlikely to be any effects on climatic factors from the implementation of the Local Flood Risk Management Strategy.

The Local Flood Risk Management Strategy includes actions to ensure that development takes into account the potential risk of changes in climatic factors for example, the

promotion of SuDS which could manage increased surface run off from potential increased frequency of extreme weather events.

Proposed Monitoring

Impacts on climatic factors will be monitored through the future updates of the Local Flood Risk Management Strategy, which will consider any changes in flood risk in Bath & North East Somerset and the latest government climate change predications.

5.2.8 Material Assets

Baseline Conditions

Information on current baseline conditions for material assets in Bath & North East Somerset was collected and presented in Section 4.3 of the Scoping Report. The paragraphs below provide a summary of the identified receptors.

Housing

There is a shortage of housing in Bath & North East Somerset which is due to be met by the construction of 11,205 new dwellings to be built by 2026.

Economy

The 2011 census reveals that 5.5% of the local working population are unemployed which is very slightly less than the national average which was 5.6% from April 2015 to June 2015 (Office of National Statistics, 2015)

The majority of employed people living in Bath & North East Somerset work in public sector related activities, with other important sectors being retail, leisure and tourism. This is to be expected due to the rich cultural heritage of Bath.

The large majority of people working in Bath & North East Somerset do so in Bath, with others working in rural areas and Keynsham.

Mineral Resources and Extraction

Bath & North East Somerset is geologically complex with a number of bedrock types. The main commercial mineral extracted in Bath & North East Somerset is limestone. One mine is currently active near Limpley Stoke and one has been stabilised near Combe Down. There are also coal resources which could be extracted using surface mining techniques. There are two designated Mineral Consultation Areas in Bath & North East Somerset which

are safeguarded from development that could negatively impact the commercial value of the mineral resource.

Soils

The main soil type in Bath & North East Somerset is clayey soils with a high organic content. These soils are characteristic of poorly drained area and have an inherent risk of agricultural run-off. Also present are well drained calcareous soils which have a low risk of agricultural run-off. Pockets of slowly permeable calcareous clayed soils, reddish loamy soils and Strategic Environmental Assessments on ally waterlogged fine loam clayey soils are also found.

Waste Management

Currently there are two waste transfer stations, one railhead, two materials recycling facilities, three recycling centres and two refuse collection and cleaning depots. At present, Bath & North East Somerset does not dispose of any of its waste in the local authority area and instead the waste is compacted at the waste transfer station in Bath and transferred to landfills in Buckinghamshire, Somerset, South Gloucestershire, Somerset and Wiltshire.

Transport Infrastructure

The city of Bath is accessible by bus and car via the A4, A36 and A46 and links are provided to the M4 motorway via the A46. To the southwest of Bath the A368, A39 and A367 are major roads. Bath & North East Somerset has a good rail service covering the north, north-east and east.

Assessment Results

Likely Effects

The Local Flood Risk Management Strategy will improve the flood risk management in areas allocated for development in the Core Strategy (Bath & North East Somerset, 2014). This will lead to a positive, long term effect on the delivery of housing.

The effective management of flood risk in Bath & North East Somerset will lead to positive, long term, medium magnitude effects on the local economy through increasing confidence for new investments and expansion. Managing flood risk will also allow the continued extraction of minerals at Limpley Stoke. This effect is of a high probability and magnitude.

There are unlikely to be significant effects upon fertility of agricultural fields from reduced flooding. This is because the implementation of actions to address wet spots will not affect the amount of flooding in agricultural fields as they are primarily targeted in areas where flooding affects highways. In addition any effects from soil erosion are not likely to be significant as the magnitude of change will be very low following the implementation of the strategy and there is a very low probability of the effect occurring.

There will be positive, direct effects upon waste management through the management of flood risk in Bath, Midsomer Norton and Keynsham, as waste management sites will be able to continue operating.

Further positive effects will result from effective flood risk management throughout the road infrastructure throughout Bath & North East Somerset. Reducing the amount and duration of road closures during flooding will enable the population to mobilise throughout the county maintaining society. This effect is likely to occur as the wet spots are located on highways so is of a high probability. Not all the roads in Bath & North East Somerset are affected so the magnitude of change will be low.

Proposed Mitigation Measures

As the potential significant effects arising from the implementation of the Local Flood Risk Management Strategy on population and human health are all positive, it is not necessary to propose mitigation measures.

Proposed Monitoring

Material Assets can be monitored by measuring the following indicators:

1. Changes in the numbers/area at flood risk of properties; land and transport infrastructure.

It is anticipated that current and future monitoring programmes would sufficiently monitor any potential effects on material assets arising from the implementation of the Local Flood Risk Management Strategy. The monitoring programmes will be completed by other organisations as well as Bath & North East Somerset Drainage and Flooding Team.

6 Compatibility testing between Local Flood Risk Management Strategy and Strategic Environmental Assessment objectives

6.1 Introduction

Testing the compatibility of the Local Flood Risk Management Strategy objectives against the Strategic Environmental Assessment objectives falls into Stage B of the Strategic Environmental Assessment process (Task B2). It helps to identify any potential synergies or inconsistencies between the Local Flood Risk Management Strategy and Strategic Environmental Assessment objectives.

A compatibility assessment has been performed during development of the Local Flood Risk Management Strategy to determine how compatible the Local Flood Risk Management Strategy objectives are with the Strategic Environmental Assessment objectives.

6.2 Testing the compatibility of Local Flood Risk Management Strategy objectives against Strategic Environmental Assessment objectives

The compatibility of the Local Flood Risk Management Strategy objectives (listed in Section 1.1) is discussed in relation to each of the Strategic Environmental Assessment objectives below. Table 6.1 summarises the compatibility assessment.

SEA Objective 1: Protect and enhance the ecological and chemical status of watercourses and water bodies in BANES in accordance with Water Framework Directive, whilst promoting the sustainable use of water as a natural resource

As noted in Section 3.5 of the Local Flood Risk Management Strategy, under Objective 2 to promote community awareness and build capability for appropriate action, *all property and land owners are encouraged to adopt good land use practices and adequately maintain their drainage systems to avoid surface-water runoff from causing problems for neighbouring property and land.* This measure would have the additional benefit of protecting and enhancing the ecological status of water bodies that might surface water would subsequently flow into. Nevertheless, as also noted in Section 3.5 of the Local Flood Risk Management Strategy, under common law, land or property owners are responsible

for the drainage of their own land. Therefore it is not possible to guarantee that landowners will take measures to protect the quality of waterbodies in carrying out their land drainage practices, which may result in the Local Flood Risk Management Strategy and Strategic Environmental Assessment objectives being incompatible in this instance.

It is assumed that the Council in its capacity as Planning Authority or Lead Local Flood Authority will ensure that capital works or maintenance implemented by the Council, its partners or developers under Local Flood Risk Management Strategy Objectives 3 and 4 are done in compliance with the Environment Agency's Pollution Prevention Guidelines. This measure will ensure compliance with the Strategic Environmental Objective to protect and enhance water quality of watercourses and waterbodies, and thereby ensuring compatibility of objectives.

SEA Objective 2: Understand and manage flood risk from ordinary watercourses, surface water runoff, groundwater and artificial sources within BANES

All of the Local Flood Risk Management Strategy objectives relate to maintaining and improving flood risk management, so it is anticipated that these will be compatible with this Strategic Environmental Assessment objective to a large extent. The only area of possible non-compliance is for drainage of properties and land. As noted for Objective 1 above, land and property owners are responsible for drainage of their own land, so it cannot be guaranteed that flood risk from surface runoff will be managed effectively.

SEA Objective 3: Maintain and enhance a positive health profile for BANES

All of the Local Flood Risk Management Strategy objectives are compatible with this Strategic Environmental Assessment objective as they all offer opportunities to enhance the health and wellbeing of people living and working in BANES. The actions to be implemented under the Local Flood Risk Management Strategy will improve the management of flood risks, which will lead to reduced stress, injury and / or ill health caused as a result of actual flooding or the perceived risk of flooding.

SEA Objective 4: Protect and enhance biodiversity and geodiversity across BANES especially in relation to statutory and non-statutory designated sites. Special consideration to be given to priority species

Only the Local Flood Risk Management Strategy objectives with proposed structural actions for capital work or maintenance (Objectives 3 and 5) are related to this Strategic Environmental Assessment objective, as they have potential to cause direct effects upon biodiversity and geodiversity. It is determined that through the good practice measures and mitigation that are proposed (identified in Section 5), diversity will be protected and enhanced, and these objectives will be mutually compatible.

SEA Objective 5: Maintain and enhance characteristic landscape features, with special emphasis on the landscape features of AONBs located within BANES

As with the biodiversity and geodiversity objective above, only the Local Flood Risk Management Strategy objectives with proposed actions for capital work or maintenance (Objectives 3 and 5) are relevant. As above, through the proposed good practice measures and mitigation, landscape features be maintained and enhanced, and these objectives will be mutually compatible.

SEA Objective 6: Protect and enhance features that define the cultural heritage of BANES (i.e. listed buildings, scheduled monuments and registered parks and gardens)

As above, through the proposed good practice measures and mitigation identified to protect and enhance cultural heritage assets, the objectives of the Local Flood Risk Management Strategy that propose structural works will be compatible with and this Strategic Environmental Assessment.

SEA Objective 7: Manage, plan and adapt for the impacts of climate change

There is clear compatibility of this Strategic Environmental Assessment objective and Local Flood Risk Management Strategy Objectives 3, 4 and 5, as several of the actions to be implemented these Local Flood Risk Management Strategy objectives will take account of the possible impacts of climate change.

SEA Objective 8: Ensure that new development in BANES is located with respect to the sequential test

This objective is directly compatible Local Flood Risk Management Strategy objective 4, which aims to prevent inappropriate development that creates increased flood risk. Local Flood Risk Management Strategy Objectives 1 and 2 are also compatible, as they seek to raise community awareness of flood risks through greater data availability and community-led forums; this greater awareness will encourage individuals and developers to target proposals for development in areas with lower risk of flooding.

SEA Objective 9: Maintain and enhance accessibility to essential services across BANES by providing an efficient transport infrastructure.

Local Flood Risk Management Strategy Objective 2 is compatible with this Strategic Environmental Assessment objective as the Local Highways Authority can issue notice under Section 163 of the Highways Act to adjoining occupiers to take measures to prevent, so far as is reasonably practicable, surface water from the premises flowing onto, or over, the footway of the highway.

Proposed capital works and maintenance actions to alleviate flooding under Local Flood Risk Management Strategy Objective 3 will improve accessibility to essential services in floodplain areas, and thereby ensure compatibility of this objective. In addition, it is anticipated that Local Flood Risk Management Strategy objective 4 will also be compatible as new development will incorporate Sustainable Drainage Systems where necessary to avoid increased flood risk to essential services and infrastructure.

SEA Objective 10: Protect and enhance high quality agricultural land across BANES.

In a similar way to Strategic Environmental Assessment Objective 9 above, it is anticipated that Local Flood Risk Management Strategy Objectives 3 and 4 will be compatible with this objective, as they will incorporate measures to reduce flooding and minimise runoff from new development. Nevertheless, as noted for Objective 1 above, land and property owners are responsible for drainage of their own land, so it cannot be guaranteed that flood risk from surface runoff to agricultural land will be managed effectively.

Table 6.1 Compatibility of the Strategic Environmental Assessment objectives and Local Flood Risk Management Strategy Objectives

SEA OBJECTIVE \ LFRMS OBJECTIVE	1 Improve understanding of local flood risk	2 Promote community awareness and build capability for appropriate action	3 Manage local flood risk through capital /maintenance investment	4 Prevent inappropriate development that creates or increases flood risk	5 Improve flood preparedness, warning and ability to recover
1 Protect and enhance the ecological and chemical status of watercourses and water bodies in BANES	0	+/-	+	+	0
2 Understand and manage flood risk	+	+/-	+	+	+
3 Maintain and enhance positive health profile for BANES	+	+	+	+	+
4 Protect and enhance biodiversity and geodiversity	0	0	+	+	0
5 Maintain and enhance characteristic landscape features,	0	0	+	+	0
6 Protect and enhance features that define the cultural heritage of BANES	0	0	+	+	0
7 Manage, plan and adapt for the impact of climate change.	0	0	+	+	+
8 Ensure that new development in BANES is located with respect to the sequential test.	+	+	0	+	0
9 Maintain and enhance accessibility to essential services across BANES by providing an efficient transport infrastructure.	0	+	+	+	0
10 Protect and enhance high quality agricultural land across BANES.	0	+ / -	+	+	0

Key

0	Not related
+	Compatible
+/-	Compatibility depends on implementation

6.3 Overall Compatibility

Several of the Local Flood Risk Management Strategy objectives were found to be unrelated to the Strategic Environmental Assessment objectives; particularly those that are linked with non-structural actions such as raising public awareness of flood risks. The majority of related Local Flood Risk Management Strategy objectives and Strategic Environmental Assessment objectives are compatible and will ensure maintenance and enhancement of environmental features whilst promoting structural works to manage flood risk. For Local Flood Risk Management Strategy Objective 2, as good land use practices to control runoff cannot be guaranteed, there is potential that compatibility will depend upon how this action is implemented by landowners.

7 Conclusion

7.1 Likely Environmental Effects Identified

The Strategic Environment Assessment has been undertaken alongside the development of the Local Flood Risk Management Strategy, as is described in Section 2. This has enabled the Strategy to develop the most environmentally acceptable objectives and actions, which are within the final Strategy document. This is evident in Section 5 of this report where the only significant negative impacts likely to arise from the Strategy are from any engineering schemes which could lead to effects on water resources, habitats and species and cultural heritage assets. Where engineering schemes are proposed, project level environment assessment will be undertaken to determine if impacts are likely and whether any mitigating actions are required. Through the numerous actions proposed to identify and manage flood risk, the Strategy is likely to result in a variety of positive effects on water quality, flood risk, human health, statutory nature conservation sites, cultural heritage sites, housing, economy, waste management and infrastructure.

Cumulative positive effects upon flood risk management are anticipated as this Local Flood Risk Management Strategy is being developed alongside similar planning initiatives to manage and alleviate flood risk (for example Multi-agency flood plans and Catchment Flood Management Plans). In addition, good communication, collaboration of efforts and information sharing between partners within and outside Bath & North East Somerset will lead to cumulative positive effects upon water quality and resources for the entire Bristol Avon.

7.2 Limitations Encountered

Limitations encountered during this Strategic Environmental Assessment process are outlined in Table 7.1 along with the proposed actions taken to reduce their potential effect. Implementation of these actions will increase the strength of this assessment. Section 1.3 details general limitations of the Strategic Environmental Assessment process.

Table 7.1 Limitations encountered during the Strategic Environmental Assessment process and actions taken to reduce the effects of these

Strategic Environmental Assessment Task	Limitation	Effect of limitation	Action
Task A1: Review of Policies, Plans and Programmes (PPPs)	A thorough review has been completed of key PPPs; but this is unlikely to be definitive and it is possible that PPPs have been overlooked.	Omission of effects associated with missed PPPs (especially cumulative effects) may not be assessed.	Consultation process has addressed the possibility of gaps in the PPP review.
Task A2: Collecting baseline information	Gaps in current knowledge of Strategic Environmental Assessment topics.	Data gathered during scoping and preparing this report may be no longer relevant when Local Flood Risk Management Strategy is implemented.	Update baseline dataset when new information becomes available from: (a) Monitoring results.
Task B6 and E1: Measures to monitor effects of Local Flood Risk Management Strategy	It may be difficult to ascertain changes in the future baseline attributable to the implementation of the Local Flood Risk Management Strategy.	A limited monitoring programme is proposed by Bath & North Somerset Council, so there is potential that it may not determine effects fully.	Good communication, and information sharing, across partners and the public will identify, and make available, all relevant monitoring programmes that may support the Strategy.

7.3 Wider Environmental Benefits

Measures that incorporate natural processes into flood risk management such as Sustainable Drainage Systems (SuDS) will be promoted through the implementation of the Local Flood Risk Management Strategy. The use of SUDs within any engineering scheme proposed could help to mitigate the potential negative impacts of the Strategy on biodiversity and lead to additional enhancements such as the creation of wetland areas. In addition, promotion of SuDS into new and existing developments in Bath & North East Somerset would offer opportunities to enhance biodiversity and water quality while managing flood risk, creating a more sustainable area.

7.4 Next Steps in the Local Flood Risk Management Strategy

The Local Flood Risk Management Strategy has been finalised. The monitoring programme outlined in this Strategic Environmental Assessment will be developed and implemented as part of the implementation of the Local Flood Risk Management Strategy. Should significant adverse effects upon environmental receptors be identified through monitoring or as part of the periodic review of the Strategy, the associated Action Plan may need to be revised to minimise effects.

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Appendix A Consultation Comments

Table A1 Scoping Report Consultation Comments

Consultee	Consultee Comments	Bath and North East Somerset Response
Environment Agency (July 2013; Dave Pring, Sustainable Places - Planning Specialist)	Overall the Environment Agency believed that the objectives in the Scoping Report were sufficiently broad enough to assess the impact of the Local Flood Risk Management Strategy on the environment.	No action required
	The report contained a significant number of statistics however; there was no clear linkage of the baseline environmental to the purpose of the strategy.	The baseline environment has been reviewed and updated as required.
	The Strategic Environmental Assessment should have a more defined understand of the process of soil erosion and the interactions/projected changes resulting from the Local Flood Risk Management Strategy.	The impacts from the Local Flood Risk Management Strategy on soil erosion have been considered in Section 5.2.8
	More information should be included on the impact of water resources management on flood risk within the study area.	Consideration of the effects on Water Resources is given in Section 5.2.1
	Further details will be required on how the Local Flood Risk Management Strategy will impact on individual species and habitats. The Environment Agency advice that the impact will need to be assess on a site by site basis.	Impacts from implementing engineering schemes on individual species and habitats are unknown at this strategic stage. EIA will be undertaken on projects as required and these will include detailed ecological assessments.
	Six river sections are associated with white clawed crayfish in Bath and North East Somerset. The Bath and North East Somerset ecologist is aware of some safe haven (Arc) sites for crayfish in the region and plans to introduce crayfish as part of the South West Crayfish Project.	White clawed crayfish are listed on the short list of notable species identified by the Wildthings Partnership. Any engineering scheme likely to have an impact on known Arc sites will ensure no impact on crayfish.

Consultee	Consultee Comments	Bath and North East Somerset Response
English Heritage (July 2013; Rohan Torkildsen)	Ensure that the latest data on flood risk is used in the Local Flood Risk Management Strategy.	The Flood Risk data used in the Local Flood Risk Management Strategy uses that gathered for our SWMP. Specifically, recorded Local Flooding incidents dating from 2009-2014 have been used to inform a Local Flooding Incident register. This info has been gathered from Council records, Wessex Water records and the Environment Agency.
	Consult with Bristol Water and Wessex Water on the surface water assessment.	Both organisations were consulted on the Surface Water Management Plan and are key stakeholders in the development of the Local Flood Risk Management Strategy.
	Scoping report requires further development as English Heritage believe that there are significant deficiencies in its content	Noted - The baseline section for the Cultural Heritage receptor has been completely rewritten in this Environmental Report (Section 5.2.6)
	Section 3 does not consider the NPPF, the emerging Bath and North East Somerset Strategy, World Heritage Site Legislation etc.	Relevant Plans, Policies and Programme and Environmental Legislation has been reviewed in Appendix B of this Environmental Report
	Section 4.5 provides limited commentary on Cultural Heritage	The baseline section for the Cultural Heritage receptor has been rewritten in this Environmental Report (Section 5.2.6)
	Table 4.7 fails to mention Conservation Areas, Historic Parks and Gardens and Registered Battlefields.	The baseline section for the Cultural Heritage receptor has been rewritten in this Environmental Report (Section 5.2.6)
	English Heritage provides guidance on how to prepare an Strategic Environmental Assessment in relation to the historic environment.	This guidance has been followed to in this Environmental Report (Section 5.2.6)
	Recommends that the Bath and North East Somerset Conservation and Archaeology teams are consulted on the baseline environment.	Local archaeological groups (e.g. Bath Heritage Watchdog, Bath Preservation Trust) were consulted on the draft Environmental Report.
	Recommends that local heritage groups and society are consulted.	Local heritage groups were consulted on the draft Environmental Report.

Consultee	Consultee Comments	Bath and North East Somerset Response
Natural England (July 2013; Amanda Grundy Lead Advisor, Sustainable Land Use)	Encourages Bath and North East Somerset to use the guidance from the Environment Agency on the preparation of the Local Flood Risk Management Strategy	The Environment Agency is a key stakeholder in the Local Flood Risk Management Strategy. They are part of our Operational Flood Working Group and Strategic Flood Board and have been consulted fully on our draft Local Flood Risk Management Strategy.
	Generally satisfied that the Scoping Report is based on robust evidence and information and it demonstrates a reasonable understanding of the context of the strategy in terms of relevant key issues and trends for water management.	No action required
	Expects consideration of the Core Strategy modifications will be taken into account as part of the Local Flood Risk Management Strategy.	Core Strategy Policy CP5 is concerned with Flood Risk Management and utilises a sequential approach to development. This approach is backed up in the development sections of the Local Flood Risk Management Strategy and Surface Water Management Plan.
	Encourage Bath and North East Somerset to consider any emerging or adopted Local Plans or programme of neighbouring authorities and water companies. This will enable the Local Flood Risk Management Strategy to contribute to any actions proposed to avoid / mitigate adverse effects elsewhere on the natural environment.	Relevant Plans, Policies and Programme and Environmental Legislation has been updated and reviewed in Appendix B of this Environmental Report The emerging Placemaking Plan includes a specific policy on the prioritisation of sustainable drainage systems all major new development. Wessex Water and Bristol Water are part of the Strategic Flood Board and our Drainage and Flooding team are part of the West of England Flood risk Working Group.
	Expect green infrastructure to feature strongly in the Local Flood Risk Management Strategy.	The Local Flood Risk Management Strategy includes a section on development, highlighting the Council's policy to prioritise sustainable drainage systems that may include Green Infrastructure.

Table A2 Specific Comments Provided on the Draft Environmental Report during the Consultation Exercise

Consultee	Consultee Comments	Bath and North East Somerset Response
Heritage England Rohan Torkildsen Planning Adviser for the South West and West Midlands	The emerging LFRMS and its associated SEA, of particular interest to Historic England for the following reasons: The vulnerability of most heritage assets (designated and non-designated) to flooding, including occasional flooding, and the potential harm to or loss of their significance. The potential impact of flood risk management measures on heritage assets and their settings, and including impacts on water-related or water-dependent heritage assets. The potential impact of changes in groundwater flows and chemistry on preserved organic and palaeo-environmental remains. Where groundwater levels are lowered as a result of measures to reduce flood risk this may result in the possible degradation of remains through de-watering, whilst increasing groundwater levels and the effects of re-wetting could also be harmful. The opportunities for conserving and enhancing heritage assets as part of an integrated approach to flood risk management and catchment based initiatives, including sustaining and enhancing the local character and distinctiveness of historic townscapes and landscapes. The opportunity for increasing public awareness and understanding of appropriate responses for heritage assets in dealing with the effects of flooding as well as the design of measures for managing flood risk and improving resilience. The opportunities for improving access, understanding or enjoyment of the historic environment and heritage assets as part of the design and implementation of flood risk management measures.	The SEA content has been amended to include consideration of the opportunities referred to in the consultation response. A reference to any potential groundwater changes on remains is also included.

Consultee	Consultee Comments	Bath and North East Somerset Response
Tony Crouch City of Bath World Heritage Site Manager Bath & North East Somerset Council	The glossary in the Strategic Environmental Assessment relating to World Heritage Sites is inaccurate. The following amendment was suggested: <i>Current: A natural or man-made site, area or structure recognised as being of outstanding international importance and therefore as deserving special protection. Sites are nominated to and designated by the World Heritage Convention (an organisation of UNESCO).</i> <i>Suggested replacement: A cultural or natural site deemed to be of outstanding universal value, the protection of which is important to all humanity. Sites are nominated globally by the United Nations Educational, Scientific and Cultural Organisation (UNESCO) who also put in place operational guidelines for management and protection.</i>	The Glossary in this final Environmental Report has been changed to use the replacement text suggested.
A private consultee	The strategy barely gives a mention to cross agency working re the EA responsibilities with the River Avon. That is a key strategic environmental issue, so why not?	Cross agency working is referred to more strongly in the flood risk section.
The London Road and Snow Hill Partnership	In response to the question 7a) Is the assessment of the environmental impacts adequate? The partnership responded: <i>"As a baseline now but does not take account of change of climatic factors by 2050 (guestimates) page 49.</i> <i>How robust are the latter estimates ?"</i>	The climate change section has been added to note that the Local Flood Risk Management Strategy covers a ten year period and therefor it is unlikely that it is noted that the Local Flood Risk Management Strategy will be implemented over the course of the next ten years, and therefore it is unlikely that many of the predicted climatic changes will be realised within this timeframe. The estimates are given from the Adapting to Climate Change in England, A Framework for Action, 2008 document which overall objective is develop a robust and comprehensive evidence base about the impacts and consequences of climate change on the UK.

Consultee	Consultee Comments	Bath and North East Somerset Response
Natural England Alison Howell Lead Advisor Sustainable Development (Somerset, Avon, Wiltshire)	The comments provided relate mainly to protection of the interest features for which the Bath and Bradford on Avon Bat Special Area of Conservation (SAC) and North Somerset and Mendip Bats SAC are notified, i.e. Lesser and Greater Horseshoe Bats and Bechstein's bats, together with the habitat features which support them. Rivers and streams are important for bats as they provide a linear feature which the bats follow as a means of navigating their way through the countryside, foraging for food or commuting between different roosts. Natural England endorses the objectives of this Strategy. We welcome in particular the recognition of the importance of Green Infrastructure in developed areas, as a means of capturing surface water as well as performing other beneficial functions for people and ecology. It is our advice, on the basis of the material supplied with the consultation, that, in so far as landscapes, geology and soils are concerned, there are unlikely to be significant environmental effects from the proposed plan. One of the conclusions of the SEA is that engineering schemes will have the potential to have negative environmental impacts but there is an assumption that all engineering schemes will be assessed again at a project level once there is certainty that they will proceed. Our recommendation here is that some simple principles relating to protection of the SAC bats are put in place for all engineering projects so that the risk of a project going ahead without further assessment is addressed at the SEA stage. The recommended principles follow the points made above in relation to the LFRMS: - For each engineering project, consider what structures or assets may be affected (disturbed, altered, removed) and	The recommended principles have been included in the Biodiversity and Landscape section of this report.

Consultee	Consultee Comments	Bath and North East Somerset Response
	liaise with the Council's ecologist or NE if they have the potential to house roosting bats - For each engineering project, consider what vegetation will need to be removed or cleared and liaise with the Council's ecologist or NE if the vegetation consists of, eg mature trees or shrubs adjacent to a water course or adjacent to an asset or structure which may be used by bats; removal of mature trees or shrubs which form a linear feature so that there will be a gap in the linear feature following their removal.	

Appendix B Review of Relevant Plans, Plans and Programmes and Environmental Protection Legislation

Table B.1 International Policies, Plans, Programmes and Environmental Protection Legislation

Plan/Programme	Objectives and/or requirements of the plan or programme	How objectives and requirements might be taken into account in the Local Flood Risk Management Strategy
EU Floods Directive - Directive 2007/60/EC on the assessment and management of flood risks, 2007	<i>Overall objective:</i> Establish a common framework for assessing and reducing the risks that floods within the European Union pose to human health, the environment, cultural heritage, property and economic activity. <i>Requirements:</i> - By 2011, Member States must carry out a preliminary flood risk assessment (PFRA) on their river basins and associated coastal zones to identify areas where potential significant flood risk exists. The assessment and resulting categories assigned to river basins must be published and reviewed by December, 2018. - By December, 2013, flood hazard and flood risk maps must be developed for the identified areas where flood risks exist - By December, 2015, flood risk management plans must be drawn up for these zones. - These steps will be reviewed every six years, in a cycle coordinated and synchronised with the Water Framework Directive (WFD) implementation cycle.	The Local Flood Risk Management Strategy complements the objectives and requirements of the Directive. It aims to reduce and manage flood risk in Bath & North East Somerset, while considering the requirements of the WFD. It will refer to the findings of the Bath & North East Somerset PFRA, catchment management plan and the flood risk and hazard maps. Through its Strategic Environmental Assessment, the Local Flood Risk Management Strategy has considered any potential impacts arising from its implementation on human health, environment, property, cultural heritage and economic activity, while avoiding/mitigating where appropriate.
EU Water Framework	<i>Overall objective:</i> Establish a framework for the protection of inland surface	The Local Flood Risk Management Strategy will implement management plans that will enhance rather

Plan/Programme	Objectives and/or requirements of the plan or programme	How objectives and requirements might be taken into account in the Local Flood Risk Management Strategy
Directive - Directive 2000/60/EC of the European Parliament and of the Council establishing a framework for the Community action in the field of water policy, 2000	waters (rivers and lakes), transitional waters (estuaries), coastal waters and groundwater; ensuring that all aquatic ecosystems, wetlands and, with regards to their water needs, terrestrial ecosystems meet 'good status' by 2015. <i>Requirements:</i> • Member States to establish river basin districts and for each of these a river basin management plan. • Prevent deterioration in the classification status of aquatic ecosystems, protect them and improve the ecological condition of waters. • Achieve at least 'good status' for all waters. Where this is not possible, 'good status' should be achieved by 2021 or 2027. • Promote sustainable use of water as a natural resource. • Conserve habitats and species that depend directly on water. • Progressively reduce or phase out release of individual pollutants or groups of pollutants that pose a significant threat to the aquatic environment. • Progressively reduce the pollution of groundwater and prevent or limit the entry of pollutants. • Contribute to mitigating the effects of floods and droughts.	than diminish the status of aquatic environments (e.g. Sustainable Drainage Systems – SuDS). The Local Flood Risk Management Strategy will promote the sustainable use of water as a resource by describing how the implementation of SuDS will be managed across the local authority. The Strategic Environmental Assessment for the Local Flood Risk Management Strategy has ensured that the objectives, requirements and targets of the WFD have been considered within the Local Flood Risk Management Strategy and mitigation measures incorporated where appropriate.

Table B.2 National Policies, Plans, Programmes and Environmental Protection Legislation

Plan/Programme	Objectives and/or requirements of the plan or programme	How objectives and requirements might be taken on board in Local Flood Risk Management Strategy
National Planning Policy Framework (March, 2012)	Document comprises twelve 'Core Planning Principles' which will underpin plan-making and decision-making to contribute to sustainable development: 1. Genuinely plan-led, empowering local people to shape their surroundings, with succinct local and neighbourhood plans setting out a positive vision for the future of an area. 2. Ensure it is not simply about scrutiny, but instead be a creative exercise in finding ways to enhance and improve areas. 3. Drive and support sustainable economic development, in line with the area's requirements. 4. Secure high quality design and a good standard of amenity for all existing and future occupants of land and buildings. 5. Consider the different roles and character of different areas, promoting vitality of main urban areas, while protecting the surrounding green belts; recognising intrinsic character and beauty of countryside and support thriving rural communities within it. 6. Support the transition to a low carbon future, taking into account flood risk and coastal change, but also encouraging reuse of existing resources and use of renewable resources. 7. Contribute to conserving and enhancing the natural environment and reducing pollution. Allocation of land for development, with preference to areas of lesser environmental value (where consistent with other policies in this framework). 8. Encourage reuse of brownfield land, provided it is not of high environmental value.	The Local Flood Risk Management Strategy will promote the twelve 'Core Planning Principles' of the National Planning Policy Framework where applicable - especially in relation to flood risk. The Local Flood Risk Management Strategy will encourage appropriate development in flood risk areas across Bath & North East Somerset. This will ensure that planning decisions are properly informed of flood risk issues and the future impact of planning on flood risk is considered in Bath & North East Somerset. Through its Strategic Environmental Assessment, the Local Flood Risk Management Strategy has considered any potential impacts arising from its implementation on human health, environment, cultural heritage, climate change, economic activity and accessibility, while avoiding/mitigating where appropriate. The implementation of the Local Flood Risk Management Strategy will promote biodiversity where possible, by implementing natural flood defences which benefit biodiversity.

Plan/Programme	Objectives and/or requirements of the plan or programme	How objectives and requirements might be taken on board in Local Flood Risk Management Strategy
	9. Promote mixed use development and encourage multiple benefits from land use in urban and rural areas, recognising that some open land can perform many functions (such as for wildlife, recreation, flood risk mitigation, carbon storage, or food production). 10. Conserve heritage assets in a manner appropriate to their existence. 11. Actively manage patterns of growth to make fullest possible use of public transport, walking and cycling. Focus significant development in locations that can be made sustainable. 12. Consider and support local strategies to improve health, social and cultural wellbeing for all, and deliver sufficient community and cultural facilities and services to meet local needs.	
National Standards for Sustainable Drainage Systems: Designing, constructing, operating and maintaining drainage for surface runoff (Defra 2011)	Overall objective of SuDS: To manage the flow rate and volume of surface runoff and to reduce the risk of flooding and water pollution. SuDS also reduce pressure on the sewerage network and can therefore improve biodiversity and local amenity.	To fulfil the local authority's role as a SuDS Approval Body (SAB), the Local Flood Risk Management Strategy will describe how the implementation of SuDS will be managed across the authority area. The Local Flood Risk Management Strategy will promote sustainability across Bath & North East Somerset.
The National Flood and Coastal Erosion	Overall Objective: Ensure the risk of flooding and coastal erosion is well-managed and co-ordinated in an appropriate way, so that	This is a key guidance document for the Local Flood Risk Management Strategy.

Plan/Programme	Objectives and/or requirements of the plan or programme	How objectives and requirements might be taken on board in Local Flood Risk Management Strategy
Risk Management Strategy for England: Session 2010-2012 (May 2011)	their impacts are minimised. Communities, individuals, voluntary groups, as well as private and public sector organisations, will work together to: • Manage the risk to people and their property.] • Facilitate decision-making and action at their appropriate level – individual, community, or local authority, river catchment, coastal cell or national. • Achieve environmental, social and economic benefits, consistent with the principles of sustainable development.	
Flood and Water Management Act 2010	Requirements: • Lead Local Flood Authority (LLFA) must develop and implement a Local Flood Risk Management Strategy. This includes flood risk from surface runoff, groundwater and ordinary watercourses. • SuDS Approving Body (SAB) is responsible for approval, adoption and maintenance of SuDS systems.	This primary reason for the Local Flood Risk Management Strategy is to adhere to Flood and Water Management Act. To fulfil the local authority's role as a SuDS Approval Body (SAB), the Local Flood Risk Management Strategy has described how the implementation of SuDS will be managed across the authority area.
Biodiversity 2020: A Strategy for England's Wildlife and Ecosystem Services (2011)	Four priority 'Areas for Action': • More integrated large-scale approach to conservation on land and at Strategic Environmental Assessment. • Putting people at heart of biodiversity policy. • Reducing environmental pressures. • Improving our knowledge. These four priority areas are based on the five strategic goals of the 'Convention on Biological Diversity (CBD) Strategic Plan 2011-2020, but re-cast and re-ordered to better fit the priorities here in England.	The actions in the Local Flood Risk Management Strategy comply with the policies outlined in this strategic document.
UK Biodiversity Framework (2012)	Sets out a broad enabling structure for action across the UK up until 2020. The 'UK Post-2010 Biodiversity Framework' succeeded the UK Biodiversity Action Plan. This was required following devolution and the creation of country-level biodiversity strategies, the framework particularly sets out the	The UK BAP lists of priority species and habitats remain, however, important and valuable reference sources. Notably, they have been used to help draw up statutory lists of priority species and habitats in England, Scotland, Wales and Northern Ireland (see

Plan/Programme	Objectives and/or requirements of the plan or programme	How objectives and requirements might be taken on board in Local Flood Risk Management Strategy
Water for People and the Environment; Water Resources Strategy for England and Wales, 2009	priorities for UK-level work to support the Convention on Biological Diversity's (CBD's) Strategic Plan for Biodiversity 2011-2020 and its five strategic goals and 20 'Aichi Targets', agreed at the CBD meeting in Nagoya, Japan, in October 2010; and the EU Biodiversity Strategy (EUBS), launched in May 2011. Overall objectives: • Reduce level of abstraction by introducing water pricing for abstraction and use to ensure its future sustainability, while also resolving any environmental problems which have been caused by historic unsustainable abstractions. • Minimise greenhouse gas emissions produced from using water resources. • Increase the resilience of supplies and critical infrastructure to reduce future impact of climate change. • Careful management of water resources: (a) Reduce average amount of water used per person; (b) Introduction of near-universal metering of households by water companies; (c) Reduce leakages from mains and supply pipes; (d) Make homes and buildings more water efficient; (e) Efficient allocation of water resources. • Consider the needs of wildlife, navigation, fisheries and recreation, environment and abstractors when allocating water resources. • Implement measures to ensure water bodies achieve WFD objectives. • Integration of catchment management to ensure impacts on water resources and environment are managed together.	NI species and NI habitats lists), as required under Section 41 (England) and Section 42 (Wales) of the Natural Environment and Rural Communities (NERC) Act 2006, Section 2(4) of the Nature Conservation (Scotland) Act 2004, and Section 3(1) of the Wildlife and Natural Environment Act (Northern Ireland) 2011. The Local Flood Risk Management Strategy considers other plans and programmes at local, regional and national levels in order to provide an integrated management of flood risk, the water environment and water resources.

Plan/Programme	Objectives and/or requirements of the plan or programme	How objectives and requirements might be taken on board in Local Flood Risk Management Strategy
Future Water, The Government's water strategy for England, 2008	Overall vision for 2030: • A sustainable supply-demand balance across England with no seriously water stressed areas. • People, businesses and industry using water resources sustainably, with no interruptions to essential supply during drought. • Large majority of water bodies in England to have a good ecological and chemical status. • People maximising sustainable use and amenity benefits gained from safe, healthy and attractive waters and water environments. • Healthy rivers, lakes, estuaries, coasts and groundwaters which provide maximum resilience to climate change and sustain biodiversity. • Major improvements achieved from tackling problems of nutrient pollution, chemical pollution, water resources, litter and microbial contamination. • Land increasingly flexibly managed for flood storage. • Reduced adverse impact of agriculture on the water environment through continued evolution of the EU's Common Agricultural Policy to deliver more environmental benefit. • More adaptable drainage systems delivering reduced flood risk, improved water quality, and decreased burdens on the sewer system. • Flood and coastal erosion risk management which contributes to sustainable development, combining the delivery of social and environmental benefits with the protection of economic assets. • Consistent and holistic management of urban flood risk, with strategic planning, partnerships of responsible bodies	The Local Flood Risk Management Strategy provides the strategic driver to implement management plans that will enhance rather than diminish the ecological and chemical status of water bodies (e.g. Sustainable Drainage Systems – SuDS). The Local Flood Risk Management Strategy promotes the sustainable use of water as a resource by describing how the implementation of SuDS will be managed across the authority area.

Plan/Programme	Objectives and/or requirements of the plan or programme and clear understanding of various flood risk responsibilities.	How objectives and requirements might be taken on board in Local Flood Risk Management Strategy
Adapting to Climate Change in England, A Framework for Action, 2008	Overall Objectives of Phase 1 of the programme are to: - Develop robust and comprehensive evidence base about the impacts and consequences of climate change on the UK. - Raise awareness of the need to take action now and help others to take action. - Measure success and take steps to ensure effective delivery. - Work across Government at the national, regional and local level to embed adaptation into Government policies, programme and systems.	The Local Flood Risk Management Strategy plans for potential future flooding impacts caused by climate change across Bath & North East Somerset. The actions will inform the public of the flood risk – especially in areas of flood risk. The Local Flood Risk Management Strategy is consistent with NFCERMS and aim to minimise the gap between national and local flood risk management.
Civil Contingencies Act 2004	Main points: - Legal obligation of emergency services and local authorities (category 1 responders) to assess the risk of, plan and exercise for emergencies. - Category 1 responders are responsible for informing and warning the public, in relation to emergencies. - Local authorities are responsible for providing business continuity advice to local businesses. - Increased co-operation and information sharing between different emergency and non-emergency services.	The Local Flood Risk Management Strategy complies with the duties and powers resulting from this Act. The Local Flood Risk Management Strategy improves upon the current flood emergency warning system in place in Bath & North East Somerset and will contribute to the development of a flood emergency plan for Bath & North East Somerset. The Local Flood Risk Management Strategy involves a thorough consultation process with statutory bodies, emergency services and general public. This will ensure that a comprehensive emergency plan will be developed between the local authority and relevant emergency services in Bath & North East Somerset.
Water Act, 2003	Main points: - Provides for regulation by EA for: (a) Water resource management, abstraction and impounding. (b) Water quality standards and pollution control.	The Local Flood Risk Management Strategy complies with the duties and powers resulting from this Act.

Plan/Programme	Objectives and/or requirements of the plan or programme	How objectives and requirements might be taken on board in Local Flood Risk Management Strategy
	Overall objectives: - Amend Water Resources Act 1991 and the Water Industry Act 1991. - Make provisions with respect to compensation under section 61 of the Water Resources Act 1991. - Change how water abstraction and impoundment are regulated. - Improve protection of environment and provide more flexible process of regulation. - Resolve significant problem areas and achieve sustainable water resource management. - Encourage responsible abstractors.	
EA Policy: Sustainable Drainage Systems, 2002	Overall objectives: - Increase awareness of environmental problems arising from conventional surface water urban drainage. - Present drainage options that are effective in reducing these environmental problems at new or re-development sites – i.e. sustainable drainage systems. - Promote more sustainable urban development.	To fulfil the local authority's role as a SuDS Approval Body (SAB), the Local Flood Risk Management Strategy describes how the implementation of SuDS will be managed across the local authority.
Land Drainage Act, 1991, (as Amended 2004)	Main points: - Watercourses are to be maintained by the owner in such a way that the free flow of water is not impeded. - If the land owner does not comply with his responsibilities, or if anyone else causes a watercourse to become blocked or obstructed, the unitary council have the power of enforcement by serving a notice.	The Local Flood Risk Management Strategy complies with the duties and powers resulting from this Act.
County of Avon Act 1982	Act of Parliament specifically covering the protection of the hot spring resource in Bath. Consent is required from Bath & North East Somerset for excavations across defined zones in the city.	Any engineering projects which may result in excavations within the defined zones of the County of Avon Act 1982 will comply with the provisions of the Act.

Table B.3 Sub-national, Regional and Local Policies, Plans, Programmes and Environmental Protection Legislation.

Plan/Programme	Objectives and/or requirements of the other plan or programme	How objectives and requirements might be taken on board in Local Flood Risk Management Strategy
River Basin Management Plan Severn River Basin District (December 2009)	The plan has been prepared under the WFD, which requires all countries throughout the EU to manage the water environment to consistent standards. Each country has to: • Prevent deterioration in the status of aquatic ecosystems, protect them and improve the ecological conditions of waters. • Aim to achieve at least a 'good status' for all water bodies by 2015. Where this is not possible and subject to the criteria set out in the Directive, aim to achieve 'good status' by 2021 or 2027. • Meet the requirements of the WFD Protected areas. • Promote sustainable use of water as a natural resource. • Conserve habitats and species that depend directly on water. • Progressively reduce or phase out the release of individual/groups of pollutants that present a significant threat to the aquatic environment. • Progressively reduce the pollution of groundwater and prevent or limit the entry of pollutants. • Contribute to mitigating the effects of floods or droughts. Overall objectives (to be met by 2015): • 17% of surface waters (rivers, lakes and estuaries) in the Severn River Basin District to be improved for at least one biological, chemical or physical element. • 34% of surface waters will be at a good or better ecological status/potential and 65% of groundwater bodies will be at a good status.	The Local Flood Risk Management Strategy will lead to the implementation of measures to prevent flooding that will enhance rather than diminish the status of aquatic ecosystems (e.g. SuDS). Through the Strategic Environmental Assessment process the Local Flood Risk Management Strategy has considered any potential impacts arising from its implementation on water quality and quantity across Bath & North East Somerset and will avoid/mitigate where appropriate.

Plan/Programme	Objectives and/or requirements of the other plan or programme	How objectives and requirements might be taken on board in Local Flood Risk Management Strategy
	(a) At least 38% of assessed surface waters will be at good or better biological status	
City of Bristol Local Flood Risk Management Strategy November 2014 (City of Bristol 2014)	Objectives: • Gain a greater understanding of the flood risks posed to Bristol and its people and places. • Actively manage flood risk infrastructure to reduce the likelihood of flooding causing harm to people and damage to society, the economy and the environment. • Increase public awareness and encourage communities to take action to manage the risks that they face. • Understand communities flooding concerns and priorities, and gather knowledge based on their perception of flooding. • Promote sustainable development that seeks to reduce flood risk and includes a consideration of climate change. • Improve preparedness for flood events and post flood recovery.	There is a direct overlap in places covered with the Local Flood Risk Management Strategy and City of Bristol Local Flood Risk Management Strategy. In certain locations the responsibility for local flood risk management has been agreed to be covered by the City of Bristol as LLFA. This is detailed within the SWMP.
South Gloucestershire Local Flood Risk Management Strategy (South Gloucestershire Draft in press)	Objectives: • Prioritise and implement improvements to local flood infrastructure to reduce the likelihood of flooding causing harm to the communities, businesses and the environment of South Gloucestershire. • Increase public awareness of the level of flood risk affecting communities and businesses and how they can better protect themselves and their property. • Actively work with other Lead Local Flood Authorities and Risk Management • Authorities to coordinate management and reduce flood risk across South Gloucestershire. • Contribute to wider social, economic and environmental benefits by encouraging sustainable multi-benefit solutions and	No interaction

Plan/Programme	Objectives and/or requirements of the other plan or programme	How objectives and requirements might be taken on board in Local Flood Risk Management Strategy
	maximizing use of resources • Improve our understanding of drainage assets, flood risk and how climate change will influence future flood risk. • Ensure future development considers all known flood risks and climate change projections for South Gloucestershire.	
North Somerset Local Flood Risk Management Strategy (Local Flood Risk Management Strategy):	The six strategic objectives for the Local Flood Risk Management Strategy are: • Improve our understanding of flood and coastal erosion risks in North Somerset • Develop plans and policies to manage these risks sustainably; • Work in partnership with other flood Risk Management Authorities and lead by example; • Maintain and improve flood and coastal erosion risk management infrastructure and systems to reduce risk; • Avoid inappropriate development in areas of flood and coastal erosion risk, and ensure that development does not increase risks elsewhere, and; • Increase public awareness of flooding and promote individual and community level flood resilience. Under each of these strategic objectives the Somerset Local Flood Risk Management Strategy has set out specific goals and anticipated outcomes to help interpret them into actions.	No interaction
Somerset County Local Flood Risk Management Strategy February 2014 (Somerset County Council, 2014)	Objectives: • Develop, maintain, apply and monitor a strategy for local flood risk management in Somerset. Set local strategy for local flood risk management. Examine alternatives to reduce risk to life and property, while minimising economic and environmental impacts of flood risk management actions and programmes. • Enhance the internal technical capabilities for flood risk	No interaction

Plan/Programme	Objectives and/or requirements of the other plan or programme	How objectives and requirements might be taken on board in Local Flood Risk Management Strategy
	management. • It is expected that lead local flood authorities will form partnerships with the other risk management authorities in their area to manage local flood risk. • Investigate flooding incidents to identify which authorities have relevant functions to deal with the flood and whether each of them intends to respond. The lead local flood authority will then be required to publish the results of any investigation, and notify any relevant authorities. • Continue a countywide public education and outreach program to improve flood awareness that includes actions people can take to reduce risks (e.g. flood insurance, flood proofing). • Identify possible funding sources for implementing the recommended flood risk management activities. • Management and delivery of the Pitt Recommendations. • Prioritise projects and programmes of work based on the level of risk, benefit, and cost-effectiveness over the life of the plan or facility. In collaboration with others, develop a three-year rolling programme of works associated with ordinary watercourses, surface water run-off and groundwater to tackle flooding. • Involve stakeholders in the assessment of acceptable risks, evaluation of alternatives, and natural resource management issues. • Coordinate among internal and external stakeholders to seek consistency in flood risk management and flood disaster response and recovery. • Work with and support Planning Authorities to limit new development in flood risk areas and to minimise new risks to life and property.	

Plan/Programme	Objectives and/or requirements of the other plan or programme	How objectives and requirements might be taken on board in Local Flood Risk Management Strategy
	- Identify opportunities to work with environmental organisations to integrate flood management with environmental management. - Incorporate information about climate change into flood risk management decision-making. - Collate and map the main flood risk management and drainage assets. Evaluate the risks to existing development in flood risk areas. - Prepare preliminary flood risk assessment reports. - Identify flood risk areas. - Maintain a register of structures or features which they consider to have a significant effect on flood risk in their area, at a minimum recording ownership and state of repair with the intention to inform and promote capital programmes through Somerset Transport Plan or other means. - Identify current and establish future “Levels of Service” for existing and new flood protection assets. Use principles established in the Transport Asset Management Plan (TAMP). - Review internal working practices to align aims, objectives and outcomes contained in this Plan. - Work with the Association of British Insurers to identify repetitive-loss properties to assist in developing the flood risk maps and consequential programme of works. - Continuously review implementation to learn from successes, develop cost-effective approaches and reduce the need for costly solutions. - Adopt a robust technical approach in developing and evaluating alternatives and to monitor implementation both for flood risk and biodiversity. - Promote the uptake of sustainable land management	

Plan/Programme	Objectives and/or requirements of the other plan or programme	How objectives and requirements might be taken on board in Local Flood Risk Management Strategy
	techniques that will reduce surface water run-off. - To accord with the Act, commence a programme of review and designation of structures and features that affect flooding. - Cooperate with the Environment Agency and Met Office in interpreting and using data derived by the existing network of river flow and weather gauges. - Examine the connections between flood risk management, river corridors, biodiversity, open space, public access and agricultural resources to take advantage of efficiencies in addressing multiple objectives. - Prepare flood risk management plans. - Maintain, repair and retrofit existing flood protection assets in a cost-effective manner that makes the facilities less susceptible to future damage. - Consider removal or retrofit existing flood protection facilities to protect, restore, or enhance critical riparian or water borne habitat that benefits threatened or endangered species. - Identify important or vulnerable riparian and biodiversity sites.	
Wiltshire Local Flood Risk Management Strategy: October 2014 (Wiltshire Council, 2014)	Objectives Wiltshire Council has adopted the following objectives to:- - Improve knowledge regarding flood risk - Improve protection from flooding - Improve resilience to flooding - Improve the environment - Improve communications about flooding issues Wiltshire Council will seek to: - Improve the level of understanding of local flood risk amongst partners and stakeholders,	No interaction

Plan/Programme	Objectives and/or requirements of the other plan or programme	How objectives and requirements might be taken on board in Local Flood Risk Management Strategy
	• Ensure that local communities, residents and businesses understand their responsibilities with regard to local flood risk management, • Maximise the partnership working with flood risk partners and stakeholders, • Actively manage flood risk associated with new development proposals • Ensure the approach to Flood Risk Management is sustainable and balance the economic, environmental and social benefits from policies and programmes, • Improve or maintain the capacity of existing drainage systems by targeted maintenance where appropriate, • Encourage responsible maintenance of privately owned flood defence and drainage assets, • Establish a policy on water management, and use available information on flood risk to assess the suitability of the allocation of sites for different land uses through the local development framework, • Maximise opportunities to reduce surface water runoff from catchments, • Identify projects and programmes which are affordable and maximise capital funding from external sources, • Ensure environmental consequences are considered in the design, construction and implementation of proposed flood risk management measures.	
Bath and North East Somerset Council Preliminary Flood Risk Assessment (PFRA)	Overall objective: • Understand of local flood risk within Bath & North East Somerset from local sources, including both surface and ground water flooding, , ordinary watercourses flooding and	The Local Flood Risk Management Strategy has incorporated the findings of the PFRA. The six local flood risk areas identified in the PFRA have been examined in further detail

Plan/Programme	Objectives and/or requirements of the other plan or programme	How objectives and requirements might be taken on board in Local Flood Risk Management Strategy
(March 2011)	flooding from man-made structures (excluding Main Rivers).	in terms of flood risk management in Bath & North East Somerset. The Local Flood Risk Management Strategy is applicable to flooding types from the following sources: ordinary watercourses, surface water, groundwater and artificial sources. It will also consider the interaction between these and main rivers.
Bath and North East Somerset Council Surface Water Management Plan (2015)	Overall objective: The main aim of the SWMP is to produce a long term, area wide high level Action Plan to manage local sources of flooding within the Bath and North East Somerset area.	The Local Flood Risk Management Strategy has used the actions outlined in the SWMP to manage the flood risk of wet spots identified.
Bath and North East Somerset Green Infrastructure Strategy (2013)	Overall objectives: - Support healthy lifestyles by encouraging more people to use Green Infrastructure (GI). - Improve the quality, function and management of Council owned green spaces by establishing a culture and processes for long term management. - Encourage more people to connect with nature and foster sense of place. - Improve the network of green travel routes. - Respect and enhance the local landscape. - Safeguard and enhance access of local built heritage. - Maintain and create robust ecological networks by reducing fragmentation and delivering habitat restoration, re-creation and biodiversity enhancements. - Secure the multiple benefits that trees and woodland can provide.	Where possible, the implementation of the Local Flood Risk Management Strategy will incorporate GI measures into the management of flood risk across Bath & North East Somerset.

Plan/Programme	Objectives and/or requirements of the other plan or programme	How objectives and requirements might be taken on board in Local Flood Risk Management Strategy
	• Recognise the importance of healthy ecosystems and protect/enhance the natural services they provide. • Achieve more sustainable management of water resources, flood mitigation and flood risk. • Provide natural solutions to help tackle the impacts of climate change. • Contribute to a vibrant local community.	
Bath and North East Somerset Core Strategy (Bath & North East Somerset 2014a)	Overall objectives: • Pursue a low carbon and sustainable future in a changing climate. • Protect and enhance the district's natural built and cultural assets and provide green infrastructure. • Encourage economic development, diversification and prosperity. • Invest in our city, towns and local centres. • Meet housing needs. • Plan for development that promotes health and well-being. Deliver well-connected places, accessible by sustainable means of transport.	The Local Flood Risk Management Strategy will promote a more sustainable approach to managing flood risk, by describing how the implementation of SuDS will be managed across the authority area. Core Strategy Policy CP5 is concerned with Flood Risk Management and utilises a sequential approach to development. This approach is backed up in the development sections of the Local Flood Risk Management Strategy and Surface Water Management Plan.
Bath and North East Somerset Flood Risk Management Strategy Report (Bath & North East Somerset, 2010)	Overall objectives: • Identify how development sites within flood risk zones can be made more viable and deliverable through strategic or site-specific mitigation and compensation whilst seeking amenity value for users. • Protect and, where possible, enhance biodiversity, water quality and resources, existing material assets and cultural heritage features. • Improve the quality of the landscape and visual amenities as	The Local Flood Risk Management Strategy will promote appropriate development in flood risk areas Bath & North East Somerset by ensuring that planning decisions are properly informed by flood risk issues and that the future impact of planning on flood risk is considered in Bath & North East Somerset.

Plan/Programme	Objectives and/or requirements of the other plan or programme	How objectives and requirements might be taken on board in Local Flood Risk Management Strategy
	well as recreational amenities. SuDS installations to be used for all new developments.	It will promote a more sustainable approach to managing flood risk, by describing how the implementation of SuDS will be managed across the authority area.
Bristol Avon Catchment Flood Management Plan Summary Report June 2012 (Environment Agency, 2012)	Overall objectives: - Understand scale and extent of flooding now and in the future. - Set policies for managing flood risk within catchment. - Promote more sustainable approaches to managing flood risk. Policies described: - Six flood management policies were described for the Bristol Avon catchment; three of which apply to Bath & North East Somerset as the sub-areas are located within the boundaries of Bath & North East Somerset. - These policies are as follows: (a) Sub-area of Bath: Policy 5. Flood risk is moderate to high and further action is required to reduce flood risk. (b) Sub-area of Lower Avon: Policy 3. Flood risk is low to moderate and is being managed effectively. - Sub-area of Mendip Slopes and Long Ashton: Policy 4. Flood risk from low to high. It is being managed effectively, but may require further actions due to climate change.	The Local Flood Risk Management Strategy will contribute to the understanding of the scale and extent of flooding in Bath & North East Somerset. It will refer to and develop the policies described in the catchment management plan that apply to Bath & North East Somerset. It will promote a more sustainable approach to managing flood risk, by describing how the implementation of SuDS will be managed across the authority area. It will involve consultation with councils and partners that share the responsibility of sub-areas Bath & North East Somerset, as well as councils and partners in other sub-areas of the Bristol Avon catchment. This consultation process will improve the co-ordination of flood risk management activities across the catchment and will facilitate the agreement of the most effective way to manage flood risk. It will also ensure that the safe-guarding of a particular area from flood risk does not have knock on negative effects in another location. There are seven local authorities and nine partners responsible for flood risk management across the

Plan/Programme	Objectives and/or requirements of the other plan or programme	How objectives and requirements might be taken on board in Local Flood Risk Management Strategy
Strategic Flood Risk Assessment of Bath and North East Somerset Volume 1 Technical Report April 2008 (Bath and North East Somerset, 2008)	Underlying objective of the risk-based sequential allocation of land: Reduce exposure of new development to flooding and reduce the reliance on long-term maintenance of built flood defences. Overall objective of the B&NES SRFA is to provide flood information; (a) So that an evidence-based and risk-based sequential approach can be adopted when making planning decisions, in line with PPS25. (b) That is strategic in that it covers a wide-spatial area and looks at flood risk today and in the future. (c) That supports sustainability appraisals of the local level documents (including the LDF). (d) That identifies what further investigations may be required in detailed flood risk assessments (FRAs) for specific development proposals.	catchment. The Local Flood Risk Management Strategy will incorporate the findings of the SFRA. It will also consider the flood risk management options described in the SFRA. Flood risk management will also be considered in terms of areas of new development and existing flood defences, as well as the maintenance that will be required for built flood defences.
Bath and North East Somerset Local Plan Saved Policies Including Minerals and Waste Policies - Adopted October 2007	This plan was the previous planning document for all planning decisions within the district. The Core Strategy is now the main document however some policies from the Local Plan have been retained.	The objectives and actions described in the Local Flood Risk Management Strategy does not contradict any of the saved policies.

Plan/Programme	Objectives and/or requirements of the other plan or programme	How objectives and requirements might be taken on board in Local Flood Risk Management Strategy
Mendip Hills AONB Management Plan 2014-2019	Biodiversity and Geodiversity objectives: • Ensure that there is no net loss of characteristic habitats and species. • Promote a landscape scale approach to the conservation and expansion of coherent and resilient ecological networks within and adjoining the AONB. • Increase monitoring and awareness of the biodiversity resource of the Mendip Hills AONB so that it is sufficiently understood to continue to guide the successful conservation of the characteristic habitats and species. • Promote a holistic approach to implementing AONB Management Plan objectives, National Character Area Statements of Opportunity and a locally designated Nature Improvement Area's objectives. • Recognise and celebrate geological sites and features of the Mendip Hills AONB to ensure the successful conservation both of the geology and wildlife habitat they provide. • Increase awareness of the Mendip Hills geology; particularly cave systems in relation to the importance they play in water management and water supply. Natural resources objectives: • Recognise and promote the benefits and relevance of the AONB as a valuable source of ecosystem services, economic and health benefits. • Promote conservation of water resources and enhance their quality taking measures to reduce low flows and flooding by appropriate management and use. • Promote sustainable management of soils in accordance with best practice to minimise erosion and water pollution and maximise resilience to drought.	The implementation of the Local Flood Risk Management Strategy will refer to AONB management plans where applicable.

Plan/Programme	Objectives and/or requirements of the other plan or programme	How objectives and requirements might be taken on board in Local Flood Risk Management Strategy
Cotswolds Management Plan, – 2013 – 2018	Conserving and enhancing objectives: By 2014: - Relevant organisations have strengthened landscape-scale restoration and the re-linking and management of habitats to reverse ecological fragmentation and to improve the resilience of the Cotswold landscape, habitats and water environment to the effects of climate change. - National and local development management and transport authorities and agencies have policies and guidance to make decisions which conserve and enhance the special qualities of the AONB, maintain local distinctiveness, provide services and support a buoyant rural economy. By 2016: - National and local agencies have put in place policies and guidance to implement the sustainable provision and use of natural resources in the Cotswolds AONB. By 2018: - It can be demonstrated that organisations and individuals responsible for land management and development management have conserved and enhanced the special qualities of the Cotswold landscape. - Sustainable farming and forestry remain the primary means by which the distinctive landscapes of the Cotswolds are managed. - Relevant organisations have demonstrably better identified, recorded and promoted, the distinctive historic and cultural and natural heritage of the Cotswolds AONB, which is better understood by residents and visitors. Understanding and enjoying objectives: By 2016:	Through its Strategic Environmental Assessment, the Local Flood Risk Management Strategy has considered any potential impacts arising from its implementation on the character and special features of the AONBS located within Bath & North East Somerset and will avoid/mitigate where appropriate. The Local Flood Risk Management Strategy has involved a thorough consultation process with the general public, partners that share the responsibility of the AONBs with Bath & North East Somerset and relevant statutory bodies. Workshops with the general public will also discuss the role of land management in flood risk.

Plan/Programme	Objectives and/or requirements of the other plan or programme	How objectives and requirements might be taken on board in Local Flood Risk Management Strategy
	- The Cotswolds is widely recognised and valued as a sustainable visitor destination, where local communities benefit, businesses prosper and the environment is sustained through the co-ordinated delivery of quality and enriching visitor experiences. By 2018: - It can be shown that residents and visitors demonstrably value the natural beauty, historic character and cultural heritage of the Cotswolds and understand the need to invest in and sensitively manage the special qualities of the area. - Relevant organisations make the Cotswolds a landscape available for all to explore and enjoy, which is demonstrably regarded by residents and visitors as a place for positive, high-quality experiences. Fostering economic and social well-being objectives: By 2018: - National and local agencies recognise the value and relevance of the AONB as a valuable source of “ecosystem services”, economic and health benefits.	
City of Bath World Heritage Site Management Plan (The City of Bath World Heritage Site, 2010)	A main aim of the plan is to ensure that the Outstanding Universal Value of the Site and its setting is understood, protected and sustained.	The implementation of the Local Flood Risk Management Strategy will ensure that the Outstanding Universal Value of the site is protected and maintained.

Plan/Programme	Objectives and/or requirements of the other plan or programme	How objectives and requirements might be taken on board in Local Flood Risk Management Strategy
The City of Bath World Heritage Site Setting Supplementary Planning Document (SPD) August 2013	Guidance on assessing impacts on the World Heritage Site is a key part of the SPD for use by developers, agents and development management planners when considering development proposals. This are expected to be used where a planning application may have a significant impact on the setting.	The implementation of the Local Flood Risk Management Strategy will refer to this SPD where applicable.

Appendix C Assessment of Effects

RECEPTOR (Value (H/M/L) Vulnerability (H/M/L/N) Sensitivity (H/M/L/N)	Description of effect	Direct or indirect; Far- field effect; Cumulative effect; or effect resulting from Consequential Development	Probability (H/M/L/VL)	Duration (during construction, or decommission) Term (L/M/S/VS) and Frequency (continual/ intermittent)	Irreversible / reversible; temporary/ permanent	Magnitude (H/M/L/VL)	Spatial extent & trans- boundary (National/ Regional/ Unitary/ Authority/ Local)	Positive/ Negative	Assumptions, Limitations, Uncertainties	Significant (Yes/No)	Proposed Mitigation
Water Resources											
Water Framework Directive Waterbodies Value (H) Vulnerability(H) Sensitivity (H)	Physical modification or pollution of water courses leading to a reduction in ecological/ chemical statuses of water bodies. Contributing to failures in regional targets.	Direct effect	L	Construction – S Continual frequency Operation- L	Reversible; Permanent	VL	Regional	Negative	Any engineering scheme will be designed to ensure compliance with the WFD	No	
Surface and Ground Water Resources Value (H) Vulnerability (L) Sensitivity (M)	Improved surface and ground water quality from reductions in mobilisation of pollutants, through effective flood risk management and SuDS	Direct effect, in local watershed only.	L	Construction - S	Reversible; Temporary	L	Regional	Positive		Yes	Work will be undertaken in compliance with Pollution Prevention Guidelines

RECEPTOR (Value (H/M/L) Vulnerability (H/M/L/N) Sensitivity (H/M/L/N)	Description of effect	Direct or indirect; Far- field effect; Cumulative effect; or effect resulting from Consequential Development	Probability (H/M/L/VL)	Duration (during construction, operation or decommission) Term (L/M/S/Vs) and Frequency (continual/ intermittent)	Irreversible / reversible; temporary/ permanent	Magnitude (H/M/L/VL)	Spatial extent & trans- boundary (National/ Regional/ Unitary Authority/ Local)	Positive/ Negative	Assumptions, Limitations, Uncertainties	Significant (Yes/No)	Proposed Mitigation
Surface and Ground Water Resources Value (H) Vulnerability (L) Sensitivity (M)	Disturbance to physical nature of water bodies and ground water resources and function (including hot springs) from construction of engineering solutions arising from the LFRMS, with effects upon water quality and resource capacity	Direct effect, in local watershed only.	M	Construction - L	Reversible; Permanent	L	Local	Negative		No	As above
Flood risk											
Flooding Value (L) Vulnerability (H) Sensitivity (M)	More effective management of local flood risk throughout BANES	Direct	H	Operation - L	Reversible, Permanent	H	Unitary Authority	Positive	It is uncertain if landowners will take measures to control runoff rates in carrying out land drainage practices	Yes	
	Implementing engineering schemes could alter flood passage and storage dynamics e.g. through the requirements for material storage.	Direct effect, in local watershed only.	VL	Construction S	Reversible; Permanent	VL	Local	Negative	Applicable where scheme would be constructed within a floodplain	No	Flood risk assessments undertaken and mitigation proposed followed.

RECEPTOR (Value (H/M/L) Vulnerability (H/M/L/N) Sensitivity (H/M/L/N)	Description of effect	Direct or indirect; Far- field effect; Far- Cumulative effect; or effect resulting from Consequential Development	Probability (H/M/L/VL)	Duration (during construction, operation or decommission) Term (L/M/S/Vs) and Frequency (continual/ intermittent)	Irreversible / reversible; temporary/ permanent	Magnitude (H/M/L/VL)	Spatial extent & trans- boundary (National/ Regional/ Unitary/ Authority/ Local)	Positive/ Negative	Assumptions, Limitations, Uncertainties	Significant (Yes/No)	Proposed Mitigation
	New flood risk management structures (e.g. pumping stations) could alter flood passage and storage dynamics.		VL	Operation – L	Reversible; permanent	VL	Local	Negative	Applicable where scheme would be constructed within a floodplain	No	Flood risk assessments undertaken and mitigation proposed followed.
	Increased implementation of SUDs will reduce flood risk from new development	Indirect	M	Operation – L	Reversible, permanent	H	Unitary Authority	Positive	Assumes SUDs promoted on all new developments	Yes	
	Preventing inappropriate development creating or increasing flood risk in BANES	Direct	H	Operation – L	Irreversible, permanent	H	Unitary Authority	Positive		Yes	
Population and Human Health											
Population Value (L) Vulnerability (M) Sensitivity (M)	No direct effects on the population of BANES are likely.										
Health Value (M) Vulnerability (L) Sensitivity (M)	Reduction in flood risk and providing better information of how to manage flood risk at a property level leading to less stress for affected property owners	Direct	M	Operation – L	Irreversible. Permanent	M	Unitary Authority	Positive		Yes	

RECEPTOR (Value (H/M/L) Vulnerability (H/M/L/N) Sensitivity (H/M/L/N)	Description of effect	Direct or indirect; Far- field effect; Cumulative effect; or effect resulting from Consequential Development	Probability (H/M/L/VL)	Duration (during construction, operation or decommission) Term (L/M/S/V/S) and Frequency (continual/ intermittent)	Irreversible / reversible; temporary/ permanent	Magnitude (H/M/L/VL)	Spatial extent & trans- boundary (National/ Regional/ Unitary/ Authority/ Local)	Positive/ Negative	Assumptions, Limitations, Uncertainties	Significant (Yes/No)	Proposed Mitigation
	Managing flooding from sewers will ensure less risk of contaminated water entering homes causing illness. Potable water supplies are less likely to be interrupted with better flood risk management	Indirect	M	Operation – L	Irreversible. Permanent	M	Unitary Authority	Positive		Yes	
Biodiversity and Landscape											
Landscape Character of BANES Value (L) Vulnerability (L) Sensitivity (L)	Engineering schemes leading to an alteration of the landscape character of BANES	Direct; far-field	VL	Operation – L Term Continual frequency	Irreversible, permanent	VL	Local	Negative		No	
Landscape Character of the AONBs Value (H) Vulnerability (L) Sensitivity (M)	Engineering schemes leading to damage to the AONB via change to the changing the setting of its features	Direct, far-field	VL	Operation – L Continual frequency	Irreversible, permanent	VL	Unitary Authority	Negative		No	

RECEPTOR (Value (H/M/L) Vulnerability (H/M/L/N) Sensitivity (H/M/L/N)	Description of effect	Direct or indirect; Far- field effect; Cumulative effect; or effect resulting from Consequential Development	Probability (H/M/L/V/L)	Duration (during construction, operation or decommission) Term (L/M/S/V/S) and Frequency (continual/ intermittent)	Irreversible / reversible; temporary/ permanent	Magnitude (H/M/L/V/L)	Spatial extent & trans- boundary (National/ Regional/ Unitary/ Authority/ Local)	Positive/ Negative	Assumptions, Limitations, Uncertainties	Significant (Yes/No)	Proposed Mitigation
Notable Habitats and Species Value (H) Vulnerability (L) Sensitivity (M)	Structural engineering schemes could damage species and habitats (including important wildlife corridors, ancient woodlands, crayfish sites and fish/eel migration sites)	Direct	L	Construction and Operation – M Continual frequency	Irreversible, temporary	L	Local	Negative	Assumed that ecological assessments/ surveys are undertaken for projects where likely effects are anticipated. No engineering schemes for wet spots involve permanent barriers to fish migration	No	Avoidance of areas deemed ecologically sensitive, translocation of habitats / species or compensatory habitat creation.
	An increase in the wetland habitats in BANES through the promotion of SuDS for new developments and local flood risk management	Direct	H	Operation - L	Irreversible, permanent	M	Unitary Authority	Positive	Assumes SUDS will be designed to create additional wetland areas	Yes	
	Improved flood risk management resulting in less risk of pollution of habitats through runoff.	Indirect	H	Operation – L	Irreversible, permanent	M	Unitary Authority	Positive		No	
Statutory Nature Conservation Sites Value (H) Vulnerability (L) Sensitivity (M)	Management of local flood risk resulting in reduced flood risk and a reduction in pollutants reaching Chew Valley Lake.	Indirect	H	Operation – L	Irreversible, permanent	M	Regional	Positive	Assumes hydrologic link between local drains and Chew Valley Lake	Yes	

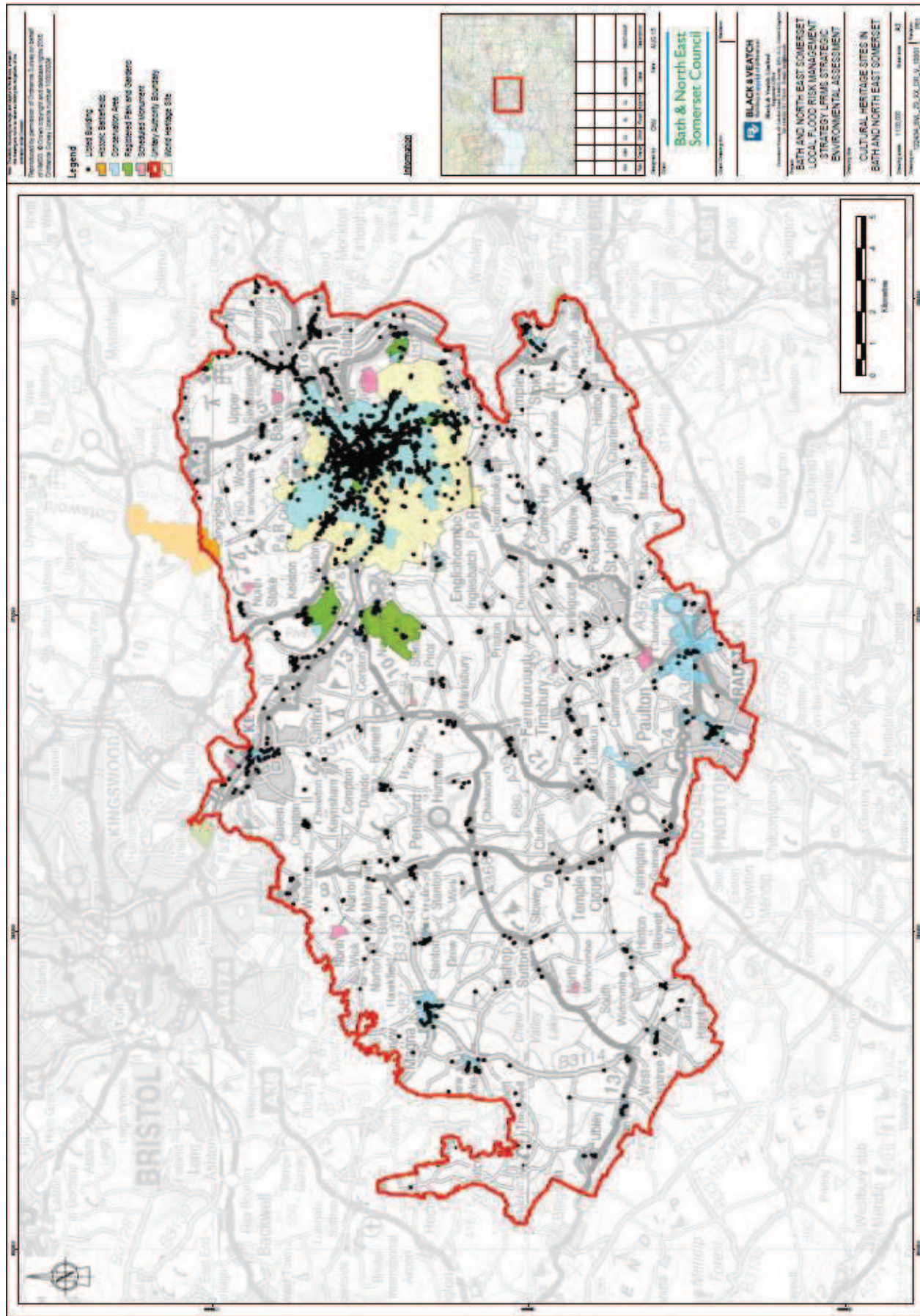
RECEPTOR (Value (H/M/L) Vulnerability (H/M/L/N) Sensitivity (H/M/L/N)	Description of effect	Direct or indirect; Far- field effect; Cumulative effect; or effect resulting from Consequential Development	Probability (H/M/L/VL)	Duration (during construction, operation or decommission) Term (L/M/SVS) and Frequency (continual/ intermittent)	Irreversible / reversible; temporary/ permanent	Magnitude (H/M/L/VL)	Spatial extent & trans- boundary (National/ Regional/ Unitary Authority/ Local)	Positive/ Negative	Assumptions, Limitations, Uncertainties	Significant (Yes/No)	Proposed Mitigation
Green belt Value (L) Vulnerability (M) Sensitivity (M)	No effects identified										
Cultural Heritage											
Bath World Heritage Site Value (H) Vulnerability (M) Sensitivity (M)	Engineering schemes could damage the features in the WHS e.g. archaeology.	Direct	VL	Operation – L	Reversible, permanent	H	National	Negative		Yes	Identification of any features which are at risk and avoidance where possible. If significant effects are likely, undertake EIA to identify mitigation measures which could include using different construction methods and monitoring.
	Engineering schemes could affect the setting of features in the WHS through tree loss.	Indirect	VL	Construction – M	Irreversible, temporary	L	National	Negative		No	
	Protection of WHS features from flooding	Direct	M	Operation – L Term	Reversible, permanent	M	National	Positive		Yes	

RECEPTOR (Value (H/M/L) Vulnerability (H/M/L/N) Sensitivity (H/M/L/N)	Description of effect	Direct or indirect; Far- field effect; Cumulative effect; or effect resulting from Consequential Development	Probability (H/M/L/VL)	Duration (during construction, operation or decommission) Term (L/M/SVS) and Frequency (continual/ intermittent)	Irreversible / reversible; temporary/ permanent	Magnitude (H/M/L/VL)	Spatial extent & trans- boundary (National/ Regional/ Unitary Authority/ Local)	Positive/ Negative	Assumptions, Limitations, Uncertainties	Significant (Yes/No)	Proposed Mitigation
Conservation areas Value (L) Vulnerability (M) Sensitivity (M)	Engineering schemes leading to the loss of trees, removal of features or using inappropriate finishes which affect the setting of conservation areas	Direct	L	Operation – L Term	Reversible, permanent	L	Unitary Authority	Negative		No	Conservation Area Consent will be required for any demolition in Conservation Areas and notices are required for tree works. Mitigation measures will be specified in these permissions e.g. tree replanting
	Engineering schemes leading to physical damage to sites	Indirect	H	Operation – L Term	Reversible, permanent	H	Unitary Authority	Negative	No scheduled monuments, registered gardens will be affected. Listed Buildings could be affected through vibration.	Yes	Identification of any at risk sites and avoidance where possible. If likely effects are unavoidable mitigation such as different methods or reinforcing site may be required.
National Heritage Sites Value (H) Vulnerability (L) Sensitivity (M)	Protection of sites from flooding	Direct	M	Operation – L Term	Reversible, permanent	M	Unitary Authority	Positive		Yes	

RECEPTOR (Value (H/M/L) Vulnerability (H/M/L/N) Sensitivity (H/M/L/N)	Description of effect	Direct or indirect; Far- field effect; Cumulative effect; or effect resulting from Consequential Development	Probability (H/M/L/VL)	Duration (during construction, operation or decommission) Term (L/M/S/Vs) and Frequency (continual/ intermittent)	Irreversible / reversible; temporary/ permanent	Magnitude (H/M/L/VL)	Spatial extent & trans- boundary (National/ Regional/ Unitary/ Authority/ Local)	Positive/ Negative	Assumptions, Limitations, Uncertainties	Significant (Yes/No)	Proposed Mitigation
Climatic Factors											
Climatic factor s Value (H) Vulnerability (L) Sensitivity (M)	No anticipated effects on climatic factors										
Material Assets											
Housing Value (L) Vulnerability (L) Sensitivity (L)	Improved flood risk management in areas where housing allocations are proposed leading to more efficient development of the sites.	Direct	M	Operation – L	Reversible, permanent	M	Unitary Authority	Positive		Yes	
Economy Value (L) Vulnerability (L) Sensitivity (L)	Reduce flood risk will encourage economic development in Bath & North East Somerset and provide confidence to existing companies to expand	Direct	L	Operation - Long	Irreversible, permanent	M	Local	Positive		Yes	
Mineral extraction Value (L) Vulnerability (L) Sensitivity (L)	The management of flood risk on nearby roads will enable Limpley Stoke mine to continue to operate.	Indirect	H	Operation – L	Irreversible, permanent	H	Local	Positive	No wet spots are directly affecting the mine	No	

RECEPTOR (Value (H/M/L) Vulnerability (H/M/L/N) Sensitivity (H/M/L/N)	Description of effect	Direct or indirect; Far- field effect; Cumulative effect; or effect resulting from Consequential Development	Probability (H/M/L/VL)	Duration (during construction, operation or decommission) Term (L/M/SVS) and Frequency (continual/ intermittent)	Irreversible / reversible; temporary/ permanent	Magnitude (H/M/L/VL)	Spatial extent & trans- boundary (National/ Regional/ Unitary/ Authority/ Local)	Positive/ Negative	Assumptions, Limitations, Uncertainties	Significant (Yes/No)	Proposed Mitigation
Soils Value (M) Vulnerability (L) Sensitivity (M)	Reduction in the fertility of agricultural land through the reduction of flooding	Indirect	VL	Operation – L	Irreversible, permanent	VL	Local	Negative	There are no areas where flooding will be prevented in agricultural areas	No	
	Reduction in the amount of flooding of soils which will reduce soil erosion	Indirect	VL	Operation – L	Irreversible, permanent	VL	Local	Positive	There are no areas where flooding will be prevented in agricultural areas.	No	
Waste Management Value (L) Vulnerability (L) Sensitivity (L)	Management of flood risk in Bath, Midsomer Norton and Keynsham will ensure continued access and operation of waste management sites	Direct	M	Operation – L	Irreversible, permanent	M	Unitary Authority	Positive		Yes	
Transport infrastructure Value (L) Vulnerability (L) Sensitivity (L)	Effective flood risk management leading to a reduction in road closures following flood events	Direct	H	Operation - L	Irreversible, permanent	L	Unitary Authority	Positive		Yes	

Appendix D Cultural Heritage Plan



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Bath and North East Somerset's Local Flood Risk Management Strategy

Strategic Environmental Assessment: Environmental Report

Non-Technical Summary

November 2015



Bath & North East
Somerset Council

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1. Introduction

Flooding is a natural process that can have a major effect on lives, communities, the economy and the environment. As a Lead Local Flood Authority, Bath & North East Somerset Council is responsible for the development, application and monitoring of a Local Flood Risk Management Strategy to address potential flood risk from all local sources, including surface water run-off, groundwater and ordinary watercourses. Flood risk from main river sources, such as the River Avon, is managed by the Environment Agency. The Local Flood Risk Management Strategy is consistent with the plans and programmes which the Environmental Agency has set for flood risk management in Bath & North East Somerset.

The purpose of Bath & North East Somerset's Local Flood Risk Management Strategy is:

- to ensure that local flood risk is managed through a coordinated approach, and;
- that communities, businesses and individuals are more aware of the risks of flooding, understand who is responsible for dealing with flooding, and are clear about the actions they can take to manage the risk of flooding.



The Local Flood Risk Management Strategy aims to manage local flood risk through a coordinated approach

The Study Area

The Study Area includes the entire area within the Bath & North East Somerset district (see Figure 1). This covers a total area of 352km² of which two-thirds is classed as green belt. The district stretches from the outskirts of Bristol, south into the Mendip Hills and east to the southern Cotswold Hills and Wiltshire border. The city of Bath is the main settlement in the district which also includes the urban areas of Keynsham, Midsomer Norton, Radstock and Westfield, as well as principal villages such as Peasedown, St. John and Paulton. Bath & North East Somerset has a varied geography including river valleys and rolling hills. Within the district is the Chew Valley where Chew Valley Lake is a significant drinking water lake and important area for wildlife and recreation. The Study Area has a long history of human habitation, most significantly during Roman times.

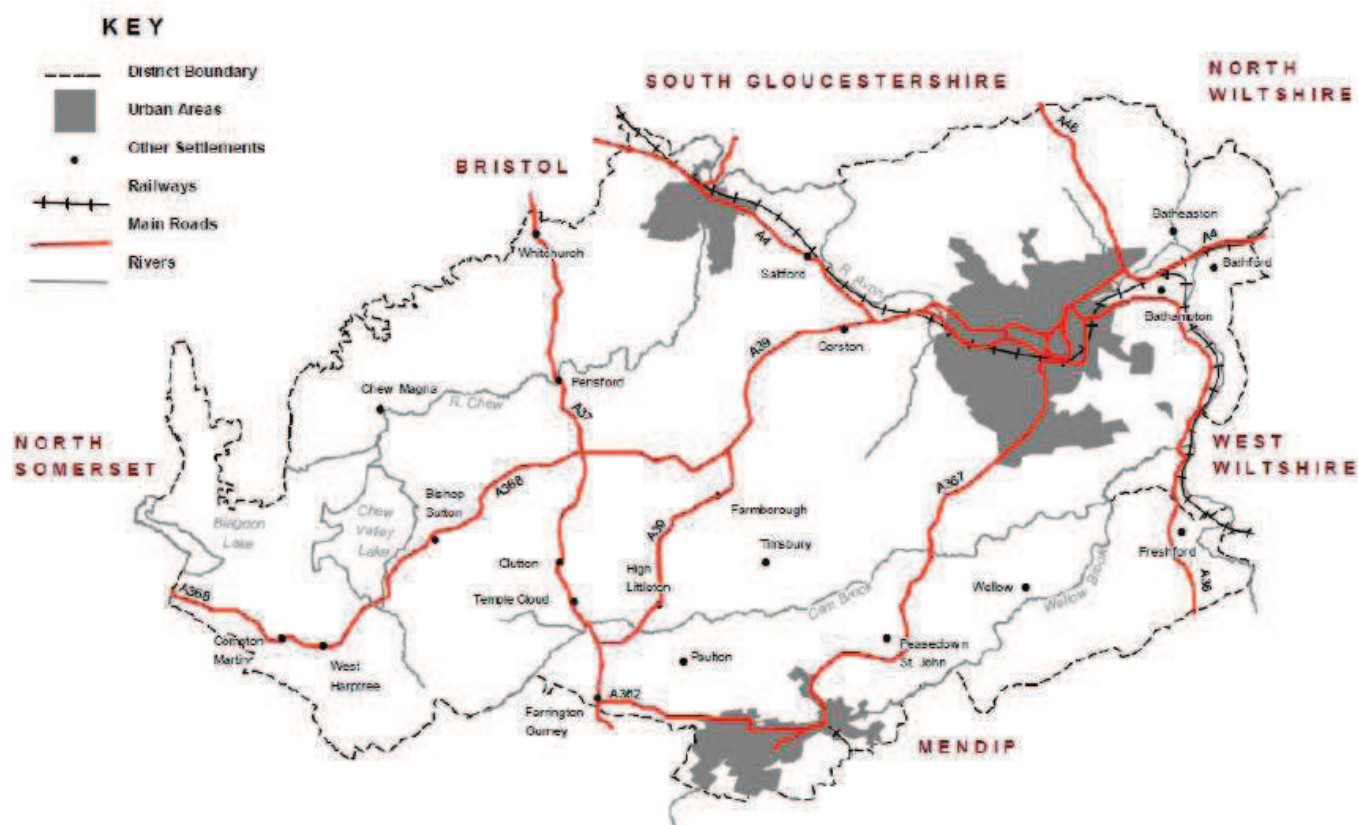


Figure 1: The Local Flood Risk Management Strategy covers the entire Bath & North East Somerset district

Strategic Environmental Assessment

A Strategic Environmental Assessment has been carried out to support the Bath & North East Somerset Local Flood Risk Management Strategy. This document provides a summary of the Environmental Report which has been produced to document the Strategic Environmental Assessment process undertaken.

A Strategic Environmental Assessment is a systematic process which assesses the potential environmental effects of plans and strategies before they are approved. The process allows us to consider different ways of managing flood risk, and identify, minimise or avoid significant environmental impacts at the earliest opportunity.

The Strategic Environmental Assessment has been undertaken in accordance with the European Strategic Environmental Assessment Directive as transposed into UK law by the Environmental Assessment of Plans and Programmes Regulations ('the Strategic Environmental Assessment Regulations'). In line with the Local Government Association Framework guidance, a proportionate Strategic Environmental Assessment of the Local Flood Risk Management Strategy has been undertaken which takes into consideration the high level nature, and limited structural elements, of the proposals, whilst noting the key environmental sensitivities of the district.

2. Key Issues and Constraints

We have collected a wide range of baseline data from a variety of sources and reviewed a range of national and local plans, policies, programmes and environmental protection legislation which are relevant to future flood risk management planning of the Study Area. We have consulted with external organisations, local experts and the public throughout the development of the Strategy to ensure we fully understand flood risks and existing environmental conditions.

The table below outlines the key environmental issues that have been identified.

Environmental Receptor	Key Environmental Issues
Water	• Compliance of the Local Flood Risk Management Strategy with the environmental objectives of the Water Framework Directive (WFD) and implementation of the Severn River Basin Management Plan (RBMP) • Movement of pollutants • Water resource management • Localised effects on surface and ground water
Flooding	• Changes in flood risk to urban and rural communities
Population and Human Health	• Potential for stress, ill health or injury from flooding and flood risk • Increasing costs associated with flooding and flood risk
Biodiversity and Landscape	• Landscape character of Bath & North East Somerset, including areas of high landscape quality in rural and urban settings, green belt, the Bath World Heritage Site and Cotswolds and Mendip Hills Areas of Outstanding Natural Beauty • Presence of priority habitats and species • Statutory and non-statutory conservation sites including the Bath and Bradford-on-Avon Special Area of Conservation (SAC), North Somerset and Mendip Bats (SAC), Chew Valley Lake Special Protection Area (SPA), 22 Sites of Special Scientific Interest and seven Local Nature Reserves and Ancient Woodlands.
Cultural Heritage	• Bath UNESCO World Heritage Site - considered of Outstanding Universal Value due to the city's hot springs, Roman archaeology, Georgian town planning and architecture and green setting of the city within a landscape bowl. • 57 Scheduled Monuments, 36 Conservation Areas, 3,278 Listed Buildings, 16 Registered Parks and Gardens and a Historic Battlefield.
Climatic Factors	• Climate change is likely to result in an increase in more extreme weather events flooding in the UK and may result in water scarcity during summer time.

Environmental Receptor	Key Environmental Issues
Material Assets	• Mineral resources and abstraction including limestone and coal. • Soil resources include clayey soils with high organic content, inherently at risk of agricultural run-off. • Waste management, including waste transfer stations and recycling facilities. • Transport infrastructure, including road and rail network • Current shortage of housing to be met by construction of new dwellings by 2026. • Local employment
The following environmental receptor has been ‘scoped out’ of the assessment	
Air Quality	It is unlikely that any significant impacts on air quality will occur. Emissions associated with construction activities can lead to localised and temporary effects on air quality; however, as details such as construction methods are unknown at this stage these effects are better assessed and managed at project level.

Strategic Environmental Assessment Objectives

Based upon the above consideration of key environmental topics, ten Strategic Environmental Assessment objectives have been formed in relation to the Bath & North East Somerset Local Flood Risk Management Strategy. These include:

1. Protect and enhance the ecological and chemical status of watercourses	2. Understand and manage flood risk
3. Maintain and enhance positive health profile for Bath & North East Somerset Council	4. Protect and enhance biodiversity and geodiversity
5. Maintain and enhance characteristic landscape features	6. Protect and enhance features that define the cultural heritage of Bath & North East Somerset Council
7. Manage, plan and adapt to the impacts of climate change	8. Ensure new development in Bath & North East Somerset Council is located in respect to the sequential test
9. Maintain and enhance accessibility to essential services by providing efficient transport infrastructure	10. Protect and enhance high quality agricultural land

3. Local Flood Risk Management Strategy Objectives and Action Plan

The objectives of the Local Flood Risk Management Strategy are to:

1. improve understanding of local flood risk;
2. promote community awareness and build capability for appropriate action;
3. manage local flood risk through capital and maintenance investment;
4. prevent inappropriate development that creates or increases flood risk., and;
5. improve flood preparedness, warning and ability to recover.

Action plans have been developed to ensure that the Local Flood Risk Management Strategy succeeds in achieving these objectives over a ten year period from 2015 to 2025. These actions identify tasks, timescales and resources that are required to achieve the action's aim and are provided in the Local Flood Risk Management Strategy report. The action plan is a live document which will be regularly reviewed and updated and includes actions to improve flood reporting, inform the population about flood risk and how it can be managed, monitor local flood risk and plan for action.



Bath is a UNESCO World Heritage Site famous for its Roman history and Georgian architecture

4. Environmental Effects, Mitigation and Monitoring

The Local Flood Risk Management Strategy has the potential for numerous environmental effects, both positive and negative. These, and any proposed mitigation or further work required, are summarised below. Wherever there is potential for the Strategy to cause significant negative environmental effects, further assessment will be undertaken at the more detailed project level to fully assess and minimise these.

	Positive Effects	Negative Effects	Further Work and Mitigation
WATER	Implementation of flood risk management and Sustainable Drainage Systems (SuDS) could contribute to the achievement of WFD water quality targets due to a reduction in the mobilisation of pollutants and reduced flood risk of contaminated land, sewerage networks and agricultural land.	Possibility of small scale modifications to, or pollution of, WFD waterbodies, but these effects are unlikely to contribute to failures in regional quality targets. Structural engineering actions resulting from the Strategy could have localised effects on surface and ground water quality or the physical nature of water bodies, which could result in indirect effects on the ecology and geomorphology of water bodies.	- All work will ensure compliance with the WFD - Structural works will follow Environment Agency's Pollution Prevention Guidelines - Where necessary, relevant flood defence or land drainage consents will be obtained - There will be good communication, collaboration of efforts and information sharing between partners within and outside of Bath & North East Somerset Council.
FLOODING	Increased understanding of flood risk, and reduced flood risk to homes, businesses and critical services, as well as reduced flooding of contaminated sites and roads which would otherwise result in pollution events.	Engineering schemes within the floodplain could affect floodplain storage capacity and flood water movement.	- Implement flood risk assessments - Under common law, landowners are responsible for drainage of their own land. It is therefore uncertain if they will take measures to control runoff rates. Monitoring of practices may be required.
HUMAN POPULATION	Reduction in stress, ill-health and injuries caused by flooding or flood risk. Reduced damage to property, amenities and infrastructure. Improved management of sewer flooding preventing the risk of untreated water entering homes.	No negative impacts are envisaged.	No mitigation is required as all effects are considered positive.

	Positive Effects	Negative Effects	Further Work and Mitigation
CULTURAL HERITAGE	Heritage assets and sites will benefit from increased flood protection. The implementation of any flood risk management measure could incorporate opportunities to improve access, understanding, or enjoyment, of the historic environment.	Low potential for direct damage to heritage assets and sites from construction works.	- Consult with Bath & North East Somerset Council planning department and obtain planning and listed building consents, if required.
BIODIVERSITY AND LANDSCAPE	Long term flood alleviation measures (e.g. SuDS) will provide opportunities to develop new habitats and enhance biodiversity. Statutory conservation sites that are at risk of local flooding will benefit (e.g. Chew Valley SPA, Bath and Bradford on Avon Bats SAC and North Somerset and Mendip Bats SAC as well as many SSSIs). Reduction in pollution entering watercourses through runoff or other sources.	Low potential for structural engineering schemes to have minor effects on species and habitats. Setting of a landscape bowl in Bath could be affected by tree removal.	- Where necessary, flood defence and land drainage consents will be sought prior to any construction. - Detailed mitigation will be developed as required following project level Environmental Impact Assessment, if required. - Consultation with statutory consultees.
CLIMATIC FACTORS	Unlikely to be any significant effects.	Unlikely to be any significant effects.	The Local Flood Risk Management Strategy includes actions to ensure that development takes in to account the potential risk of changes in climatic factors.
MATERIAL ASSETS	Improved flood risk management in areas allocated for development in the Bath & North East Somerset Council Core Strategy. Increased confidence in the local economy for new investments and expansion. Improved flood risk management will allow for continued extraction of minerals at Limpley Stoke and allow Bath, Midsomer Norton and Keynsham waste management sites to continue operating.	Unlikely to be any significant effects.	No mitigation required as all effects are considered positive.

Cumulative Effects and Wider Benefits

Cumulative positive effects upon flood risk management are anticipated as this Strategy is being developed alongside similar planning initiatives to manage and alleviate flood risk (for example Multi-agency flood plans and Catchment Flood Management Plans). In addition, good communication, collaboration of efforts and information sharing between partners within and outside Bath & North East Somerset will lead to cumulative positive effects upon water quality and resources for the entire Bristol Avon catchment.

Measures that incorporate natural processes into flood risk management such as Sustainable Drainage Systems (SuDS) will be promoted through the implementation of the Local Flood Risk Management Strategy. The use of SuDS within any engineering scheme proposed could lead to biodiversity enhancements such as the creation of wetland areas. In addition, promotion of SuDS into new and existing developments would offer further opportunities to enhance biodiversity and water quality while managing flood risk, creating a more sustainable area.

Monitoring

A key stage in the production of a Strategic Environmental Assessment is the development of measures that can be used to monitor the environmental effects of the implementation of the strategy. The findings of the monitoring will be reviewed and incorporated into the periodic review of the Local Flood Risk Management Strategy and be used to prepare an appropriate response where adverse effects are identified. The following indicators will be used to monitor and measure the magnitude of environmental effects during the implementation of the Strategy:

Changes in ecological and chemical status of water bodies	Changes in quantitative status (e.g. water levels) of watercourses and waterbodies.	Changes in water quality
Changes in the number of flood events	Changes in the number of properties at risk of flooding	Change in the number of critical services at risk of flooding
Changes in the severity of flood events	The number of SuDS schemes that are implemented	The number of defences that are developed
Change in the number of flood related injuries, illnesses and injuries	Numbers and distribution of protected habitats and species	Status of designated nature conservation sites within Bath & North East Somerset
Number of designated sites potentially at risk from future flood events	Numbers of cultural heritage features at risk from flooding (e.g. Scheduled Monuments, Listed Buildings)	Future updates in flood risk based upon local flood risk changes and the latest government climate change predictions

It is anticipated that the majority of these performance indicators can be sufficiently monitored by existing and future monitoring programmes currently being undertaken by Bath & North East Somerset Council or other organisations, such as the Environment Agency or Water Utility Companies. If other organisations identify negative effects, Bath & North East Somerset Council will be informed for example through the Local Resilience Forums or Strategic Flood Board & Operational Working Group that have been set up, or are being set up, as part of the Local Flood Risk Management Strategy.

5. Compatibility testing of Objectives

An assessment has been performed to determine how compatible the ten Strategic Environmental Assessment Objectives and five Local Flood Risk Management Strategy objectives are with each other. Several of the objectives were simply not related; particularly the Strategy objectives that are linked with non-structural actions such as raising public awareness of flood risks. The majority of related objectives are compatible and will ensure maintenance and enhancement of environmental features whilst promoting structural works to manage flood risk.



Chew Valley Lake is the largest artificial lake in south-west England, and valued as an important resource for drinking water as well as for biodiversity and recreation

6. Conclusion

Through the numerous actions proposed to identify and manage flood risk, the Local Flood Risk Management Strategy will have positive effects on water quality, flood risk, human health, statutory nature conservation sites, cultural heritage, housing, economy, waste management and infrastructure. Mitigation is required to ensure that any negative effects of structural engineering works upon water resources, biodiversity and cultural heritage are minimised.

7. Abbreviations and Glossary

Abbreviation / Term	Definition
AONB	Area of Outstanding Natural Beauty
EIA	Environmental Impact Assessment
FRMS	Flood Risk Management Strategy
RBMP	River Basin Management Plan
SAC	Special Area of Conservation
SPA	Special Protection Area
SSSI	Site of Special Scientific Interest
SuDS	Sustainable Drainage System
WFD	Water Framework Directive
Flood Risk	The combination of the likelihood of a flood happening and the impact it would have
Flood Risk Management	Activities that are undertaken to reduce the impact of flooding
Mitigation	The measures, including any process, activity or design to avoid, reduce, remedy or compensate for negative impacts.
River Basin Management Plan	A plan prepared under the Water Framework Directive that sets out the mitigation measures and actions that are needed for water bodies to reach good ecological status
Strategic Environmental Assessment	A process carried out according to the requirements of the Strategic Environmental Assessment Directive 2001/42/EC designed to ensure that significant environmental effects arising from proposed plans and programmes are identified, assessed, subjected to public participation, taken into account by decision-makers, and monitored.
Sustainable Drainage Systems	Drainage solutions that provide an alternative to the direct channelling of surface water through networks of pipes and sewers to nearby watercourses.
Water Framework Directive (WFD)	The WFD (EC Directive (2000/60/EC)) sets out environmental objectives for water status based on ecological and chemical parameters, common monitoring and assessment strategies, arrangements for river basin administration and planning and a programme of measures in order to meet the objectives.
World Heritage Site	A cultural or natural site deemed to be of outstanding universal value, the protection of which is important to all humanity. Sites are nominated globally by the United Nations Educational, Scientific and Cultural Organisation (UNESCO) who also put in place operational guidelines for management and protection.

FINAL

BATH & NORTH WEST SOMERSET LOCAL FLOOD RISK MANAGEMENT STRATEGY HABITATS REGULATION ASSESSMENT

B&V PROJECT NO. 122434
B&V FILE NO. 00

PREPARED FOR



12 NOVEMBER 2015



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Reviewed by:



11th November 2015

Vicky Lutyens

Approved by:



20th November 2015

Date

Signature

Jim Collings

Printed Name

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1.0 Introduction to the Local Flood Risk Management Strategy

- 1.1 Flood risk is managed by a range of Risk Management Authorities¹ as defined in the Flood and Water Management Act 2010.
- 1.2 The statutory Bath & North East Somerset Local Flood Risk Management Strategy sets out how Bath & North East Somerset Council as the Lead Local Flood Authority will, in partnership with other Flood Risk Management Authorities, carry out roles and responsibilities under the Flood and Water Management Act 2010.
- 1.3 The Local Flood Risk Management Strategy focuses on 'local' sources of flood risk which include surface water run-off, groundwater and ordinary water courses.
- 1.4 The Local Flood Risk Management Strategy will remain live for a 10 year period to 2025, after which it will be reviewed and updated where necessary. A mid-term update of the Local Flood Risk Management Strategy will take place after five years, in 2020, to check progress against the Strategy objectives and update the document where required. The update of the Local Flood Risk Management Strategy in 2020 will be reviewed by the Flood Risk Scrutiny Panel.

2.0 Requirement for HRA

- 2.1 Article 6 of EU 'Habitats Directive' on the conservation of natural habitats and of wild fauna and flora (Council Directive 92/43/EEC) states:
 - *'Any plan or project not directly connected with or necessary to the management of the site but likely to have a significant effect thereon, either individually or in combination with other plans or projects, shall be subject to an appropriate assessment of its implications for the site in view of the site's conservation objectives.....'*
 - *.... competent national authorities shall agree to the plan or project only after having ascertained that it will not adversely affect the integrity of the site concerned and, if appropriate, after having obtained the opinion of the public'.*
- 2.2 The Conservation of Habitats and Species Regulations 2010 (the 'Conservation Regulations') transpose the Habitats Directive into national law in England and Wales. Regulations 102 to 105 require planning authorities to assess the potential effects of plans on European Sites.
- 2.3 Habitats Regulations Assessment (HRA) is the process by which the requirements of the Habitats Directive are implemented, and ensures that plans or projects will not adversely affect European Sites.

¹ Risk Management Authorities covered by the Local Flood Risk Management Strategy are: Somerset County Council, all district councils, Environment Agency, South West Water, Somerset Internal Drainage Board and the Highways Agency.

- 2.4 **European Sites** - Reference in this report to ‘European sites’² should be taken to include the following:
- a) **Special Areas of Conservation** (SACs) for habitats and species designated through the EU Habitats Directive;
 - b) **Special Protection Areas** (SPAs) for the protection of wild birds and their habitats designated through the EU Birds Directive;
 - c) **Ramsar** sites, identified through the Convention on Wetlands of International Importance; and
 - d) Sites that are being considered for designation, referred to as Sites of Community Interest, candidate SACs or proposed SPAs.
- 2.5 SACs on land or freshwater areas are underpinned by notification as Sites of Special Scientific Interest (SSSI) designated by Natural England. HRA relates specifically and exclusively to the qualifying interests of international sites and not to the broader conservation interests or requirements under SSSIs. However, conserving and enhancing SSSIs that underpin international designations is likely to assist the conservation and enhancement of the international designations themselves. The condition status of SSSIs can also help to understand the ecological status of the international sites of which they may form a part.

3.0 Outline of the HRA Process

- 3.1 HRA is an assessment of the impacts of a proposed plan in combination with other plans or projects on one or more internationally designated sites. The screening stage of HRA is used to determine if a ‘likely significant effect’ will impact on the integrity of an international site. This report details the result of the screening stage of the HRA of the Bath & North East Somerset Local Flood Risk Management Strategy.
- 3.2 If likely significant effects are predicted in the screening stage, the second stage (the Appropriate Assessment) needs to provide a statement that says whether the plan does or does not adversely affect the integrity of an international site. Where it is not possible to conclude that no adverse effects will occur, having considered potential alterations to the plan and investigated alternative solutions, exceptional circumstances can be considered. However, it would have to be demonstrated that
- i. there were no alternative solutions and;
 - ii. there were imperative reasons of overriding public interest.
- 3.3 The process is sequential and if the screening stage concludes that the plan will have no likely significant effects on European sites it is not necessary to undertake appropriate assessment.

² It should be noted that ‘European Sites’ are also sometimes termed ‘Natura 2000’ sites

4.0 HRA Screening Methodology

4.1 There is no specific guidance relating to the HRA of flood risk management strategies. The methodology developed for the HRA screening is therefore based upon the following regulations and guidance documents:

- *Conservation of Habitats and Species (Amendment) Regulations 2012* (the ‘Habitat Regulations’).
- *The Habitats Regulations Assessment of Local Development Documents. Final Draft Guidance* (Natural England 2009).
- *Assessment of plans and projects significantly affecting Natura 2000 sites* (European Commission, 2001).
- *Planning for the Protection of European Sites: Guidance for Regional Spatial Strategies and Local Development Documents* (Department for Communities and Local Government, 2006).

4.2 The HRA Screening has been undertaken using the following steps described below and is based on the requirements set out by Natural England (2009).

Step 1 - List any international sites within, adjacent to or associated with the area that the strategy covers. Review the site(s)’ qualifying interest features and conservation objectives. The significance of a plan’s effects on an international site depends on whether the “integrity” of the site is affected. Article 6(3) of the Habitats Directive requires that: “the competent national authorities shall agree to the plan... only after having ascertained that it will not adversely affect the integrity of the site concerned...”. To determine what is meant by the “integrity” of the site, it is important to discover why the site was designated, i.e. identify the qualifying interest features. These features are listed in Annex I (habitats) and Annex II (species) of the Habitats Directive. The integrity³ of a site relies on the maintenance of an environment which will sustain its qualifying features and ensure their continuing viability. Conservation objectives are a statement of the overall nature conservation requirements for a site, expressed in terms of the favourable condition required for the habitats and/or species for which the site was selected.

Step 2 Determine whether the strategy is directly connected with or necessary to the management of the international site(s).

Step 3 Identify and discount all principal elements of the strategy that will have no significant impact on the international site(s) (including direct indirect and secondary impacts).

Step 4 Identify any ‘in combination’ effects of the strategy with other plans and projects (including direct indirect and secondary impacts) i.e. the cumulative effect of influences of all the plans and projects on the site(s)’ conditions required to maintain integrity.

Step 5 Identify elements of the strategy that may have a significant impact (including direct indirect and secondary impacts) to take through to the Appropriate Assessment if thought to be necessary.

³ Site integrity is defined as being the coherence of its ecological structure and function across its whole area which enables it to sustain the habitats, complex of habitats and/or population levels of the species for which it was classified (or designated). (Paragraph 20, ODPM Circular 06/2005 on Biodiversity and Geological Conservation).

5.0 Role of Authorities

- 5.1 In the case of the Local Flood Risk Management Strategy, the plan-making authority, Bath & North East Somerset Council, takes the role of Competent Authority for the purposes of the Habitats Regulations. Competent Authorities are responsible for:
- i. making an assessment before deciding to undertake, or give any consent, permission or other authorisation for a plan or project likely to have a significant effect on an international site, either alone or in combination with other plans and projects;
 - ii. for the purposes of the assessment, consulting the appropriate nature conservation body and having regard to its representations; and
 - iii. ensuring that if there is a negative assessment of a plan or project, agreement to that plan or programme is only given if there are no alternative solutions, it must be carried out for imperative reasons of over-riding public interest, and any compensatory measures that may be required are secured.
- 5.2 Natural England implements, on behalf of the Government, international conventions and EC Directives on nature conservation. Regulation 61 of the Habitats Regulations states that if Natural England advises that a plan or project is likely to have a significant effect on an international site, it must be subject to Appropriate Assessment by a Competent Authority. The Habitats Regulations imply that the competent authority can agree if the strategy is likely to have significant effects, but it cannot 'give effect' to the strategy until an Appropriate Assessment has been carried out and determined that it will not adversely affect the integrity of the international site. Natural England can
- i. provide advice on whether plans and programmes are likely to have a significant effect (either alone or in combination with other plans and projects) when requested to do so;
 - ii. advise Competent Authorities whether a plan or programme is necessary for the management of the site;
 - iii. comment on Appropriate Assessments;
 - iv. provide advice on the ecological requirements of any compensatory measures; and
 - v. provide advice on the suitability of any proposed compensatory measures.
- 5.3 The Secretary of State is responsible for:
- i. securing any necessary compensatory measures to ensure that the overall coherence of Natura 2000 is protected;
 - ii. confirming that any compensatory measures are sufficient to maintain the coherence of Natura 2000;
 - iii. informing the Commission of the measures adopted; and
 - iv. directing the plan-making authority not to give effect to a plan that may have an adverse affect on site integrity.

6.0 Screening the Bath & North East Somerset Local Flood Risk Management Strategy

6.1 The process outlined in paragraph 4.2 has been applied and the outcomes are outlined below.

6.2 Step 1: **Collation of information on international sites**

Three European Sites are present within the jurisdiction of Bath & North East Somerset and could be affected by some of the actions defined in the Local Flood Risk Management Strategy. These are:

- Bath and Bradford on Avon Special Area of Conservation (SAC) – significant parts of this site are within the Bath & North East Somerset area.
- Chew Valley Lake Special Protection Area (SPA) – the site is wholly within the Bath & North East Somerset areas.
- North Somerset and Mendip Bats SAC – one site is in the south west of the Bath & North East Somerset area by Compton Martin.

The interest features for these sites designated are provided in Annex 1, Table A1.

A review of all internationally designated sites adjacent to the Bath & North East Somerset area was undertaken to identify sites which could be impacted by the proposals within the Local Flood Risk Management Strategy. A small section of the SSSI Impact Risk Zone for the Mells Valley SAC is also within the Bath & North East Somerset authority area in the south west and therefore any proposed actions within this zone could lead to effects on this site. No other sites are likely to have significant effects following the implementation of the Local Flood Risk Management Strategy. All sites considered in the review are provided in Annex 1, Tables A1 and A2.

A review of the potential vulnerabilities / issues from the implementation of the Local Flood Risk Management Strategy on the four sites identified is provided in Table 6.1.

Table 6.1 Vulnerabilities / Issues on European Sites which could be affected by the implementation of the Local Flood Risk Management Strategy

Name	Site sensitivity	Site Vulnerabilities/Issues
Bath and Bradford on Avon Bats SAC	Important hibernation sites for greater horseshoe bat (<i>Rhinolophus ferrumequinum</i>) and, Bechsteins bat (<i>Myotis bechsteini</i>)	Bats are mobile species and therefore there will be effects outside of the SAC boundary at any type and scale of development site e.g. at locations of summer roosts, loss of feeding resources in key foraging areas.
North Somerset and Mendip Bats SAC	Only the Compton Mine Orcre Mine is within the Bath & North East Somerset Unitary Authority area. The mines are hibernation sites for Greater Horseshoe Bats but, according to the SSSI citation the site does not appear to contain any other interest feature for the SAC (e.g. Tilio-Acerion forests of slopes, screes and ravines) Lesser horseshoes and great horseshoes using the maternity and hibernation sites in the Somerset County sections of the SAC are likely to utilise foraging and commuting habitats within the Bath & North East Somerset area.	Bats are mobile species and therefore there will be effects within and outside of the SAC boundary at any type and scale of development site. Any projects proposed within the Compton Mine Orcre site included in the SAC boundary could affect terrestrial interest features however, they are unlikely to be present.
Chew Valley Lake SPA	Important wintering habitat for Northern shoveler (<i>Anas clypeata</i>)	Direct habitat loss or degradation from any changes in water abstraction, water quality, water depth and acid and nitrate deposition in important wetland areas. There is the potential for disturbance effects and loss of habitat within the SPA boundary on Northern Shoveler if projects occur within the SPA boundary or nearby.
Mells Valley SAC	Provides a maternity site site for 12% of the UK greater horseshoe bat population. Bats also hibernate in the site.	Bats are mobile species and therefore there will be effects outside of the SAC boundary at any type and scale of development site.

6.3 Step 2: Is the strategy connected to the management of the international sites

The Local Flood Risk Management Strategy is not directly connected to the management of the international sites.

6.4 Step 3: Identify and discount elements of the strategy which will have no significant impact

Table 6.2 analyses the actions provided in the Local Flood Risk Management Strategy to achieve the objectives to show where no significant effects on sites are predicted from the actions. The analysis shows that the majority of the actions proposed within the Local Flood Risk Management Strategy will not lead to a significant impact upon European sites and therefore these can be screened out of the next stages of the HRA.

The following actions proposed within the Local Flood Risk Management Strategy which could result in likely significant effects have been screened in:

- Deliver the actions in the Bath & North East Somerset Surface Water Management Plan
- Identify catchments where improved land management could reduce flood risk and/or improve the wider environment
- Identify critical highway drainage assets, in order to undertake targeted maintenance and respond to issues as the Local Highways Authority
- Prioritise maintenance and clearance works to culverts and watercourses
- Evaluate flood reports to identify where drainage improvements or other mitigation works are possible

6.5 Step 4: Identify in-combination effects

The relevant strategic plans (and associated projects) which could give rise to potential in-combination effects are:

- South West River Basin Management Plan (2009)
- The National Flood and Coastal Erosion Risk Management Strategy for England (2011)
- Biodiversity 2020: A Strategy for England's wildlife and Ecosystem Services
- Water for People and the Environment: Water Resources Strategy for England and Wales
- Future Water, the Government's Water Strategy for England (2008)
- Bath & North East Somerset Green Infrastructure Strategy
- District and Unitary Local Plans
- South West River Basin Management Plan
- Bath & North East Somerset Strategic Surface Water Management Plan
- South West Water Integrated Urban Drainage Studies

Although there is a lack of detail on how these actions will be implemented on the ground it is clear from a review of the aims of the proposals that the projects resulting from the actions screened in for further assessment are unlikely to be of a large scale. Where required, the projects proposed will be subject to an Environmental Impact Assessment where impacts will be identified and mitigation measures implemented to result in no residual impacts. As a result it is highly unlikely that there will be any in-combination effects from the implementation of the actions in the Local Flood Risk Management Strategy and the plans listed above.

Table 6.2 Screening the Local Flood Risk Management Strategy Actions to establish whether a Likely Significant Effect on a European site could result from their implementation. Actions indicated in bold italics could lead to an impact on European Sites and require further assessment.

Objective	Action Ref	Action	Could there be an impact on a European site	Conclusion
1 - Improve understanding of local flood risk	1a	Complete a regional Surface Water Management Plan	No – the plan is complete. Any actions which were identified will be delivered as part of a separate Local Flood Risk Management Strategy Action to achieve Objective 3 (see below).	Screened out – No Likely Significant Effect.
	1b	Continue to develop an updated flood reporting system	None – Does not in itself identify projects	Screened out - No Likely Significant Effect.
	1c	Improve the use of visual tools (e.g. GIS) to record and analyse flooding incidents	None – Does not in itself identify projects	Screened out - No Likely Significant Effect.
	1d	Continue to complete investigations of flood incidents, where the appropriate criteria is met	No – This is an investigatory action and does not identify projects.	Screened out - No Likely Significant Effect.
	1e	Ensure that appropriate data on flooding is shared between organisations, and between organisations and communities	None – Does not in itself identify projects	Screened out - No Likely Significant Effect
2 - Promote community awareness and build capability for appropriate action	2a	Establish clearer routes for communicating with communities and businesses about the roles and responsibilities for flood risk	None – Does not in itself identify projects	Screened out - No Likely Significant Effect
	2b	Help communities understand their own flood risk and their responsibilities for managing flooding	None – Does not in itself identify projects	Screened out - No Likely Significant Effect
	2c	Raise awareness of land drainage and riparian responsibilities	None – Does not in itself identify projects	Screened out - No Likely Significant Effect

Objective	Action Ref	Action	Could there be an impact on a European site	Conclusion
3- Manage local flood risk through capital and maintenance investment.	2d	Develop a network of Local Flood Representatives to act as a point of contact in the community on flooding issues, including in areas with transient populations	None – Does not in itself identify projects	Screened out - No Likely Significant Effect
	2e	Ensure communities know what to do in the event of a flood,, including in areas with transient populations	None – Does not in itself identify projects	Screened out - No Likely Significant Effect
	3a	Continue to work with partners, including adjacent authorities, to develop long term approaches to manage flood risk	None – Does not in itself identify projects	Screened out - No Likely Significant Effect
	3b	Deliver the actions in the Bath & North East Somerset Surface Water Management Plan	Yes – the actions could identify engineering projects which could have an impact.	Potential need to screen in for future assessment due to potential for Likely Significant Effect.
	3c	Continue to develop a register of assets which significantly affect local flood risk	None – Does not in itself identify projects.	Screened out - No Likely Significant Effect
	3d	Designate structures that effect local flood risk, to protect them from alteration or removal	None – Does not in itself identify projects.	Screened out - No Likely Significant Effect
	3e	Continue to assess applications for works on ordinary watercourses, through the land drainage consent process.	None – Does not in itself identify projects.	Screened out - No Likely Significant Effect
	3f	Identify catchments where improved land management could reduce flood risk and/or improve the wider environment	Yes – if improved land management is deemed as preferable in order to reduce flood risk or improve the water environment, suitable schemes will be progressed / promoted which could lead to impacts.	Potential need to screen in for future assessment due to potential for Likely Significant Effect.

Objective	Action Ref	Action	Could there be an impact on a European site	Conclusion
3- Manage local flood risk through capital and maintenance investment <i>continued</i>	3g	Identify critical highway drainage assets, in order to undertake targeted maintenance and respond to issues as the Local Highways Authority	Yes - a revised maintenance programme will be prepared which will involve replacing / improving critical assets	Potential need to screen in for future assessment due to potential for Likely Significant Effect.
	3h	Prioritise maintenance and clearance works to culverts and watercourses	Yes - a revised maintenance programme will be prepared which will involve replacing / improving critical assets	Potential need to screen in for future assessment due to potential for Likely Significant Effect.
	3i	Evaluate flood reports to identify where drainage improvements or other mitigation works are possible	Yes – drainage improvement projects resulting from the evaluation could lead to impacts	Potential need to screen in for future assessment due to potential for Likely Significant Effect.
4 - Prevent inappropriate development that creates or increases flood risk.	4a	Continue to review planning applications to make recommendations for surface water drainage and managing flood risk	None – Does not in itself identify projects	Screened out - No Likely Significant Effect
	4b	Publish the West of England Sustainable Drainage Systems Guidance for developers, and work across the West of England to co-ordinate sustainable drainage system implementation	None – Does not in itself identify projects	Screened out - No Likely Significant Effect
	4c	Include SuDS planning policy within the Council's Placemaking Plan/ Core Strategy	None – Does not in itself identify projects	Screened out - No Likely Significant Effect
	4d	Continue to provide guidance at the pre-application stage on flooding issues	None – Does not in itself identify projects	Screened out - No Likely Significant Effect
	4e	Consider the need for additional planning guidance on flooding specific to Bath & North East Somerset	None – Does not in itself identify projects	Screened out - No Likely Significant Effect
	4f	Identify areas that are sensitive to surface water flood risk and develop appropriate surface water drainage and flood risk requirements for any proposed development in these areas	None – Does not in itself identify projects	Screened out - No Likely Significant Effect

Objective	Action Ref	Action	Could there be an impact on a European site	Conclusion
5- Improve flood preparedness, warning and ability to recover.	5a	Help develop a multi-agency flood plan for high risk areas in Bath & North East Somerset	Yes – plan will result in projects which could lead to an impact	Potential need to screen in for future assessment due to potential for Likely Significant Effect.
	5b	Communicate information to communities, businesses and individuals on flood preparedness and recovery	None – Does not in itself identify projects	Screened out - No Likely Significant Effect
	5c	Promote uptake of the Environment Agency's Floodline Warnings Direct service	None - Relates to emergency plans / warning systems.	Screened out - No Likely Significant Effect.
	5d	Improve warnings and proactive mitigation in response to predicted rainfall	None - Relates to emergency plans / warning systems.	Screened out - No Likely Significant Effect.

6.6 Step 5 Identification of potentially significant impacts that may need to be taken through to Appropriate Assessment

The Strategy Action Plan given in Section 5 of the Local Flood Risk Management Plan is a 'live' document. There is a lack of certainty in terms of how the actions will be implemented on the ground. **It is therefore not possible to undertake an Appropriate Assessment of the likely significant impacts on European Sites at this stage.**

Once the projects resulting from the implementation of the Local Flood Risk Management Strategy are defined at project design stage, those that are planned in proximity to European Sites (using the HRA Alert Maps produced by the Bath & North East Somerset Council's Ecology Team) may need to be screened on the potential for significant effects upon the interest features of these. In addition, where projects have potential for wider significant effects by virtue of their size, location or characteristics, a statutory Environmental Impact Assessment may be required.

The projects implemented within the Local Flood Risk Management Strategy are likely to be small scale engineering works, where mitigation measures will be easily achievable to prevent potential impacts such as habitat loss or pollution effects integral to the functionality of the European Site. A set of principles have been developed in agreement with Natural England to ensure that there are no likely significant effects on bats using the Bradford on Avon Bat SAC and North Somerset and Mendip Bat SAC from engineering projects arising from the Local Flood Risk Management Strategy:

- All projects will consider what structures or assets may be affected (disturbed, altered or removed). Consultation with the Bath & North East Somerset Ecologist or Natural England will occur if the structures or assets have the potential to house roosting bats. Works may need to be scheduled to avoid the times of year when bats are using the asset.
- Every engineering project will consider what vegetation will need to be removed. Once known consultation with the Bath & North East Somerset Ecologist or Natural England will occur if the vegetation could be of value to bats so that mitigation measures can be employed (e.g. mature trees or shrubs adjacent to a water course or adjacent to an asset or structure which may be used by bats for roosting or sections of mature trees or shrubs which form a linear feature so that there will be a gap in the linear feature following their removal).

During the consultation exercise on this Habitats Regulation Assessment, Natural England it accepted that Step 5 cannot be completed at this stage. Natural England recommended that the types of actions which may have the potential to affect the interest features of the European sites be listed in the report, so that these can be quickly identified for specific activities within the Action Plan as it is implemented. These actions have been reviewed and are likely to be as follows:

- removal of commuting or foraging habitats for the SAC bats (i.e. greater horseshoe, Bechstein's and lesser horseshoe bats);

- removal or disturbance of features or assets used by SAC bats for roosting;
- lighting impacts to SAC bats if engineering projects are carried out at night or at dusk;
- habitat loss leading to a loss in the available foraging areas for SAC bats and the Chew Valley Lake Northern Shoveler populations; and
- changes to Chew Valley Lake SPA through alterations in water abstraction processes, negative water quality changes, modifications in the depth of the lake and acid and nitrate deposition in important wetland areas which support the bird populations of the SPA.

7.0 Summary

- 7.1 The report aims to provide a summary of the European Sites that could potentially be affected by the Bath & North East Somerset Local Flood Risk Management Strategy and ways in which they could be affected.
- 7.2 Only five of the 29 proposed actions of the Local Flood Risk Management Strategy have been identified to potentially cause a significant impact on European Sites. These are:
- Deliver the actions in the regional Surface Water Management Plan
 - Identify catchments where improved land management could reduce flood risk and/or improve the wider environment
 - Identify critical highway drainage assets, in order to undertake targeted maintenance and respond to issues as the Local Highways Authority
 - Prioritise maintenance and clearance works to culverts and watercourses
 - Evaluate flood reports to identify where drainage improvements or other mitigation works are possible
- 7.3 Further HRA screening of the actions implemented through the Local Flood Risk Management Strategy may be required at project design stage once the details of any projects are better understood. The screening will identify whether significant effects upon the interest features of European Sites are likely and, therefore whether an Appropriate Assessment is required.

Appendix A. Annex 1

Table A1 List of European Sites within the Bath and North East Somerset Unitary Authority area

Name	Designation	Qualifying Interest Feature
Bath and Bradford on Avon Bats	SAC	Greater Horseshoe bat (<i>Rhinolophus ferrumequinum</i>) (1304) Bechsteins bat (<i>Myotis bechsteini</i>) (1323) Lesser Horseshoe bat (<i>Rhinolophus hipposideros</i>) (1303)
North Somerset and Mendip Bats	SAC	Semi-natural dry grasslands and shrubland facies on calcareous substrates (<i>Festuco-Brometalia</i>) (6210) Tilio-Acerion forests of slopes, screes and ravines (9180) Caves not open to the public (8310) Lesser Horseshoe bat (<i>Rhinolophus hipposideros</i>) (1303) Greater Horseshoe bat (<i>Rhinolophus ferrumequinum</i>) (1304)
Chew Valley Lake	SPA	This site qualifies under Article 4.2 of the Directive (79/409/EEC) by supporting populations of European importance of the following migratory species Over winter: Northern Shoveler (<i>Anas clypeata</i>) - 503 individuals representing up to 1.3% of the wintering Northwestern/Central Europe population (5 year peak mean 1991/2 - 1995/6)

Table A2 List of International Sites in adjacent counties/unitary authorities:-

Name	Designation	Qualifying Interest Feature
South Gloucestershire (Unitary Authority)	Severn Estuary SAC	Estuaries (1130) Mudflats and Sandflats (1140) Atlantic Salt Meadows (<i>Glauco-Puccinellietalia maritima</i>) (1330) Sandbanks which are slightly covered by seawater all the time (1110) Reefs (1170) Sea Lamprey (<i>Petromyzon marinus</i>) (1095) River Lamprey (<i>Lampetra fluviatilis</i>) (1099) Twaiite Shad (<i>Alosa fallax</i>) (1103)
	Severn Estuary SPA and Ramsar Site	This site qualifies under Article 4.2 of the Directive (79/409/EEC) by supporting populations of European importance of the following migratory species: Over winter: 84317 waterfowl (5 year peak mean 01/04/1998) including: Including: <i>Cygnus columbianus bewickii</i> , <i>Anser albifrons</i> , <i>Tadorna tadorna</i> , <i>Anas strepera</i> , <i>Calidris alpina</i> , <i>Tringa totanus</i> .
City of Bristol (Unitary Authority)	Avon Gorge Woodlands SAC	<i>Tilio-Acerion</i> forests of slopes, scree and ravines (9180) Semi-natural dry grasslands and shrubland facies on calcareous substrates (<i>Festuco-Brometalia</i>) (6210)
Wiltshire	North Meadow and Clattinger Farm SAC	Lowland hay meadows (<i>Alopecurus pratensis</i> , <i>Sanguisorba officinalis</i>) (6510)
	Great Yews SAC	<i>Taxus baccata</i> woods of the British Isles (91J0)
	Kennet & Lambourn Flood Plain SAC	Desmoulin's whorl snail (<i>Vertigo moulinsiana</i>) (1016)

Name	Designation	Qualifying Interest Feature
Wiltshire <i>Continued</i>	Pewsey Downs SAC	Semi-natural dry grasslands and shrubland facies on calcareous substrates (<i>Festuco-Brometalia</i>) (6210) Early gentian (<i>Gentianella anglica</i>) (1654)
	Prescombe Down SAC	Semi-natural dry grasslands and shrubland facies on calcareous substrates (<i>Festuco-Brometalia</i>) (6210) Early gentian (<i>Gentianella anglica</i>) (1654) Marsh fritillary butterfly <i>Euphydryas</i> (Eurodryas, Hypodryas) <i>aurinia</i> (1065)
	Salisbury Plain SAC	<i>Juniperus communis</i> formations on heaths or calcareous grasslands (5130) Semi-natural dry grasslands and shrubland facies on calcareous substrates (<i>Festuco-Brometalia</i>) (6210) Marsh fritillary butterfly <i>Euphydryas</i> (<i>Eurodryas</i> , <i>Hypodryas</i>) <i>aurinia</i> (1065)
	Salisbury Plain SPA	This site qualifies under Article 4.1 of the Directive (79/409/EEC) by supporting populations of European importance of the following species listed on Annex I of the Directive: During breeding season: Stone Curlew <i>Burhinus oedicephalus</i> , 22 pairs representing at least 11.6% of the breeding population in Great Britain (Count as at 1998). Over winter: Hen Harrier <i>Circus cyaneus</i> , 14 individuals representing at least 1.9% of the wintering population in Great Britain (RSPB 1996/7).
	Chilmark Quarries SAC	Greater Horseshoe bat (<i>Rhinolophus ferrumequinum</i>) (1304) Barbastelle (<i>Barbastella barbastellus</i>) (1308) Bechsteins bat (<i>Myotis bechsteini</i>) (1323)
	The New Forest SPA -	This site qualifies under Article 4.2 of the Directive (79/409/EEC) by supporting populations of European importance of the following migratory species: During the breeding season: Eurasian Hobby (<i>Falco Subbuteo</i>), representing 5% of the population in Great Britain (no count period specified). Wood Warbler (<i>Phylloscopus sibilatrix</i>), representing at least 2% of the population in Great Britain (no count period specified)

Name	Designation	Qualifying Interest Feature
Wiltshire <i>Continued</i>	River Avon SAC	Water courses of plain to montane levels with the <i>Ranunculus fluitantis</i> and <i>Callitriche-Batrachion</i> vegetation (3260) Desmoulin's whorl snail (<i>Vertigo moulinsiana</i>) (1016) Sea Lamprey (<i>Petromyzon marinus</i>) (1095) Brook lamprey (<i>Lampetra planeri</i>) (1096) Atlantic salmon (<i>Salmo salar</i>) (1106) Bullhead (<i>Cottus gobio</i>) (1163)
	Porton Down SPA	This site qualifies under Article 4.1 of the Directive (79/409/EEC) by supporting populations of European importance of the following species listed on Annex I of the Directive during the breeding season: Stone Curlew <i>Burhinus oedicnemus</i> , representing 10.6% of the GB breeding population (5 year mean, 1995-1999).
	The New Forest SAC	Oligotrophic waters containing very few minerals of sandy plains (<i>Littorelletalia uniflorae</i>) (3110) Oligotrophic to mesotrophic standing waters with vegetation of the <i>Littorelletea uniflorae</i> and/or of the Isoëto-Nanojuncetea (3130) Northern Atlantic wet heaths with <i>Erica tetralix</i> (4010) European dry heaths (4030) Molinia meadows on calcareous, peaty or clayey-silt-laden soils (<i>Molinia caerulea</i>) (6410) Depressions on peat substrates of the <i>Rhynchosporion</i> (7150) Atlantic acidophilous beech forests with <i>Ilex</i> and sometimes also <i>Taxus</i> in the shrublayer (<i>Quercion robur-petraeae</i> or <i>Ilici-Fagenion</i>) (9120) <i>Asperulo-Fagetum</i> beech forests (9130) Old acidophilous oak woods with <i>Quercus robur</i> on sandy plains (9190) Bog woodland (91D0) Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (<i>Alno-Padion</i> , <i>Alnion incanae</i> , <i>Salicion albae</i>) (91E0) Transition mires and quaking bogs (7140) Alkaline fens (7230) Southern damselfly (<i>Coenagrion mercuriall</i>) (1044) Stag beetle (<i>Lucanus cervus</i>) (1083) Great Crested newt (<i>Triturus cristatus</i>) (1166)

Name	Designation	Qualifying Interest Feature
Somerset	Somerset Levels & Moors SPA and Ramsar Site	This site qualifies under Article 4.1 of the Directive (79/409/EEC) by supporting populations of European importance of the following species listed on Annex I of the Directive: Over winter: Bewick's Swan (<i>Cygnus columbianus bewickii</i>), representing 2.7% of the GB population (5 year peak mean 1991/92-1995/96) European Golden Plover (<i>Pluvialis apricaria</i>), representing 1.2% of the GB population (5 year peak mean 1991/92-1995/96)
	Mendip Limestone Grasslands SAC	European dry heaths (4030) Caves not open to the public (8310) Tilio-Acerion forests of slopes, screes and ravines (9180) Greater Horseshoe bat (<i>Rhinolophus ferrumequinum</i>) (1304)
	Mendip Woodlands SAC	Tilio-Acerion forests of slopes, screes and ravines (9180)
	Holme Moor & Clean Moor SAC	Calcareous fens with <i>Cladium mariscus</i> and species of the <i>Caricion davallianae</i> (7210) Alkaline fens (7230) Molinia meadows on calcareous, peaty or clayey-silt-laden soils (<i>Molinion caeruleae</i>) (6410)
	Quants SAC	Marsh fritillary butterfly <i>Euphydryas</i> (<i>Eurodryas</i> , <i>Hypodryas</i>) <i>aurinia</i> (1065)
	Hestercombe House SAC	Lesser Horseshoe bat (<i>Rhinolophus hipposideros</i>)
	North Somerset & Mendip Bats SAC	As provided in Table 6.1
	Exmoor and Quantek Oakwoods SAC	Old sessile oak woods with Ilex and Blechnum in the British Isles (91A0) Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (Alno-Padion, Alnion incanae, Salicion albae) (91E0) Barbastelle (<i>Barbastella barbastellus</i>) (1308) Bechsteins bat (<i>Myotis bechsteini</i>) (1323) Otter (<i>Lutra lutra</i>) (1355)

Name	Designation	Qualifying Interest Feature
Somerset <i>Continued</i>	Exmoor Heaths SAC	Northern Atlantic wet heaths with <i>Erica tetralix</i> (4010) European dry heaths (4030) Vegetated sea cliffs of the Atlantic and Baltic Coasts (1230) Blanket bogs (7130) Alkaline fens (7230) Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in the British Isles (91A0)
	Mells Valley SAC	Semi-natural dry grasslands and shrubland facies on calcareous substrates (<i>Festuco-Brometalia</i>) (6210) Caves not open to the public (8310) Greater Horseshoe bat (<i>Rhinolophus ferrumequinum</i>) (1304)
North Somerset (Unitary Authority)	Severn Estuary SPA, SAC and Ramsar Site	As above in South Gloucestershire unitary authority section
	Avon Gorge Woodlands SAC	As above in City of Bristol unitary authority section
	Mendip Limestone Grasslands SAC	As above in Somerset county section
	North Somerset and Mendip Bats SAC	As above in B&NES unitary authority section

Bath & North East Somerset Council		
MEETING/ DECISION MAKER:	Cabinet	
MEETING/ DECISION DATE:	2 nd December 2015	EXECUTIVE FORWARD PLAN REFERENCE:
		E2813
TITLE:	Adoption of the Green Spaces Strategy	
WARD:	All	
AN OPEN PUBLIC ITEM		
List of attachments to this report: Given the large file size for these reports they can be viewed online as a series of pdf documents at: http://www.bathnes.gov.uk/services/sport-leisure-and-parks/parks-green-spaces-information/green-space-strategy-review with appendices: • Green Space Strategy Final Report • Green Space Strategy Appendices one and two • Further appendices: Bath Area Profile, Bathavon Area Profile, Chew Valley Area Profile, Keynsham Area Profile, Somer Valley Area Profile		

1 THE ISSUE

- 1.1 Bath and North East Somerset Council's Parks service has recently completed a review of the Council's Green Spaces Strategy. The review is designed to provide an assessment of both current open space and any surpluses or deficiencies in open spaces throughout the district. The findings of the review will help inform the policies within the B&NES Placemaking Plan, establish local provision standards and create an up to date evidential basis that can be maintained and used to aid the implementation of the policies and the provision of open spaces, during the life of the plan period.
- 1.2 The findings of this study have been drawn upon by the Parks Service to develop a set of nine objectives to guide the development and management of our open space assets until 2029.

2 RECOMMENDATION

It is recommended that:

- 2.1 Cabinet adopt the proposed Green Space Strategy, findings of the review and associated area profiles, and agree that the findings of the report be used when preparing an action plan for the delivery and management of the green spaces across the district from 2015-2029.

3 RESOURCE IMPLICATIONS (FINANCE, PROPERTY, PEOPLE)

- 3.1 The proposed Green Space Strategy 2015 sets out a series of draft policies and standards for the provision of green space across the district, and a methodology for interpreting and informing the provision for these assets until 2029.
- 3.2 This strategy will be used to prioritise the allocation of existing resources for managing the green space asset and for directing developers' and other third party funding contributions to where they are most needed.
- 3.3 There will be no new additional financial implications for the authority arising from the adoption of this strategy
- 3.4 There will be no new implications for Property and People arising from the adoption of this strategy.
- 3.5 The proposed strategy's Appendix 2 provides a summary of the calculations used for setting developers' contributions in the 2015 Developer's contributions Supplementary Planning Document.

4 STATUTORY CONSIDERATIONS AND BASIS FOR PROPOSAL

- 4.1 The study which informs the draft strategy has been carried out in-line with the National Planning Policy Framework (NPPF) and Planning Policy Guidance 17: Planning for Open space, Sport and Recreation. The strategy will provide the evidence base for the green space policies within the Place-Making Plan.
- 4.2 The proposed strategy will provide a means for prioritising expenditure associated with the district's green spaces and will help the Council meet its obligations in the areas of Sustainability and the Natural Environment (as they relate to green spaces).

5 THE REPORT

- 5.1 There was a clear need to review the existing 2007 Green Spaces Strategy in light of the introduction of National Planning Policy Framework and to inform the policies within the emerging B&NES Placemaking Plan.
- 5.2 In carrying out the review a comprehensive local needs assessment was undertaken which included public consultation, review of neighbourhood plans, related B&NES strategies, policies and a Joint Strategic Needs Assessment. An audit of 500 sites and the mapping of 2000 green spaces was undertaken together with reviewing the capital and maintenance costs for any new provision.
- 5.3 The study was undertaken by Ethos Environmental Planning and overseen by a project board comprised of representatives from the Council's Planning Policy,

Public Health, Strategy and Performance, Environmental Services, Natural Environment and Sustainability teams. The Project Board scrutinised and directed the areas of work undertaken which informed the review leading to the production of the final strategy document and area profiles.

- 5.4 In producing the draft strategy a survey of 594 B&NES households was undertaken and 296 young people were consulted to inform the local needs assessment. This provided a snapshot of aspirations and expectations for green infrastructure across the district.
- 5.5 A review of capital and maintenance costs for green site provision was undertaken in parallel with this study to be used to inform planning policy relating to Developer contributions towards green space provision. Furthermore, the proposed strategy also sets out a methodology for using Developer contributions when addressing deficits and surpluses in green space provision and it is proposed that Planning Officers will use this in the assessment of applications for Planning Consent.
- 5.6 The proposed strategy sets out a series of expectations for the provision and management of green spaces across the district summarised as follows:
- (1) Deliver a mixture of doorstep and destination provision,
 - (2) Design and deliver greenspaces which are multifunctional,
 - (3) Develop an action plan for improving quality across the area,
 - (4) Address quantity shortages in key typologies – specifically allotments, youth provision, parks and recreation grounds, improving access to the Public Rights Of Way network,
 - (5) Help to create and enhance a network of both utility and recreation routes for use by foot and bike in both urban and rural areas,
 - (6) Use neighbourhood plans to identify locations for new provision
- 5.7 In addition to district-wide recommendations, the proposed strategy also identifies specific priorities and issues for each of the five community forum areas. These are shown in the associated area profiles contained as appendices documents at the webpage address listed on pages 1 and 5.
- 5.8 The recommendations from the proposed strategy have been used to develop a set of nine objectives for guiding the development and management of the green asset until 2029 which are as follows:

Bath and North East Somerset's green spaces will:

- Be managed sustainably
- Deliver spaces which help support fit and healthy communities
- Encourage communities to explore their green infrastructure through a connected green grid
- Support communities to connect with their green spaces
- Enhance the unique and beautiful landscape of the district

- Reveal and celebrate the unique local heritage
- Help mitigate the impacts of climate change and pollution
- Showcase excellence

5.9 If adopted, the strategy will be shared formally with partners and used to develop more detailed action plans for the provision and management of green spaces across the district until 2029.

6 RATIONALE

6.1 The development of the proposed strategy has been undertaken by an external team of consultants and has been informed by an independent studies using established and rigorous methodology. The whole process has been overseen and scrutinised at all stages of the process by a multi-disciplinary B&NES Council team representing all key stakeholders involved in the provision and maintenance of green spaces.

7 OTHER OPTIONS CONSIDERED

7.1 Continue with an out dated strategy (2007) based on information that is unfit to inform emerging or future Council policy.

8 CONSULTATION

8.1 Those consulted in preparing this report include the Council Cabinet Member for Communities, Section 151 Officer and Council Monitoring Officer. The Green Spaces Strategy was prepared in consultation with Officers throughout the Council.

9 RISK MANAGEMENT

9.1 A risk assessment related to the issue and recommendations has been undertaken, in compliance with the Council's decision making risk management guidance

Contact person	<i>Paul Pearce (01225 396879)</i>
Background papers Not included for draft dispatch	Not attached due to substantial file size Green Space Strategy Final Report, Green Space Strategy Appendices 1 & 2 and Further Appendices: Bath Area Profile, Bathavon Area Profile, Chew Valley Area Profile, Keynsham Area Profile & Somer Valley Area Profile. These can be viewed on the council website at: http://www.bathnes.gov.uk/services/sport-leisure-and-parks/parks-green-spaces-information/green-space-strategy-review
Please contact the report author if you need to access this report in an	

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