



Review of mooring standards
on the River Avon between
Pulteney Weir and North
Parade Bridge

Table of Contents

Executive Summary	2
Introduction and Terms of Reference	4
Methodology.....	5
Results of the Mooring standards review.....	6
Review of the existing standards of moorings on the River Avon between Pulteney Weir and North Parade Bridge.....	6
Comparative review of the mooring arrangements along the river Avon in Bath, Bathampton and Bradford on Avon.....	7
Results of the Access audit.....	8
Access Audit	10
Pre-arrival information	10
Parking.....	10
Facilities.....	10
Approach routes	10
Riverside path.....	10
Access to moorings	11
Seating.....	11
Summary Table	11
Results of the stakeholder survey.....	14
Operational management.....	14
Acceptance and attraction	16
Facilities and infrastructure.....	18
Conclusions.....	21
Recommendations	22
Management References.....	23
Appendix A - Legislative context and relevant design standards	24
Appendix B – Table of photographs.....	26

Issue	Date	Originator	Reviewer	Authority	Details
1	27.11.2013	PM&JT	ND	RoSPA	Draft
2	10.12.2013	PM&JT	ND	RoSPA	Final

Executive Summary

RoSPA were requested to evaluate the current safety and access standards for mooring between Pulteney Bridge and North Parade Bridge in the centre of Bath.

A number of RoSPA consultants were involved in conducting site visits. The project included talking with visitors, conducting site visits and consulting with stakeholders. An electronic questionnaire and a number of phone interviews were conducted to consult with stakeholders.

Currently we found that the moorings and access to them does not meet the expected standards for this type of location. The moorings have limited suitability for year round use and the access to them could be significantly improved.

The main issue for public safety was noted to be the condition and width of the pathway, particularly when the river level is rising.

A number of recommendations have been made to assist with improving the location and use of the location for 48 hour moorings for the foreseeable future. These include:

- Moving the fence
- Provision of mooring rings or similar; and perhaps a floating pontoon or similar solution to cope with the fluctuating levels and fast flow, if the space is available and engineering considerations and costs allow.
- Providing improved access along the existing pathway and to any boats, for all.
- Providing power and water on the pontoon with rescue equipment and information for users.
- Providing segregation for the moorings from the bank, especially when high edge pressures are likely to be common.

These recommendations and others were supported by the majority of the stakeholders we spoke to. The provision of a warden or similar to supervise the area was broadly welcomed, but the financial viability of this was questioned.

Overall, we feel that the recommendations, if implemented in full, would ensure that the moorings and access to it along this area would be greatly improved. Improving this area and facility would add to the attraction of Bath as a tourist destination, rather than being below current expectations as it is today.

Introduction and Terms of Reference

RoSPA were engaged by Bath and North East Somerset Council, to review the existing standards of moorings for boats along the river Avon between Pulteney Weir and North Parade Bridge on the river Avon in Bath with additional comparison of existing mooring arrangements on the river Avon in Bath, Bathampton and Bradford on Avon.

For the purposes of this review the relevant best practice guidance contained in the publications below were considered.

- The RoSPA publication –Safety in Inland Waters Operational Guidance
- The Yacht Harbours Association (THYA) Code of Practice for the design construction of Marinas and Yacht Harbours.
- British Waterways guidance for narrow boats (British Waterways are now the Canal and River Trust).

There are no specific existing legal standards for the design of Marinas and berthing arrangements; however these publications have the status of an ACOP (approved code of practice) and would be considered by the Courts as such.

Your attention should also be given to the requirements of the Management of Health and Safety at Work Regulations 1999 and the Workplace, Health, Safety and Welfare Regulations (recently revised) which require suitable and sufficient risk assessments to be undertaken and relevant standards to be provided.

The review considered these documents to identify any areas where physical controls need to be improved and to identify and significant management issues that should be addressed during the operation of these facilities.

An access audit was conducted for the area. This assessment considered the accessibility of this area, the environment and any services derived from it. The assessment considered the requirements of the Equality Act, now and in the future, but this report does not constitute the access audit for the Council, in compliance with this legislation.

Areas considered:-

- General requirements for access
- General requirements for water safety edge protection and Personal rescue equipment
- Provision of arrangements for any shared access
- Provision for disabled access
- Provision and safety of required features and amenities

In carrying out this safety review RoSPA would point out that reviews are by nature a sampling exercise, therefore the reviewer cannot guarantee to identify all safety hazards from the available plans. Opinion is formed by this desk top review and absence of comment on any issue should not be taken to imply that the site will be risk free.

Consideration has been given in our recommendations to the implications of Case Law, changes to H&S Regulations and the findings of accident investigations where these have a bearing on water safety.

RoSPA has endeavoured to identify all the significant risks; however it is essential that the controls identified in the risk assessments are continually developed and reviewed in

response to changing legislation, best practice documents, *active monitoring* and the *investigation and outcomes of accidents and near misses*.

Methodology

In order to complete the review the RoSPA consultant conducted a site review and scoping exercise in October 2013. As part of this review the consultant made reference to a number of standards and guidance which are listed in the reference section and where appropriate in the report.

We also used our experience of other similar locations around the UK and of accident statistics regarding safety and drowning.

A survey was conducted by use of the Snap Survey to a list of stakeholders. Phone interviews were also conducted with a number of individuals representing key parties. A list of those contacted is included in the appendix.

The results of the access audit, safety standards review and stakeholder consultation were compiled. Conclusions and recommendations were then drawn from the findings.

Results of the mooring standards review

Review of the existing standards of moorings on the River Avon between Pulteney Weir and North Parade Bridge.

The existing moorings are located in the middle of the City centre on the River Avon. The location affords splendid views of the Abbey and wider City. The moorings are popular for visitors and overnight stays.

The edge pressures in this location will be periodically high, due to the exits from the Rugby and Cricket grounds and the use by visitors.

There are some sizable boats moored and using this area. Individuals spoken to during the site visit reported that boat owners are sometimes struggle to negotiate turning in this area due to the strong currents and relatively narrow width of the river. It was noted that the operation of the sluice can significantly affect the navigation at this stretch of river.

It was noted that a number of poor practices have been recognised from time to time:

- Boat are tying onto the railings. This is unwise and insecure and could lead to a boat drifting, sinking, or at least damaging the railings.
- During Spate conditions that boat owners had failed to move their boats to a more suitable mooring. See photo 10.
- Boat owners were using scaffolding boards on top of the park benches as access routes to the boats. Obviously this is not safe and would be completely unacceptable for anyone inviting members of the public onto a boat e.g. as part of a business.

Despite these fairly obvious abuses, the existing arrangements do not meet the current best practice for providing moorings on a busy river in a city centre.

Giving consideration to the Yacht Harbours Association (THYA) Code of Practice for the design construction of Marinas and Yacht Harbours, the following aspects need attention:

1. The critical deviation from the standard is the provision of 20m turning space between pontoons/ other structures. This would potentially be expensive to achieve, if at all possible with the current location. Consideration of the application of this standard and any restriction on boat sizes should be agreed when a design is drafted (see 12, below).
2. Of course, the provision of a structurally sound floating pontoon or other suitable mooring would need to be provided. We understand that Piling into the riverbed would be inappropriate and therefore that a pontoon would need to be hinged from the bank. Structural evaluations would be necessary to ensure this is constructed correctly.
3. The maintenance and retention of the existing edge protection to prevent persons falling into a fast flowing river.
4. Access control to any proposed pontoons, which allows visitors off the river but prevents unauthorised access onto the pontoons. This can be achieved by the creation of a bridge head leading to a series of pontoons.
5. The provision of water and electricity onto the pontoons (to be recharged to the customers)

6. Lifesaving equipment on the pontoons suitable for a fast flowing river.
7. Safety signage at the bridge head to give advice on what to do in the event of an emergency.
8. Rescue ladders on the pontoons designed and identified in such a way as to assist with self-recovery.
9. Lighting on the pontoons to provide safe access and egress during the hours of darkness.
10. Fire extinguisher boxes containing 1 CO₂ and 1 Foam extinguisher to be provide on each pontoon so creating a 'Safety Point' together with the lifesaving equipment and safety signage.
11. Critical to the visual impact of the area and the practical use of the facility is, of course the Pontoon design. The TYHA guidance identified for following standards.
12. Width of the created inner channel to be 20 m and when facing against the current would need to be increased.
13. Recommended pontoon length for craft up to 20m long to be boat length (BL) + 1.5 m where there is a single berth and where multiple berths (ie boats moored against each other BL+BL+2m (additional guidance is given for boats over 21m in length.
14. Access ramps should be a minimum of 3m wide with finger ramps having a width of 2.5 m, access ramps should have a gradient of 1 in 4 and ridges provided to provide grip, when the ramp is steep or inclement weather.
15. The access point would ideally be secured from the general public.

Consideration needs to be given to the longer stretch of river to ensure that residential moorings are not moved or allowed between North Parade Bridge and the K&A Lock. This area is unsuitable for moorings. Access to the slipway is critical for emergency services access to the river.

Navigation control of this stretch should be agreed between all the stakeholders to ensure that a robust plan can be implemented across the area. Plans and associated byelaws or licensing laws can then be used as appropriate.

Comparative review of the mooring arrangements along the river Avon in Bath, Bathampton and Bradford on Avon.

The existing arrangements for moorings in a more rural environment both down and upstream conform to what would normally be expected in a rural area and can be referenced against the standards applied by British waterways for canal barges.

The difference between the proposal to provide moorings in the City centre, where there is a fast flowing current and the edge gradient is very steep (requiring edge protection) and significant edge pressure

Against the moorings provided at Bathampton and Bradford on Avon where the moorings are against a shallow bank where the river meanders through the countryside and numbers of mooring are much lower (with relatively no multiple mooring) and with significantly reduced edge pressure.

In these circumstances we would not recommend edge protection or the creation of mooring pontoons with ancillary equipment.

Results of the Access audit

Site location and description

The site is within Bath city centre along the eastern bank of the River Avon, between Pulteney Bridge to North Parade Bridge. The area is managed by the local authority, Bath & North East Somerset Council.

The riverside path is part of a pedestrian route from Pulteney Bridge to Widcombe and the Kennet and Avon Canal junction in the south. This report focuses on the section of riverside path between the Pulteney Bridge steps and North Parade Bridge steps, which is approximately 300m in length and is divided into the following elements, starting from the north (upstream) end:

- A. Riverside Path from Pulteney Bridge:** The riverside path starts at the foot of the steps from Pulteney Bridge and skirts around a silted up boat dock (Photo 1). The paved and tarmac path runs along the riverside wall, on top of which is mounted a guardrail (>1.1m high metal railings) (Photo 2). The only break in this guardrail is a gate to the cruise boat embarkation point (see below).
- B. Grove Street No-Through-Road:** To the east of the riverside path is a no-through-road, leading from Grove Street under Pulteney Bridge. There are one or two restaurants along the east side of this road. Between this road and the riverside path road is an area of grass and trees.
- C. Cruise boat embarkation point:** Cruise boats, such as the Sir William Pulteney operated by Pulteney Cruises, take people on trips upstream above the weir to Bath Boating Station and Bathampton Weir (Photo 3). These trips run at hourly intervals during the summer and six times a day during the winter. The cruise boats are not currently wheelchair accessible.
- D. Pulteney Weir sluice gate and island:** This large sluice gate, dating from the 1970's, spans between the river bank and an artificial island within the river. Across the top of

the sluice gate is a terrace. This terrace was designed as the location for a restaurant but has never been used for this purpose. The terrace, the island and the sluice gate have no public access, but can be reached for maintenance purposes up a flight of gated steps at the side of the sluice gate.

- E. Raised path from sluice gate to North Parade Bridge:** The riverside path continues in a south-easterly direction, reached up four steps with one handrail (Photo 4) near the sluice gate or alternatively via gently sloping tarmac paths across the grass. On the west side of the riverside path is a bunded slope with a smooth concrete top edge and rough stones sloping down to a lower walkway (Photo 5). There are several flights of steps with no handrails set into the bunded slope (Photo 6). Temporary moorings are reached by climbing over a metal barrier with two horizontal bars (<1.1m height) from the lower walkway. On the east side of the upper level riverside path is Bath Rugby Club's ground with an entrance gate and further south is the Bath Sports and Leisure Centre. To reach the Leisure Centre Car Park one must climb over a grassy flood prevention bank, which has two flights of steps with handrails on both sides (Photo 7).
- F. North Parade Bridge:** The riverside path continues under North Parade Bridge to a level drop-off point at Spring Gardens Road and Ferry Lane in Widcombe. Alternatively pedestrians can leave the path by climbing up narrow winding steps within the pier of the North Parade Bridge (Photo 8).

Who uses the paths and moorings?

- **Boat users** access the temporary moorings along the section of river bank south of the sluice gate/weir and embark on river cruises from the steps to the north of the sluice gate/weir.
- **Local residents** frequently use the riverside path to reach shops, schools or their place of work as part of one of the many city footpaths. It is well-used as a detour to avoid the extremely busy city centre pedestrian shopping areas. It is also a route to Bath Leisure Centre via the steps over the flood prevention bank.
- **Tourists** use the riverside path to photograph Pulteney Bridge and the river, and also enjoy the riverside and city path network.
- **Bath Rugby Club supporters** use the riverside path to enter the west side of the rugby ground.

Consequences of changes in river level and flooding

The section of riverside path surveyed is prone to flooding (Photos 9 to 14) taken in November 2012. When the riverside path is flooded this has an effect on pedestrian access, because pedestrian routes are either covered in shallow water, concealing hazards such as the unguarded slope edge, or pedestrians are diverted along inaccessible stepped or steep detours.

Access Audit

This section looks at specific access issues, such as arrival at the site, parking, facilities and barriers to access within the site itself. The locations of specific features refer to the descriptions in Section 1.1. Where relevant, recommendations have been made in the Summary Table.

Pre-arrival information

There is no pre-arrival information available, which outlines specifically the facilities and access provision along this section of riverside path. This report does not make any specific recommendations to make available pre-arrival information, unless the moorings are significantly upgraded so that they do have wheelchair access. When this happens, any accessibility features should then be publicised via the cruise company's and council's websites.

Parking

There is no dedicated parking provided at the site, only level access from kerb-side residents' parking bays available in Grove Street on the north side of Pulteney Bridge. Blue Badge Holders are able to park on restricted parking areas in locations as specified under the Parking Policy of Bath and Northeast Somerset Council.

Facilities

There are no council facilities providing WCs or refreshments within or near the site. Those mooring would need to have their own facilities provided.

Approach routes

The step-free approach routes to the site are along public roads via Grove Street from the north and Spring Gardens Road, Widcombe from the south. Both of these routes are reasonably level with dropped kerbs. There are acceptable stepped pedestrian approach routes with handrails from Pulteney Bridge (A), over the flood prevention bank from Sports and Leisure Centre Car Park (A) and from North Parade Bridge (F).

Riverside path

The riverside path has a worn and uneven tarmac surface in some places, caused by surface level tree roots (Photo 15). This is in evidence near the cruise boat embarkation point (C).

Some steps along the riverside path do not comply with current accessibility standards, because they do not have two handrails, have no contrasting nosings and no tactile warning strips at the top and bottom of the flights. An example is the flight of steps in Photo 4 near the sluice gate. As there is a detour route to avoid these steps, these defects need not to be urgently addressed, but the steps should be upgraded in the long term.

The riverside path between the sluice gate and North Parade Bridge (D) is liable to flooding and when this occurs, it is not possible to see the bunded slope along the edge of the path (Photos 9 and 10). Ad-hoc barriers are put in place (Photo 14) to divert pedestrians away from the flooded area. However the diversion route is not accessible, because it takes people up the flood prevention bank alongside the Sports and Leisure Centre Car Park.

Access to moorings

Cruise boat embarkation point

Above the sluice gate/ weir passengers embark on the cruise boats through a gate in the riverside path guardrail, which is opened by the cruise boat crew. A flight of 3 nos. steps (1750mm wide) and a narrower flight of steps (approx. 1m wide) with 150mm risers lead down to the water's edge. The boats are moored alongside these steps. Passengers must steady themselves by holding the corner of the boat roof or railings attached to the boat when negotiating these steps (Photo 3). The steps themselves have no handrail on the wall-side for people who only use one arm. There are also no visible warning strips or contrasting nosings for people with vision impairments.

Moorings south of sluice gate

Below the sluice gate/ weir the lower walkway at the bottom of the bunded slope has a <1.1m high guardrail with no gates to provide access to the temporary moorings. There is no ramped route to this lower walkway, only steps with no handrails, and a series of bollards reduce the width of the lower walkway, rendering it inaccessible to a wheelchair user. Currently no licensed cruise boats operate from these moorings; this stretch of river below the weir is served by a licensed cruise boat, which operates from a mooring with pontoon and ramp located to the south of North Parade Bridge.

Seating

There are benches at regular intervals alongside the riverside path. None of these benches have arms for people with limited upper body strength.

Recommendations

1. Long term: When benches are replaced, install 50% with arms, so that they are easier to use for people with limited upper body strength.

Summary Table

It should be borne in mind that the recommendations in this report will not be the only way of complying with the relevant legislation and are offered as examples. The recommended adaptations from Section 2 are prioritised under the following headings in the following table:

- | | |
|---|---|
| 1 | Immediate action: |
| 2 | Implement in short term (within 1 to 2 years) |
| 3 | Implement in long term (within 2 to 5 years) |
| M | Management issues |

Recommendations	Priorities
Pre-arrival information	
If the moorings are significantly upgraded so that they are wheelchair accessible, indicate this fact on the cruise company's and council's websites. This information should include accessible approach routes, location of accessible parking bays, facilities available, type of access to the boats, etc.	3
Riverside path	
Repair uneven tarmac on paths, particularly near cruise boat embarkation point (C) . All paths should have firm non-slip surfaces (not loose gravel).	1
Steps near sluice gate should be upgraded to have two handrails, contrasting nosings and tactile warning strips at the top and bottom of the flights. Handrails should be 48mm diameter tubular sections at 900 - 1000mm height, or similar designed to BS8300:2009.	3
When the river floods over the riverside path, install permanent gates and signs showing diversion and also have in place management plan to close the gates on these occasions. Signs should indicate the alternative step-free route for people who are unable to climb over the flood prevention bank alongside the Sports and Leisure Centre Car Park.	1/M
Access to moorings	
To reach cruise boat embarkation point above sluice gate/weir, install handrails on wall side of steps.	2
To reach moorings below sluice gate/weir, install handrails on one flight of steps to lower walkway.	2
Any new flights of steps should be upgraded to have two handrails, contrasting nosings and tactile warning strips at the top and bottom of the flights. Handrails should be 48mm diameter tubular sections at 900 - 1000mm height, or similar designed to BS8300:2009.	3
If the cruise boat embarkation point or the moorings below sluice gate/weir are remodelled, it is best practice to accommodate wheelchair users, via ramps, accessible gangways and gates. Ramps should be designed to BS8300:2009 (minimum gradient at 1:12), but if this is not achievable, bearing in mind the narrow width of the river, Sailability standards should be followed (a ramp with non-slip surface no steeper than 1:4 gradient and handrails on both sides). Any decking or pontoons should have boarding with non-slip surface and no greater than 15mm gaps between the boards and there should be step-free transitions between ramps and level	3

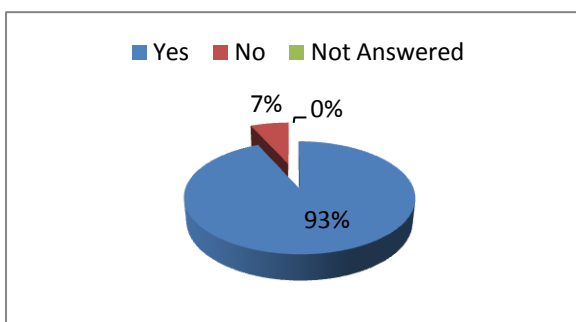
Recommendations	Priorities
boarding.	
Consideration should be given to the provision of a hoist, or making one available should it be requested.	
Seating	
Long term: When benches are replaced, install 50% with arms, so that they are easier to use for people with limited upper body strength.	3

Results of the stakeholder survey

We asked the group of stakeholders to respond to 17 questions around the operations aspects of the area, the acceptance and attraction of the characteristics and the facilities and infrastructure. These were the responses.

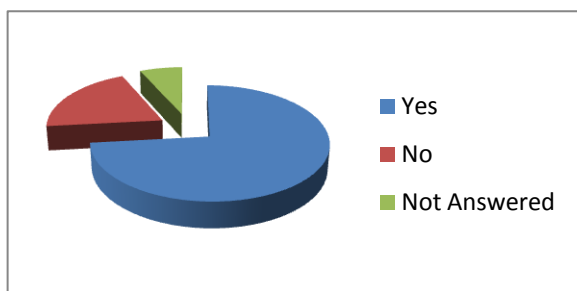
Operational management

1. **The moorings could be suitable for stays of up to 48 hours but we want to know whether you agree that this should be the maximum stay?**



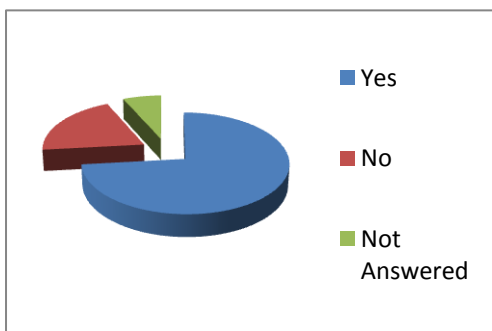
Overall the feeling was that a 48 hour limit was acceptable and suitable

2. **Do you think there needs to be a dedicated supervisor/ warden provided to help guide and supervise any visitors mooring and other water users**



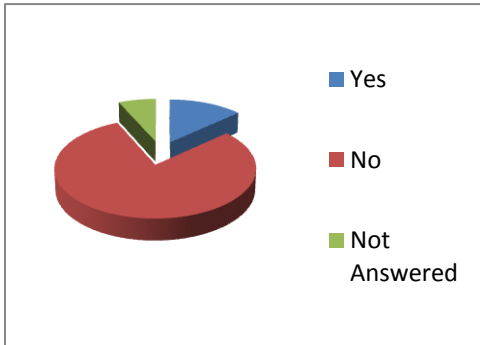
Overall it was clear that someone needs to supervise the area and provide a welcome service for visitors, but that the economics would be questionable.

3. **Should the council or a third party acting on their behalf, continue to manage the mooring operation? If not, why**



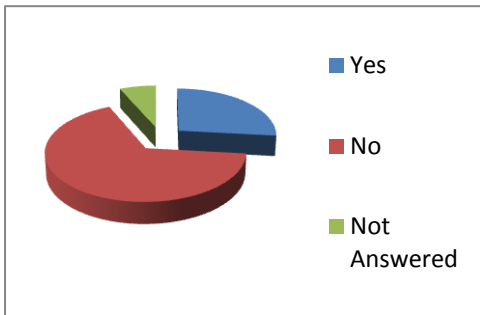
As per the previous findings there is a clear preference for some form of supervision from the council or appointed organisation.

4. Should moorings be changed to day visitors only? If so, why?



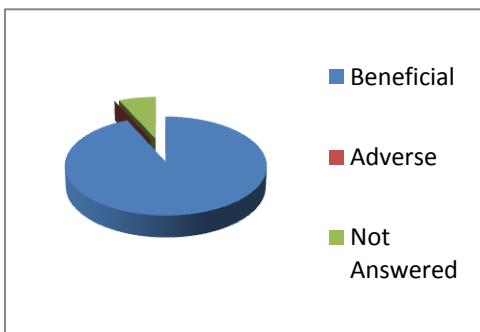
Clearly there was no desire to restrict mooring to daylight hours and this would detract from the use of the moorings.

5. Do you think that moorings should be permitted only March to October? why?



The balance was clearly that mooring should be authorised all year round, as long as people were aware of the safety issues.

6. Would encouraging short term mooring in this location have a beneficial or adverse affect on local business?



Clearly the feeling is that the moorings are a significant benefit to bath businesses.

Acceptance and attraction

7. Given the water features and characteristics in the area do you consider that this area of the river is suitable for visiting boats with inexperienced skippers?

The following comments were received:

1. Yes, providing they are given sufficient instruction and information - warning notices etc.
2. skippers would already gained experience by getting the boat there
3. The river should be closed from the canal when the river is deemed unsafe, otherwise it is safe for inexperienced boaters.
4. Yes, when river conditions are suitable. River is already closed to navigation when flows are too high.
5. Yes. Despite the area not being under the navigational control of the Canal & River Trust I believe that there is no greater dangers than other parts of the River Avon. Many other UK cities embrace visiting inexperienced boaters, so why should Bath be any different?
6. Yes
7. Inexperienced skippers from hire boats should not have permission from the hire boat company to go on to the river. Hire boats should have a permission note signed to go on the river.
8. The under currants below Bath weir can be extremely strong at certain times and inexperienced boaters do get into difficulty as we have experienced on several occasions over the last couple of years with fast flowing currents and rivers in spate.
9. Yes subject to 5 above.
10. In settled weather it is fine but some provision of timely warning and closure in times of flood is required.
11. Yes
12. Yes but more training is needed on handover day
13. Yes if river conditions are favourable. If river conditions are NOT favourable, then not suitable for any boats unless with rise and fall moorings for safety reasons
14. One of the reasons we use the area is to give students taking part in the 2 day Royal Yachting Association 2 day Inland Waterways Helmsman Course the invaluable experience which that area affords. I do not feel that under normal conditions this area is any more dangerous than inexperienced people operating locks and other obstructions on the canal/river system.

The overall feeling is that access to all is fine, subject to specific warnings being given in line with the rest of the navigation.

8. Do you think there should be any restrictions on the types or size of boats that are authorised to use the area?

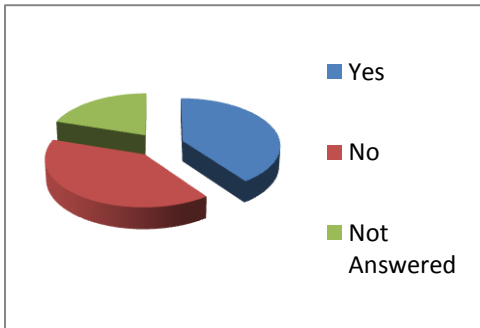


No specific restrictions were suggested. Consideration should be given to the 20m standard for moorings, as identified above.

9. Do you think that offering short term moorings in this location makes Bath City centre more attractive as a destination for visitors?

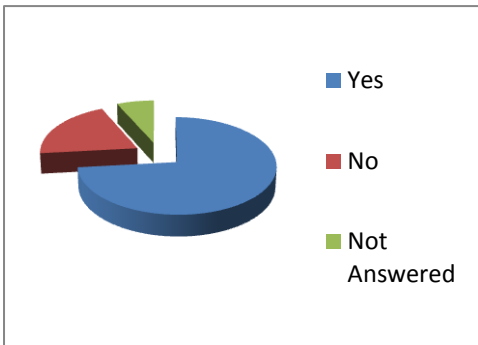


10. Should any activities around or on board be prohibited or restricted? e.g. excessively smoking fires/ boilers, parties with lights or noise, boats with liquor licences.



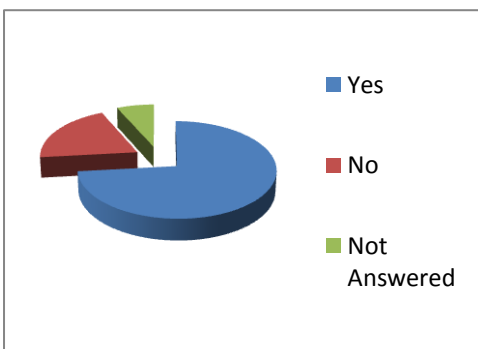
1. All the above
2. None, other than restrictions you would have in other parts of Bath
3. Noise, inc running generators / engines. Smoky fires.
4. All of the above
5. Smokeless fuel should be used in the area. Parties and rivers are a heady combination!
6. Boats with liquor licences need to be minimal and noise levels to a minimum due to nearby residents
7. Parties and boats with liquor licenses. The Penny Lane can stay.
8. Noise from party boats etc should be time restricted for resident's nighttime peace.
9. Prohibit floating businesses.
10. parties and noise
11. Barbeques, generators, licensed craft, and burger stalls on the towpath

11. To make the use of the moorings equitable for all visitors should a minimum turn around time/. Return time be established for leaving and returning boats (or visitors on hire boats)?



A suggested 48 hours per week was proposed in order to prevent/ reduce any potential abuse of residential boats ‘juggling’ moorings.

12. Do you consider that multiple berthing would be acceptable at this location?



Facilities and infrastructure

13. What facilities would you expect to see for short-term moorings?

1. Fresh water only should be adequate - toilet pump out would be good but may not be suitable in such a location; a little further downstream perhaps.
2. none, if it is only short term no facilities required.
3. free water fill up and use of the sports centre's changing rooms.
4. Water rubbish disposal
5. Minimal. A water point would be useful. Sewage remove (pump out facilities) not needed as could attract the wrong type of visiting boats. Electric plug in is probably not needed.
6. Rubbish disposal
7. Waste bin areas including recycling with paddlock. Water point.
8. Water,
9. A water point would be helpful but not if it takes up a valuable space. Perhaps facilities including rubbish disposal would be better at Bath Quays.
10. Waste disposal. Toilets/showers. Water point.
11. Fresh water. PortaPotti emptying facility. Leisure Centre usage incl. showers/toilets
12. water and electricity, toilets and pump out

- 13. Rise and fall pontoons, water and rubbish disposal
- 14. Access to fresh water, waste disposal and possibly elsan toilet emptying facilities.

Overall it appeared that providing minimal facilities was acceptable. The feasibility of providing additional facilities was questioned by the individuals we spoke to. Any future design would need to consider the viability of providing the toilets and disposal points.

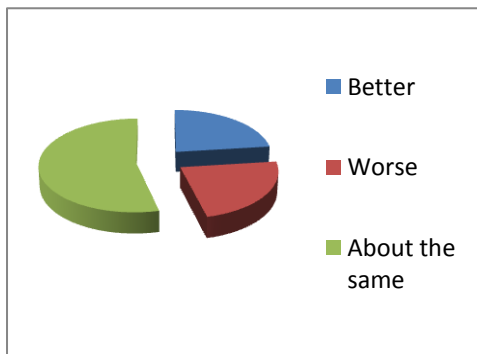
14. What specific facilities do you think would be beneficial for promoting disabled and disadvantaged use?

It was noted by a number of people that disabled access to the water is provided at Bath Quays and North Quay and that this area is not really suitable. Obviously any new development should consider the findings of the access audit conducted here.

15 Do you think that the area is suitably secure for the users?

Overall the feelings were that the area poses no significant security challenges although a few incidences of vandalism, petty criminal behaviour were mentioned.

16. Do you think that the moorings are better, worse or about the same standard as others in the local area? Why?



The main comments were regarding the railings which need to be moved to allow mooring correctly.

17. Any other comments

1. I look forward to action being taken which will free up this very attractive mooring site to be used and enjoyed by many other boaters.
2. We understand that your end objective of improving and increasing visitor moorings may take a while to come into force. You will no doubt appreciate that if the moorings remain closed beyond Easter 2014 (the start of next year's leisure season), this would have a significant adverse impact on many businesses and genuine boaters wishing to moor in Bath and would also result in bad publicity for the city of Bath, K&A canal and the River Avon. Therefore, we would urge you to find an interim solution which enables the visiting boaters access to the moorings between Pulteney Weir and Widcombe Basin.

3. As a hire boat company we have many visitors who enjoy visiting Bath and all the tourist attractions. There are not enough moorings or space on the canal and without moorings on the river many visitors would be deterred from visiting. We have already had many disappointed customers who would have like to visit Bath and moor on the river but were not able as moorings have been closed. The Kennet and Avon Canal includes the route to Bristol from London and should be available to all boaters whenever it is safe. It is part of our National Heritage and with careful management navigation and mooring should be made available. We want to encourage everyone to visit Bath and this includes those who choose to travel by water and holiday in our beautiful City.
4. This area is an area of outstanding beauty and visitors to the city should be allowed to enjoy it. Over the last two years the area has been abused by liveaboards and become an area that is no longer attractive due to some of the boats that have taken to living there. Having worked on this river since 1998 I have never seen it so bad and it was always for visitors and never residential. Yes we need boats there but during the winter this stretch is just not suitable and I would not entertain mooring a boat to railings that can become immersed under water in a very quick period of time. The area needs far more signage and safety signs. It needs to have a warden or someone in charge and a base where boaters can go to find our information. It is a very dark and lonely place and this needs addressing.
5. Please have someone managing them supported by legal powers of enforcement. It must be a condition that boats are not left unattended for longer than 3 hours and that mobile phone contact must be in place so as to facilitate evacuation when warnings of high water levels are in place. CRT need to be consulted so that the shutting of the Widcombe locks can be co-ordinated. Someone must assume navigation control for this stretch.
6. At the moment the area is not a safe or proper mooring. Boats are tied to railings which are deformed by the stress. The railings are along the river edge and block access to the quay for crew. They should be moved to the top of the slope. The bollards are unusable and should be replaced with mooring rings. It is extremely hazardous in times of flood and positively dangerous with high flows and levels as seen last winter. In such conditions they should be closed.
7. Clamp down on those who openly flout the rules! Remove their boats and get them off the water
8. B&NES needs to recognise it's limited ownership of riverside land, it's responsibility to other riparian owners who do not want boats moored on their land, especially long stay residential use.
9. Not being able to moor overnight in this area would have detrimental effect on the hire boat business in the area.

Clearly there is at least the perception of people abusing the provision of the moorings. Therefore the issue of providing cost effective management arrangements is fundamental to ongoing use and enjoyment and warning those moored of any high water will be an important element of ensuring everyone's safety.

Conclusions

Overall the facility does not currently meet the safety, access or stakeholder requirements. The pathway is not well suited for large volumes of pedestrians or for those with specific access needs. The river in spate reduced the available width and the moorings become unsuitable for use in these circumstances.

Work is required immediately and longer term to ensure that the area is suitable for the intended user groups and to provide a safe and visually attractive facility in the centre of the city. The stakeholders are broadly in agreement with the need to undertake this work and the suggested parameters for boats to moor.

Consideration needs to be given to the longer stretch of river to ensure that residential moorings are not moved or allowed between North Parade Bridge and the K&A Lock. This area is unsuitable for moorings and access and the slipway is critical for emergency services access to the river.

Consideration needs to be given to any changes to the sluice gate operation when considering the suitability of any proposed redesign.

Navigation control of this stretch should be agreed between all the stakeholders to ensure that a robust plan can be implemented across the area. Plans and associated byelaws or licensing laws could then be used, as appropriate.

Future developments should aim to improve access along the pathway for all groups, provide more suitable mooring and berthing arrangements and ideally separate the moorings from the main pathway. This work should ideally aim to improve the overall aesthetics of the area.

Any revised design needs to meet the Yacht Harbours Association guidance and consideration should be given to the available width of the river when considering the provision of new mooring rings or other solution.

Arrangements for supervision of the area needs to be agreed when a decision has been taken on the intended use and facilities to be provided.

Recommendations

A number of recommendations have been made in the relevant sections above. These should be considered as part of the overall development plan for the area.

In order to open the moorings for the public before Easter the following actions should be taken:

- Move the fence to the top of the bank.
- Repair uneven tarmac on paths, particularly near cruise boat embarkation point. All paths should have firm non-slip surfaces (not loose gravel).
- Provide handrails to the steps, as identified above.
- Remind those arranging moorings here, including the hire companies of the expected standards and arrangements for high water
- Ensure that arrangements are in place for high water notifications so that owners/operators can move, or at the very least secure their boats in good time.
- Provide a small lifering at the top of the slope as a short term safety aid (at the downriver position to take account of the flow rate).

Arrangements for the use and supervision of the moorings should be agreed in line with any development plans.

Further advice should be taken when a formal design is produced to ensure that the changes to the water and land profile are suitable and safe for ongoing use.

Management References

HS (G) 65 Successful Health and Safety Management
HSE Books
ISBN 0 7176 1276 7

BS OHSAS 18001: 2007
British Standards institute (BSI)

INDG163 Five steps to Risk assessment
HSE

Inland

Access audit Handbook
Centre for Accessible Environments

Safety at Inland Water sites: operational guidelines:
RoSPA
ISBN 1 85088 092 1

A code of practice for the design and construction of Marinas and Yacht Harbours.
The Yacht Harbours Association Ltd.

Guidance to Narrow boats.
British waterways (now Canal and River Trust)

Managing visitor safety in the Countryside: principles and practice
Visitor Safety in the Countryside Group
(No ISBN Number)

Appendix A - Legislative context and relevant design standards

A/ Equality Act 2010

The Equality Act 2010 (formally the Disability Discrimination Act 1995/ 2005) sets out rights and duties for service providers, employers and educational institutions. The Equality Acts defines a disabled person as 'someone who has a physical and mental impairment, which has an effect on his or her ability to carry out normal day-to-day activities.' The effect must be substantial, adverse and long-term. Physical and mental impairment includes sensory impairments. It includes hidden impairments including, for example, mental illness.

Service Provider Provisions

Under the Equality Act 2010 it is unlawful for service providers to treat disabled people less favourably because they are disabled. The service provider must not indirectly discriminate against a disabled person unless there is a clear reason to do so. They must also not treat a disabled person unfavourably because of something connected with their disability, unless there is a clear and fair reason. For this form of discrimination the service provider must know or should reasonably have been expected to know that the person is disabled.

Service providers have to make reasonable adjustments for disabled people in the way they deliver their services. This is so that a disabled person is not put at a substantial disadvantage compared to non-disabled people in accessing the services.

Examples of reasonable adjustments could include:

- installing an induction loop for people who are hearing impaired
- providing disability awareness training for staff who have contact with the public
- providing larger, well-defined signage for people with impaired vision
- putting in a ramp at the entrance to a building which has steps.

What is considered a reasonable adjustment for a large organisation like a bank, may be different from what is a reasonable adjustment for a small local shop. It is about what is practical in the service provider's individual situation and what resources the business may have. They will not be required to make adjustments that are not reasonable because they are unaffordable or impractical.

The duty to make reasonable adjustments under the Equality Act 2010 Service Provider Provisions is an anticipatory duty owed to disabled people at large. It is not simply a duty to individuals. The duty to make reasonable adjustments, in relation to providing auxiliary aids and overcoming physical barriers to access, applies to the areas of the property where the service is provided, and the access to these areas.

Employer Provisions

Under the Equality Act 2010 there is a duty placed on employers to make reasonable adjustments to enable disabled people to take employment. Employers must take reasonable steps to alter arrangements made, or alter any physical feature that puts a disabled person at a substantial disadvantage. The duty to make adjustments is not anticipatory but is specific to the needs of individuals. There is no requirement to make wholesale changes in anticipation.

The employer cannot fully anticipate a disabled employee's needs, since individual disabilities vary. Our review considers the general circulation and facilities requirements for staff who may use mobility aids and other walking aids or who may have a visual or hearing impairment.

Once employment is offered to a disabled person, or an existing employee develops a disability, where this affects mobility, vision, hearing or other normal functions, his or her needs must be fully assessed. We recommend that the employer holds confidential discussions with the individual and engages a professional access advisor to assess the need for suitable and

reasonable adjustments to all work areas affected, including a personal emergency escape plan.

Auxiliary aids and facilities

It is important to recognise that the Equality Act covers non-building adjustments to aid disabled people. The provisions require that a service provider provides 'auxiliary aids' and adjusts policy procedures and practices that could have a discriminatory effect. Our report covers some aspects of non-building adjustments. We have not audited policies and procedures unless these were implicated in the audit of physical arrangements.

Under the 'auxiliary aids' provisions, a portable or temporary ramp, which does not have fabric implications is an 'auxiliary aid'. Other simple and well-understood examples of auxiliary aids include a large print or Braille guide for visually impaired people, and the use of induction loops for hearing impaired people.

B/ Access standards

Building Regulations Parts M and K

The design and construction of a new building, or the material alteration of an existing one, must comply with Building Regulations. For buildings in England and Wales, Parts M and K of the Building Regulations (access to and use of buildings) is intended to ensure that reasonable provision is made for people to gain access to and use buildings.

Guidance accompanying the Building Regulations (known as 'Approved Document M or K' or AD M or AD K) sets out a number of 'provisions' as suggested ways in which the requirements of the Regulations might be met. It is unlikely to be reasonable for a service provider to have to make an adjustment to a physical feature of a building which it occupies, if that feature accords with the relevant provisions of the most up to date version of AD M or AD K. Any works carried out under the previous versions of AD M or AD K are deemed to be acceptable for 10 years from the construction date under Equality Legislation.

BS 8300:2009

As the Building Regulations standards provide only a baseline standard of accessibility for building or landscape undergoing redevelopment, a second document is essential reference when assessing the access requirements of disabled people to existing buildings; the British Standard 8300:2009, *Design of buildings and their approaches to meet the needs of disabled people – Code of Practice*.

It is unlikely to be reasonable for a service provider to have to make an adjustment to a physical feature of a building it occupies, if the design and construction of the physical feature is in accordance with the guidance in BS8300.

Other Guidance

There are other 'best practice' guides, such as the Centre for Accessible Environments 'Designing for Accessibility', which gives advice concerning design issues not covered in Part M or BS8300 and the Sign Design Guide, providing useful information on signage.

Appendix B – Table of photographs



Photo 1: View of northern end of riverside path near Pulteney Bridge



Photo 2: Riverside path with seats and area of grass near cruise boat embarkation point



Photo 3 Steps with no handrails down to cruise boat embarkation point



Photo 4 Steps with one handrail near sluice gate



Photo 5: Riverside path below sluice gate/weir with bunded slope, lower walkway and temporarily moored boats.



Photo 6: Steps down bunded slope have no handrails



Photo 7: Main entrance with steps and parking in front



Photo 8: Steps up to North Parade



Photo 9: View of moorings below sluiceway/ weir with river at normal level



Photo 10: Same view of moorings below sluiceway/ weir with river in flood (Nov 2012)



Photo 11: View of moorings below sluiceway/ weir with river at normal level



Photo 12: Similar view of moorings below sluiceway/ weir with river in flood (Nov 2012)



Photo 13: View of river above weir/ sluice gate in flood

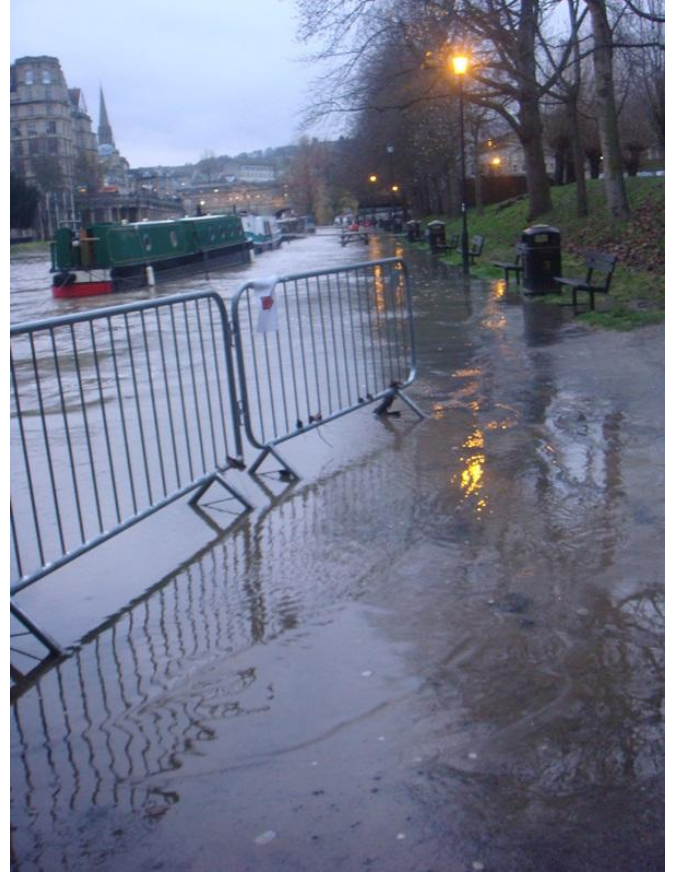


Photo 14: Makeshift barriers and signs directing pedestrians away from the flooded path



Photo 15: Uneven tarmac is a potential trip hazard