Avon Pension Fund (the "Fund")

LDI Implementation Policy – May 2024

This paper provides a summary of the Fund's Liability Driven Investments ("LDI") arrangements, in particular, referencing, where necessary, guidance published by the Pensions Regulator on 24 April 2023, which can be read here[1].

The policy sets out the operational, governance and monitoring processes established and implemented by the Fund, along with the responsibilities of each of the stakeholders involved.

This policy is reviewed at least annually, or more frequently should there be material changes to the Fund's investments.

A summary is provided below, with more detail on each element of the policy provided in the Appendix.

Summary of LDI Policy

Policy element	Current Position	Recommended Action
LDI Manager's ability to implement strategy	The Fund has appointed BlackRock Investment Management (UK) Limited ("BlackRock") to manage the LDI portfolio. BlackRock are highly rated by Mercer for managing LDI strategies of this type (single-investor bespoke pooled fund). BlackRock are reliant on the cashflows provided to them to implement the appropriate hedging portfolio. Therefore, it is important for the Liability Benchmark Portfolio (LBP) to be monitored and updated on a regular basis (at least annually) in order to manage the risk of a drift in the liability sensitivities.	Funding and Risk Management Group (FRMG), with research undertaken by Mercer, to continue to review BlackRock regularly. Mercer are responsible for the monitoring and recalculation of the LBP.
Level of collateral held within LDI strategy	The Fund's Investment Management Agreement (IMA) with BlackRock sets out guidelines under which BlackRock monitor and manage collateral requirements on behalf of the Fund. Given the nature of the Fund's investments in relation to the wider Risk Management Framework (systematic equity protection and synthetic equity), there are a number of inter-connected elements to be taken into account within the collateral framework in order to more accurately reflect the impact of wider market stresses on the Fund's collateral buffer. Yield headroom of c. 7.1% as at 31 March 2024 allowing for the full collateral framework (including stresses on the systematic equity protection strategy and synthetic equity mandate). BlackRock's LDI collateral adequacy framework sets out the following key definitions and targets:	FRMG monitor the collateral position through the monthly and quarterly risk monitoring reports provided by Mercer, and regularly report this position to the Fund's Investment Panel and Pensions Committee.

[1] https://www.thepensionsregulator.gov.uk/en/document-library/scheme-management-detailed-guidance/funding-and-investment-detailed-guidance/liability-driven-investment

Policy element	Current Position	Recommended Action
	- **Total Collateral Waterfall Buffer**: yield headroom at BlackRock should be more than 325bps. Mercer recommend at least 350bps of headroom is maintained. - BlackRock will begin notifying Officers (and Mercer) of breaching this tolerance at 400bps, and at each further 25bps deterioration in headroom thereafter. No immediate action is required from the Fund at this stage, however BlackRock recommend the Fund performs one or more of the following, depending on specific investment and governance structure considerations: 1) Prepare to provide additional capital to the LDI mandate 2) Instruct asset transfer of additional collateral to the LDI mandate, especially where the dealing process is longer than a week 3) Adjust the objectives of the LDI mandate (i.e., reduce hedge ratios) to increase Total Collateral Waterfall Adequacy - **Urgent collateral Creation Point**: yield headroom of 290bps. BlackRock at this point expect the Fund to perform one or both of the following: 1) Urgently provide additional assets within 5 business days (6th date of notification on day 1) to increase collateral adequacy by at least 50bps 2) Adjust the objectives of the LDI mandate (i.e. reducing hedge ratios) to increase Total Collateral Waterfall Adequacy by at least 50bps If yield headroom fell below 290bps, then additional collateral would be required or hedging may be reduced.	
Availability of collateral outside LDI strategy	Action was taken over the course of 2023 in order to bolster the Fund's collateral position through the sale of the Brunel Paris Aligned Benchmark ("PAB") equity holdings, which is to be used as the primary collateral source. The lost equity exposure was replaced synthetically at BlackRock via Total Return Swaps referencing the MSCI PAB index in order to maintain the overall exposure to equities. The Fund retains physical exposure to equities with Brunel which can be which could be synthesised in order to provide additional collateral, as required. The quantum of the available capital is regularly monitored by the FRMG. As at 31 March 2024, the Fund held c. £428m in the Brunel Passive PAB mandate, which would be the first source of collateral as it can be easily synthesised by implementing a Total Return Swap on the MSCI PAB benchmark index. In addition, the Fund held c. £667m and c. £720m in Brunel Global Sustainable Equity and	Consider including a facility to raise collateral via the Fund's corporate bond holding within the BlackRock QIF either directly by including corporate bonds in the collateral waterfall or indirectly through a credit repo facility to cover extreme market movements. The FRMG should consider potential market timing risk and transaction costs or funding costs before making changes.

Policy element	Current Position	Recommended Action
	Global High Alpha Equity mandates respectively. Whilst these mandates could be sold and the exposure broadly replaced using synthetic equity, this would create an element of basis risk given these are active mandates. If yield headroom falls to c. 300bps (assuming no additional stresses applied to the equity holdings, which would have an impact on the wider collateral position), the Fund would need to raise c. £142m as at 31 March 2024 from Brunel PAB Equity in order to top up the yield headroom to in excess of 400bps. If the Brunel PAB Equity mandate were to be fully depleted, then the next source of collateral to be utilised would be from the other Brunel equity mandates noted above or from BlackRock's Exchange Traded Funds ("ETF") mandate (c.£3.4m as at 31 March 2024).	
Ability to transfer additional collateral to the LDI strategy in a suitable timeframe	The Brunel equity funds require 5 days' notice to trade and is weekly dealing, with settlement of T+2. Therefore, it can take 2 to 3 weeks to source collateral. There is a very low probability of listed equity markets becoming "illiquid", however, this can change over time. Overall liquidity considerations will be considered on a regular basis. There is no automated process in place for utilising the corporate bonds held within the bespoke pooled fund currently.	Consider incorporating the corporate bonds as a source of capital in a "last resort scenario" that BlackRock could utilise in extreme market conditions.
Governance Model	Strong level of governance within the FRMG, providing oversight and risk management-focused expertise that is relayed to the Investment Panel regular. FRMG consists of Officers, Investment Consultant, Risk Advisor and the Fund's Actuary, with a specific terms of reference and delegated responsibilities from the Committee / Panel. The FRMG meets at least quarterly, but can convene quickly on an ad-hoc basis if required. Officers are typically available for approval and to sign instructions in short timeframes if required. Officers sign relevant forms and co-ordinates asset transfers, with the help of the Investment Consultants if necessary. Mercer report the collateral headroom levels on a monthly and quarterly basis in the risk monitoring reports. Regular training is provided to the Investment Panel and Pensions Committee on LDI strategies, as required.	None
Ongoing monitoring of LDI collateral resilience	BlackRock monitors collateral headroom on a daily basis and informs Officers and the Investment Consultant by email when collateral falls below 400bps and for each subsequent 25bps fall below.	Keep under regular review. Overall position currently is positive with significant current headroom and

Policy element	Current Position	Recommended Action
	Investment Consultant informs the Officers of any breach of the target collateral level by email and provides written advice on proposed action to source additional collateral in order to top up the position to 400bps. BlackRock provides monthly and quarterly updates in respect of the collateral position to the Investment consultant by email. Investment Consultant keep Officers informed of key updates within the market and at BlackRock. Detailed monthly and quarterly monitoring of collateral resilience, alongside other LDI risk factors, presented to Officers by the Investment Consultant at FRMG meetings.	liquidity within the wider asset holdings to fund collateral calls as necessary.

Source: Mercer estimates and investment managers.

Appendix – Additional Detail

Fund's LDI Arrangements	
Appointed LDI Manager	BlackRock Investment Management (UK) Limited
Lead LDI Investment Consultant/Risk Adviser	Nick Page / Mercer
Fund Actuary	Paul Middleman / Mercer
Nature of LDI Arrangements	• Bespoke pooled fund (QIF) with a monthly dealing cycle (although ad-hoc dealing days can be arranged); • End-point target of 70% interest and inflation rates hedge ratios as a percentage of assets (based on 31 March 2022 cashflows, updated for market conditions to 31 May 2023). Subject to interest rate and inflation trigger framework; • LBP produced by Mercer, using cashflows provided by the Fund Actuary at the last actuarial valuation date of 31 March 2022; • LBP reviewed after each triennial valuation and on an annual basis thereafter; • Instruments Used: Gilts, Index Linked Gilts, Interest Rate and Inflation Swaps, Gilt TRS, Repos, Bond Futures, Cash Funds, Direct cash holdings and Spot Currency Contracts; • Nature of documentation: IMA.

Setting LDI Strategy and Ongoing Implementation	
How often is the LDI strategy reviewed?	• Officers to consider liability hedging / LDI strategy as part of broader investment strategy considerations on a regular basis and FRMG meet at least quarterly; • LBP updated based on cashflows from triennial actuarial valuation and updated annually to reflect changing market conditions and approximate allowance for member experience. • Mercer provide BlackRock with the LBP and work alongside them to formulate a suitable hedging solution. Usually provided in the format of a short advice paper setting out the current and proposed solutions and any trading required, taking into account collateral management/estimated implementation costs as well as wider strategic implications for the Fund.
What are the key objectives of the LDI strategy?	• To lock-in to an attractive level of real yields in order to provide an appropriate return over inflation in a risk-free way to help stabilise contribution requirements for the Fund's employers.
How is success of the LDI strategy measured?	• Performance attribution related (£ return vs liability change); • Improve stability of funding level (relative to having unleveraged exposure to liability hedging assets); • Protect funding position from significant deterioration in a falling gilt yield or rising inflation environment.

What is the target level of collateral resiliency for assets held within the LDI mandate?	• Recommendation from Mercer to maintain a minimum of 350bps headroom within bespoke pooled fund (including LDI and collateral waterfall assets) i.e. green zone • To calculate the overall yield headroom, BlackRock have stressed the systematic equity protection strategy by +10% with an offsetting stress of -20% to the synthetic equity Total Return Swap exposure to reflect the conditions

	under which wider equity market movements would have an impact on collateral; • BlackRock managed Buy and Maintain Credit fund's interest rate exposure is reported for in hedge levels, but the credit assets are not currently included in the collateral sufficiency calculation produced by BlackRock.
At what level of collateral resiliency will collateral buffers be replenished?	• BlackRock define the minimum level of collateral within the portfolio (equivalent to the "market stress buffer" as defined by tPR) to be 290bps headroom assuming a 5 business day period to source additional collateral.
What is the expected timeframe for collateral buffers to be replenished?	• BlackRock is expected to provide the collateral call notification "as soon as reasonably practicable". • The Brunel equity funds require 5 days notice to trade and is weekly dealing, with settlement of T+2. Therefore, it can take 2 to 3 weeks to source collateral.
What assets are available for use as collateral sources? What level of coverage are they expected to provide?	• Assets held in the Brunel PAB (c.£428m as at 31 March 2024) are expected to provide coverage for feasible market scenarios. The fund is weekly priced. • • Assets held in BlackRock ETF (c.£3.4m as at 31 March 2024) or Brunel Global Sustainable (c. £667m as at 31 March 2024) or Global High Alpha (c. £721m as at 31 March 2024) equities act as the secondary source of collateral, in the event that Brunel PAB holdings are fully depleted. The ETF fund is daily priced whereas the Brunel equity funds have the same dealing terms as the Brunel PAB fund.
Where assets have been used to meet capital calls, what steps may be taken to ensure suitable collateral sources remain in place for future collateral calls?	• Should holdings in the Brunel PAB fund be significantly or entirely depleted, the FRMG will consider on a case by case basis whether and how to replenish these holdings (taking into account any changes in the overall position of the Fund and wider strategic requirements.)
Governance and Implementation	
What are the key steps to implementing the LDI strategy and who is responsible for each?	• Fund Actuary: Providing liability cashflows. • Investment Consultant: Producing LBP. Advising on investment and hedging strategy. Engagement with LDI manager. Co-ordination of asset transfers. • Officers: Engagement with investment Consultant and LDI manager. Signing manager IMA and instructions to facilitate asset transfers. • BlackRock: execution and ongoing collateral monitoring, notification of limit breaches.
What is the governance process for providing collateral to LDI funds?	• Collateral management delegated to BlackRock through IMA in place and accompanying collateral waterfall policy implemented. Authorisation/input only required from Officers when additional collateral is required • BlackRock informs the Investment Consultant by email of a breach of the 290bps target, detailing the collateral position and effective headroom. • Investment Consultant informs the Officers of any breach of the target collateral level and advice on action to provide additional collateral, after considering broader investment strategy and liquidity issues.
Who is responsible for monitoring of the collateral resilience of the LDI strategy?	• BlackRock on daily basis (documented via IMA). • Mercer report on the collateral position within the monthly and quarterly risk monitoring reports presented to the FRMG and Investment Panel. Mercer responsible for supporting Officers with reporting and advice on collateral calls.

Stress Testing, Monitoring Resilience and Ongoing Reporting

What are the key data items monitored to ensure the LDI manager's continued collateral resiliency?

- Yield headroom.
- LDI asset value
- LDI PV01 & IE01
- Yield rise required for collateral call.
- Market stress and operational buffers in place.
- Stress testing for different yield movements. Analysis to include:
  - Yield stresses of 1%, 2%, 3% and 4% rises
  - Yield headroom following a further equity market stress event
  - Collateral top up required to return to the target headroom
  - Value of collateral pool following the stress.

Under the existing collateral framework – a 20% negative stress to the synthetic equity TRS notional value, and a 10% positive stress to the systematic equity protection strategy notional value – the collateral position at 31 March 2024 was:

Stress	Yield Headroom following stress	Collateral required / (released) to return to 4% headroom
0%	7.1%	(£300m)
1%	6.1%	(£227m)
2%	5.1%	(£128m)
3%	4.1%	(£7m)
4%	3.1%	£142m

Following a 4% rise in yields, the Fund would require c. £142m of capital to increase the yield headroom back to 4%. In this scenario, the value of the Brunel PAB equities would be c. £428m, and synthesising this value would release c. £341m of collateral (assuming -20% stress on equities).

Under a stress of the existing collateral framework – a 40% negative stress to the synthetic equity TRS notional value, and a 20% positive stress to the systematic equity protection strategy notional value – the collateral position at 31 March 2024 was:

Stress	Yield Headroom following stress	Collateral required / (released) to return to 4% headroom
0%	5.6%	(£180m)
1%	4.6%	(£109m)
2%	3.6%	£64m
3%	2.6%	£229m
4%	1.6%	£433m

Under a 20% equity fall, and a 4% rise in yields, the Fund would require c. £433m of capital to increase the yield headroom back to 4%. In this scenario, the value of the Brunel PAB equities would be c. £341m, and synthesising this value would release c. £273m of collateral (assuming -20% stress on equities). Additional collateral of c. £160m would be required from the Brunel Global Sustainable Equity or Brunel Global High Alpha Equity mandates in this scenario.

How regularly are they reviewed and who is responsible for ensuring it takes place? **How are they reported to the Officers and in what format?**	• **Quarterly:** BlackRock provide LDI reporting including the collateral levels. Investment Consultant monitors output and includes it in their quarterly performance reports to the FRMG. Investment Panel receive reports quarterly. • **Monthly:** Investment Consultant reports the collateral position to Officers on a monthly basis. • **Daily:** BlackRock monitors collateral intra-day as part of their portfolio management responsibilities. • **Ad hoc:** Any events considered material by the BlackRock and Investment Consultant will be notified to the Officers as required. • **Stress testing:** Policy to be updated annually, or more frequently if there have been significant changes to market conditions, and presented to the FRMG.

Important Notices