Environment Agency
Pension Fund

December 2022

Active Fund Funding Strategy Statement

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1 Introduction

What is this document?

This document sets out the Funding Strategy Statement (FSS) for the Environment Agency Active Pension Fund.

The Environment Agency Active Pension Fund is administered by the Environment Agency, known as the administering authority. The Environment Agency worked with the Fund's actuary, Hymans Robertson, to prepare this FSS which is effective from 8 December 2022.

There is a regulatory requirement for the Environment Agency to prepare an FSS. You can find out more about the regulatory framework in Appendix A. For any queries please contact Craig Martin, Chief Pensions Officer on **EAPF@environment-agency.gov.uk**

1.1 What is the Environment Agency Active Pension Fund?

The Environment Agency Active Fund was established as the National Rivers Authority Active Pension Fund in 1989 at the time of the privatisation of the water industry in England and Wales. The Fund inherited active members' accrued liabilities from the predecessor pension arrangements, but no pensioners or deferred pensioner liabilities. In 1996 it transferred to the Environment Agency and became the Environment Agency Active Pension Fund. Since then, the Fund has been gradually maturing.

The Fund is part of the Local Government Pension Scheme (LGPS). You can find more information about the LGPS at **www.lgpsmember.org.** The administering authority runs the Fund on behalf of participating employers, their employees and current and future pensioners. You can find out more about roles and responsibilities in Appendix B.

1.2 What are the funding strategy objectives?

The funding strategy objectives are to:

- Take a prudent long-term view to secure the regulatory requirement for long-term solvency, with sufficient funds to pay benefits to members and their dependants
- Use a balanced investment strategy to minimise long-term cash contributions from employers and meet the regulatory requirement for long-term cost efficiency
- Where appropriate, ensure stable employer contribution rates
- Reflect different employers' characteristics to set their contribution rates, using a transparent funding strategy
- Use reasonable measures to reduce the risk of an employer defaulting on its pension obligations.

1.3 Who is the FSS for?

The FSS is mainly for employers participating in the Fund, because it sets out how money will be collected from them to meet the Fund's obligations to pay members' benefits.

The Fund currently has three participating employers:

- **Scheduled bodies -** Employers who are specified in a schedule to the LGPS regulations. Scheduled bodies must give employees access to the LGPS if they can't accrue benefits in another pension scheme, such as another public service pension scheme. The Environment Agency is a scheduled body.
- **Admission bodies -** Other employers can join through an admission agreement. The Fund can set participation criteria for them and can refuse entry if the requirements aren't met. Natural Resources Wales (NRW) and Shared Services Connected Ltd (SSCL) are both admission bodies.

1.4 How does the funding strategy link to the investment strategy?

The funding strategy sets out how money will be collected from employers to meet the Fund's obligations. Contributions, assets and other income are then invested according to an investment strategy set by the administering authority. **You can find the investment strategy on the Fund's website.**

The funding and investment strategies are closely linked. The Fund must be able to pay benefits when they are due – those payments are met from a combination of contributions (through the funding strategy) and asset returns and income (through the investment strategy). If investment returns or income fall short the Fund won't be able to pay benefits, so higher contributions would be required from employers.

1.5 Does the funding strategy reflect the investment strategy?

The funding policy is consistent with the investment strategy. Future investment return expectations are set with reference to the investment strategy, including a margin for prudence which is consistent with the regulatory requirement that funds take a 'prudent longer-term view' of funding liabilities (see Appendix A)

1.6 How is the funding strategy specific to the Environment Agency Active Pension Fund?

The funding strategy reflects the specific characteristics of the Fund employers and its own investment strategy.

How do I find my way around this document?

In Section 3 we show how the funding strategy is linked with the Fund's investment strategy.

In the Appendices we cover various issues in more detail:

A. the regulatory background, including how and when the FSS is reviewed,
B. who is responsible for what,
C. what issues the Fund needs to monitor, and how it manages its risks,
D. the assumptions which the Fund actuary currently makes about the future,
E. a glossary explaining the technical terms occasionally used here.

For any queries please contact Craig Martin, Chief Pensions Officer on **EAPF@environment-agency.gov.uk**

2 How does the Fund calculate employer contributions?

2.1 Calculating contribution rates

Employee contribution rates are set by the LGPS regulations.

Employer contributions are made up of two elements:

- The primary contribution rate – contributions payable towards future benefits
- The secondary contribution rate – the difference between the primary rate and the total employer contribution

The primary rate also includes an allowance for the Fund's expenses.

The Fund actuary uses a model to project each employer's asset share over a range of future economic scenarios. The contribution rate takes each employer's assets into account as well as the projected benefits due to their members. The value of the projected benefits is worked out using employer membership data and the assumptions in Appendix D.

The total contribution rate for each employer is then based on:

- The funding target – how much money the Fund aims to hold for each employer
- The time horizon – the time over which the employer aims to achieve the funding target
- The likelihood of success – the proportion of modelled scenarios where the funding target is met.

This approach takes into account the maturing profile of the membership when setting employer contribution rates. The Fund permits the advance payment of employer contributions in specific circumstances. The Fund's policy on advance contributions is available on request.

2.2 The contribution rate calculation

Table 1: contribution rate calculation for individual or pooled employers

Employer	Environment Agency (EA)	Natural Resources Wales (NRW)	Shared Services Connected (SSCL)
Funding target*	Ongoing	Low-risk	Ongoing
Likelihood of success at 2022 valuation	74%	73%	N/A – risk sharing agreement with EA
Maximum time horizon	20 years	20 years	20 years
Primary rate approach	The contributions must be sufficient to meet the cost of benefits earned in the future with the required likelihood of success at the end of the time horizon		

Method of assessing total contributions payable	Contribution stability mechanism	NRW funding arrangement	Risk sharing agreement

* See Appendix D for further information on funding targets

2.3 Employer funding strategies

EA

Keeping employer contribution rates reasonably stable is an important funding objective. The Fund adopts a stabilised approach to setting contributions for the EA, which keeps contribution variations within a pre-determined range from year-to-year. After taking advice from the Fund actuary, the administering authority believes a stabilised approach is a prudent longer-term strategy for the EA given that it is open to new entrants and has a secure funding arrangement.

On the basis of asset-liability modelling carried out for the 2022 valuation the stabilised contributions payable by the EA are as follows:

Table 2: current stabilisation approach for the EA

Employer	EA
Contributions to 31 March 2026	19.0% of pay
Maximum contribution increase per year thereafter	+0.5% of pay
Maximum contribution decrease per year thereafter	-0.5% of pay

Stabilisation criteria and limits are reviewed during the valuation process. The administering authority may review them between valuations to respond to membership or employer changes.

NRW

NRW is closed to new entrants and will eventually become an exiting employer when its last active member leaves, retires or dies. At this point no other employer share responsibility for NRW's assets or liabilities in the Fund. To ensure other employers do not have to fund any deficit that emerges after this point, NRW is funded with a low-risk funding target based on the yield on government bonds.

At the instruction of the administering authority, the Fund Actuary has carried out extensive asset liability modelling to determine a fixed level of contribution that would provide the Fund with the desired likelihood of funding success.

On the basis of the modelling carried out in 2016, a fixed annual contribution of £7m was agreed. This level of contributions is expected to continue until the point of cessation, subject to review at each actuarial valuation. The modelling carried out for the 2022 valuation confirmed that this arrangement was still appropriate, so the following fixed annual contributions are still in force:

Table 3: NRW funding strategy

Employer	NRW
Contributions to 31 March 2026	£7m pa
Contributions thereafter	Intended to remain at £7m pa subject to regular review

SSCL

SSCL participates in the Fund under a risk sharing agreement with the EA. As per the terms of this agreement, SSCL will be certified to pay a total contribution rate of 22.7% of payroll throughout its period of participation in the Fund. On ceasing to participate in the Fund, no cessation debt will be payable and all the LGPS assets and liabilities of this employer within the EAPF will revert to the EA.

2.4 Reviewing contributions between valuations

The Fund may amend contribution rates between formal valuations at its discretion. The purpose of any review is to establish the most appropriate contributions. A review may lead to an increase or decrease in contributions.

2.5 Administering authority discretion

Individual employers may be affected by circumstances not easily managed within the FSS rules and policies. If this happens, the administering authority may adopt alternative funding approaches on a case-by-case basis.

3 What additional contributions may be payable?

3.1 Pension costs – awarding additional pension and early retirement on non ill-health grounds

If an employer awards additional pension as an annual benefit amount, it pays an additional contribution to the Fund as a single lump sum. The amount is set by guidance issued by the Government Actuary's Department and updated from time to time.

If an employee retires before their normal retirement age on unreduced benefits, employers may be asked to pay additional contributions called strain payments. Employers are expected to make strain payments as a single lump sum.

3.2 Pension costs – early retirement on ill-health grounds

If a member retires early because of ill-health, their employer must pay a funding strain, which may be a large sum.

The administering authority does not offer any arrangement to mitigate this. Individual employers should make their own arrangements if they are concerned about the risk of unmanageable ill-health strain costs.

4 How does the Fund calculate assets and liabilities?

4.1 How are employer asset shares calculated?

The Fund adopts a cashflow approach to track individual employer assets.

Each Fund employer has a notional share of the Fund's assets, which is assessed yearly by the actuary. The actuary starts with assets from the previous year-end, adding cashflows paid in/out and investment returns to give a new year-end asset value. The Fund actuary makes a simplifying assumption, that all cashflow and investment returns have been paid uniformly over the year. This assumption means that the sum of all employers' asset values is slightly different from the whole Fund asset total over time. This minimal difference is split between employers in proportion to their asset shares at each valuation.

4.2 How are employer liabilities calculated?

data and the assumptions in Appendix D, the Fund actuary projects the expected benefits for all members into the future. This is expressed as a single value – the liabilities – by allowing for expected future investment returns.

Benefits are valued in line with the regulations in force at the time of the valuation, with an exception relating to the McCloud ruling. The benefits of members likely to be affected by the McCloud ruling have instead been valued in line with the expected regulations, reflecting an underpin as directed by DLUHC.

Each employer's liabilities reflect the experience of their own employees and ex-employees.

4.3 What is a funding level?

An employer's funding level is the ratio of the market value of asset share against liabilities. If this is less than 100%, the employer has a shortfall: the employer's deficit. If it is more than 100%, the employer is in surplus. The amount of deficit or surplus is the difference between the asset value and the liabilities value.

Funding levels and deficit/surplus values measure a particular point in time, based on a particular set of assumptions. While this measure is of interest, for most employers the main issue is the level of contributions payable. The funding level does not directly drive contribution rates. See section 2 for further information on rates.

5 What happens when an employer joins the Fund?

5.1 When can an employer join the Fund

Employers can join the Fund if they are a new scheduled body or a new admission body. New designated employers may also join the Fund if they pass a designation to do so (though this is unlikely given the nature of the Environment Agency Active Pension Fund).

On joining, the Fund will determine the assets and liabilities for that employer within the Fund. The calculation will depend on the type of employer and the circumstances of joining.

A contribution rate will also be set. This will be set in accordance with the calculation set out in Section 2, unless alternative arrangements apply (for example, the employer has agreed a pass-through arrangement).

5.2 New admission bodies as a result of outsourcing services

New admission bodies usually join the Fund because an existing employer outsources a service to another organisation (a contractor). This involves TUPE transfers of staff from the letting employer to the contractor. The contractor becomes a new participating Fund employer for the duration of the contract and transferring employees remain eligible for LGPS membership. At the end of the contract, employees typically revert to the letting employer or a replacement contractor.

Liabilities for transferring active members will be calculated by the Fund actuary as at the day before the outsourcing occurs. New contractors will be allocated an asset share equal to the value of the transferring liabilities. The admission agreement may set a different initial asset allocation, depending on contract-specific circumstances.

There is flexibility for outsourcing employers when it comes to pension risk potentially taken on by the contractor. You can find more details on outsourcing options from the administering authority or in the contract admission agreement.

5.3 Other new employers

There may be other circumstances that lead to a new admission body entering the Fund, e.g. machinery of government changes. Calculation of assets and liabilities on joining and a contribution rate will be carried out allowing for the circumstances of the new employer.

5.4 Risk assessment for new admission bodies

Under the LGPS regulations, a new admission body must assess the risks it poses to the Fund if the admission agreement ends early, for example if the admission body becomes insolvent or goes out of business. In practice, the Fund actuary assesses this because the assessment must be carried out to the administering authority's satisfaction.

After considering the assessment, the administering authority may decide the admission body must provide security, such as a guarantee from the letting employer, an indemnity or a bond.

This must cover some or all of the:

- Strain costs of any early retirements if employees are made redundant when a contract ends prematurely
- Allowance for the risk of assets performing less well than expected
- Allowance for the risk of liabilities being greater than expected
- Allowance for the possible non-payment of employer and member contributions
- Admission body's existing deficit.

6 What happens if an employer has a bulk transfer of staff?

Bulk transfer cases will be looked at individually, but generally:

- The Fund won't pay bulk transfers greater in value than either the asset share of the transferring employer in the Fund, or the value of the liabilities of the transferring members, whichever is lower
- The Fund won't grant added benefits to members bringing in entitlements from another fund, unless the asset transfer is enough to meet the added liabilities
- The Fund may permit shortfalls on bulk transfers if the employer has a suitable covenant and commits to meeting the shortfall in an appropriate period, which may require increased contributions between valuations.

The bulk transfer policy is available on the Fund's website.

7 What happens when an employer leaves the Fund?

7.1 What is a cessation event?

Triggers for considering cessation from the Fund are:

- The last active member stops participation in the Fund. The administering authority, at its discretion, can defer acting for up to three years by issuing a suspension notice. That means cessation won't be triggered if the employer takes on one or more active members during the agreed time.
- Insolvency, winding up or liquidation of the employer
- A breach of the agreement obligations that isn't remedied to the Fund's satisfaction
- Failure to pay any sums due within the period required
- Failure to renew or adjust the level of a bond or indemnity, or to confirm an appropriate alternative guarantor
- Termination of a deferred debt arrangement (DDA).

If no DDA exists, the administering authority will instruct the Fund actuary to carry out a cessation valuation to calculate if there is a surplus or a deficit when the employer leaves the scheme.

7.2 What happens on cessation?

The administering authority must protect the interests of the remaining Fund employers when an employer leaves the Fund. The actuary aims to protect remaining employers from the risk of future loss. The funding target adopted for the cessation calculation is below. These are defined in Appendix D.

a) Where there is no guarantor, cessation liabilities and a final surplus/deficit will usually be calculated using a low-risk basis, which is more prudent than the ongoing participation basis. The low-risk exit basis is defined in Appendix D.

b) Where there is a guarantor, the guarantee will be considered before the cessation valuation. Where the guarantor is a guarantor of last resort, this will have no effect on the cessation valuation. If this isn't the case, cessation may be calculated using the same basis that was used to calculate liabilities (and the corresponding asset share) on joining the Fund.

c) Depending on the guarantee, it may be possible to transfer the employer's liabilities and assets to the guarantor without crystallising deficits or surplus. This may happen if an employer can't pay the contributions due and the approach is within guarantee terms.

If the Fund can't recover the required payment in full, unpaid amounts will be paid by the related letting authority (in the case of a ceased admission body) or shared between the other fund employers. This may require an immediate revision to the rates and adjustments certificate or be reflected in the contribution rates set at the next formal valuation.

The Fund actuary charges a fee for cessation valuations and there may be other cessation expenses. Fees and expenses are at the employer's expense and are deducted from the cessation surplus or added to the cessation deficit. This improves efficiency by reducing transactions between employer and Fund.

7.3 What happens if there is a surplus?

If the cessation valuation shows the exiting employer has more assets than liabilities the administering authority can decide how much will be paid back to the employer based on:

- The surplus amount
- The proportion of the surplus due to the employer's contributions
- Any representations (like risk sharing agreements or guarantees) made by the exiting employer and any employer providing a guarantee or some other form of employer assistance/support
- Any other relevant factors

7.4 How do employers repay cessation debts?

If there is a deficit, full payment will usually be expected in a single lump sum or:

- Spread over an agreed period, if the employer enters into a Debt Spreading Arrangement (DSA)
- If an exiting employer enters into a Deferred Debt Agreement (DDA), it stays in the Fund and pays contributions until the cessation debt is repaid. Payments are reassessed at each formal valuation.

7.5 What if an employer has no active members?

When employers leave the Fund because their last active member has left, they may pay a cessation debt (as a lump sum or via a DSA), receive an exit credit or enter a DDA. In the first two cases they have no further obligation to the Fund and either:

a) Their asset share runs out before all ex-employees' benefits have been paid. The other Fund employers will be required to contribute to the remaining benefits.

b) The last ex-employee or dependant dies before the employer's asset share is fully run down. The surplus will be shared between the other employers in the Fund.

In both cases the Fund actuary will effectively attribute the surplus/deficit to the other Fund employers at the next actuarial valuation based on their share of the Fund assets.

8 What are the statutory reporting requirements?

8.1 Reporting regulations

The Public Service Pensions Act 2013 requires the Government Actuary's Department to report on LGPS funds in England and Wales after every three-year valuation, in what's usually called a Section 13 report. The report should include confirmation that employer contributions are set at the right level to ensure the Fund's solvency and long-term cost efficiency.

8.2 Solvency

Employer contributions are set at an appropriate solvency level if the rate of contribution targets a funding level of 100% over an appropriate time, using appropriate assumptions compared to other funds. Either:

a) Employers collectively can increase their contributions, or the Fund can realise contingencies to target a 100% funding level

or

(b) There is an appropriate plan in place if there is, or is expected to be, a reduction in employers' ability to increase contributions as needed.

8.3 Long-term cost efficiency

Employer contributions are set at an appropriate long-term cost efficiency level if the contribution rate makes provision for the cost of current benefit accrual, with an appropriate adjustment for any surplus or deficit.

To assess this, the administering authority may consider absolute and relative factors.

Relative factors include:

1. Comparing LGPS funds with each other
2. The implied deficit recovery period
3. The investment return required to achieve full funding after 20 years.

Absolute factors include:

1. Comparing funds with an objective benchmark
2. The extent to which contributions will cover the cost of current benefit accrual and interest on any deficit
3. How the required investment return under relative considerations compares to the estimated future return targeted by the investment strategy
4. The extent to which contributions paid are in line with expected contributions, based on the rates and adjustment certificate
5. How any new deficit recovery plan reconciles with, and can be a continuation of, any previous deficit recovery plan, allowing for Fund experience.

These metrics may be assessed by Government Actuary Department (GAD) on a standardised market-related basis where the funds' actuarial bases don't offer straightforward comparisons.

Appendix A – Regulatory framework

A1 Why do funds need a Funding Strategy Statement?

The Local Government Pension Scheme (LGPS) regulations require funds to maintain and publish a Funding Strategy Statement (FSS). According to the Department for Levelling Up, Housing and Communities (DLUHC) the purpose of the FSS is to document the processes the administering authority uses to:

- Establish **a clear and transparent fund-specific strategy** identifying how employers' pension liabilities are best met going forward
- Support the regulatory framework to maintain **as nearly constant employer contribution rates as possible**
- Ensure the fund meets its **solvency and long-term cost efficiency** objectives
- Take a **prudent longer-term view** of funding those liabilities.

To prepare this FSS, the administering authority has used guidance by the Chartered Institute of Public Finance and Accountancy (CIPFA).

A2 Does the Administering Authority consult anyone on the FSS?

Both the LGPS regulations and most recent CIPFA guidance state the FSS should be prepared in consultation with "persons the authority considers appropriate". This should include 'meaningful dialogue with council tax raising authorities and representatives of other participating employers'.

In practice, for the Fund, the consultation process for this FSS was as follows:

a) A draft version of the FSS was issued to all participating employers on 21 October 2022 for comment;
b) Comments were requested within 30 days;
c) Following the end of the consultation period the FSS was updated where required approved by the Pensions Committee on 8 December 2022 and then then subsequently published.

A3 How is the FSS published?

The FSS is made available through the following routes:

- Published on the website at www.eapf.org.uk
- A copy sent by e-mail to each participating employer in the Fund
- A full copy included in the annual report and financial statements of the Fund
- Copies made available on request.

A4 How often is the FSS reviewed?

The FSS is reviewed in detail at least every three years as part of the valuation. Amendments may be made before then if there are regulatory or operational changes. Any amendments will be consulted on, agreed by the Pensions Committee and included in the Committee meeting minutes.

A5 How does the FSS fit into other Fund documents?

The FSS is a summary of the Fund's approach to funding liabilities. It isn't exhaustive – the Fund publishes other statements like the investment strategy statement, governance policy and communications policy. The Fund's annual report and accounts also includes up-to-date Fund information.

These documents can be found at www.eapf.org.uk/trustee/governance-policies

Appendix B – Roles and responsibilities

The efficient and effective operation of the Fund needs various parties to each play their part.

B1 The Administering Authority should:

1. Operates the Fund and follows all Local Government Pension Scheme (LGPS) regulations
2. Manages any conflicts of interest from its dual role as administering authority and a Fund employer
3. Collects employer and employee contributions, investment income and other amounts due
4. Ensures cash is available to meet benefit payments when due
5. Pays all benefits and entitlements
6. Invests surplus money like contributions and income which isn't needed to pay immediate benefits, in line with regulation and the investment strategy
7. Communicates with employers so they understand their obligations
8. Safeguards the Fund against employer default
9. Works with the Fund actuary to manage the valuation process
10. Provides information to the Government Actuary's Department so they can carry out their statutory obligations
11. Consults on, prepares and maintains the Funding and Investment Strategy Statements
12. Tells the actuary about changes which could affect funding
13. Monitors the Fund's performance and funding, amending the strategy statements as necessary

B2 Individual employers:

1. Deduct the correct contributions from employees' pay
2. Pay all contributions by the due date
3. Have appropriate policies in place to work within the regulatory framework
4. Make additional contributions as agreed, for example to augment scheme benefits or early retirement strain
5. Tell the administering authority promptly about any changes to circumstances, prospects or membership which could affect future funding.
6. Make any required exit payments when leaving the Fund.

B3 The Fund actuary:

1. Prepares valuations, including setting employers' contribution rates, agreeing assumptions, working within FSS and LGPS regulations and appropriately targeting fund solvency and long-term cost efficiency
2. Provides information to the Government Actuary's Department so they can carry out their statutory obligations
3. Advises on Fund employers, including giving advice about and monitoring bonds or other security
4. Prepares advice and calculations around bulk transfers and individual benefits
5. Assists the administering authority to consider changes to employer contributions between formal valuations
6. Advises on terminating employers' participation in the Fund
7. Fully reflects actuarial professional guidance and requirements in all advice.

B4 Other parties:

1. Internal and external investment advisers ensure the Investment Strategy Statement (ISS) is consistent with the Funding Strategy Statement
2. Investment managers, custodians and bankers play their part in the effective investment and dis-investment of Fund assets in line with the ISS
3. Auditors comply with standards, ensure Fund compliance with requirements, monitor and advise on fraud detection, and sign-off annual reports and financial statements
4. Governance advisers may be asked to advise the administering authority on processes and working methods
5. Internal and external legal advisers ensure the Fund complies with all regulations and broader local government requirements, including the administering authority's own procedures
6. The Department for Levelling Up, Housing and Communities, assisted by the Government Actuary's Department and the Scheme Advisory Board, work with LGPS funds to meet Section 13 requirements.

Appendix C – Risks and controls

C1 Managing risks

The administering authority has a risk management programme to identify and control financial, demographic, regulatory and governance risks.

Details of the fund-specific risks and controls are set out in the risk register, which is available on request. A summary of the key financial, demographic, regulatory and governance risks and controls is set out below.

Financial risks

Risk	Summary of Control Mechanisms
Fund assets fail to deliver returns in line with the anticipated returns underpinning the valuation of liabilities and contribution rates over the long-term.	Only anticipate long-term returns on a relatively prudent basis to reduce risk of under-performing. Assets invested on the basis of specialist advice, in a suitably diversified manner across asset classes, geographies, managers, etc. Analyse progress at three yearly valuations for all employers. Inter-valuation roll-forward of liabilities between valuations at whole Fund level.
Inappropriate long-term investment strategy.	Overall investment strategy options considered as an integral part of the funding strategy.
Active investment manager under-performance relative to benchmark.	Quarterly investment monitoring analyses market performance and active managers relative to their index benchmark.
Pay and price inflation significantly more than anticipated.	The focus of the actuarial valuation process is on real returns on assets, net of price and pay increases. Inter-valuation monitoring, as above, gives early warning. Some investment in bonds also helps to mitigate this risk. Employers pay for their own salary awards and should be mindful of the geared effect on pension liabilities of any bias in pensionable pay rises towards longer-serving employees.

Risk	Summary of Control Mechanisms
Effect of possible increase in employer's contribution rate on service delivery and admission/scheduled bodies	An explicit stabilisation mechanism has been agreed as part of the funding strategy for the EA, whilst a stable monetary contribution (subject to triennial review) has been agreed for NRW. SSCL participate in the Fund with a fixed contribution rate.
Effects of possible shortfall in cash required to meet benefit outgo due to reduced cash contributions and/or maturing demographic profile	Projections are calculated at each formal valuation to monitor cashflows versus contributions income, so that any possible future cash shortfall is identified early enough for appropriate action to be taken. Accuracy of cashflow projections is improved by use of bespoke baseline longevity assumptions.
Effect of possible asset underperformance as a result of climate change	The administering authority has a comprehensive approach to managing this risk outlined in its Policy to Address Climate Change. The potential risks from climate change were considered in the long-term modelling carried out to set employer contribution rates at the 2022 valuation.

Demographic risks

Risk	Summary of Control Mechanisms
Pensioners living longer, thus increasing cost to Fund.	Set mortality assumptions with some allowance for future increases in life expectancy. The Fund Actuary has direct access to the experience of over 50 LGPS funds which allows early identification of changes in life expectancy that might in turn affect the assumptions underpinning the valuation.
Maturing Fund – i.e. proportion of actively contributing employees declines relative to retired employees.	Continue to monitor at each valuation, consider seeking monetary amounts rather than % of pay and consider alternative investment strategies.
Deteriorating patterns of early retirements	Employers are charged the extra cost of non ill-health retirements following each individual decision. Employer ill health retirement experience is monitored.

Risk	Summary of Control Mechanisms
Reductions in payroll causing insufficient deficit recovery payments	In many cases this may not be sufficient cause for concern and will in effect be caught at the next formal valuation. A review of contributions is permitted in general between valuations. NRW pay contributions as a monetary amount rather than a percentage of payroll to avoid a gradually reducing annual contribution.

Regulatory risks

Risk	Summary of Control Mechanisms
Changes to national pension requirements and/or HMRC rules e.g. changes arising from public sector pensions reform.	The Administering Authority considers all consultation papers issued by the Government and comments where appropriate.
Time, cost and/or reputational risks associated with any DLUHC intervention triggered by the Section 13 analysis.	Take advice from Fund Actuary on position of Fund as at prior valuation, and consideration of proposed valuation approach relative to anticipated Section 13 analysis.
Changes by Government to particular employer participation in LGPS Funds, leading to impacts on funding and/or investment strategies.	The Administering Authority considers all consultation papers issued by the Government and comments where appropriate. Take advice from Fund Actuary on impact of changes on the Fund and amend strategy as appropriate.

Governance risks

Risk	Summary of Control Mechanisms
Administering Authority unaware of structural changes in an employer's membership (e.g. large fall in employee members, large number of retirements) or not advised of an employer closing to new entrants.	The Administering Authority has a close relationship with employing bodies and communicates required standards e.g. for submission of data. The Actuary may revise the Rates and Adjustments certificate to increase an employer's contributions between triennial valuations. Deficit contributions may be expressed as monetary amounts.

Risk	Summary of Control Mechanisms
Actuarial or investment advice is not sought, or is not heeded, or proves to be insufficient in some way	The Administering Authority maintains close contact with its specialist advisers. Advice is delivered via formal meetings involving Pensions Committee Members, and recorded appropriately. Actuarial advice is subject to professional requirements such as peer review.
An employer ceasing to exist with insufficient funding or adequacy of a bond.	The Administering Authority believes that it would normally be too late to address the position if it was left to the time of departure. The risk is mitigated by: Seeking a funding guarantee from another scheme employer, or external body, where-ever possible Alerting the prospective employer to its obligations and encouraging it to take independent actuarial advice. Vetting prospective employers before admission. Where permitted under the regulations requiring a bond to protect the Fund from various risks. Requiring new Community Admission Bodies to have a guarantor. Reviewing bond or guarantor arrangements at regular intervals. Reviewing contributions well ahead of cessation if thought appropriate.
An employer ceasing to participate in the Fund resulting in an exit credit being payable	The Administering Authority regularly monitors admission bodies coming up to cessation The Administering Authority invests in liquid assets to ensure that exit credits can be paid when required.

C2 Employer covenant assessment and monitoring

All the employers in the Fund are either directly funded by government (the EA or NRW) or participate via a risk-sharing agreement with a government-funded body (SSCL). The Fund is therefore satisfied that detailed covenant analysis and monitoring is not required. If the situation of any of the employers changes in future this may be reconsidered.

C3 Climate risk and TCFD reporting

The Fund has considered climate-related risks when setting the funding strategy. The Fund included climate scenario stress testing in the contribution modelling exercise for the EA and NRW at the 2022 valuation. The modelling results under the stress tests were slightly worse than the core results but were still within risk tolerance levels, particularly given the severity of the stresses applied.

The results provide assurance that the modelling approach does not significantly underestimate the potential impact of climate change and that the funding strategy is resilient to climate risks. The results of these stress tests may be used in future to assist with disclosures prepared in line with Task Force on Climate-Related Financial Disclosures (TCFD) principles.

The Fund has a Responsible Investment Policy and a Policy to Address Climate Change, **both of which are available on its website.**

Appendix D – Actuarial assumptions

The Fund's actuary uses a set of assumptions to determine the strategy, and so assumptions are a fundamental part of the Funding Strategy Statement.

D1 What are assumptions?

Assumptions are used to estimate the benefits due to be paid to members. Financial assumptions determine the amount of benefit to be paid to each member, and the expected investment return on the assets held to meet those benefits. Demographic assumptions are used to work out when benefit payments are made and for how long.

The funding target is the money the Fund aims to hold to meet the benefits earned to date.

Any change in the assumptions will affect the funding target and contribution rate, but different assumptions don't affect the actual benefits the Fund will pay in future.

D2 What assumptions are used to set the contribution rate?

The Fund doesn't rely on a single set of assumptions when setting contribution rates, instead using Hymans Robertson's Economic Scenario Service (ESS) to project each employer's assets, benefits and cashflows to the end of the funding time horizon.

ESS projects future benefit payments, contributions and investment returns under 5,000 possible economic scenarios, using variables for future inflation and investment returns for each asset class, rather than a single fixed value.

For any projection, the Fund actuary can assess if the funding target is satisfied at the end of the time horizon.

Table: Summary of assumptions underlying the ESS, 31 March 2022

		Annualised total returns										
		Cash	Index Linked Gilts (long)	Private Equity	Property	Infr. Debt	Global Equity	Multi Asset Credit (sub inv grade)	Private lending	Corp Medium A	CPI inflation	17 year real govt yield
10y	16%ile	0.8%	-3.1%	-1.2%	-0.6%	-0.3%	-0.6%	1.7%	2.7%	-0.1%	1.6%	-1.7%
	50%ile	1.8%	-0.7%	9.4%	4.4%	2.2%	5.6%	3.5%	6.0%	1.6%	3.3%	-0.5%
	84%ile	2.9%	2.0%	20.1%	9.5%	4.3%	11.6%	5.2%	9.2%	3.2%	4.9%	0.7%
20y	16%ile	1.0%	-2.6%	2.4%	1.4%	1.2%	1.6%	2.8%	4.3%	1.1%	1.2%	-0.7%
	50%ile	2.4%	-0.9%	10.0%	5.0%	2.7%	6.1%	4.4%	6.8%	2.1%	2.7%	1.1%
	84%ile	4.0%	0.8%	17.6%	8.9%	4.2%	10.8%	6.0%	9.2%	3.2%	4.3%	2.7%
40y	16%ile	1.2%	-1.1%	4.7%	2.6%	2.3%	3.2%	3.6%	5.5%	2.0%	0.9%	-0.6%
	50%ile	2.9%	0.3%	10.3%	5.5%	3.7%	6.6%	5.3%	7.7%	3.1%	2.2%	1.3%
	84%ile	4.9%	1.9%	16.1%	8.8%	5.1%	10.2%	7.1%	10.0%	4.4%	3.7%	3.2%
	Vol (1 yr)	2%	9%	30%	15%	8%	18%	6%	10%	7%	3%	

D3 What financial assumptions were used?

Future investment returns and discount rate

The Fund uses a risk-based approach to generate assumptions about future investment returns over the funding time horizon, based on the investment strategy.

The discount rate is the annual rate of future investment return assumed to be earned on assets after the end of the funding time horizon. The discount rate assumption is set as a margin above the risk-free rate.

Assumptions for future investment returns depend on the funding objective.

Funding target	Employer	Margin above risk-free rate
Ongoing basis	EA and SSCL	1.6%
Low-risk basis	NRW	0.0%

Discount rate (for funding level calculation as at 31 March 2022 only)

The table below shows the discount rates which apply for the purpose of calculating a funding level at the 2022 valuation.

Funding level discount rate	Employer	% pa
Ongoing basis	EA and SSCL	3.1%
Low-risk basis	NRW	1.7%

The ongoing basis funding level discount rate is based on a prudent estimate of investment returns, specifically, that there is an 78% likelihood that the Fund's assets will achieve future investment returns of 3.1% pa over the 20 years following the 2022 valuation date.

The low-risk basis discount rate is based on the yield on long-dated government bonds on the valuation date.

Pension increases and CARE revaluation

Deferment and payment increases to pensions and revaluation of CARE benefits are in line with the Consumer Price Index (CPI) and determined by the regulations.

The CPI assumption is based on Hymans Robertson's ESS model. The median long-term value of CPI inflation from the ESS was 2.5% pa on 31 March 2022.

Salary growth

The salary increase assumption at the latest valuation has been set to 0.5% pa above CPI pa plus a promotional salary scale.

Life expectancy

The longevity assumptions are based on VitaCurves produced by detailed analysis and tailored to fit the Fund's membership profile.

Allowance has been made for future improvements to mortality, in line with the 2021 version of the continuous mortality investigation (CMI) published by the actuarial profession. The starting point has been adjusted by +0.25% to reflect the difference between the population-wide data used in the CMI and LGPS membership. A long-term rate of mortality improvements of 1.5% pa applies.

The smoothing parameter used in the CMI model is 7.0. There is little evidence currently available on the long-term effect of Covid-19 on life expectancies. To avoid an undue impact from recently mortality experience on long-term assumptions, no weighting has been placed on data from 2020 and 2021 in the CMI.

For NRW (or any other employer ceasing on the low-risk basis), a more prudent assumed rate of long-term improvements is 1.75% pa is used.

Other demographic assumptions	
Retirement in normal health	Members are assumed to retire at the earliest age possible with no pension reduction.
Promotional salary increases	Sample increases below
Death in service	Sample rates below
Withdrawals	Sample rates below
Retirement in ill health	Sample rates below
Family details	A varying proportion of members are assumed to have a dependant partner at retirement or on earlier death. For example, at age 60 this is assumed to be 90% for males and 85% for females. After retirement the proportion is adjusted to reflect dependant mortality. Males are assumed to be 3 years older than females, and partner dependants are assumed to be opposite sex to members.
Commutation	60% of maximum tax free cash
50:50 option	1% of members will choose the 50:50 option.

Males

Incidence per 1000 active members per year								
Age	Salary scale	Death before retirement	Withdrawals		Ill-health tier 1		Ill-health tier 2	
		FT &PT	FT	PT	FT	PT	FT	PT
20	107	0.17	242.58	487.81	0.00	0.00	0.00	0.00
25	120	0.17	160.24	322.22	0.00	0.00	0.00	0.00
30	134	0.20	113.69	228.58	0.00	0.00	0.00	0.00
35	145	0.24	88.83	178.58	0.10	0.07	0.02	0.01
40	152	0.41	71.52	143.73	0.16	0.12	0.03	0.02
45	158	0.68	67.18	134.98	0.35	0.27	0.07	0.05
50	162	1.09	55.38	111.14	0.90	0.68	0.23	0.17
55	162	1.70	43.61	87.56	3.54	2.65	0.51	0.38
60	162	3.06	38.87	78.01	6.23	4.67	0.44	0.33

Females

Incidence per 1000 active members per year								
Age	Salary scale	Death before retirement	Withdrawals		Ill-health tier 1		Ill-health tier 2	
		FT &PT	FT	PT	FT	PT	FT	PT
20	107	0.10	211.45	280.42	0.00	0.00	0.00	0.00
25	120	0.10	142.28	188.66	0.10	0.07	0.02	0.01
30	134	0.14	119.27	158.13	0.13	0.10	0.03	0.02
35	145	0.24	102.94	136.43	0.26	0.19	0.05	0.04
40	152	0.38	85.67	113.51	0.39	0.29	0.08	0.06
45	158	0.62	79.95	105.91	0.52	0.39	0.10	0.08
50	162	0.90	67.41	89.19	0.97	0.73	0.24	0.18
55	162	1.19	50.30	66.62	3.59	2.69	0.52	0.39
60	162	1.52	40.53	53.62	5.71	4.28	0.54	0.40

Appendix E – Glossary

Funding basis	The combined set of assumptions made by the actuary, regarding the future, to calculate the value of the funding target at the end of the employer's time horizon. The main assumptions will relate to the level of future investment returns, salary growth, pension increases and longevity. More prudent assumptions will give a higher funding target, whereas more optimistic assumptions will give a lower funding target.
Administering Authority	The body with statutory responsibility for running the Fund, in effect the Fund's "trustees".
Admission Bodies	Employers where there is an Admission Agreement setting out the employer's obligations. These can be Community Admission Bodies or Transferee Admission Bodies.
Covenant	The assessed financial strength of the employer. A strong covenant indicates a greater ability (and willingness) to pay for pension obligations in the long run. A weaker covenant means that it appears that the employer may have difficulties meeting its pension obligations in full over the longer term.
Employer	An individual participating body in the Fund, which employs (or used to employ) **members** of the Fund. Normally the assets and **funding target** values for each employer are individually tracked, together with its **Primary rate** at each **valuation**.
Gilt	A UK Government bond, i.e. a promise by the Government to pay interest and capital as per the terms of that particular gilt, in return for an initial payment of capital by the purchaser. Gilts can be "fixed interest", where the interest payments are level throughout the gilt's term, or "index-linked" where the interest payments vary each year in line with a specified index (usually RPI). Gilts can be bought as assets by the Fund, but are also used in funding as an objective measure of a risk-free rate of return.
Guarantee / guarantor	A formal promise by a third party (the guarantor) that it will meet any pension obligations not met by a specified employer. The presence of a guarantor will mean, for instance, that the Fund can consider the employer's **covenant** to be as strong as its guarantor's.
Letting employer	An employer which outsources or transfers a part of its services and workforce to another employer (usually a contractor). The contractor will pay towards the LGPS benefits accrued by the transferring members, but ultimately the obligation to pay for these benefits will revert to the letting employer.
LGPS	The Local Government Pension Scheme, a public sector pension arrangement put in place via Government Regulations, for workers in local government. These Regulations also dictate eligibility (particularly for Scheduled Bodies), members' contribution rates, benefit calculations and certain governance requirements. The LGPS is divided into 100 Funds across the UK. Each LGPS Fund is autonomous to the extent not dictated by

	Regulations, e.g. regarding investment strategy, employer contributions and choice of advisers.
Maturity	A general term to describe a Fund (or an employer's position within a Fund) where the members are closer to retirement (or more of them already retired) and the investment time horizon is shorter. This has implications for investment strategy and, consequently, funding strategy.
Members	The individuals who have built up (and may still be building up) entitlement in the Fund. They are divided into actives (current employee members), deferred pensioners (ex-employees who have not yet retired) and pensioners (ex-employees who have now retired, and dependants of deceased ex-employees).
Primary contribution rate	The employer contribution rate required to pay for ongoing accrual of active members' benefits (including an allowance for administrative expenses). See Appendix D for further details.
Profile	The profile of an employer's membership or liability reflects various measurements of that employer's **members**, i.e. current and former employees. This includes: the proportions which are active, deferred or pensioner; the average ages of each category; the varying salary or pension levels; the lengths of service of active members vs their salary levels, etc. A membership (or liability) profile might be measured for its **maturity** also.
Rates and Adjustments Certificate	A formal document required by the LGPS Regulations, which must be updated at the conclusion of the formal **valuation**. This is completed by the actuary and confirms the contributions to be paid by each employer (or pool of employers) in the Fund for the period until the next valuation is completed.
Scheduled Bodies	Types of employer explicitly defined in the LGPS Regulations, whose employees must be offered membership of their local LGPS Fund. These include Councils, colleges, universities, academies, police and fire authorities etc, other than employees who have entitlement to a different public sector pension scheme (e.g. teachers, police and fire officers, university lecturers).
Secondary contribution rate	The difference between the employer's total and **Primary contribution rates**. See Appendix D for further details.
Stabilisation	Any method used to smooth out changes in employer contributions from one year to the next. This is very broadly required by the LGPS Regulations, but in practice is particularly employed for large stable employers in the Fund.
Valuation	A risk management exercise to review the **Primary and Secondary contribution rates**, and other statutory information for the Fund and individual employers.