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Environment Agency Closed Fund

Report on the actuarial valuation at 31 March 2022

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Steven Scott FFA

29 March 2023
For and on behalf of Hymans Robertson LLP

Contents

Valuation report		Page
1	Introduction	3
2	Valuation approach	5
3	Valuation results	6
4	Sensitivity analysis	8
5	Final comments	9

Appendices

Appendix 1 – Data
Appendix 2 – Assumptions
Appendix 3 – Government funding agreement
Appendix 4 – Rates & Adjustments Certificate
Appendix 5 – Grant-in-Aid projections and self-sufficiency date
Appendix 6 – Section 13 dashboard

1 Introduction

Background to the actuarial valuation

We have been commissioned by the Environment Agency ("the Administering Authority") to carry out an actuarial valuation of the Environment Agency Closed Fund ("the Fund") as at 31 March 2022 as required under Regulation 62 of the Local Government Pension Scheme Regulations 2013 ("the Regulations").

We have carried out a conventional actuarial valuation but the calculations are of greatest use as a platform for providing expenditure forecasts to Defra (the Department for Environment, Food and Rural Affairs), and for Defra to place a value on liabilities in its annual accounts (which rely on different assumptions as prescribed by HM Treasury in their annual Public Expenditure System notes). The expenditure forecasts are shown in Appendix 5.

Reliances and Limitations

This report is addressed to the Administering Authority. It has been prepared by us as actuaries to the Fund and is solely for the purpose of summarising the main outcomes of the 2022 actuarial valuation. It has not been prepared for any other third party or for any other purpose. We make no representation or warranties to any third party as to the accuracy or completeness of this report, no reliance should be placed on this report by any third party and we accept no responsibility or liability to any third party in respect of it.

This summary report is the culmination of other communications in relation to the valuation, in particular:

- Our 2022 valuation toolkit which sets out the methodology used when reviewing funding plans:
- Our paper to the Fund's Pension Committee meeting dated 10 March 2022 discussing the valuation assumptions;
- Our Initial Results Report dated 21 September 2022 which outlines the whole fund results and inter-valuation experience;
- Our data report dated March 2023 which summarises the data used for the valuation, the approach to ensuring it is fit for purpose and any adjustments made to it during the course of the valuation.
- The Funding Strategy Statement which details the approach taken to adequately fund the current and future benefits due to members.

The totality of our advice complies with the Regulations as they relate to actuarial valuations.

The following Technical Actuarial Standards apply to this advice, and have been complied with where material and to a proportionate degree. They are:

- TAS100 – Principles for technical actuarial work
- TAS300 – Pensions

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Use of this report by other parties

This report is addressed to the Administering Authority of the Fund only. We appreciate that other parties may also seek information about the 2022 valuation process and methodology. We would encourage such parties to refer to the following publicly available documents for further information:

- The Fund's Funding Strategy Statement;
- The Fund's Investment Strategy Statement;
- Published meeting papers and minutes for the quarterly meetings of the Fund's Pensions Committee.

Considering these papers alongside this valuation report will provide a more complete view of the Fund's funding strategy and decision-making process surrounding this. These documents are available on the Fund's website or on request.

2 Valuation approach

The valuation is a planning exercise for the Fund, to assess the monies needed to meet the benefits owed to its members as they fall due. As part of the valuation process the Fund reviews its funding strategy to ensure that an appropriate contribution plan and investment strategy is in place.

It is important to realise that the actual cost of the pension fund (i.e. how much money it will ultimately have to pay out to its members in the form of benefits) is unknown. This cost will not be known with certainty until the last benefit is paid to the last pensioner. The purpose of this valuation is to estimate what this cost will be, so that the Fund can then develop a funding strategy to meet it.

Setting the funding strategy for a defined benefit pension fund such as the Environment Agency Closed Fund is complex. Firstly, the time period is long; benefits will be paid out over a period of the next 45 years or more to current pensioners, deferred pensioners and their dependants. Secondly, the LGPS remains a defined benefit scheme so there are uncertainties in the final cost of the benefits to be paid.

As per the previous valuation, the method of valuation is based on the projected accrued benefit method. In this method we estimate the payments which will be made from the Fund throughout the future lifetimes of existing deferred pensioners, pensioners and their dependants. These estimates rely on the assumptions described in section 3 and Appendix 2, and allow for all expected pension increases. We have then calculated the amount of money which, if invested now, should be sufficient to meet all of these payments in future, assuming that future investment returns are in line with the discount rate. This amount is the estimated cost of members' benefits.

We then compare this figure with the market value of assets at 31 March 2022. By maintaining a link to the market in both cases, we ensure that the assets and liabilities are valued in a consistent manner.

The funding level is the ratio of assets to liabilities at the valuation date. A funding level of less/more than 100% implies that there is a deficit/surplus in the Fund at the valuation date against the Funding Objective (defined in section 3).

The level of contributions payable to the Fund is not directly determined from the funding position. Instead, a cashflow approach is used where contributions are paid by Defra every six months, with the aim of covering expected benefits and expenses payable from the Fund over the following six months.

Significant events

The figures in this report are based on our understanding of the benefit structure of the LGPS in England and Wales as at 31 March 2022. Details can be found at http://www.lgpsregs.org/.

McCloud ruling

The LGPS benefit structure is currently under review following the Government's loss of the right to appeal the McCloud and other similar court cases. However, the ruling does not apply to the Environment Agency Closed Fund because it only applies to benefits earned after the Fund closed to new accrual.

Indexation and equalisation of Guaranteed Minimum Pensions (GMP)

It is assumed that all increases on GMPs for members reaching State Pension Age after 6 April 2016 will be paid for by LGPS employers. This is the same approach that was taken for the 2019 valuation..

3 Valuation results

The Administering Authority has prepared a Funding Strategy Statement which sets out its funding objectives for the Fund. This involves Defra meeting expected future expenditure as it emerges by making GiA payments.

Ultimately, the main valuation objective is to ensure the long-term solvency of the Fund, using a prudent long term view ("the Funding Objective"). This will ensure that sufficient funds are available to meet all members'/dependants' benefits as they fall due for payment.

Funding position relative to Funding Objective

In assessing the extent to which the Funding Objective was met at the valuation date, we have used the actuarial assumptions described in Appendix 2 for the funding basis and the funding method also earlier described. The table below compares the value of the assets and liabilities at 31 March 2022. The 31 March 2019 results are also shown for reference.

A funding level of 100% would correspond to the Funding Objective being met at the valuation date.

Valuation Date	31 March 2019	31 March 2022
Past Service Liabilities	**(£m)**	**(£m)**
Deferred Pensioners	60	46
Pensioners	514	444
Total Liabilities	**574**	**491**
Assets	**294**	**329**
Surplus / (Deficit)	**(280)**	**(162)**
Funding Level	**51%**	**67%**

There has been an improvement in the reported funding level since 31 March 2019 from 51% to 67% and a reduction in the funding deficit from £280m to £162m.

A breakdown of the key factors that have influenced the reported funding position from 31 March 2019 to 31 March 2022 are detailed below.

Change in the surplus/deficit position	Assets (£m)	Liabilities (£m)	Surplus / (Deficit) (£m)
Last valuation at 31 March 2019	**294**	**574**	**(280)**
Cashflows			
Grant-in-Aid contributions	155		155
Benefits paid out	(147)	(147)	0
Other cashflows (e.g. Fund expenses)	(2)		(2)
Expected changes			
Expected investment returns	13	0	13
Interest on benefits already accrued	0	23	(23)
Accrual of new benefits	0	0	0
Expected position at 31 March 2022	**313**	**450**	**(137)**
Events between 2019 and 2022			
Benefit increases less than expected	0	(4)	4
Mortality heavier than expected	0	(10)	10
Other membership experience	0	14	(14)
Higher than expected investment returns	16	0	16
Changes in future expectations			
Investment returns	0	(12)	12
n	0	42	(42)
ty	0	10	(10)
Other demographic assumptions	0	2	(2)
This valuation at 31 March 2022	**329**	**491**	**(162)**

Note that figures may not sum due to rounding

Since the previous valuation, various events have taken place which affect the value placed on the liabilities, including:

- There is an interest cost of £23m. This is broadly three years of compound interest at 1.5% p.a. applied to the previous valuation liability value of £574m. The benefits that have been accrued to the valuation date are three years closer to payment at 31 March 2022 than they were at 31 March 2019, meaning there is less opportunity for future investment returns to help meet this cost. This serves to increase the value placed on the liabilities;
- The areas of membership experience that have had the greatest impact on the surplus/deficit position of the Fund are set out below, together with their impact on the liabilities:

	Expected	Actual	Difference	Impact on funding position
Post-retirement experience				
Benefit increases (p.a.)	2.0% pa	1.8% pa	(0.2%)	+£4m
Pensions ceasing (£m)	£14.4m	£16.6m	£2.2m	+£10m

- The changes to the longevity assumptions used for the valuation have resulted in a modest reduction in life expectancies. This has served to increase the liabilities by £10m;
- The assumed rate of future CPI inflation has increased from 2.0% p.a. at 31 March 2019 to 3.1% p.a. at 31 March 2019. This has increased the value of the liabilities by £42m;
- The assumed rate of future investment returns has increased from 1.5% p.a. to 1.7% p.a.. This has decreased the value of the liabilities by £12m.

There has been a large increase in the value of the Fund's assets since the previous valuation because:

- Benefit payments are covered by Grant-in-Aid payments from Defra so the assets are not depleted as benefits are paid. The funding position is therefore expected to improve over time. Over the inter-valuation period the impact of this was to reduce the deficit by £155m.
- The investment return on the Fund's assets for the period 31 March 2019 to 31 March 2022 was 10.0%. This has increased the value of the assets by £29m.

Projection of the funding position

The progression of the funding position will depend on various factors including future asset performance, economic conditions and membership movements. If the financial and demographic assumptions made at this valuation are borne out in practice, and there are no changes to the valuation assumptions, we project that the funding level at the 2025 valuation date will be approximately 95%. This allows for Grant-in-Aid contributions to be received as described in Appendix 5.

4 Sensitivity analysis

Valuation results depend on actuarial assumptions made about the future. By their nature, these assumptions are uncertain which means it's important to understand their sensitivity and risk levels.

Sensitivity of the funding position to future inflation

Pensions (both in payment and in deferment) in the LGPS increase annually in line with CPI. If future CPI inflation is higher than the assumed rate of 3.1% p.a. then the cost of the benefits will be higher than we have set out in Section 3.

The table quantifies the impact on the funding position of varying the benefit increases (CPI) assumption below.

CPI inflation assumption	Surplus / (Deficit)	Funding Level
% pa	**(£m)**	**%**
2.9%	(152)	68%
3.1%	(162)	67%
3.3%	(171)	66%

Sensitivity of the funding position to life expectancy

The main area of demographic risk is people living longer than expected. If long term mortality rates fall at a rate of 1.75% p.a. (compared to the assumed 1.5% p.a.) then members will live slightly longer than we have assumed in this valuation. The impact on the funding position is detailed below.

Long term rate of improvement	Surplus / (Deficit)	Funding Level
% pa	**(£m)**	**%**
1.5% (baseline)	(162)	67%
1.75%	(165)	67%

Other demographic risks to consider

There are other risk factors which would have an impact on the funding position. Examples of these include members' choices around retirement age and commutation, and the proportion of pensioners with an eligible dependant. These are probably unlikely to change in such a way that would rank them as amongst the highest risks facing the Fund and therefore there has been no further quantification of their risk.

Comment on sensitivity analysis

Note that the tables above show the effect of changes to each assumption in isolation. In reality, it is perfectly possible for the experience of the Fund to deviate from more than one of the assumptions simultaneously and so the precise effect on the funding position is therefore more complex. Furthermore, the range of assumptions shown here is by no means exhaustive and should not be considered as the limits of how extreme experience could actually be.

Climate change risk

Results may materially change due to the impact of climate change, because of transition and physical risks. We have not quantified the risk exposure here as the Closed Fund's funding agreement with Defra means its exposure to climate risk is minimal.

5 Final comments

The Fund's valuation operates within a broader framework, and this document should therefore be considered alongside the following:

- the Funding Strategy Statement, which in particular highlights how different types of employer in different circumstances have their contributions calculated;
- the Investment Strategy Statement, which sets out the investment strategy for the Fund;
- the general governance of the Fund, such as meetings of the Pensions Committee and Local Pension Board, decisions delegated to officers, the Fund's business plan, etc;
- the Fund's risk register; and
- the agreement the Fund has with Defra regarding the ongoing funding of benefits as they fall due.

Intervaluation employer events

New employers joining the Fund

Any new employers or admission bodies joining the Fund should be referred to the Fund Actuary to assess the required level of contribution. Depending on the number of transferring members the ceding employer's rate may also need to be reviewed.

Cessations and bulk transfers

Any employer who ceases to participate in the Fund should be referred to us in accordance with Regulation 64 of the Regulations.

Any bulk movement of scheme members:

- involving 10 or more scheme members being transferred from or to another LGPS fund; or
- involving 2 or more scheme members being transferred from or to a non-LGPS pension arrangement;

should be referred to us to consider the impact on the Fund.

Valuation frequency

Under the provisions of the LGPS regulations, the next formal valuation of the Fund is due to be carried out as at 31 March 2025 where contribution rates payable from 1 April 2026 will be set.

Richard Warden

Steven Scott

Fellows of the Institute and Faculty of Actuaries

For and on behalf of Hymans Robertson LLP

29 March 2023

Appendices

Appendix 1 – Data

Membership data as at 31 March 2022

A summary of the membership data provided by the Administering Authority for the purposes of the valuation at 31 March 2022 is shown below. The corresponding membership data from the previous valuation is also shown for reference.

Membership data	Last valuation	This valuation
Deferred members		
Number	1,408	1,056
Total accrued pension (£000)	1,911	1,304
Average age (liability weighted)	58.6	60.9
Pensioners		
Number	11,180	9,997
Total accrued pension (£000)	52,352	43,811
Average age (liability weighted)	76.6	76.6
Average duration of liabilities	9.1	9.6

Other data used in this valuation

We have also relied upon asset and accounting data from the Fund's published 2019/20, 2020/21 and 2021/22 Annual Report and Accounts. Cashflow data was provided by the Administering Authority and reconciled against the information shown in these documents.

Comment on data quality

The results of the valuation are dependent on the quality of the data provided to us by the Administering Authority for the specific purpose of this valuation. We have carried out validations on the membership data provided to ensure it is fit for the purpose of the valuation. Further details can be found in our report issued to the Administering Authority entitled "Data report for 2022 valuation", dated. We believe the membership data is fit for the purposes of this valuation.

Appendix 2 – Assumptions

The key assumptions required to carry out the formal valuation, and our approach to setting the assumptions, are discussed in guides 4 (*Financial assumptions)*, 5 (*Longevity and other demographic assumptions*) and 8 (*Measuring a funding level*) of our 2022 valuation toolkit. However, due to the unique nature of the Fund in the LGPS some of the assumptions are either not applicable (e.g. salary increases) or set in a different way (e.g. the discount rate). Further detail is set out in the rest of this section.

To set appropriate assumptions for the valuation of the Environment Agency Closed Fund, the Administering Authority commissioned actuarial advice which was presented to the Fund's Pensions Committee at the meeting on 16 March 2022.

Demographic assumptions

Longevity

As the Fund is a member of Club Vita, the baseline longevity assumptions are a bespoke set of Vita Curves that are tailored to fit the membership profile of the Fund. These curves are based on the data the Fund has provided us with for the purposes of this valuation.

We have also allowed for future improvements in mortality based on the CMI 2021 model with no weighting placed on 2020 and 2021 data, an initial additional parameter of 0.25% for males and females and a long-term rate of improvement of 1.5% p.a. for both women and men.

Longevity Assumptions	31 March 2019	31 March 2022
Baseline Longevity	Club Vita	Club Vita
Future improvements	CMI2018, Smoothed, 0.5% p.a. long term	CMI2021, Smoothed, 1.5% p.a. long term

Full details are available on request.

The longevity assumptions result in the following typical future life expectancies from age 65 (figures for 2019 shown for comparison):

Assumed Life Expectancy	31 March 2019	31 March 2022
Male		
Pensioners	20.1 years	20.5 years
Non-pensioners	19.6 years	20.4 years
Female		
Pensioners	22.6 years	23.6 years
Non-pensioners	23.2 years	24.3 years

Non-pensioners are assumed to be aged 60 at the valuation date

Other demographic assumptions

We are in the unique position of having a very large local authority data set from which to derive our other demographic assumptions. We have analysed the trends and patterns that are present in the membership of local authority funds and tailored our demographic assumptions to reflect LGPS experience. The resulting demographic assumptions are as follows:

Demographic Assumptions	
Retirement ages	The earliest a member can retire with unreduced benefits.
Family details	A varying proportion of members are assumed to have a dependant at retirement or on earlier death. For example, at age 60 this is assumed to be 90% for males and 85% for females. The dependant of a male member is assumed to be 3 years younger than him and the dependant of a female member is assumed to be 3 years older than her.
Commutation	50% of future retirements elect to exchange pension for additional tax free cash up to HMRC limits.

Further details are available on request.

Financial assumptions

Discount rate

In order to place a current value on the future benefit payments from the Fund, an assumption about future investment returns is required in order to "discount" future benefit payments back to the valuation date. In setting the discount rate the Fund is determining the extent to which it relies on future investment returns required to meet benefit payments in excess of the monies already held at the valuation date.

For this valuation, we have assumed that the discount rate is equal to the yield on the types of assets held by the Fund, i.e. the return on Government bonds ('gilts').

Benefit increases

Pension benefit increases (both in payment and deferment) are in line with Consumer Price Index (CPI) inflation. As there continues to be no deep market for CPI linked financial instruments, the Fund derives the expected level of future CPI inflation with reference to the Retail Price Index (RPI).

At the previous valuation, the assumption for RPI was derived from market data as the difference between the yield on long-dated fixed interest and index-linked government bonds, with a further reduction of 0.3% p.a. for the distortion in the market due to supply and demand issues. This 'inflation risk premium' has been removed for the 2022 valuation.

Due to RPI reform, the Fund expects the difference between RPI and CPI inflation to be 1.0% p.a. up to 2030 and 0.0% p.a. thereafter. Based on its membership profile, the Fund has chosen to adopt a weighted average RPI-CPI gap of 0.6% p.a..

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The key financial assumptions used to assess the funding position as at 31 March 2022 are set out below.

Financial Assumptions (% p.a.)	31 March 2019	31 March 2022
Discount rate		
Return on long-dated gilts	1.5%	1.7%
Discount rate	**1.5%**	**1.7%**
Benefit increases		
Market-implied RPI inflation	3.3%	3.7%
Adjusted RPI*	3.0%	-
Assumed RPI/CPI gap	(1.0%)	(0.6%)
Benefit increase assumption	**2.0%**	**3.1%**

* Allowing for an Inflation Risk Premium of 0.3% p.a. as at 31 March 2019

Prudence in assumptions

As required for Local Government Pension Scheme valuations, our approach to this valuation must include a degree of prudence. The unique nature of the Fund's arrangement with the Department for Environment, Food and Rural Affairs (Defra) means that prudence in the way the benefits are funded is achieved in a different way to other LGPS funds, by relying on the strength of Defra's covenant and the binding agreement it has to cover benefit payments.

We believe that the proposed assumptions represent the "best estimate" of future experience. This effectively means that there is a 50% chance that future experience will be better or worse than the chosen assumption.

The assumptions used in this valuation have been agreed with the Administering Authority and are set out in the Fund's Funding Strategy Statement.

Appendix 3 – Government funding agreement

Extract from a letter sent on 15 April 2004 by Paul Boateng (Chief Secretary to the Treasury) to the Rt Hon Margaret Beckett (Secretary of State for the Environment)

Environment Agency Closed Pension Fund

"Thank you for your letter of 18 March requesting a change in the arrangement agreed in the 2002 spending review for funding the liabilities of the Environment Agency Closed Pension Fund. I am prepared to agree to the revised arrangements you suggest for the 2004 spending review baseline year. The funding of the Environment Agency Closed Pension Fund will remain ring-fenced and will reduce over time in line with the un-winding of the liability".

Paul Boateng

Extract from a letter sent on 15 July 2004 by the Rt Hon Margaret Beckett (Secretary of State for the Environment) to Mr John Edmonds (Chairman of the Environment Agency Pensions Committee)

Environment Agency Closed Pension Fund

The Environment Agency Closed Pension Fund is in actuarial deficit. Current valuations indicate that the assets available will not meet its future liabilities and the Fund will be exhausted by autumn 2006. Section 173 of the Water Act 1989 gave me the function of providing funding to enable the liabilities of the Fund – a public service, final salary, funded pension scheme – to be met. I propose to exercise this function through stabilisation of the Fund and annual top-up payments from April 2006.

The assets of the Fund should be allowed to run down (rather than be liquidated) and then stabilised through annual top-up payments using section 173 provisions of the Water Act 1989, thus meeting on-going liabilities on a pay-as-you-go basis. The Chief Secretary to the Treasury has agreed to this and that we should retain financial cover sufficient to fund annual costs from 2006/07.

Actuarial valuations indicate that the Fund will fall below the £100m mark – the equivalent of a little over annual outgoings in the latter half of 2005/06. I therefore propose to top-up the Fund in April/May 2006 and again in September/October 2006 by a total amount equivalent to its annual outgoings as determined by actuarial forecasts. This will be repeated in subsequent years, with the amount proportionate to the actual Fund liabilities.

I confirm that the implementation of these proposals will not either dilute or remove my statutory funding function under section 173 of the Water Act 1989. The Fund pensioners will not see any change in how their individual pensions are paid, and they can be certain that their entitlement will be met. I would therefore commend these arrangements to you, to the Agency's Pensions Committee and to the Fund's members.

Margaret Beckett

Memorandum of understanding

Between:

The Secretary of State for Environment, Food and Rural Affairs of Nobel House, 17 Smith Square, London SW1P 3JR ("the Secretary of State"); and

The Environment Agency – Pensions Committee of Rio House, Waterside Drive, Almondsbury, Bristol, BS32 4UD ("the Agency")

Background

1. The Environment Agency Closed Fund ("the Closed Fund") is vested in, and required to be maintained by, the Environment Agency by regulation 2(1) of the Local Government Pension Scheme (Environment Agency) Regulations 1996.

2. Before 1989, the Water Authorities Superannuation Fund ("WASF") served the former Regional Water Authorities in England and Wales. Under the Water Act 1989 their water supply and sewerage functions were transferred to newly created water companies, together with the relevant employees. The pension liabilities and assets in respect of such employees were transferred from the WASF to the new water company pension schemes. The pension liabilities and assets in respect of the remaining employees, and also of the former employees and pensioners, were transferred with the WASF to the National Rivers Authority ("the NRA"), which set up a pension fund for its own employees ("the Active Fund") into which were transferred the pension liabilities and assets in respect of the said remaining employees.

3. Following the transfer of active employed members to both the water company pension schemes and the Active Fund, the only remaining members of the WASF were deferred and pensioner members. No further members were admitted to it, so that it became a closed scheme ("the Closed Fund"). The Secretary of State and the NRA accepted the possibility that, in due course, the Closed Fund could have insufficient resources to meet its pension liabilities. With effect from 1 April 1996 the Agency assumed the functions of the NRA and the Closed Fund is now known as the Environment Agency Closed Fund.

4. The Closed Fund is maintained for the purposes of Section 7 of the Superannuation Act 1972, and accordingly the Secretary of State has the function conferred by Section 173 of the Act to make such payments into the Closed Fund as may be considered appropriate in respect of the actual and prospective liabilities falling from time to time to be met out of the Closed Fund for the benefit of its members ("the Closed Fund members").

5. As at 31 March 2004, the Closed Fund's FRS 17 valuation indicated that it had a net deficit for accounting purposes of £826,600,000 and its actuarial valuation indicated that it had a funding level of 21% which corresponded to a net past service reserve deficit of £880,000,000. The value of the liability under both valuations is sensitive to future mortality rates, inflation rates, and the discount rate used.

6. This Memorandum of Understanding sets out the mechanism whereby the Secretary of State will exercise the function under section 173 of the 1989 Water Act with a view to addressing the deficit in the Closed Fund.

7. This Memorandum has been agreed between the Secretary of State and the Environment Agency and the arrangements for funding the Closed Fund have been approved by Her Majesty's Treasury pursuant to that section, as indicated in the letter of 15 April 2004 from the Chief Secretary to the Secretary of State, subject to the conditions referred to in that letter.

Payments into the Fund

8. The Closed Fund's funding level continues to deteriorate, and on actuarial advice it is assumed that the value of the assets will reduce to a level of between £50 million and £60 million by about April 2006. With effect from that date the Secretary of State will ensure that cash payments are made into the Fund each year totalling an amount equivalent to its total annual outgoings (defined as total anticipated payments to pensioners, transfers out of the Closed Fund, investment management or other agents' fees, administration costs, and all other liabilities or expenses whatsoever, less interest earned on such cash payments made to the Agency for the Closed Fund during the year) to be calculated and properly certified by the Agency in accordance with actuarial advice received.

9. Such payments will be solely to finance the Closed Fund's annual outgoings and will be treated separately from the Agency's mainstream finances. They will be made every six months, with the sums to be paid equalling the amount of the Fund's outgoings for the previous six months. The first payment into the Fund will be made in April 2006. These payments will continue until the liabilities of the Closed Fund have been met in full. Latest actuarial projections indicate that this will occur in 2062.

10. These payments will be in the form of ring-fenced grant-in-aid from the Secretary of State and will be paid twice each year in April and October through the normal grant-in-aid procedures to the Agency.

11. The Agency will provide the Secretary of State with a copy of actuarial advice received and such information as is reasonably required to illustrate how the payments certified as payable have been calculated. Any assets held in the Closed Fund in excess of the payments will be retained to protect against minor variations in outgoings until a certificate of the actuary to the Closed Fund confirms that their retention is unnecessary. A copy of any such certificate shall be provided by the Agency to the Secretary of State.

12. Payments made by the Secretary of State into the Closed Fund will be reported in Defra's annual accounts together with the Closed Fund's liability in accordance with FRS 17 (or any replacement accounting standard).

Payments to pensioners

13. Nothing in this Memorandum will affect the Agency's role in the making of payments from the Closed Fund which are to be made in accordance with the Local Government Pension Scheme Regulations 1997 ("LGPS Regulations").

Control, monitoring and review

14. The Agency will manage the residual assets of the Closed Fund according to the high standards of financial integrity expected of those responsible for the management of public assets. The Agency will invest any surplus funds, as required by the Local Government Pension Scheme (Management and Investment of Funds) Regulations 1998 and in accordance with the Closed Fund's Statement of investment principles and Funding strategy statement. The Agency's procedures and the accounts of the Fund will continue to be the subject of an annual external audit, and nothing in this Memorandum affects the need for an actuarial valuation of the Closed Fund as required by the LGPS Regulations.

15. For monitoring purposes, the Agency will inform the Secretary of State of the Closed Fund's liabilities at the end of each financial year in accordance with FRS 17 (or any replacement accounting standard).

16. This information will be used to update provisions in the annual accounts of Defra. Significant variations from profiled grant-in-aid payments will be fully justified by the Agency.

17. This Memorandum shall only be amended by the agreement in writing of both the Secretary of State and the Agency.

Brian Bender,
Accounting Officer, Defra
On behalf of the Secretary of State for Environment, Food and Rural Affairs

Barbara Young,
Accounting Officer,
Environment Agency
On behalf of the Environment Agency

Date of signature: 17 May 2005

Appendix 4 – Rates & Adjustments Certificate

In accordance with regulation 62(4) of the Regulations we have made an assessment of the contributions that should be paid into the Fund by Defra for the period 1 April 2023 to 31 March 2026 in order to maintain the solvency of the Fund and comply with the funding agreement detailed in Appendix 3.

The method and assumptions used to calculate the contributions set out in the Rates and Adjustments certificate are detailed in the Funding Strategy Statement dated December 2022 and in Appendix 2 of our report on the actuarial valuation dated 29 March 2023. These assumptions underpin our estimate of the number of members who will become entitled to a payment of pensions under the provisions of the LGPS and the amount of liabilities arising in respect of such members.

The table below summarises the whole fund Primary and Secondary Contributions for the period 1 April 2023 to 31 March 2026. As the Fund has no active members accruing benefits there is no Primary Rate. The Secondary contributions are simply equal to the projected Grant-in-Aid funding requirement for each of the next three years **for funded benefits only**, including an allowance for expenses of 1.4% of funded benefit outgo. For further details on the Grant-in-Aid projections please see Appendix 5.

Whole fund contribution rate		
Primary rate	Not applicable	
Secondary rate (£)	2020/21	45,688,000
	2021/22	41,059,000
	2022/23	38,304,000

Signature:

Name: Richard Warden Steven Scott

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Date: 29 March 2023

Appendix 5 – Grant-in-Aid projections and self-sufficiency date

The following table shows projected Grant-in-Aid payments required to meet the cost of benefits and expenses over the 10 years following the 2022 valuation. Grant-in-Aid payments may cease to be required in future if the Fund reaches the self-sufficiency 'cut-off' point mentioned below.

		All figures in £000												
		Closed Fund Funded[1]			Closed Fund Unfunded[2]									
							Water Company Pension Scheme Members' Compensation							
Year ending 31 March	Pension increase	CF Members' LGPS Benefits	Admin Expenses net of Interest on Cash Deposits[3]	*Funded Subtotal*	CF Members' Compensation & Gratuities	Lee Conservancy CB Pension Scheme	United Utilities (aka North West)	Northumbrian	Western Power (aka Welsh or Hyder)	Southern[4]	Anglian[5] Associated (aka Water Associated Employers Pension Scheme (WAEPS) of NRA - Water Research Centre)[5]	Water Company Sub-Total	*Unfunded Subtotal*	*GRAND TOTAL*
2023	3.1%	43,858	614	44,472	5,323	93	97	32	24	50	0	202	5,619	50,091
2024	10.1%	45,057	631	45,688	5,200	98	98	34	25	50	0	207	5,504	51,192
2025	3.1%	40,492	567	41,059	4,725	96	93	32	24	47	0	196	5,018	46,077
2026	3.1%	37,775	529	38,304	4,255	95	86	31	23	44	0	184	4,534	42,837
2027	3.1%	34,733	486	35,219	3,797	93	80	29	22	40	0	170	4,060	39,279
2028	3.1%	32,276	452	32,728	3,356	90	73	27	21	36	0	156	3,602	36,330
2029	3.1%	29,924	419	30,343	2,938	88	65	25	19	32	0	141	3,167	33,510
2030	3.1%	27,760	389	28,148	2,547	85	58	22	18	28	0	125	2,757	30,905
2031	3.1%	25,713	360	26,073	2,185	81	50	20	16	24	0	110	2,376	28,450
2032	3.1%	23,854	334	24,188	1,855	78	43	17	14	20	0	94	2,028	26,215

1. These are funded benefits that members have accrued under LGPS regulations and are statutorily entitled to receive from the Fund.
2. These are additional unfunded benefits to those accrued under LGPS regulations which are recharged back to employers. **These benefits have not been valued or considered as part of the Closed Fund's formal 2022 valuation exercise**.
3. Administration expenses have been calculated as 1.4% of the Funded benefit outgo which represents the average administration expenses, less the interest on cash deposits, over the three years to 31 March 2022.
4. Southern Water projections are based on the projections from 2019 (allowing for actual pension increases since 31 March 2019) in the absence of more up-to-date data.
5. According to the data provided, there are no remaining pensions payable to members of the Anglian Water Companies and Associated (aka Water Associated Employers Pension Scheme (WAEPS) of NRA – Water Research Centre).

An allowance has been made for the 2023 pension increase assumption of 10.1% within the benefit projections.

We estimate that, based on the asset value at 31 March 2022 and assuming investment returns equal to the valuation discount rate of 1.7% p.a., the Fund's assets will be enough to pay for future funded and unfunded benefits after 31 March 2026. This 'cut-off' point will need regular monitoring by the Environment Agency to ensure that the GiA funding mechanism is not stopped too early by Defra. The 'cut-off' point will be reviewed and, if necessary, updated again as part of the next actuarial valuation in 2025.

Appendix 6 – Section 13 dashboard

The following information has been provided to assist the Government Actuary's Department in complying with Section 13 of the Public Service Pensions Act. Due to its unique funding arrangement in the LGPS I understand the Fund is exempt from many areas of the Section 13 valuation, but information has been provided where possible.

Financial Assumptions		2022 Valuation	2019 Valuation
2022 funding position - local funding basis	**Unit**		
Funding level (assets/liabilities)	%	67%	
Funding level (change since previous valuation)	£m	16%	
Asset value used at the valuation	£m	329	
Value of liabilities (including McCloud liability)	£m	491	
Surplus (deficit)	% pa	(162)	
Discount rate – past service	% pa	1.7%	
Discount rate – future service	% pa	N/A	
Assumed pension increases (CPI)	% pa	3.1%	
Method of derivation of discount rate, plus any changes since previous valuation		Yield on long-dated government bonds as at the valuation date. This is the same methodology used for the 2019 valuation.	
Assumed life expectancies at age 65	**Unit**		
Average life expectancy for current pensioners - men currently age 65	Years	20.5	
Average life expectancy for current pensioners - women currently age 65	Years	23.6	
Average life expectancy for future pensioners - men currently age 45	Years	21.8	
Average life expectancy for future pensioners - women currently age 45	Years	25.7	
Past service funding position - SAB basis (for comparison purposes only)	**Unit**		
Market value of assets	£m	329	
Value of liabilities	£m	427	
Funding level on SAB basis (assets/liabilities)	%	77%	
Funding level on SAB basis (change since last valuation)	%	12%	
Contribution rates payable	**Unit**		
Total expected contributions (Defra Grant-in-Aid payments)[1]			
Total expected contributions 2023/24	£m	45.688	51.027
Total expected contributions 2024/25	£m	41.059	47.142
Total expected contributions 2025/26	£m	38.304	44.005
Metric	**Unit**		
Latest deficit recovery period end date for any employer in deficit in fund	Year	Methodology not used	Methodology not used
Earliest surplus spreading period end date for any employer in surplus in fund	Year	Methodology not used	Methodology not used
The time horizon end date, where this methodology is used by the fund's actuarial advisor	Year	Methodology not used	Methodology not used
The funding plan's likelihood of success, where this methodology is used by the fund's actuarial advisor	%	Methodology not used	Methodology not used
Percentage of liabilities relating to employers with deficit recovery periods of longer than 20 years	%	N/A	N/A
Additional information	**Unit**		
Percentage of total liabilities that are in respect of Tier 3 employers	%	0%	
Included climate change analysis/comments in the 2022 valuation report	Yes/No	Yes	
Value of McCloud liability in the 2022 valuation report (on local funding basis)	£m	N/A	

[1] No primary rate or employee rate is provided as the Fund has no active members. The total contributions shown are the projected Grant-in-Aid payments from Defra in the three years to 31 March 2026.