

Report on the actuarial valuation as at 31 March 2019

London Borough of
Waltham Forest
Pension Fund

31 March 2020



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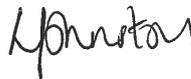
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Introduction

This report is addressed to the London Borough of Waltham Forest (“the Administering Authority”) as the Administering Authority of the London Borough of Waltham Forest Pension Fund (“the Fund”) and is provided to meet the requirements of Regulation 62 of the Local Government Pension Scheme Regulations 2013 (as amended) (“the Regulations”). It describes the factors considered by the Administering Authority when carrying out the actuarial valuation as at 31 March 2019 and the decisions reached as a result.

The purpose of the actuarial valuation is for the Administering Authority to determine:

- The expected cost of providing the benefits built up by members at the valuation date (the “liabilities”), and compare this against the funds held by the Fund (the “assets”).
- The contributions needed to cover the cost of the benefits that active members will build up in the future and other costs incurred in running the Fund (the ‘Primary Contribution Rate’).
- An appropriate plan for making up the shortfall if the Fund has less assets than liabilities. This plan will cover the amounts which will need to be paid (the ‘Secondary Contribution Rate’) and the timeframe over which they will be paid (‘the Recovery Period’).

Signature		
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Date	31 March 2020	

This report uses various technical terms. These are explained in more detail in the explanatory boxes which appear throughout this report, and in the Glossary at Appendix I.

This report has been prepared in accordance with Technical Actuarial Standards TAS 100: Principles for Technical Actuarial Work and TAS 300: Pensions which are issued by the Financial Reporting Council. The calculations referred to in the report use methods and assumptions appropriate for reviewing the financial position of the Fund and determining a contribution rate for the future. Mercer does not accept liability to any third party in respect of this report; nor do we accept liability to the Administering Authority if the information provided in this report is used for any purpose other than that stated. The report may be disclosed to members and others who have a statutory right to see it. It may also be disclosed to any participating employer and, if the Administering Authority and Mercer consent, it may be disclosed to other third parties.

1

Funding Strategy – Key Elements

Fundamental to the valuation results is the funding strategy adopted by the Fund. This funding strategy is set out in a specific document (the Funding Strategy Statement or FSS for short) which is one of the Administering Authority's key governance documents for the Fund. In essence, the FSS sets out an overview of the approach to be used for the actuarial valuation. Amongst other things it outlines the assumptions, both economic and demographic, to be used in calculating the value of the liabilities built up, the contributions required to correct any funding shortfall or surplus, and the contribution rate required to fund the benefits for future service. It also sets out the strategy for making good any funding shortfall, in particular how any shortfall is expected to be financed in terms of the balance between future contributions and future investment returns, and the period over which any surplus or shortfall is expected to be recovered.

The FSS is the Administering Authority's key governance document in relation to the actuarial valuation. It sets out the funding policies adopted, the actuarial assumptions used, and the timescales over which deficits will be paid off. Employers are consulted about the FSS as part of the actuarial valuation process.

The principal elements of the funding strategy adopted for this actuarial valuation are as follows:

- The McCloud judgment (see Appendix D for details) – the Solvency Funding Position and Primary Contribution Rate set out in Section 2 of this report do not include an allowance in relation to the potential cost of the McCloud judgment. However, an estimate of the effect of the judgment for the whole Fund is shown at the end of that section. Each employer has been notified of a reasonable estimate of the potential cost of the judgment and given the option to pay additional contributions over 2020/23 in respect of this which would not be reviewed until the next actuarial valuation unless this is a requirement of the final remedy process.
- Assumed rate of future long term average CPI inflation – 2.4% p.a., based on the yields available on gilts and index-linked gilts of appropriate duration less an adjustment of 1% p.a. to allow for the difference between market-implied future RPI and estimated future CPI inflation.
- Real investment returns over and above CPI for past service – 1.95% p.a., based on the anticipated real returns achievable on the Fund's expected long-term investment strategy with a suitable margin for prudence.
- Real investment returns over and above CPI for future service – 2.50% p.a., based on the anticipated real returns achievable on future invested contributions.

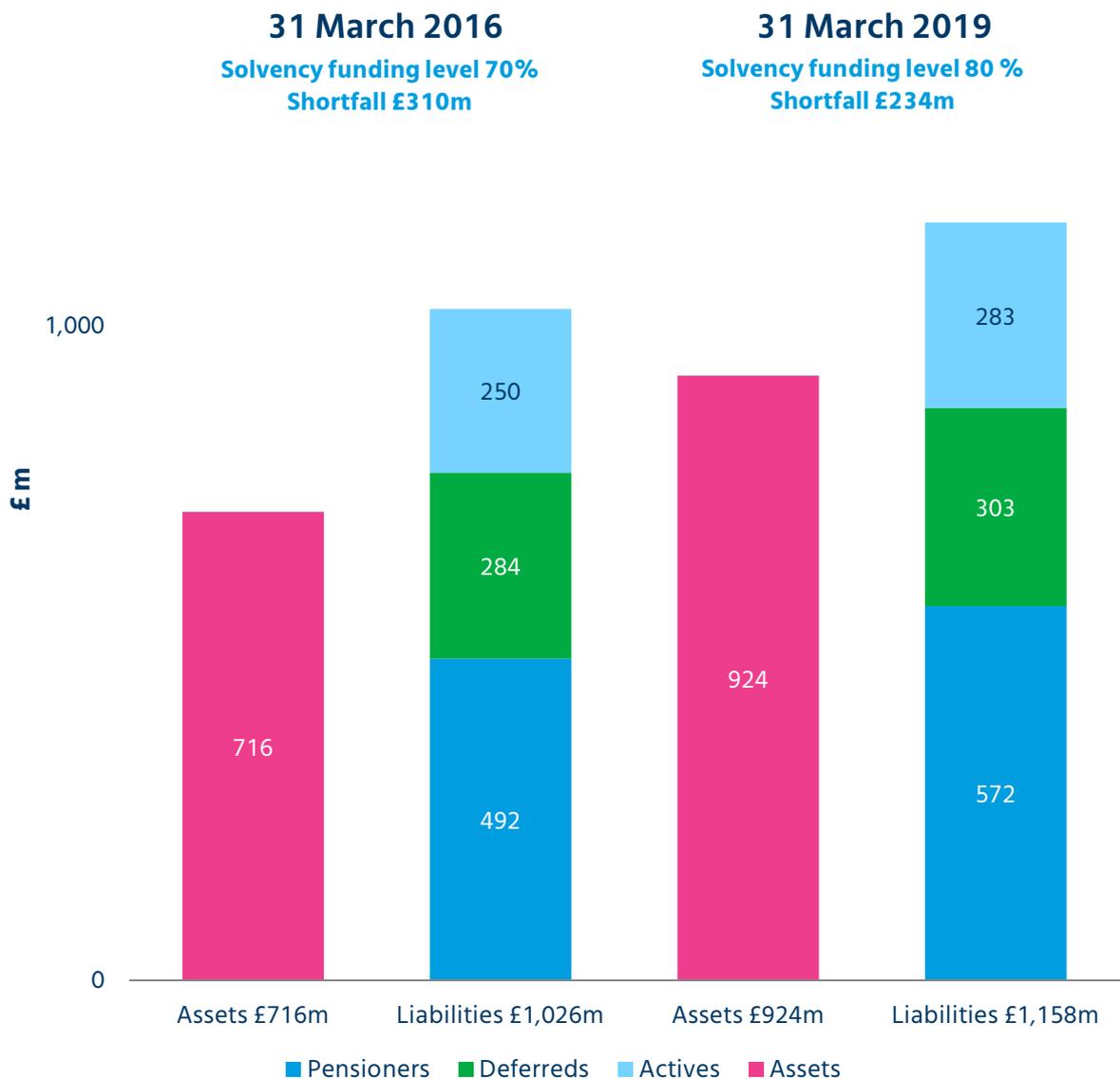
The "McCloud judgment" refers to a legal challenge in relation to historic benefit changes for all public sector schemes being age discriminatory. The Government announced in 2019 that this needs to be remedied for all schemes including the LGPS. This is likely to result in increased costs for some employers. This remedy is not yet agreed but guidance issued requires that the each Fund sets out its policy on addressing the implications.

- Future pay growth – 2% p.a. over the 4 years to April 2023, taking into account the Government’s policy on pay restraint in the public sector (unless agreed otherwise with the Administering Authority), and then 1.5% p.a. over and above CPI in the longer term. Baseline life expectancy based on a scheme-specific mortality study.
- Future mortality improvements based on the CMI 2018 model with a long-term improvement trend of 1.75% p.a.
- An average recovery period of 17 years for correcting any imbalance between the existing assets and past service liabilities. The FSS sets out the circumstances in which this might vary from one employer to another.

2 Key results of the funding assessment

Solvency funding position

The table below compares the assets and liabilities of the Fund at 31 March 2019. Figures are also shown for the last valuation as at 31 March 2016 for comparison.



The chart shows that **at 31 March 2019 there was a shortfall of £234m** against the Fund's solvency funding target. An alternative way of expressing the position is that **the Fund's assets were sufficient to cover 80% of its liabilities** – this percentage is known as the solvency funding level of the Fund.

At the previous valuation at 31 March 2016 the shortfall was £310m, equivalent to a solvency funding level of 70%. The key reasons for the changes between the two valuations are considered in Section 4.

The liability value at 31 March 2019 shown in the table above is known as the Fund's "solvency funding target". The solvency funding target is calculated using assumptions that the Administering Authority has determined are appropriate having consulted with the actuary, and are also set out in the FSS.

The LGPS Regulations require the contributions to be set so as to secure the Fund's solvency and long-term cost efficiency. In this context solvency means being able to meet the liabilities as and when they arise, with long-term cost efficiency meaning that contribution levels should not be set so as to give rise to additional costs at a later date. In practice, contribution levels have been set so as to target a solvency funding level of 100%, based on the funding parameters outlined in Section 2 above.

Further details of the way in which the solvency funding target has been calculated are set out in Appendix A.

Primary Contribution Rate

The valuation looks at the normal employer contribution rate required to cover the cost of the benefits (including death benefits and expenses) that will be built up over the year after the valuation date (the "Primary Contribution Rate"). A summary of the assumptions used is provided in Appendix A.

The "Primary rate" of the employers' contribution is the contribution rate required to meet the cost of the future accrual of benefits including ancillary, death in service and ill health benefits together with administration costs.

The table below gives a breakdown of the Primary Contribution Rate at 31 March 2019 and also shows the corresponding rate at 31 March 2016 for comparison. In calculating the average Primary Contribution Rate we have not made any allowance for future members to opt for the 50:50 scheme.

Active members pay contributions to the Fund as a condition of membership in line with the rates required under the governing Regulations (see Appendix D).

PRIMARY CONTRIBUTION RATE	% of Pensionable Pay	
	31 March 2019	31 March 2016
Normal Contribution rate for retirement and death benefits	21.4	20.6
Allowance for administrative expenses	0.7	0.7
Total normal contribution rate	22.1	21.3
Average member contribution rate	6.5	6.3
Primary contribution rate*	15.6	15.0

* In line with updated CIPFA guidance, the 2019 Primary Contribution Rate is the weighted average of the individual employer Primary Contribution Rates as derived based on their individual circumstances (e.g. whether or not they are closed to new entrants).

Correcting the imbalance – Secondary Contribution Rate

The funding objective as set out in the FSS is to achieve and maintain a solvency funding level of 100% of liabilities (the solvency funding target). In line with the FSS, where a shortfall exists at the effective date of the valuation a deficit recovery plan will be put in place which requires additional contributions to correct the shortfall. Equally, where there is a surplus it is usually appropriate to offset this against contributions for future service, in which case contribution reductions will be put in place to allow for this.

The FSS sets out the process for determining the recovery plan in respect of each employer. At this actuarial valuation the average recovery period adopted is 17 years, and the total initial recovery payment (the “Secondary rate” for 2020/21) is an addition of approximately £7.6m per annum plus 4.2% of pensionable pay (which allows for the contribution plans which have been set for individual employers under the provisions of the FSS), including the estimated costs in relation to the McCloud judgment where appropriate.

The “Secondary rate” of an individual employer’s contribution is an adjustment to the Primary Contribution Rate to reflect any past service deficit or surplus, to arrive at the rate the employers are required to pay.

The McCloud Judgment

As described in Section 1 of this report, the **Solvency Funding Position and Primary Contribution Rate** figures do **not** include an allowance for the estimated cost of the McCloud judgment. However, at the overall Fund level we estimate that the cost of the judgment could be an increase in past service liabilities of broadly £7 million and an increase in the Primary Contribution rate of 0.3% of Pensionable Pay per annum.

The “McCloud judgment” refers to a legal challenge in relation to historic benefit changes for all public sector schemes being age discriminatory. The Government announced in 2019 that this needs to be remedied for all schemes including the LGPS. This is likely to result in increased costs for some employers. This remedy is not yet agreed but guidance issued requires that each Fund sets out its policy on addressing the implications.

To the extent that employers have opted to pay additional contributions over 2020/23 in relation to the McCloud judgment, these emerge in the **Secondary Contribution Rate figures** quoted above.

3

Experience since last valuation

Summary of key inter-valuation experience

The last actuarial valuation was carried out with an effective date of 31 March 2016. With effect from 1 April 2014 the scheme's benefit structure changed from a Final Salary Scheme to a Career Average Revalued Earnings (CARE) Scheme, and the 2016 actuarial valuation took these changes into account.

The average Pensionable Salary increase for the Fund members who were in service for the whole of the inter-valuation period was 2.7% per annum.

Pensions in payment (in excess of Guaranteed Minimum Pensions (GMPs) were increased as guaranteed under the Fund as follows:

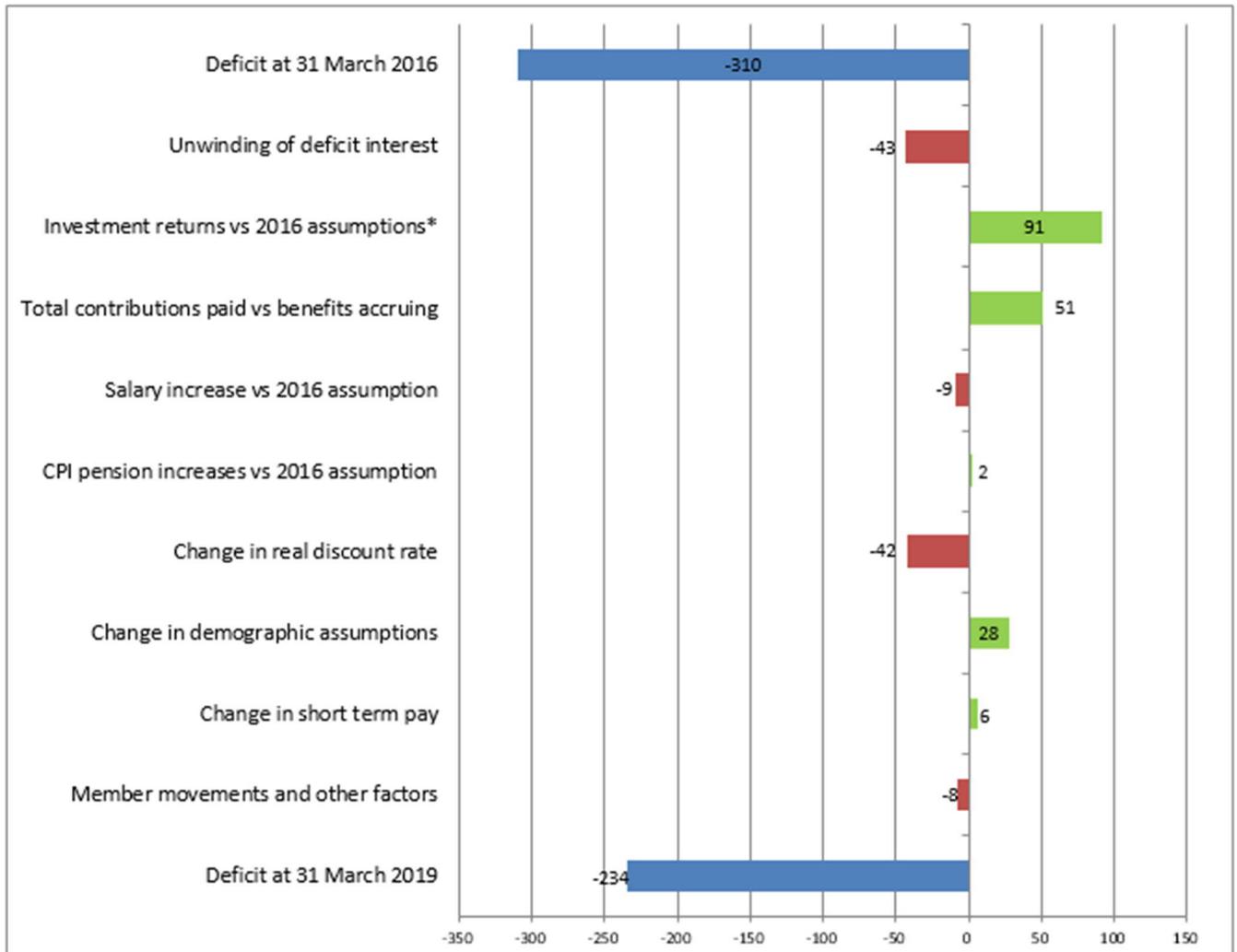
- April 2017 1.0%
- April 2018 3.0%
- April 2019 2.4%

Over the inter-valuation period, benefit inflation has averaged 2.1% p.a. Over the three years to 31 March 2019 the gross investment return on the Fund's assets has averaged 8.1% per annum, meaning that the average real return over CPI inflation has been about 5.9% p.a.

The outcomes from the valuation are determined both by the assumptions adopted for the future, and the Fund's historic experience relative to assumptions made in the past. In this section we consider the effect of the Fund's experience over the last three years.

Reasons for the change in funding position since the last actuarial valuation

The shortfall at the last valuation date was £310m. The chart below sets out the main reasons for the change in the shortfall between 31 March 2016 and 31 March 2019 (figures shown in £m).

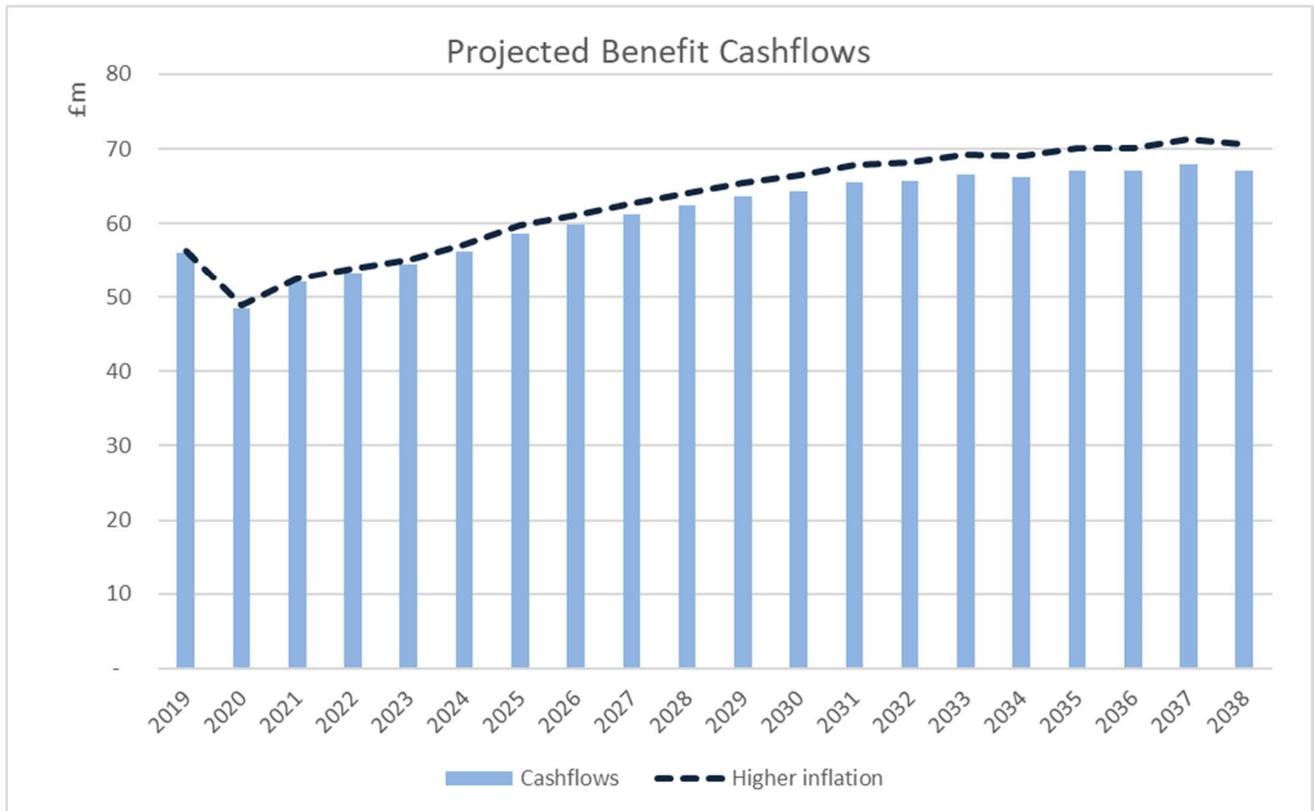


4 Cash flows, risks and alternative funding positions

Benefit cash flows

The projected benefit cash flows which result from applying the assumptions as set out in Section 2 are shown in the chart below. The additional trendline sets out how those total projected benefit cash flows would change if we were to assume inflation of 0.25% p.a. higher than the assumption of 2.4% p.a. used for the actuarial valuation. Over the 20 years following the valuation date, the extra benefit payments which would result from the extra 0.25% p.a. inflation assumption are projected to be £36m.

The actuarial valuation process is principally concerned with projecting all the expected benefit cash flows into the future, and then converting them into present day values by discounting them to allow for assumed future investment returns. The chart shows those projected cash flows, and also illustrates how sensitive they are to the future inflation assumption.



Projected funding position at next actuarial valuation

As part of this valuation, the Administering Authority has set an average recovery plan of approximately 17 years. The next actuarial valuation will take place with an effective date of 31 March 2022. If experience up to that date were to be in line with the assumptions made for this current actuarial valuation and contributions are paid at the agreed rates or amounts, there would be a shortfall at 31 March 2022 of £223m, equivalent to a funding level of 83% (prior to any potential impact of the McCloud judgment).

Material risks faced by the Fund

The Fund is subject to some potentially material risks that are, to an extent, outside the Administering Authority's control, but could affect the funding level and ultimately the employer contribution requirements. Any material worsening of the funding level will mean more contributions are needed (either at an increased rate or at the same rate over a longer period) to be able to provide the benefits built up in the Fund – unless experience acts in other ways to improve the funding level. Examples of such risks, and how the Administering Authority manages them, are:

Funding a defined benefit pension scheme such as the LGPS which is open to new members is by its nature uncertain, and involves some level of risk. The principal funding risks are investment (e.g. whether the Fund earns the desired level of long-term real returns) and demographic (e.g. whether longevity of members is longer or shorter than anticipated). In practice, the key is whether such risks can be managed and mitigated.

- If an Employer becomes unable to pay contributions or to make good deficits in the future, the Fund's assets will be lower than expected and the funding level will be worse than expected. The Administering Authority regularly monitors the financial strength of the Employers so that actions can be taken to mitigate (but not fully remove) the risk.
- If future investment returns on assets are lower than assumed in the valuation, the Fund's assets will be lower, and the funding level worse, than expected. The Administering Authority has a process in place to monitor investment performance quarterly, and it reviews the Fund's investment strategy alongside each actuarial valuation. The Fund has also put in place a strategy of "equity protection", which offers some protection to the Fund's asset values in the event of an equity market fall.
- If improvements in life expectancy are greater than assumed, the cost of benefits will increase because members are living longer than expected. This will mean the funding level will be worse than expected. The Administering Authority regularly reviews the Fund's experience and ensures that the assumptions it makes about members' life expectancy take the most recent information available into account.
- If members make decisions about their options which increase the Fund's liabilities, the funding level will be worse than expected. An example would be if members commute less pension for cash than is being assumed. The Administering Authority reviews the Fund's experience at each valuation to ensure that their treatment of member options remains appropriate.

Impact of COVID-19

The valuation results and employer contributions shown in this report are assessed as at 31 March 2019. In March 2020 we have seen significant falls in equity markets around the world in relation to the COVID-19 pandemic. This potentially has far-reaching consequences in terms of funding and risk

which will need to be kept under review. Our view is that it is important to take stock of the situation as opposed to make immediate decisions in what is an unprecedented set of events. The Fund has a risk management framework in place and in particular, equity protection is in place, which will help mitigate some of the impact of these equity market falls if they persist. The level of mitigation will depend on the structure of the arrangements. Our view is that employer contributions should not be revisited but the position should be kept under review by the Administering Authority who will monitor the development of the situation and keep all stakeholders informed of any potential implications so that the outcome can be managed effectively. For some employers this could mean a review of contributions prior to the next valuation depending on their financial covenant.

Sensitivity of funding position to changes in key assumptions

The value placed on the Fund's liabilities is critically dependent on the assumptions used to carry out the calculations. If future experience differs from the assumptions the Administering Authority has used after consulting with the Employers, then the projected future funding level will be different from the level described above.

To illustrate how sensitive the funding level is to experience being different from assumed, the table below shows how the valuation results at 31 March 2019 would have differed given small changes in the key assumptions.

Assumption change	Increase in deficit at 31 March 2019 (£m)	Resultant deficit at 31 March 2019 (£m)
Original solvency funding position	-	234
Real investment return 0.25% lower than assumed	44	278
Pensionable Salary growth 0.25% higher than assumed	2	236
Long term improvement rate in life expectancy reduced by 0.25% per annum	(7)	227
Assets fall by 25%	231	465

Minimum risk funding position

In assessing the value of the Fund's liabilities (the solvency funding target), allowance has been made for investment returns as described in Appendix A, taking into account the investment strategy adopted by the Fund, as set out in the Fund's Investment Strategy Statement (ISS).

It is not possible to construct a portfolio of investments which produces a stream of income exactly matching the expected liability outgo. However, it is possible to construct a portfolio which attempts closely to match the liabilities and provide a high level of certainty in future investment returns above CPI inflation. This represents a "minimum risk" investment position. Such a portfolio would consist mainly of a mixture of long-term index-linked and fixed interest gilts. Investment of the Fund's assets in line with the minimum risk portfolio would minimise fluctuations in the Fund's minimum risk funding level between successive actuarial valuations but would result in much higher employer contributions (all other things equal).

If, at the valuation date, the Fund had been invested in this portfolio, then in carrying out the valuation it would not be appropriate to make any allowance for out-performance of the Fund investments. In this event the value of the Fund liabilities would have increased substantially, to £1,932m, and the funding level would have reduced correspondingly to 48%. If the actuarial assumptions are borne out in practice and contributions are paid in line with the Rates and Adjustment Certificate for all employers, the projected funding level on this basis at the next actuarial valuation would be slightly higher at 51% (prior to any potential impact of the McCloud judgment).

The value of the liabilities on the ongoing solvency funding target assumptions was £1,158m, which is £774m less than the value on the minimum risk basis. The funding plan is therefore making a prudent allowance for future investment returns of £774m over and above those available from the notional minimum risk investment portfolio to support the funding of member benefits along with contributions payable. This is an indication of the expected return built into the funding strategy for the Fund as a whole.

APPENDICES



Appendix A

Assumptions

How the benefits are valued

In order to calculate the liabilities, there is a need to make assumptions about various factors that affect the cost of the benefits provided by the Fund – for example, how long members will live, or the future level of inflation. The table below explains the key assumptions being made in the valuation.

Assumption	Why it is important and how it impacts on the liabilities
Discount rate	<p>The majority of benefits in a pension fund are paid many years in the future. In the period before the benefits are paid, the Administering Authority invests the funds held by the Fund with the aim of achieving a return on those funds. When calculating how much money is needed now to make these benefit payments, it is appropriate to make allowance for the investment return that is expected to be earned on these funds. This is known as “discounting”.</p> <p>The higher the investment return achieved, the less money needs to be set aside now to pay for benefits. The calculation reflects this by placing a lower value on the liabilities if the “discount rate” is higher.</p>
Inflation	<p>Pensions in payment increase in line with Consumer Price Inflation (CPI). Salary growth is also normally linked to price inflation in the long term. A higher inflation assumption will, all other things being equal, lead to a higher value being placed on the liabilities.</p>
Pensionable Salary growth	<p>Benefits earned prior to 1 April 2014 for active members are based on their salaries immediately before retirement, so it is necessary to make an assumption about future Pensionable Salary growth. The higher this assumption, the higher the value placed on the liabilities for active members.</p>
Life expectancy	<p>Pensions are paid while the member (and potentially their spouse or partner) is alive. The longer people live, the greater is the cost of providing a pension. Allowing for longer life expectancy therefore increases the liabilities.</p>

The liabilities of the Fund are calculated by projecting forward all of the future benefit cash flows and discounting them back to the effective date of the valuation, using these assumptions. For example, the liability for a single pensioner is calculated by estimating the amount of each pension payment they will receive in the future, multiplying by the probability that the member will still be alive by the date of each payment, and then discounting each payment back to the effective date of the valuation using the appropriate discount rate, and then summing up all of these discounted amounts. The liabilities for the whole Fund are calculated by summing the liabilities for each of the individual members.

Financial assumptions used to calculate the solvency funding target

The table below summarises the key financial assumptions used in the calculation of the solvency funding target at whole Fund level and those used for the 31 March 2016 actuarial valuation. Section 1 of this report sets out how these assumptions might vary from one employer to another.

Financial assumptions	31 March 2019	31 March 2016
Discount rate	4.35% p.a.	4.4 % p.a.
Price inflation (CPI)	2.4% p.a.	2.2% p.a.
Salary increases (short term)	2% p.a. for 4 years*	1% p.a. for 4 years
Salary increases (long term)	3.90% p.a.	3.70% p.a.
Pension increases in payment:	2.4% p.a.	2.2% p.a.

* unless agreed otherwise with the Administering Authority

The key financial assumption is the expected long term investment return above CPI inflation as this is usually the principal factor which determines the long term cost to employers via their contributions. In determining this we consider first the long term real returns (i.e. returns above CPI) which the Fund's investment strategy can be expected to deliver based on market outlook at the valuation date taking into account the projected cashflow position of the Fund. This analysis then helps us recommend and agree with the Administering Authority on a suitably prudent assumption for the valuation discount rate based on the investment strategy, any risk management framework in place, and reasonably allowing for the likely changes in investment strategy as the Fund matures. In order to consider the level of prudence we look at the likelihood of the expected real return from the Fund's assets exceeding the assumption made. We measure this by considering the percentile expected return from the analysis. A return assumption higher than the 50th percentile return from the analysis can be deemed to be prudent and retain margins to provide some protection against increases in contributions at future valuations.

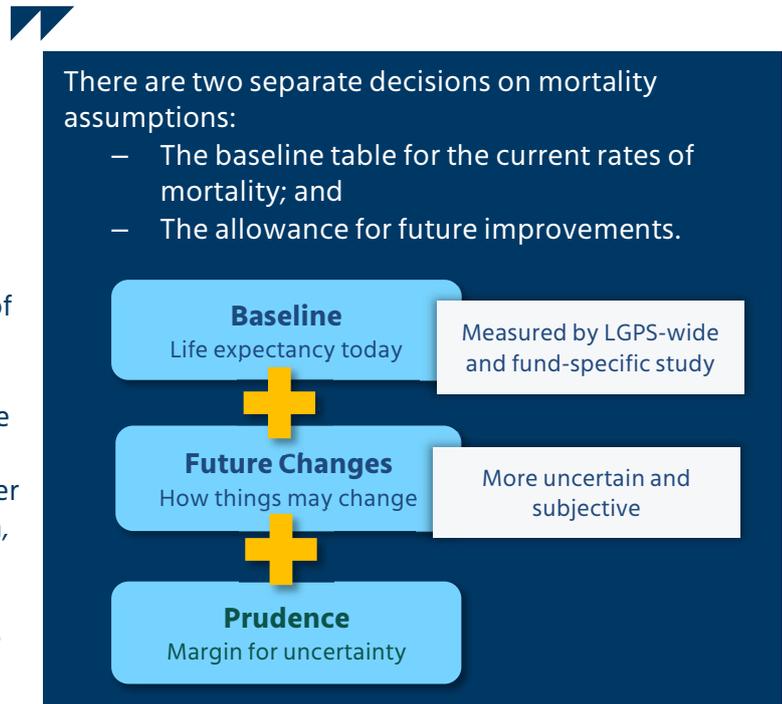
Our analysis of expected future real investment returns uses a Monte Carlo simulation (stochastic) model, based on 4,000 simulations. Within the overall analysis we specify and calibrate a range of economic and asset class models. Our analysis uses an asset correlation matrix to help generate each stochastic simulation. The model includes estimates for long-term expected returns and inflation along with volatilities each asset class and inflation.

At the previous valuation, the real discount rate used was 2.2% p.a., which at the time was approximately the 65th percentile return. At this actuarial valuation the real discount rate which we have used is 1.95% p.a., which takes into account the general market outlook i.e. a reduction in expected returns since the previous valuation, and also the Fund's overall risk management objectives, as agreed with the Administering Authority. It is expected to be slightly lower than the percentile return from the previous valuation.

Demographic assumptions used

Post-retirement Mortality

Mortality (or life expectancy) tables are typically made up of three elements: a baseline table (equivalent to the expected current mortality), an allowance for future improvements, and a margin for prudence. Very few pension funds are large enough for them to be able to determine a bespoke set of baseline assumptions based purely on the fund’s own membership experience. Typically, the life expectancy assumptions are set by benchmarking a fund’s membership profile and mortality experience against larger external datasets. For this actuarial valuation, we have benchmarked the Fund’s membership profile and experience against the “S tables” published by the CMI. We have applied weightings and age ratings as appropriate to adjust the standard tables so as to arrive at assumptions which are appropriate for the Fund. We have generally used the S3PA tables (“middle” tables for females), other than for female dependants where the S3DA tables have been used and ill-health retirements where the S3IA tables have been used. At the 2016 actuarial valuation the S2PA tables were used (S2DA tables for female dependants).



The weightings and age ratings applied to the above are set out in the table below.

Current Status	Retirement Type	2019 weighting/age rating	2016 weighting/age rating
Annuitant	Normal Health	99% males, 90% females	102% males, 91% females
	Dependant	134% males, 91% females	132% males, 107% females
	Ill Health	116% males, 138% females	102% males, 91% females with an age rating of +3 years in each case
	Future Dependant	125% males, 107% females	114% males, 105% females
Active	Normal Health	104% males, 92% females	102% % males, 91% females
	Ill Health	121% males, 141% females	102% males, 91% females with an age rating of +4 years in each case
Deferred	All	125% males, 104% females	102% males, 91% females
Active/deferred	Future Dependant	132% males, 114% females	114% males, 105% females

A weighting applied to an actuarial table has the effect of increasing or reducing the chance of survival at each age, which increases or reduces the corresponding life expectancy. Similarly, an age rating applied to an actuarial table has the effect of assuming that beneficiaries have a life expectancy equal to those older (or younger) than their actual age.

Future improvements are assumed to follow the CMI 2018 model with a 1.75% p.a. long-term improvements trend. At the 2016 actuarial valuation the CMI 2015 model with 1.5% p.a. long-term trend was used.

The mortality assumptions used for the 31 March 2019 valuation result in the following life expectancies.

	Years
Life expectancy for a male aged 65 now	22.5
Life expectancy at 65 for a male aged 45 now	24.1
Life expectancy for a female aged 65 now	25.0
Life expectancy at 65 for a female aged 45 now	26.9

Pre-retirement Mortality

The following mortality tables (together with any appropriate weightings and age ratings) have been adopted for mortality rates in the period up to retirement.

	31 March 2019	31 March 2016
Base Table	DxL08 tables with adjustments of 80% (male) 50% (female) to reflect the Fund's membership profile	DxL08 tables with adjustments of 80% (male) 50% (female) to reflect the Fund's membership profile
Allowance for Future Improvements	CMI_2015 [1.5%]	CMI_2015 [1.5%]

Commutation

Members have the option to commute part of their pension at retirement in return for a lump sum at a rate of £12 cash for each £1 per annum of pension given up. Following an analysis of the take-up rates, it has been assumed that, on average, retiring members will take 80% of the maximum tax-free cash available at retirement. This is broadly equivalent to the assumption at the 2016 actuarial valuation.

Retirement lump sums are less costly for the Fund to provide than the alternative pension, as members receive only £12 of each £1 p.a. of pension given up. If members take the cash sum option at a higher rate than has been assumed then this will normally lead to an improvement in the funding level.

Early retirement

For those members who are entitled to receive their accrued benefits (or part of those benefits) prior to the Fund's normal pension age, a proportion of the active membership is assumed to retire in normal health prior to age 65, as set out below:

If members take early retirement to a greater extent than has been assumed then this will typically lead to a worsening of the funding level. This is because many members are able to take substantial parts of their benefits from age 60 without them being reduced for early payment.

Age	% retiring per annum	
	Males	Females
60	10	20
61	8	15
62	8	15
63	8	15
64	8	15
65	100	100

The appropriate early retirement factors applied to the relevant tranche of benefits are in line with the Government Actuary's Department (GAD) guidance.

Ill health retirement

For certain employers, a small proportion of the active membership has been assumed to retire owing to ill health. As an example of the rates assumed, the following is an extract from the decrement table used:

The level of ill-health retirement benefit provided for a member falls into one of three "tiers", depending on whether and when the member might be expected to resume gainful employment. Tier 1, for example, is on the basis that the member is unlikely to be able to do so before Normal Pension Age. Full details are set out in the LGPS Regulations and associated guidance.

	% retiring per annum	
Age	Males	Females
35	0.03	0.03
45	0.09	0.09
55	0.41	0.36

The proportion of ill health early retirements falling into each tier category, split by males and females, has been assumed to be as set out below:

	Tier 1	Tier 2	Tier 3
Males	75%	12.5%	12.5%
Females	75%	12.5%	12.5%

Withdrawal

This assumption relates to those members who leave the scheme with an entitlement to a deferred pension or transfer value. It has been assumed that active members will leave the Scheme at the following sample rates:

	% leaving per annum	% leaving per annum
Age	Males	Females
25	20.25	22.38
35	5.09	6.27
45	2.54	3.89

In relation to pre 2014 benefits, deferred benefits tend to be less costly for the Fund to provide than if the member had remained in the Fund until retirement. If the number of members leaving the Fund is greater than expected then this will typically lead to a slight improvement in the funding level.

Partners' and Dependants' Proportions

It has been assumed that the proportions of members below will on death give rise to a dependant's pension (spouse's and partner's), and that spouses/partners of female (male) members are three years older (younger), on average than the member.

	% spouse/partner	% spouse/partner
Age	Males	Females
25	43	46
35	69	60
45	72	60
55	74	60
65	76	55

If more members than assumed have partners then this will lead to an increase in the number of dependants pensions coming into payment over and above that expected. This would lead to a worsening of the funding level.

Assumptions used to calculate the Primary Contribution Rate

The cost of future accrual (the Primary Contribution Rate) has been calculated using the same actuarial assumptions as used to calculate the solvency funding target and recovery plan as set out above except that the financial assumptions adopted are as described below.

The financial assumptions for assessing the future service contribution rate should take account of the fact that contributions will be invested in market conditions applying at future dates, which are unknown at the effective date of the valuation, and which are not directly linked to market conditions at the valuation date.

The financial assumptions in relation to future service (i.e. the Primary Contribution Rate) are not specifically linked to investment conditions as at the valuation date itself, and are based on an overall assumed real return (i.e. return in excess of price inflation) of 2.50% per annum. This represents a

reduction of 0.25% per annum compared to the 2016 valuation, which increases the estimated cost of providing LGPS benefits. With a long term average assumption for price inflation of 2.4% per annum, this gives rise to an overall discount rate of 4.90% p.a. (the corresponding discount rate at the 2016 actuarial valuation was 4.95% p.a.).

At the previous valuation, the real discount rate used was 2.75% p.a., which at the time was approximately the 60th percentile return. At this actuarial valuation the real discount rate which we have used is 2.5% p.a., which takes into account the general market outlook i.e. a reduction in expected returns since the previous valuation, and also the Fund's overall risk management objectives, as agreed with the Administering Authority. It is expected to be slightly lower than the percentile return from the previous valuation.

Assumptions used to calculate the contributions payable under the recovery plan

Allowance for asset backed guarantees

For one employer, London Borough of Waltham Forest, when determining contributions payable to recover its shortfall, allowance has been made for the value of residual property investments currently held in a Special Purpose Vehicle that will be gifted to the Fund in 38 years' time. The value of the gift makes the following assumptions:

- Useful lifetime of properties for residential rental purposes – 38 years from 2020 = 38 years
- Discount rate to value rental income – gilts plus 3.4% per annum, to reflect broadly the yield required from an investor in this type of arrangement. Subject to being no less than the valuation discount rate.
- Recovery period for spreading value of rental income against deficit reduction contributions – 19 years.
- Indexation of rental income – 2% per annum.
- Rental income lost through voids and bad debts from time 38 years onwards – 5.75% of total rental income per annum.
- Property management and refurbishment costs – 30% of total rental income per annum.

Appendix B

Summary membership data

The membership data is summarised in the table, with figures at the previous valuation shown for comparison.

Data in relation to members of the Fund were supplied by the Fund's administrator on behalf of the Administering Authority. The accuracy of the data provided has been relied on. While reasonableness checks on the data have been carried out, they do not guarantee the completeness or the accuracy of the data. Consequently, Mercer does not accept any liability in respect of its advice where it has relied on data that is incomplete or inaccurate.

	31 March 2019	31 March 2016
Active members		
Number	6,511	6,022
Total Pensionable Salaries (£000s p.a.)	132,946	113,104
Average Pensionable Salary (£ p.a.)	20,419	18,782
Average age (pension weighted)	52.0	51.3
Deferred pensioners		
Number	10,021	8,036
Total deferred pensions revalued to valuation date (£000s p.a.)	16,775	14,936
Average deferred pension (£ p.a.)	1,674	1,859
Average age (pension weighted)	52.2	52.1
Pensioners (including dependants)		
Number	7,436	6,919
Total pensions payable (£000s p.a.)	38,348	32,747
Average pension (£ p.a.)	5,157	4,733
Average age (pension weighted)	72.2	71.4

Appendix C

Assets

The market value of the Fund's assets was £924,400,000 on the valuation date.

The Administering Authority's investment strategy is to proportion the Fund's assets by asset class as shown in the table below. The actual distribution of assets will vary over time due to changes in financial markets. The table also shows the distribution of assets at the valuation date.

	Investment strategy	Actual market value of assets at 31 March 2019	
		£m	%
	%		
UK equities	20	279.9	30.2
Overseas equities	40	325.7	35.2
Fixed Income	15	102.5	11.1
Infrastructure	17	107.5	11.8
Property	8	83.2	9.0
Social Impact / CIV	0	3.8	0.4
Cash (including net current assets/liabilities)	0	21.8	2.3
Total	100	£924.4m	100%

The Administering Authority also holds additional voluntary contributions (AVCs) which are separately invested. These assets have been excluded from the market value shown as they exactly match the value of the benefits they cover.

The details of the assets at the valuation date and the financial transactions during the inter-valuation period have been obtained from the audited accounts for the Fund.

Appendix D

Scheme benefits

The benefits valued within our calculations are those in force at the effective date of the valuation. Full details of these can be found in the Local Government Pension Scheme Regulations 2013 (as amended). The principal details are as follows:

The Local Government Pension Scheme Regulations 2013
(<http://www.legislation.gov.uk/uksi/2013/2356/contents/made>)

The Local Government Pension Scheme (Transitional Provisions, Savings and Amendment) Regulations 2014 (<http://www.legislation.gov.uk/uksi/2014/525/contents/made>)

Directions made by the Treasury under Section 59A of the Social Security Pensions Act 1975 (https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/761639/Treasury_Direction_under_section_59A_Social_Security_Pensions_Act_1975.pdf). We have made no allowance for the possibility that the directions may be extended to require the LGPS to become responsible for increases to GMPs for members reaching State Pension Age after 5 April 2021.

The Fund is also responsible for paying and, where appropriate, recharging to employers the benefits arising from the award of compensatory added years (CAY) of service on premature retirement. Unless these CAY benefits have been converted into “funded” benefits, they are normally recharged to the relevant employer (together with associated pension increases), and so are excluded from the valuation.

The benefits that will emerge from money purchase AVCs paid by members, and SCAVCs paid by employers, and the corresponding invested assets in respect of these AVCs and SCAVCs, have been excluded from the valuation.

UK and European law requires pension schemes to provide equal benefits to men and women in respect of service after 17 May 1990 (the date of the “Barber” judgment) and this includes providing equal benefits accrued from that date to reflect the differences in GMPs. Following the Lloyds Bank case in 2018, HM Treasury has issued a consultation on equalising and indexation of GMPs in all the public service pension schemes, including the LGPS, and discussions are ongoing about the extent of any inequalities and how these might be addressed.

The valuation makes no allowance for removal of these inequalities. It is consequently possible that additional funding will be required for equalisation once the law has been clarified. It is recommended that the Administering Authority seek further legal advice if it is concerned about this issue.

The McCloud Judgment

The McCloud judgment in the LGPS refers to the legal decisions (initially by the Employment Appeal Tribunal and then ratified by the Court of Appeal) in the Sargeant/McCloud cases for the Fire and Judiciary pension arrangements. The Court ruled that transitional protections afforded to older

members when these schemes were amended constituted unlawful age discrimination. Remedial action, in the form of benefit changes for these schemes, will therefore be required.

Although the above cases did not relate directly to the LGPS, the LGPS also put in place protections for older members as part of the reforms which came into effect from 2014. For the LGPS these took the form of an underpin, where older members would get the better of the benefits payable under the new and old schemes. The UK Government confirmed on 15 July 2019 that, alongside the process to remedy the Fire and Judiciary schemes, it will also bring forward proposals to address the issue for the other public service pension schemes, including the LGPS, although it is unclear at this stage what the exact extent will be of any required changes.

Following discussions with the Administering Authority, in order to consider a reasonable provision for the potential costs in employer contributions, we have assumed that the eventual remedy will be that the underpin which applies to older members will also apply to younger members who joined the Fund before 1 April 2012 (the cut-off date for the protections to apply), in the same way as for older members. More specifically we have agreed with the Administering Authority to:

- Estimate the underpin benefits for active members for service after 31 March 2014 (when the new scheme took effect).
- Compare this to the actual post 31 March 2014 benefits.
- Calculate the cost for each member as the value of the underpin benefits less the value of the actual benefits (ignoring members where the value of the actual benefits is higher).
- Sum these costs across all active members to give the impact of the underpin for each employer.

We have calculated this cost across all benefits (including deferred benefits for active members who are assumed to leave the scheme before retirement in the future).

At this stage, as the data was not readily available for the valuation we have not calculated any costs for members who had already left service or retired as at 31 March 2019. Given the nature of the underpin we expect any costs for this group of members to be immaterial at whole Fund. We also believe the approach applied to active members and the assumptions underlying the actuarial valuation contain prudential margins which are sufficient to cover the vast majority of such costs for the affected employers.

The LGPS Scheme Advisory Board has issued guidance on the approach to including the costs of the McCloud judgment within the 2019 LGPS actuarial valuations and this can be found at http://www.lgpsboard.org/images/Other/Advice_from_the_SAB_on_McCloud_May_2019.pdf.

Appendix E

Analysis of membership experience

The analysis below compares the actual experience over the 3 year period with the assumptions used for the 2019 valuation.

	Actual	Expected	%
Ill Health Retirements	33	51	65
Withdrawals	1,962	897	219
Pensioner Deaths (lives)	579	585	99

Note that actual withdrawals can include members moving to another LGPS Fund, bulk transfers and also transfers under the special transfer club terms.

Appendix F

Valuation Dashboard as agreed by Scheme Advisory Board

Past service funding position - local funding basis	
Funding level (assets/liabilities)	80%
Funding level (change since last valuation)	10%
Asset value used at the valuation (£m)	924
Value of liabilities (£m)	1,158
Surplus (deficit) (£m)	(234)
Discount rate(s)	4.35% p.a. past service 4.9 % p.a. future service
Assumed pension increases (CPI)	2.4% p.a.
Method of derivation of discount rate, plus any changes since previous valuation	See Appendix A
Assumed life expectancies at age 65	
Average life expectancy for current pensioners - men currently age 65	22.5
Average life expectancy for current pensioners - women currently age 65	25.0
Average life expectancy for future pensioners - men currently age 45	24.1
Average life expectancy for future pensioners - women currently age 45	26.9

The basis for the purposes of the LGPS Scheme Advisory Board funding position (the “SAB basis”) is a set of assumptions determined by the SAB. Its purposes are to set out the funding position on a standardised approach so that comparisons can be made with other LGPS Funds, and to assist with the “Section 13 review” as carried out by the Government Actuary’s Department. We are happy to supply further details of the SAB basis as requested.

Past service funding position - SAB basis	
Market value of assets	924
Value of liabilities	1,062
Funding level on SAB basis (assets/liabilities)	87%
Funding level on SAB basis (change since last valuation)	10%
Contribution rates payable	
Primary contribution rate	15.6%
Secondary contributions:	
Secondary contributions 2020/21 (£m)	13.5
Secondary contributions 2021/22 (£m)	14.5
Secondary contributions 2022/23 (£m)	15.6
Giving total expected contributions:	
Total expected contributions 2020/21 (based on assumed payroll of £139m) (£m)	35.2
Total expected contributions 2021/22 (based on assumed payroll of £142m) (£m)	36.6
Total expected contributions 2022/23 (based on assumed payroll of £144m) (£m)	38.2
Average employee contribution rate	6.5%
Employee contributions (based on assumed payroll of £139m) (£m)	9.0
Additional information	
Percentage of liabilities relating to employers with deficit recovery periods of longer than 20 years	0%
Percentage of total liabilities that are in respect of Tier 3 employers	4%

Appendix G

Rates and Adjustments Certificate issued in accordance with Regulation 62

Name of fund

London Borough of Waltham Forest Pension Fund

Primary Contribution Rate

I hereby certify that, in my opinion, the primary rate of the employers' contribution for the whole Fund for each of the three years beginning 1 April 2020 is 15.6% of pensionable pay. The primary rate of contribution for each employer for the three year period beginning 1 April 2020 is set out in the attached schedule.

Secondary Contribution Rate

I hereby certify that, in my opinion, the secondary rate of the employer's contribution for the whole Fund for each of the three years beginning 1 April 2020 is as follows:

2020/21 £7.6million plus 4.2% of pensionable pay

2021/22 £8.5million plus 4.2% of pensionable pay

2022/23 £9.5million plus 4.2% of pensionable pay

The secondary rate of contribution for each employer for each of the three years beginning 1 April 2020 is set out in the attached schedule. The above secondary rates, and the secondary rates for each employer, where appropriate include a provision for the costs of the McCloud judgment as set out in the notes to Appendix H.

Contribution amounts payable

The total contribution payable for each employer is the total of the primary and secondary rates as detailed in the attached schedule. Contributions will be paid monthly in arrears with each payment normally being due by the 19th of the following month (or the 22nd if paid electronically) or at intervals agreed with the Administering Authority unless otherwise noted in the schedule.

Further adjustments

A further individual adjustment shall be applied in respect of each non-ill health early retirement occurring in the period of three years covered by this certificate.

For certain employers a further individual adjustment will apply in relation to ill-health retirements occurring in the period. These further individual adjustments will be calculated in accordance with methods agreed from time to time between the Fund's Actuary and the Administering Authority.

The contributions set out in the attached schedule represent the minimum contribution which may be paid by each employer in total over the 3 years covered by the certificate. Additional contributions or a different pattern of contributions may be paid if requested by the employer concerned at the sole discretion of the Administering Authority as agreed with the Actuary. The total contributions payable by each employer will be subject to a minimum of £nil.

The individual employer contributions may be varied as agreed by the Actuary and Administering Authority to reflect any changes in contribution requirements as a result of the McCloud judgment remedy as set out in this report and/or any benefit costs being insured with a third party or parties including where the third party or parties participate in the Fund.

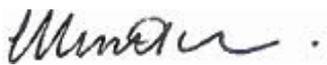
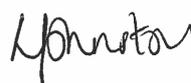
In cases where an element of an existing Scheme employer's surplus or deficit is transferred to a new employer on its inception, the Scheme employer's secondary contributions, as shown on the schedule to this Certificate in Appendix H, may be reallocated between the Scheme employer and the new employer to reflect this, on the advice of the Actuary and as agreed with the Administering Authority so that the total payments remain the same overall.

The Administering Authority and employer with advice from the Fund's Actuary can agree that contributions payable under this certificate can be sourced under an alternative financing arrangement which provides the Fund with equivalent cash contributions.

Regulation 62(8)

No allowance for non-ill health early retirements has been made in determining the results of the valuation, on the basis that the costs arising will be met by additional contributions. For certain employers, an allowance for ill health retirements has been included in each employer's contribution rate, on the basis of the method and assumptions set out in the report.

Signature:

Name:	James Hunter	Leanne Johnston
Qualification:	Fellow of the Institute and Faculty of Actuaries	Fellow of the Institute and Faculty of Actuaries
Date of signing:	31 March 2020	

Appendix H

Schedule to the Rates and Adjustments Certificate dated 31 March 2020

Employer Number	Employer	Notes	Primary rate 2020/21 to 2022/23	Secondary rates (including any allowance for potential McCloud adjustment and/or phasing)			Total Contribution Rate from 2019 Valuation		
				2020/21	2021/22	2022/23	2020/21	2021/22	2022/23
Major Employers									
107	Waltham Forest Council	7	14.9%	0.3% plus £6,830,000	0.3% plus £7,670,000	0.3% plus £8,620,000	15.2% plus £6,830,000	15.2% plus £7,670,000	15.2% plus £8,620,000
Scheduled Bodies									
301	Walthamstow Academy		15.0%	-0.3%	-0.3%	-0.3%	14.7%	14.7%	14.7%
322	Waltham Forest College		14.4%	0.2% plus £492,800	0.2% plus £512,000	0.2% plus £532,000	14.6% plus £492,800	14.6% plus £512,000	14.6% plus £532,000

Employer Number	Employer	Notes	Primary rate 2020/21 to 2022/23	Secondary rates (including any allowance for potential McCloud adjustment and/or phasing)			Total Contribution Rate from 2019 Valuation		
				2020/21	2021/22	2022/23	2020/21	2021/22	2022/23
339	Sir George Monoux		13.4%	0.6% plus £54,300	0.6% plus £56,400	0.6% plus £58,700	14.% plus £54,300	14.% plus £56,400	14.% plus £58,700
347	Highams Park School		16.8%	0.2% plus £55,400	0.2% plus £57,500	0.2% plus £59,700	17.% plus £55,400	17.% plus £57,500	17.% plus £59,700
362	Leyton Sixth Form		13.9%	0.3% plus £41,200	0.3% plus £42,800	0.3% plus £44,500	14.2% plus £41,200	14.2% plus £42,800	14.2% plus £44,500
382	Roger Ascham		17.9%	0.4% plus £22,200	0.4% plus £23,100	0.4% plus £24,000	18.3% plus £22,200	18.3% plus £23,100	18.3% plus £24,000
410	Yardley		18.1%	0.3% plus £27,300	0.3% plus £28,400	0.3% plus £29,500	18.4% plus £27,300	18.4% plus £28,400	18.4% plus £29,500
424	Hillyfield Academy		13.5%	0.2% plus £38,200	0.2% plus £39,700	0.2% plus £41,300	13.7% plus £38,200	13.7% plus £39,700	13.7% plus £41,300
443	Walthamstow Primary Academy		11.9%	0.1% plus £500	0.1% plus £500	0.1% plus £500	12.% plus £500	12.% plus £500	12.% plus £500
Admitted Bodies									
327	CT PLUS (WF Buses)		26.1%	-13.6%	-13.6%	-13.6%	12.5%	12.5%	12.5%

Employer Number	Employer	Notes	Primary rate 2020/21 to 2022/23	Secondary rates (including any allowance for potential McCloud adjustment and/or phasing)			Total Contribution Rate from 2019 Valuation		
				2020/21	2021/22	2022/23	2020/21	2021/22	2022/23
356	Kier(1)		18.5%	-4.0%	-4.0%	-4.0%	14.5%	14.5%	14.5%
364	London Quadrant		16.8%	0.5% plus £1,500	0.5% plus £1,500	0.5% plus £1,600	17.3% plus £1,500	17.3% plus £1,500	17.3% plus £1,600
370	May Gurney		18.4%	-16.9%	-16.9%	-16.9%	1.5%	1.5%	1.5%
376	Orient Regeneration Trust Ltd		21.8%	0.1% plus £68,000	0.1% plus £70,600	0.1% plus £73,400	21.9% plus £68,000	21.9% plus £70,600	21.9% plus £73,400
397	Urbaser		20.5%	-2.0%	-2.0%	-2.0%	18.5%	18.5%	18.5%
430	Rineys		20.5%	-20.5%	-20.5%	-20.5%	£0	£0	£0
436	Amey		20.7%	-0.4%	-0.4%	-0.4%	20.3%	20.3%	20.3%
444	Lloyd Park Children's Centres		17.7%	-2.0%	-2.0%	-2.0%	15.7%	15.7%	15.7%

Employer Number	Employer	Notes	Primary rate 2020/21 to 2022/23	Secondary rates (including any allowance for potential McCloud adjustment and/or phasing)			Total Contribution Rate from 2019 Valuation		
				2020/21	2021/22	2022/23	2020/21	2021/22	2022/23
452	Waltham Forest Services Ltd		20.5%	£100	£100	£200	20.5% plus £100	20.5% plus £100	20.5% plus £200
Other									
N/A	Schools and Academies Group	6	16.3%	11.8%	11.8%	11.8%	28.1%	28.1%	28.1%
Admitted Bodies – Post 31 March 2019									
465	Revive Care Services		22.1%	0.1%	0.1%	0.1%	22.2%	22.2%	22.2%
466	Care Nexus – Kare Plus Redbridge		21.3%	0.1%	0.1%	0.1%	21.4%	21.4%	21.4%

The following employers exited the Fund during 2019/20. Termination assessments will be required and any additional contributions required will be notified separately:

Employer
Kier (357)
Peabody Trust (Family Mosaic) (337)

Important notes to the Certificate:

1. The percentages shown are percentages of pensionable pay and apply to all members, including those who are members under the 50:50 option under the LGPS.
2. With the agreement of the Administering Authority employers may also opt to pay any other element of their employer contributions in advance instead of monthly amounts, with either all three years being paid in April 2020 or payment being made in the April of the year in question. The cash amounts payable will be reduced in return for this early payment as follows:
 - Payments made in the April of the certified year will be reduced by 2.11% (i.e. the above amounts will be multiplied by 0.9789)
 - 2021/22 payments made in April 2020 will be reduced by 6.19% (i.e. the above amounts will be multiplied by 0.9381)
 - 2022/23 payments made in April 2020 will be reduced by 10.1 % (i.e. the above amounts will be multiplied by 0.899)
3. Where % contributions are being paid in advance, for these cases the employer will need to estimate in advance the pensionable pay for the entire period (subject to an agreed adjustment with the Administering Authority) and a balancing adjustment to reflect the actual pensionable pay over the period would be made at the end of the period (no later than 30th April as appropriate following the year-end). Consideration will be required for employers in surplus as at 31 March 2019, where any surplus offset would be made up front before any reduction for early payment is applied. Further information on the policy for prepayments can be provided by the Fund upon request. It should be noted that only certain employers will be able to pay their primary rate in advance due to the operational complexity.
4. Where the secondary rate is a £ deduction to the primary rate due to an employer being in surplus, the total annual contributions payable by each employer will be subject to a minimum of £nil i.e. no monies can be refunded to an employer whilst they participate in the Fund.
5. Employers were given the option of whether to pay additional contributions over 2020/23 in respect of the potential additional McCloud costs or any other factors. The above secondary contributions include provision for the estimated effect of the McCloud judgment. Once the final remedy for McCloud is known, the position will be reviewed. Whilst it is possible that the Fund may require additional contributions from employers at that point in time if the McCloud remedy is substantially different from that currently anticipated, based on the Administering Authority's current knowledge and

understanding of the likely outcome it believes that requiring such additional contributions is an unlikely outcome. In the event that additional contributions are required, this certificate will then be updated to reflect these changes.

Any contribution changes will take effect from a date to be determined by the Administering Authority.

6. For these employers, the Primary Contribution rate includes an allowance for ill-health retirements. A further individual adjustment therefore will not apply in respect of each ill health early retirement occurring in the period of the Rates and Adjustments Certificate.
7. The secondary rates for Waltham Forest Council make allowance for the value of residual property investments currently held in a Special Purpose Vehicle that will be gifted to the Fund in 38 years' time. Making such allowance is contingent on the Fund being provided with satisfactory legal confirmation that this arrangement is and remains valid, binding and legally enforceable. If, at the end of any Fund year, such confirmation is outstanding an additional contribution will become payable by the Council. The amounts due in this circumstance will be £1.37 million in respect of the Fund year 2020/21, £1.43 million in respect of 2021/22, and £1.48 million in respect of 2022/23, and these would be in **addition** to the £6.83m (2020/21), £7.67m (21/22) and £8.62m (22/23) set out on the Schedule above.

The additional amounts would become payable at the end of the relevant Fund year, and would be payable by the 30 April following the year-end.

Appendix I

Glossary

Actuarial Valuation: an investigation by an actuary into the ability of the Fund to meet its liabilities. For the LGPS the Fund Actuary will assess the funding level of each participating employer and agree contribution rates with the administering authority to fund the cost of new benefits and make good any existing deficits as set out in the separate Funding Strategy Statement.

Best Estimate Assumption: an assumption where the outcome has a 50/50 chance of being achieved.

Bonds: loans made to an issuer (often a government or a company) which undertakes to repay the loan at an agreed later date. The term refers generically to corporate bonds or government bonds (gilts).

Career Average Revalued Earnings Scheme (CARE): with effect from 1 April 2014, benefits accrued by members in the LGPS take the form of CARE benefits. Every year members will accrue a pension benefit equivalent to 1/49th of their pensionable pay in that year. Each annual pension accrued receives inflationary increases (in line with the annual change in the Consumer Prices Index) over the period to retirement.

CPI: acronym standing for "Consumer Prices Index". CPI is a measure of inflation with a basket of goods that is assessed on an annual basis. The reference goods and services differs from those of RPI. These goods are expected to provide lower, less volatile inflation increases. Pension increases in the LGPS are linked to the annual change in CPI.

Deficit: the extent to which the value of the Fund's past service liabilities exceeds the value of the Fund's assets.

Discount Rate: the rate of interest used to convert a cash amount e.g. future benefit payments occurring in the future to a present value.

Employer Covenant: the degree to which an employer participating in an occupational pension scheme is willing and able to meet the funding requirements of the scheme.

Employer's Future Service Contribution Rate: the contribution rate payable by an employer, expressed as a % of pensionable pay, as being sufficient to meet the cost of new benefits being accrued by active members in the future. The cost will be net of employee contributions and will include an allowance for the expected level of administrative expenses. It is normally the same as an employer's Primary Contribution Rate under the Regulations.

Employer's Primary Contribution Rate: the contribution rate required to meet the cost of the future accrual of benefits including ancillary, death in service and ill health benefits together with administration costs. It is expressed as a percentage of pensionable pay, ignoring any past service surplus or deficit, but allowing for any employer-specific circumstances, such as its membership profile, the funding strategy adopted for that employer, the actuarial method used and/or the employer's covenant. The Primary Contribution Rate for the whole Fund is the weighted average (by payroll) of the individual employers' Primary Contribution Rates.

Employer's Secondary Contribution Rate: an adjustment to the Primary Rate to reflect any past service deficit or surplus, to arrive at the rate each employer is required to pay. The Secondary Rate may be expressed as a percentage adjustment to the Primary Rate, and/or a cash adjustment in each of the three years beginning 1 April in the year following that in which the valuation date falls. The Secondary Rate is specified in the Rates and Adjustments Certificate. For any employer, the rate they are actually required to pay is the sum of the Primary and Secondary Rates. Secondary Rates for the whole fund in each of the three years shall also be disclosed. These will be calculated as the weighted average based on the whole fund payroll in respect of percentage rates and as a total amount in respect of cash adjustments.

Equities: shares in a company which are bought and sold on a stock exchange.

Funding Strategy Statement (FSS): This is a key governance document that outlines how the administering authority will manage employer's contributions to the Fund.

Guaranteed Minimum Pension (GMP): This part of a member's pension which was earned between 6 April 1978 and 5 April 1997 and which replaces part of that member's State Scheme benefits in respect of that period.

Investment Strategy: the long-term distribution of assets among various asset classes that takes into account the Funds objectives and attitude to risk.

McCloud Judgment: This refers to the linked legal cases of Sargeant and McCloud, and which found that the transitional protections (which were afforded to older members when the public service pension schemes were reformed in 2014/15) constituted unlawful age discrimination.

Past Service Liabilities: this is the present value of the benefits accrued by members up to the valuation date. It is assessed based on a set of assumptions agreed between the Administering Authority and the Actuary.

Percentile: A method of ranking a series of outcomes. For example, a 10th percentile outcome means that only 10% of results would be expected to be as good as or better than the 10th percentile and 90% of results would be expected to be worse.

Prepayment: the payment by employers of contributions to the Fund earlier than that certified by the Actuary. The amount paid will be reduced compared to the certified amount to reflect the early payment.

Present Value: the value of projected benefit payments, discounted back to the valuation date.

Primary rate of the employers' contribution: the contribution rate required to meet the cost of the future accrual of benefits including ancillary, death in service and ill health benefits together with administration costs. It is expressed as a percentage of pensionable pay, ignoring any past service surplus or deficit, but allowing for any employer-specific circumstances, such as its membership profile, the funding strategy adopted for that employer, the actuarial method used and/or the employer's covenant. The Primary rate for the whole fund is the weighted average (by payroll) of the individual employers' Primary rates.

Prudent Assumption: an assumption where the outcome has a greater than 50/50 chance of being achieved i.e. the outcome is more likely to be overstated than understated. Legislation and guidance requires the assumptions adopted for an actuarial valuation overall to be prudent.

Real Return or Real Discount Rate: a rate of return or discount rate net of CPI inflation.

Recovery Plan: a strategy by which an employer will make up a funding deficit over a specified period of time ("the recovery period", as set out in the Funding Strategy Statement).

SAB Funding Basis or SAB Basis: a set of actuarial assumptions determined by the LGPS Scheme Advisory Board (SAB). Its purposes are to set out the funding position on a standardised approach so that comparisons can be made with other LGPS Funds, and to assist with the "Section 13 review" as carried out by the Government Actuary's Department. As an example, the real discount rate over and above CPI used in the SAB Basis as at 31 March 2019 was 2.4% p.a., so it can be substantially different from the actuarial assumptions used to calculate the Fund's solvency funding position and contribution outcomes for employers.

Solvency/Funding Level: the ratio of the value of the Fund's assets and the value of the Fund's liabilities expressed as a percentage.

Solvency Funding Target: an assessment of the present value of benefits to be paid in the future. The desired funding target is to achieve a solvency level of a 100% i.e. assets equal to the past service liabilities assessed on the ongoing concern basis.

50/50 Scheme: in the LGPS, active members are given the option of accruing a lower benefit in the 50/50 Scheme, in return for paying a lower level of contribution.

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