# **Pensions Committee**

# 2.30 p.m., Wednesday, 25 March 2015

# **2014 Actuarial Valuation for Lothian Buses Pension Fund**

Item number 5.8

Report number Executive/routine

Wards All

# **Executive summary**

The Lothian Buses Pension Fund is required by law to undertake an actuarial valuation every three years. The pension fund's Actuary assesses the financial health of the pension fund and sets the employer contribution rates required for the next three years.

This report presents the results of the actuarial valuation of the Lothian Buses Pension Fund as at 31 March 2014.

# Links

**Coalition pledges** 

Council outcomes CO26

**Single Outcome Agreement** 



# Report

# 2014 Actuarial Valuation for Lothian Buses Pension Fund

# Recommendations

1.1 Committee is requested to note the 2014 actuarial valuation for the Lothian Buses Pension Fund.

# **Background**

- 2.1 The Lothian Buses Pension Fund was established in 1986 under The Local Government Superannuation (Funds) (Scotland) Regulations 1986 (SSI 115/1986).
- 2.2 The Lothian Buses Pension Fund is required by law to undertake an actuarial valuation every three years. Based on data as at 31 March 2014, this actuarial valuation must be completed by 31 March 2015.
- 2.3 The actuarial valuation of the pension fund has 3 main purposes:
  - (a) To assess whether the funding strategy and assumptions are appropriate;
  - (b) To assess the financial health of the pension fund; and
  - (c) To set the future rates of contributions payable by the employer.

# Main report

3.1 A copy of the actuarial valuation of the Lothian Buses Pension Fund as at 31 March 2014 is attached in Appendix 1.

# Liabilities and Funding Level as at 31 March 2014

3.2 Historically the funding position of the Lothian Buses Pension Fund has been assessed on an ongoing basis, using a discount rate allowing for investment returns in excess of government bond yields. The table below summarises the financial position of the Fund at 31 March 2014 in respect of benefits earned by members up to this date on this basis.

	2011	2014
Past Service Liabilities £m	229	289
Market Value of Assets £m	257	337
Surplus / (Deficit) £m	28	48
Funding Level %	112.4%	116.7%

3.3 On the ongoing basis, the funding level has risen from 112.4% at the previous valuation at 31 March 2011 to 116.7% at this valuation. This has resulted in the surplus of £28million at 31 March 2011 increasing to a surplus of £48million at

- 31 March 2014. The improvement of the funding position on this basis reflects the favourable conditions since the previous valuation. In particular, investment returns for the three years to 31 March 2014 were higher than anticipated.
- 3.4 The chart at Page 7 of Appendix 1 illustrates the various factors that caused the funding position to improve between 31 March 2011 and 31 March 2014 and the extent of this influence.
- 3.5 As the Fund has been closed to new entrants since 1 January 2008, inevitably the liabilities will gradually mature. In this context, the funding level has also been measured on a more prudent basis, discounting the liabilities using government bond (gilts) yields. This increases the liabilities by £93million and reduces the funding level to 88.2%. The results are as follows:

Funding position as a 31 March 2014	Ongoing basis	Gilts basis
Past Service Liabilities £m	289	382
Total – Assets £m	337	337
Surplus / (Deficit) £m	48	(45)
Funding Level %	116.7%	88.2%

# **Contribution Rates**

3.6 On an ongoing basis, the theoretical contribution rates calculated by the actuary are shown in the table below. The employer has been paying 20.5% of payroll, higher than indicated at the previous valuation.

Contribution rates (% of pay)	31 March 2011	31 March 2014	31 March 2014
	Ongoing		Gilts
Employer future service rate	19.9%	24.1%	34.2%
Past service adjustment [1]	-9.0%	-13.0%	11.0%
Total employer contribution rate	10.9%	11.1%	45.3%

[1] Spread over Future Working Lifetime

3.7 In respect of the minimum contributions payable by the company, the actuary has certified the following minimum contribution rates. The rates increase over the next 3 years from the current rate of 20.5% to the future service rate (24.1%) on an ongoing basis, as shown below.

Period	Employer Minimum Contribution Rate
1 April 2015 – 31 December 2015	21.7% of payroll
1 January 2016 – 31 December 2016	22.9% of payroll
1 January 2017 – 31 December 2017	24.1% of payroll
1 January 2018 – 31 March 2018	24.1% of payroll

# **Actuarial Valuation method and assumptions**

3.8 The use of market-related financial assumptions in the actuarial valuation means that the results are likely to be volatile. Bond yields and the financial market's expectation of inflation as at the valuation date are used to value the liabilities. Inflation rates are important as pension liabilities increase with inflation and bond

yields are a key determinant of the discount rate. The use of market-related financial assumptions is considered to be transparent. However this needs to be balanced with the need for stable employer contributions.

- The value of the liabilities is very sensitive to the financial assumptions.
   1% change in the discount rate can change the value of the liabilities by
   15-20%. In the actuarial valuation, the Actuary illustrates how the funding level would be affected under different investment market conditions.
- Full details of the funding method and assumptions are provided in Appendix 1. Summarises of the main financial and demographic assumptions adopted for the valuation of members' benefits are shown below.

Financial Assumption	Description	Nominal	Real
Price Inflation (CPI)	Market expectation of long term future retail prices inflation, as measured by the difference on fixed and index-linked Government bonds at the valuation date, less 0.8% p.a.	2.7%	-
Pay increases	RPI plus 1.5% p.a.*	5.0%*	2.3%*
"Gilt-based" discount rate	Yield on fixed interest (nominal) Government Bonds	3.5%	0.8%
Funding basis (ongoing) discount rate	"Gilt-based" discount rate plus an Asset Outperformance Assumption (AOA) of 1.5% p.a.	5.0%	2.3%

<sup>\*</sup> Nominal 2.0% p.a. for 2014/15 and 2015/16, reverting to 5.0% p.a. thereafter.

3.9 The demographic assumption to which the results are most sensitive is that relating to the longevity of the Fund's members. The actuary has increased the expected life expectancy. The assumed average future life expectancies are shown below:

	Actives &	Deferreds	ds Current Pension	
Assumed life expectancy at age 65	Male	Female	Male	Female
2011 valuation - baseline	18.3	21.3	17.0	20.1
2011 valuation - improvements	21.7	24.8	18.4	21.6
2014 valuation – baseline	19.1	22.0	18.1	20.7
2014 valuation – improvements	23.5	25.9	20.4	22.6

# **Admission Agreement and Shareholder Guarantee**

3.10 An updated admission agreement to reflect regulatory requirements of the Local Government Pension Scheme and to affirm the guarantor obligations of the company's shareholders in respect of pension liabilities is being progressed.

# Maturity of the Fund and Investment Strategy Review

3.11 Given the inevitable maturing of the Fund's liability over time, the investment strategy will be reviewed over the coming months. The review will ensure that

the risks inherent in the investment strategy are appropriate including volatility of the funding level and employer contribution rate, as well as the potential impact on the company balance sheet. It will also analyse cashflow for the Fund.

- Initial meeting has been held with Lothian Buses plc, and it has been agreed that given the current funding position and the shareholder guarantee, the review will focus on a gradual reduction in investment risk.
- Conclusions of the review will be reported to Pensions Committee in due course.

# **Funding Strategy Statement**

3.12 A revised Funding Strategy Statement for the Lothian Pension Fund, incorporating the Lothian Buses Pension Fund, is reported separately on this agenda.

# **Conclusions**

- 3.13 The Actuarial Valuation for the Lothian Buses Pension Fund as at 31 March 2014 has been completed. The funding level on an ongoing basis as at 31 March 2014 was 116.7%.
- 3.14 Minimum contributions from the employer will increase to 24.1% over the next three years.
- 3.15 The investment strategy of the Lothian Buses Pension Fund will be reviewed in the coming months, with conclusions reported to Committee.

# Measures of success

4.1 The funding strategy should ensure that the Fund has sufficient assets to meet pension obligations in the long term. The minimum contribution rates payable by the employer are certified by the Fund's Actuary in accordance with the professional standards of the Institute and Faculty of Actuaries.

# **Financial impact**

5.1 The actuarial valuation sets the contribution rates payable by the employer over the next three years. The minimum employer contribution rates payable by company are as stated. The company has confirmed its acceptance of these rates.

# Risk, policy, compliance and governance impact

- 6.1 The Lothian Buses Pension Fund is required by law to undertake an actuarial valuation every three years. Regular actuarial assessment of the Fund reduces the risk of not meeting funding objectives.
- 6.2 The Lothian Buses admission agreement is being updated to reflect regulatory requirements of the Local Government Pension Scheme and to affirm the

guarantor obligations of the company's shareholders in respect of pension liabilities

# **Equalities impact**

7.1 There are no adverse equalities impacts arising from this report.

# **Sustainability impact**

8.1 There are no adverse sustainability impacts arising from this report.

# **Consultation and engagement**

9.1 The Consultative Panel for the Lothian Pension Funds, comprising employer and member representatives, is integral to the governance of the Funds. Appropriate liaison and consultation with representatives of Lothian Buses plc has been undertaken. A briefing has also been held for the member representative from Lothian Buses from the Consultative Panel.

# Background reading / external references

None.

# **Alastair Maclean**

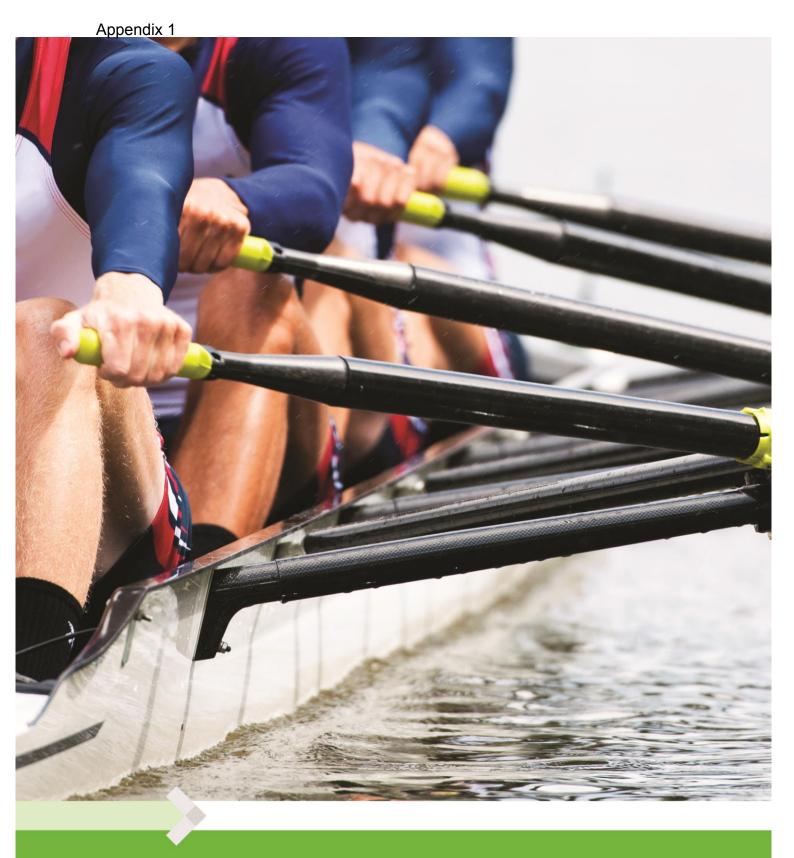
**Director of Corporate Governance** 

Contact: John Burns, Pensions & Accounting Manager

E-mail: john.burns@edinburgh.gov.uk | Tel: 0131 469 3711

# Links

Coalition pledges	
Council outcomes	CO26 - The Council engages with stakeholders and works in partnerships to improve services and deliver agreed objectives.
Single Outcome Agreement	
Appendices	Appendix 1 - Actuarial Valuation 2014 Lothian Buses Pension Fund



# Lothian Buses Pension Fund Actuarial Valuation Valuation Report

HYMANS ♯ ROBERTSON

# Contents

# 1 Executive summary 2 Introduction 3 Assumptions 4 Results 5 Risk Assessment 6 Related issues Reliances and limitations Appendix A: About the pension fund Appendix B: Summary of the Fund's benefits Appendix C: About the valuation Appendix D: Data Appendix E: Assumptions Appendix F: Events since valuation date Appendix G: Rates and adjustments certificate Statement to the rates and adjustments certificate

**PAGE** 

1

2

3

6

12

16

17

18

19

25

27

29

33

34

35



# 1 Executive summary

We have carried out an actuarial valuation of the Lothian Buses Pension Fund ('the Fund') as at 31 March 2014. The results are presented in this report and are briefly summarised below.

# **Funding position**

The table below summarises the financial position of the Fund at 31 March 2014 in respect of benefits earned by members up to this date, on both the ongoing and gilts bases.

	31 March 2011 Ongoing	31 March 2014 Ongoing	31 March 2014 Gilts
Past Service Position	(£m)	(£m)	(£m)
Past Service Liabilities	229	289	382
Market Value of Assets	257	337	337
Surplus / (Deficit)	28	48	(45)
Funding Level	112.4%	116.7%	88.2%

The results show that, on the ongoing basis, the Fund met its objective of holding sufficient assets to meet the estimated current cost of past service liabilities at 31 March 2014. The funding level has risen from 112% at the previous valuation to 117% at this valuation.

The improvement of the funding position reflects favourable fund performance since the previous valuation. Investment returns for the 3 years to 31 March 2014 were better than anticipated. This has been partially offset by a decrease in the real gilt yield, which has increased the value placed on the Fund's liabilities.

On the gilts basis, the value of the Fund's past service liabilities is greater than the assets held, leading to a deficit of £45m (and a funding level of 88%) as at 31 March 2014. The gilts position reflects the ultimate funding objective, i.e. the assets the Fund should hold at the point when the last active member leaves the Fund.

#### **Contribution rates**

The table below summarises the theoretical contribution rate that would be required, based on this triennial valuation, on both the ongoing and gilts bases.

	31 March 2011	31 March 2014	31 March 2014
	Ongoing	Ongoing	Gilts
Contribution Rates	(% of pay)	(% of pay)	(% of pay)
Total future service rate (incl. expenses of 0.3% of pay)	26.7%	30.9%	41.0%
less employee contribution rate	6.8%	6.8%	6.8%
Employer future service rate (incl. expenses)	19.9%	24.1%	34.2%
plus Past Service Adjustment (spread over FWL*)	-9.0%	-13.0%	11.0%
Employer common contribution rate	10.9%	11.1%	45.2%

<sup>\*11.7</sup> years in 2014, 9.0 years in 2011.

The common contribution rate is a theoretical figure. The minimum contributions to be paid by the employer from 1 April 2015 to 31 March 2018 are shown below, and in the Rates and Adjustments certificate in **Appendix G**;

Period	Employer Minimum Contribution Rate
1 April 2015 to 31 December 2015	21.7%
1 January 2016 to 31 December 2016	22.9%
1 January 2017 to 31 December 2017	24.1%
1 January 2018 to 31 March 2018	24.1%



# 2 Introduction

#### **Purpose**

We have carried out an actuarial valuation of the Lothian Buses Pension Fund as at 31 March 2014.

- This valuation report complies with all of the relevant regulations and professional standards, as set out in section 7.
- The figures in this report are based on our understanding of the benefit structure of the LGPS as at 31 March 2014, and changes being implemented from April 2015, details of which are provided in Appendix B.
- 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. This data is summarised in **Appendix D**.
- As part of the valuation, assumptions must be made which are discussed in **section 3** as well as in **Appendix E.** Details of our valuation approach is covered in **Appendix C.**
- The valuation results are then covered in section 4.
- We look at some of the risks the Fund faces in section 5 and consider any post valuation events in Appendix F.
- The valuation is just one aspect of the operation of the Fund, and related issues are covered in section
- In Appendix G we then set out the individual employer contribution requirements from 1 April 2015.

# **Component reports**

This document is an "aggregate" report, i.e. it is the culmination of various "component" reports and discussions, in particular:

- The data report (dated 23 July 2014 and mentioned in section 7);
- The Initial results report (dated 1 August 2014) which outlined the preliminary assumption proposals and results;
- The formal agreement by the Administering Authority of the 2014 valuation assumptions, via email on 27 June 2014;
- The Funding Strategy Statement, confirming the contribution rate setting approach.

Note that not all of these documents may be in the public domain.



# 3 Assumptions

# **Actuarial assumptions**

Assumptions must be made about the factors affecting the Fund's finances in the future. Broadly speaking, our assumptions fall into two categories – financial and demographic.

Demographic assumptions typically try to forecast **when** benefits will come into payment and what form these will take. For example, when members will retire (e.g. at their normal retirement age or earlier), how long they will then survive and whether a dependant's pension will be paid.

Financial assumptions typically try to anticipate the **size** of these benefits. For example, how large members' final salaries will be at retirement and how their pensions will increase over time. In addition, the financial assumptions also help us to estimate how much all these benefits will cost the Fund in today's money.

## **Financial assumptions**

A summary of the main financial assumptions adopted for the valuation of members' benefits is shown below.

	31 March 2011		31 March 2014	
Financial assumptions	Nominal	Real	Nominal	Real
Discount Rate	5.8%	3.0%	5.0%	2.3%
Salary Increases*	5.1%**	2.3%	5.0%***	2.3%
Price Inflation / Pension Increases	2.8%	-	2.7%	-

<sup>\*</sup>Excluding promotional increases

#### **Discount rate**

The funding valuation is effectively a planning exercise, to assess the funds needed to meet the benefits as they fall due. 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 at a suitable rate.

For a funding valuation such as this, the discount rate is set by taking into account the Fund's current and expected future investment strategy and, in particular, how this strategy is expected to outperform the returns from Government bonds over the long term. The additional margin for returns in excess of that available on Government bonds is called the Asset Outperformance Assumption (AOA).

The selection of an appropriate AOA is a matter of judgement and the degree of risk inherent in the Fund's investment strategy should always be considered as fully as possible.

Although there has been a slight downward shift in the expected returns on risky assets since the 2011 valuation, we believe the expected returns in excess of the returns on government bonds to be broadly unchanged since 2011. Therefore, we are satisfied that an AOA of 1.5% p.a. is a prudent assumption for the purposes of this valuation. This results in a discount rate of 5.0% p.a.

The 'gilts' figures shown in this report are based on a discount rate of 3.5% p.a., i.e. the yield available on Government bonds without allowance for an AOA.

<sup>\*\* 2.4%</sup> p.a. for 2011/12, 3.1% p.a. 2012/13, reverting to 5.1% p.a. thereafter

<sup>\*\*\* 2%</sup> p.a. for 2014/15 and 2015/16, reverting to 5.0% p.a. thereafter.



#### Price inflation / pension increases

As was the case at the 2011 valuation, we expect the average long term difference between RPI and CPI to be 0.8% p.a.

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. At this valuation, we have adopted a similar approach.

#### Salary increases

The assumption for salary increases is 2% p.a. for 2 years, reverting to the long term assumption of RPI plus 1.5% p.a. thereafter. The approach to set the long term salary growth assumption is consistent with that adopted for the 2011 valuation.

Note that this assumption is made in respect of the general level of salary increases (e.g. as a result of inflation and other macroeconomic factors). We also make a separate allowance for an expected pay rise granted in the future as a result of promotion. This assumption takes the form of a set of tables which model the expected promotional pay awards based on each member's age and class. Please see **Appendix E**.

#### Longevity

The main demographic assumption to which the valuation results are most sensitive is that relating to the longevity of the Fund's members. For this valuation, we have adopted assumptions which give the following sample average future life expectancies for members:

	Actives & Deferreds		Current Pensioners	
Assumed life expectancy at age 65	Male	Female	Male	Female
2011 valuation - baseline	18.3	21.3	17.0	20.1
2011 valuation - improvements	21.7	24.8	18.4	21.6
2014 valuation - baseline	19.1	22.0	18.1	20.7
2014 valuation - improvements	23.5	25.9	20.4	22.6

Further details of the longevity assumptions adopted for this valuation can be found in **Appendix E**. Note that the figures for actives and deferreds assume that they are aged 45 at the valuation date.

#### **Assets**

We have taken the assets of the Fund into account at their market value as indicated in the audited accounts for the period ended 31 March 2014.

In our opinion, the basis for placing a value on members' benefits is consistent with that for valuing the assets both are related to market conditions at the valuation date.

# **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.

Details of these assumptions are set out in **Appendix E**. Further commentary on these was included in the Initial Results report dated 1 August 2014.

# Further comments on the assumptions

As required for Local Government Pension Scheme valuations, our proposed approach to this valuation must include a degree of prudence. This has been achieved by explicitly allowing for a margin of prudence in the AOA.



For the avoidance of doubt, we believe that all other 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.

Taken as a whole, we believe that our proposed assumptions are more prudent than the best estimate. The assessed liability value on a "neutral" best estimate (not prudent) basis would perhaps be 15%-20% lower than the figures shown here.



# 4 Results

The Administering Authority has prepared a Funding Strategy Statement which sets out its funding objectives for the Fund. In broad terms, the main 'past service' objective is to hold sufficient assets in the Fund to meet the assessed cost of members' past service benefits and the main 'future service' objective is to maintain a relatively stable contribution rate. These objectives are potentially conflicting.

#### Past service

In assessing the extent to which the past service funding objective was met at the valuation date, we have used the actuarial assumptions described in the previous section of this report and funding method described in **Appendix C**. The table below compares the value of the assets and liabilities at 31 March 2014. The 31 March 2011 results are also shown for reference.

The results are presented in the form of a "funding level", this is the ratio of the market value of assets to the assessed cost of members' past service benefits ("liabilities").

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

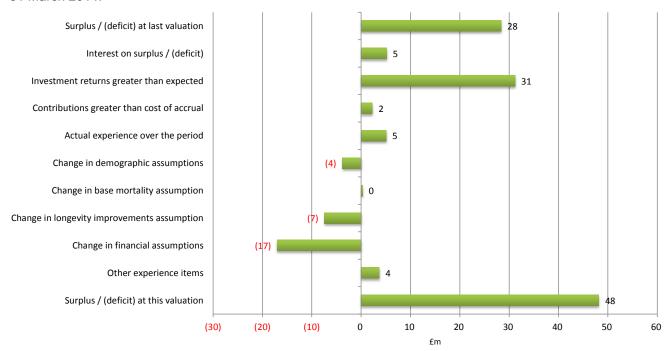
Valuation Date	31 March 2011	31 March 2014
Past Service Position	(£m)	(£m)
Past Service Liabilities		
Employees	110	139
Deferred Pensioners	33	41
Pensioners	86	109
Total Liabilities	229	289
Market Value of Assets	257	337
Surplus / (Deficit)	28	48
Funding Level	112.4%	116.7%

The main funding objective was met: there was a surplus of assets to the assessed cost of members' benefits of £48m.



#### Summary of changes to the funding position

The chart below illustrates the factors that caused the funding position to improve between 31 March 2011 and 31 March 2014:



Further comments on some of the items in this chart:

- There was interest of £5m. This is broadly three years of compound interest at 5.8% p.a. applied to the previous valuation surplus of £28m.
- Investment returns being higher than expected since 2011 led to a gain of £31m. This is the difference between the actual three-year return (roughly 31%) and expected three-year return (roughly 18%) applied to the assets from the previous valuation of £257m, with a further allowance made for cashflows during the period.
- Contributions paid to the fund since 2011 have been greater than the cost of benefits accrued over this period, leading to a gain of £2m.
- Actual experience over the period relates to the specific elements of member experience we are able to
  analyse and measure. In particular, the combined effect of early leaver, ill health retirement, salary
  growth, pension increases, pensioner longevity, cash commutation and early retirement experience since
  2011 led to a gain of £5m. Please see the Initial Results document for more detail on the observed
  membership experience at the 2014 valuation.
- The impact of the change in demographic assumptions has been a loss of around £4m. Underlying this figure, changes to the ill health early retirements assumption have had a positive impact but this has been more than offset by assuming fewer withdrawals than at 2011.
- The change in longevity assumptions (baseline and improvements) has given rise to a loss of £7m. This is mainly due to the change in assumed longevity improvements.
- The change in financial conditions since the previous valuation has led to a loss of £17m. This is due to a decrease in the real discount rate between 2011 and 2014.
- Other experience items, such as changes in the membership data, have served to increase the surplus at this valuation by around £4m.

Note that the benefit changes that come into effect as at 1 April 2015 do not change the funding position as all past service benefits to 31 March 2014 are protected.



#### **Future service**

We have calculated the average long-term contribution rate that would need to be paid to meet the estimated cost of members' benefits that will be earned after 31 March 2014 (the 'future service contribution rate'). Again, we have used the assumptions set out in the previous section of this report and the method set out in **Appendix C**. The resulting contribution rate is that which should (if the actuarial assumptions about the future are borne out in practice) ensure that the Administering Authority's main future service funding objective is met. The table below details this future service contribution rate for 31 March 2014 and shows the 31 March 2011 rate for comparison.

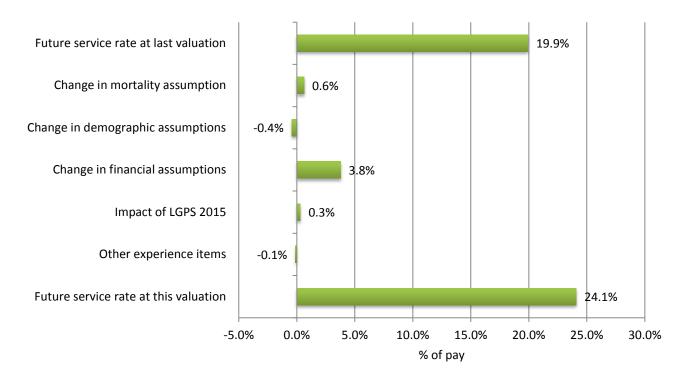
Valuation Date	31 March 2011	31 March 2014
Future service rate	% of pay	% of pay
Employer future service rate (excl. expenses)	19.6%	23.8%
Expenses	0.3%	0.3%
Total employer future service rate (incl. expenses)	19.9%	24.1%
Employee contribution rate	6.8%	6.8%

Note that the employee contribution rate includes any additional contributions being paid by employees as at 31 March 2014 into the Fund. This future service contribution rate makes no allowance for the past service deficit in the Fund described above.

The future service contribution rate for the employer is 24.1% of pay. This is the theoretical future contribution rate payable over the long term by the employer to meet the cost of benefits earned by members after the valuation date. Note this rate makes an allowance for changes to the benefit structure that takes effect from 1 April 2015.

#### Summary of changes to the future service rate

The chart below illustrates the factors that caused the future service rate to increase between 31 March 2011 and 31 March 2014:





As can be seen from this chart, the factors that have had the biggest impact on the future service rate between 2011 and 2014 are broadly similar to those discussed for the past service position, other than asset returns.

In addition to this, the impact of the LGPS 2015 scheme has resulted in an increase in contribution rate of 0.3% of payroll.

#### Total 'theoretical' contribution rate

The table below shows the total contribution rate. This consists of the future service rate plus an additional amount to recover any deficit (or 'refund' any surplus) and bring the funding level back to 100% over an appropriate period. This additional amount is referred to as the past service adjustment. The deficit recovery period has been set equal to the employer's Future Working Lifetime (FWL).

The common contribution rate based on the funding position as at 31 March 2014 is detailed below along with the results for 31 March 2011:

Valuation Date	31 March 2011	31 March 2014
Total contribution rate	% of pay	% of pay
Future service rate (incl. expenses)	19.9%	24.1%
Past Service Adjustment (spread over FWL*)	-9.0%	-13.0%
Total employer contribution rate	10.9%	11.1%

<sup>\*11.7</sup> years in 2014, 9.0 years in 2011

# **Contribution rates from 1 April 2015**

As the Fund is closed to new entrants, the ultimate funding objective is to be fully funded on the 'gilts' basis by the time the employer ceases participation in the Fund. In recognition of this, and the ever reducing period of time until the eventual cessation event, the employer has agreed to pay a contribution rate in excess of the calculated 'theoretical' contribution rate shown above.

Further information in respect of the 'gilts' funding position is shown below.

# Valuation results at 31 March 2014 on a gilts basis

The current investment strategy of the Fund includes a high proportion of equity-type assets (such as equities and property). In the long term, it is expected that such assets will outperform gilts, which are generally considered to be a closer match to the future benefit outflows from the Fund. The scale of this outperformance is a matter of judgement based on available evidence. In deriving the discount rate for the purposes of this valuation, we have assumed that the assets held by the Fund will outperform index-linked gilts by 1.5% per annum. We consider this to be a prudent assumption.

As the Fund continues to mature and move closer to the eventual cessation event, a predominantly equity-based asset strategy becomes less suitable and 'matching' assets (such as bonds) can be used to reduce funding level volatility. Such future changes to the investment strategy would necessitate a revision to the funding strategy to reflect the revised expectation of future asset return. This will be considered further at the 2017 (and future) valuations.

For information only, the following table summarises the effect on the valuation results if no advance credit is taken for additional outperformance above gilt returns (i.e. if a 'gilts basis' was used to value the liabilities).

Valuation Date	31 March 2014
Past Service Position	(£m)
Total Liabilities (gilts)	382
Market Value of Assets	337
Surplus / (Deficit)	(45)
Funding Level	88%



On this basis, the Administering Authority would need assets of some £382m to fully fund the liabilities at the valuation date. Given the actual market value of the Fund's assets, this would result in a funding shortfall of £45m. Note that this gilts basis allows for projected salary growth for active members, but does not include the salary restrictions for the two years that features in the ongoing funding basis.

At present, allowance for administration expenses is made by adding on an amount to the regular contribution rate (currently 0.3% of pay). In time, as the Fund matures and the active membership (and payroll) naturally falls, it may be appropriate to capitalise the expected future administration expenses in the valuation position (i.e. recognise the present value of expected future expenses in the past service liabilities). No allowance for this has been made in the gilts figures shown.

The table below summarises the 'theoretical' contribution rate that would be payable from 1 April 2015 under a gilts based funding strategy,

	31 March 2014 Gilts
Contribution Rates	(% of pay)
Total future service rate (incl. expenses of 0.3% of pay)	41.0%
less employee contribution rate	6.8%
Employer future service rate (incl. expenses)	34.2%
plus Past Service Adjustment (spread over FWL*)	11.0%
Employer common contribution rate	45.2%

<sup>\*11.7</sup> years in 2014

It is also worth noting that sufficient assets exist at the valuation date to effectively 'fully fund' the deferred and pensioner liabilities described above, while continuing to fund the active liabilities on the ongoing (valuation) basis. The following table summarises the funding position based on the ongoing liability valuation for active members and the gilts liability valuation for deferred and pensioner members.

Valuation Date	31 March 2014
Past Service Position	(£m)
Past Service Liabilities	
Actives (ongoing basis)	139
Deferred Pensioners (gilts basis)	57
Pensioners (gilts basis)	128
Total Liabilities	324
Market Value of Assets	337
Surplus / (Deficit)	13
Funding Level	104%



# **Contribution rates payable**

At the 2014 valuation, the 'theoretical' common contribution rate payable is 11.1% on the ongoing basis (and 45.2% on the gilts basis). This means that, in order for the Fund to be 100% funded on the ongoing basis at the end of the deficit recovery period (11.7 years at the 2014 valuation), a rate of 11.1% should be paid over this period based on the ongoing valuation assumptions (or a rate of 45.2% should be paid to be 100% funded on the gilts basis at the end of the recovery period).

The ongoing 'theoretical' rate effectively allows for the surplus to be refunded to the employer over the deficit spread period, by way of a regular reduction to the rate payable in respect of future benefit accrual.

The employer has agreed to pay contributions in excess of this amount for the period 1 April 2015 to 31 March 2018. This is in recognition of the likely need for future changes to the investment and funding strategy in the future as the Fund matures. Taking account of the alternative 'gilts' funding positions shown in the tables above, the following rates have been agreed;

Period	Employer Minimum Contribution Rate
1 April 2015 to 31 December 2015	21.7%
1 January 2016 to 31 December 2016	22.9%
1 January 2017 to 31 December 2017	24.1%
1 January 2018 to 31 March 2018	24.1%

The Rates and Adjustments certificate is provided in **Appendix G**.



# 5 Risk Assessment

The valuation results depend critically on the actuarial assumptions that are made about the future of the Fund. If all of the assumptions made at this valuation were exactly borne out in practice then the results presented in this document would represent the true cost of the Fund as it currently stands at 31 March 2014.

However, no one can predict the future with certainty and it is unlikely that future experience will exactly match all of our assumptions. The future therefore presents a variety of risks to the Fund and these should be considered as part of the valuation process. In particular:

- The main risks to the financial health of the Fund should be identified.
- Where possible, the financial significance of these risks should be **quantified**.
- Consideration should be given as to how these risks can then be controlled or mitigated.
- These risks should then be monitored to assess whether any mitigation is actually working.

This section investigates the potential implications of the actuarial assumptions not being borne out in practice.

Set out below is a brief assessment of the main risks and their effect on the valuation results, beginning with a look at the effect of changing the main assumptions and then focusing on the two most significant risks – namely investment risk and longevity risk.

# Sensitivity of valuation results to changes in assumptions

The table below gives an indication of the sensitivity of the valuation results to small changes in some of the main assumptions used.

	_	Impact	
Assumption	Change	Surplus (£m)	Future service rate (% of pay)
Discount rate	Increases by 0.5%	Increases by £31m	Falls by 3.5%
Salary increases	Increases by 0.5%	Falls by £8m	-
Price inflation / pension increases	Increases by 0.5%	Falls by £23m	Rises by 3.5%
Life expectancy	Increases by 1 year	Falls by £9m	Rises by 0.9%

This is not an exhaustive list of the assumptions used in the valuation. For example, changes to the assumed level of withdrawals and ill health retirements will also have an effect on the valuation results. However, the table contains those assumptions that typically are of most interest and have the greatest impact.

Note that the table shows 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 our assumptions simultaneously and so the precise effect on the funding position is more complex.



#### Investment risk

# Sensitivity of valuation results to market conditions and investment performance

As the assets of the Fund are taken at their market value, volatility in investment performance can have an immediate and tangible effect on the funding level and deficit. This is particularly relevant because the Fund is invested predominantly in riskier assets such as equities and equity-type investments (e.g. property). A rise or fall in the level of equity markets has a direct impact on the financial position of the Fund, which may seem obvious.

Less obvious is the effect of anticipated investment performance on the Fund's liabilities (and future service cost). Here it is the returns available on government bonds that are of crucial importance, as the discount rate that we use to place a value on the Fund's liabilities is based on gilt yields at the valuation date plus a margin of 1.5% p.a.

The table below shows how the funding level (top), deficit (middle, in £m) and total contribution rate (bottom, as % of pay) would vary if investment conditions at 31 March 2014 had been different. The level of the FTSE 100 Price index is taken as a suitable proxy for asset performance whilst the index-linked gilt yield is taken as a yardstick for the valuation of liabilities.

ъ		114%	121%	128%
Yield	-0.20%	39	59	79
표 구		12.3%	6.9%	1.6%
Gilt		110%	117%	124%
pə	0.0%	28	48	68
Linked		14.5%	11.1%	0.9%
Ĺ		106%	112%	119%
Index	-0.2%	17	37	57
Ĕ		21.3%	16.1%	10.9%
		6098	6598	7098
		FTSE 100 Price Index		dex

The shaded box contains the results for this valuation. Note that this does not take account of the performance of all asset classes held by the Fund (e.g. overseas equities, property, bonds, cash etc.) but it does serve to highlight, in broad terms, the sensitivity of the valuation results to investment conditions at the valuation date.

Note that the scenarios illustrated above are by no means exhaustive. They should not be taken as the limit of how extreme future investment experience could be. The discount rate assumption adopted at this valuation is expected to be appropriate over the long term. Short term volatility of equity markets does not invalidate this assumption.

#### **Longevity risk**

The valuation results are also very sensitive to unexpected changes in future longevity. All else being equal, if longevity improves in the future at a faster pace than allowed for in the valuation assumptions, the funding level will decline and the required employer contribution rates will increase.

Recent medical advances, changes in lifestyle and a greater awareness of health-related matters have resulted in life expectancy amongst pension fund members improving in recent years at a faster pace than was originally foreseen. It is unknown whether and to what extent such improvements will continue in the future.

For the purposes of this valuation, we have selected assumptions that we believe make an appropriate allowance for future improvements in longevity, based on the actual experience of the Fund since the previous valuation.



The table below shows how the valuation results at 31 March 2014 are affected by adopting different longevity assumptions.

	Impact		
Longevity assumption	Funding level	Surplus (£m)	Future service rate
2014 valuation (valuation improvements)	117%	48	24.1%
2014 valuation (further improvements)	111%	34	26.3%
1 year extra	108%	25	27.3%

Full details of the longevity improvements adopted at this valuation are set out in Appendix E.

The "further improvements" are a more cautious set of improvements that, in the short term, assume the 'cohort effect' of strong improvements in life expectancy currently being observed amongst a generation born around the early and mid 1930s will continue to strengthen for a few more years before tailing off. This is known as "non-peaked".

The "1 year extra" figures are relative to a further year of life expectancies beyond those assumed in "further improvements".

Again, the range of assumptions shown here is by no means exhaustive and should not be considered as the limits of how extreme future longevity experience could be.

#### Other risks to consider

The table below summarises the effect that changes in some of the other valuation assumptions and risk factors would have on the funding position. Note that these are probably unlikely to have a large financial impact on the Fund and therefore the analysis is qualitative rather than quantitative.

	Impact	
Factor	Funding level	Future service rate
Greater level of ill health retirement	Decreases	Increases
Reduced level of withdrawals	Decreases	No Impact
Rise in average age of employee members	Marginal effect	No Impact

One further risk to consider is the possibility of future changes to Regulations that could materially affect the benefits that members become entitled to. It is difficult to predict the nature of any such changes but it is not inconceivable that they could affect not just the cost of benefits earned after the change but could also have a retrospective effect on the past service position (as the move from RPI to CPI-based pension increases already has).

# Managing the risks

Whilst there are certain things, such as the performance of investment markets or the life expectancy of members, that are not directly within the control of the pension fund, that does not mean that nothing can be done to understand them further and to mitigate their effect. Although these risks are difficult (or impossible) to eliminate, steps can be taken to manage them.

Ways in which some of these risks can be managed could be:

- Set aside a specific reserve to act as a cushion against adverse future experience (possibly by selecting a set of actuarial assumptions that are deliberately more prudent).
- Take steps internally to monitor the decisions taken by members (e.g. relating to early / ill health retirements or salary increases) in a bid to curtail any adverse impact on the Fund.
- Carrying out regular reviews of the future security of the employer (i.e. assessing the strength of the employer covenants).



- Carry out a bespoke analysis of the longevity of Fund members and monitor how this changes over time, so that the longevity assumptions at the valuation provide as close a fit as possible to the particular experience of the Fund. This is effectively what Club Vita does.
- Undertake an asset-liability modelling exercise that investigates the effect on the Fund of possible investment scenarios that may arise in the future.
- Purchasing ill health liability insurance to mitigate the risk of an ill health retirement impacting on solvency and funding level of the employer where appropriate.
- Monitoring the Fund's characteristics in order to build up a picture of the risks posed. Examples include membership movements and cash flow positions.

We would be delighted to set out in more detail the risks that affect the Fund and discuss with you possible strategies for managing them.



# 6 Related issues

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 the employer's contributions are calculated:
- the Statement of Investment Principles (e.g. the discount rate must be consistent with the Fund's asset strategy);
- the general governance of the Fund, such as meetings of the Pensions Committee, decisions delegated to officers, the Fund's business plan, etc; and
- the Fund's risk register.

#### **Further recommendations**

# **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 2017. In light of the uncertainty of future financial conditions, we recommend that the financial position of the Fund continues to be monitored by means of interim funding reviews in the period up to this next formal valuation. This will give early warning of changes to funding positions and possible contribution rate changes.

# Investment strategy and risk management

We recommend that the Administering Authority continues to regularly review its investment strategy and ongoing risk management programme.

# **Additional payments**

The employer may make voluntary additional contributions to recover any shortfall over a shorter period, subject to agreement with the Administering Authority and after receiving the relevant actuarial advice.

Further sums should be paid to the Fund to meet the capital costs of any unreduced early retirements, reduced early retirements before age 60 and/or augmentation (i.e. additional membership or additional pension) using the methods and factors issued by me from time to time or as otherwise agreed.

In addition, payments may be required to be made to the Fund to meet the capital costs of any ill-health retirements that exceed those allowed for within our assumptions.



# Reliances and limitations

# Scope

This document has been requested by and is provided to City of Edinburgh Council in its capacity as Administering Authority to the Lothian Buses Pension Fund. It has been prepared by Hymans Robertson LLP to fulfil the statutory obligations in accordance with regulation 36 of the Administration Regulations. None of the figures should be used for accounting purposes (e.g. under FRS17, FRS102 or IAS19) or for any other purpose (e.g. a termination valuation under Regulation 38(1)).

This document should not be released or otherwise disclosed to any third party without our prior written consent, in which case it should be released in its entirety. Hymans Robertson LLP accepts no liability to any other party unless we have expressly accepted such liability.

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 previously issued a separate report confirming that the data provided is fit for the purposes of this valuation and have commented on the quality of the data provided. The data used in our calculations is as per our report of 23 July 2014.

#### **Actuarial Standards**

The following Technical Actuarial Standards<sup>1</sup> are applicable in relation to this report and have been complied with where material:

- TAS R Reporting;
- TAS D Data;
- TAS M Modelling; and
- Pensions TAS.

Richard Warden Steven Scott

Fellow of the Institute and Faculty of Actuaries Fellow of the Institute and Faculty of Actuaries

25 March 2015 25 March 2015

March 2015

<sup>&</sup>lt;sup>1</sup> Technical Actuarial Standards (TASs) are issued by the Financial Reporting Council (FRC) and set standards for certain items of actuarial work, including the information and advice contained in this report.



# Appendix A: About the pension fund

For more details please refer to the Fund's Funding Strategy Statement.

The purpose of the Fund is to provide retirement and death benefits to its members. It is part of the Local Government Pension Scheme (LGPS) and is a multi-employer defined benefit pension scheme.

# **Defined benefit pension scheme**

In a defined benefit scheme such as this, the nature of retirement benefits that members are entitled to is known in advance. For example, it is known that members will receive a pension on retirement that is linked to their salary and pensionable service according to a pre-determined formula.

However, the precise cost to the Fund of providing these benefits is **not** known in advance. The estimated cost of these benefits represents a liability to the Fund and assets must be set aside to meet this. The relationship between the value of the liabilities and the value of the assets must be regularly assessed and monitored to ensure that the Fund can fulfil its core objective of providing its members with the retirement benefits that they have been promised.

#### Liabilities

The Fund's liabilities are the benefits that will be paid in the future to its members (and their dependants).

The precise timing and amount of these benefit payments will depend on future experience, such as when members will retire, how long they will live for in retirement and what economic conditions will be like both before and after retirement. Because these factors are not known in advance, assumptions must be made about future experience. The valuation of these liabilities must be regularly updated to reflect the degree to which actual experience has been in line with these assumptions.

#### **Assets**

The Fund's assets arise from the contributions paid by its members and the investment returns that they generate. The way these assets are invested is of fundamental importance to the Fund. The selection, monitoring and evolution of the Fund's investment strategy are key responsibilities of the Administering Authority.

As the estimated cost of the Fund's, liabilities is regularly re-assessed this effectively means that the amount of assets required to meet them is a moving target. As a result, at any given time the Fund may be technically in surplus or in deficit.

A contribution strategy must be put in place which ensures that the employer pays money into the Fund at a rate which will target the cost of the liabilities in respect of benefits already earned by the members and those that will be earned in the future.

# The long-term nature of the Fund

The pension fund is a long-term commitment. Even though the Fund is no longer admitting new entrants, it will still be paying out benefits to existing members and dependants for many decades to come. It is therefore essential that the various funding and investment decisions that are taken now recognise this and come together to form a coherent long-term strategy.

In order to assist with these decisions, the Regulations require the Administering Authority to obtain a formal valuation of the Fund every three years. Along with the Funding Strategy Statement, this valuation will help determine the funding objectives that will apply from 1 April 2015.



# Appendix B: Summary of the Fund's benefits

Provided below is a brief summary of the non-discretionary benefits that we have taken into account for active members at this valuation. This should not be taken as a comprehensive statement of the exact benefits to be paid. For further details please see the Regulations.

Provision	Benefit Structure To 31 March 2009	Benefit Structure From 1 April 2009 to 31 March 2015	Benefit Structure From 1 April 2015
Normal retirement age (NRA)	Age 65.	Age 65.	Equal to the individual member's State Pension Age (minimum 65).
Earliest	As per NRA (age 65).		As per NRA (minimum age 65).
retirement age (ERA) on which immediate			Protections apply to active members in the scheme for pensions earned up to 1 April 2015, due to:
unreduced benefits can be paid on	(b) having the potential to age 65 (if the sum of	to satisfy the rule of 85 prior age (whole years) and	a) Accrued benefits relating to pre April 2015 service at age 65.
voluntary retirement		ars) is 85 or more). The ch the Rule of 85 applies is	b) Continued 'Rule of 85' protection for qualifying members.
	The benefits relating to various segments of scheme membership are protected as follows, which means their benefits are calculated based on the above definitions of earliest retirement age in relation to these protected periods of scheme membership.		c) Members within 10 years of existing NRA at 1 April 2012 – no change to when they can retire and no decrease in pension they receive at existing NRA.
	(a) A member born on 31 March 1960 or earlier – membership up to 31 March 2020 protected;		
	(b) All other members in the scheme immediately prior to 1 December 2006 – membership up to 31 March 2008 protected.		
Member contributions	Officers - 6% of pensionable pay  Manual Workers – 5% of pensionable pay if has protected lower rates rights or 6% for post 31 March 1998 entrants or former entrants with no protected rights.	Tiered rates (5.5%-12.0%) depending upon level of full-time equivalent pay. A mechanism for sharing any increased scheme costs between employers and scheme members is to be included in the LGPS regulations.	Banded rates varying between 5.5% and 12.0% on five different tranches of actual pay. A mechanism for sharing any increased scheme costs between employers and scheme members will be included in the LGPS regulations in due course.  Contribution rates are based on actual pay rather than full-time equivalent pay.
Pensionable pay	All salary, wages, fees and other payments in respect of the employment, excluding non-contractual overtime and some other specified amounts.		Pay including contractual overtime and additional hours but excluding non-contractual elements.
	Some scheme members may be covered by special agreements.		



Provision	Benefit Structure To 31 March 2009	Benefit Structure From 1 April 2009 to 31 March 2015	Benefit Structure From 1 April 2015
Final pay	leaving the scheme. All some cases, e.g. where service or a drop in pen Will be required for the respect of the final sala.	statutory underpin and in ry link that may apply in pers of the CARE scheme	N/A
Period of scheme membership	may be granted (e.g. tra arrangements, augmen award of additional pen	the Fund. Additional periods ansfers from other pension tation, or from April 2009 the sion). For part time members, ortionate with regard to their	N/A
Normal retirement benefits at NRA	Annual Retirement Pension - 1/80th of final pay for each year of scheme membership.  Lump Sum Retirement Grant - 3/80th of final pay for each year of scheme membership.  Additional lump sum can be provided by commutation of pension (within overriding limits) on a basis of £12 additional lump sum for each £1 of pension surrendered.	Scheme membership to 31 March 2009:  Annual Retirement Pension - 1/80th of final pay for each year of scheme membership.  Lump Sum Retirement Grant - 3/80th of final pay for each year of scheme membership.  Scheme membership from 1 April 2009:  Annual Retirement Pension - 1/60th of final pay for each year of scheme membership.  Lump Sum Retirement Grant – none except by commutation of pension.	Scheme membership from 1 April 2015: Annual Retirement Pension - 1/49th of pensionable pay (or assumed pensionable pay) for each year of scheme membership revalued to NRA in line with CPI.  Lump Sum Retirement Grant - none except by commutation of pension.



Benefit Structure To 31 March 2009	Benefit Structure From 1 April 2009 to 31 March 2015	Benefit Structure From 1 April 2015
At the time that benefits come into payment, members have the option to exchange ('commute') some of the retirement pension into additional lump sum. The terms for the conversion of pension in to lump sum is £12 of lump sum for every £1 of annual pension surrendered.	Scheme membership to 31 March 2009:  At the time that benefits come into payment, members have the option to exchange ('commute') some of the retirement pension into additional lump sum. The terms for the conversion of pension in to lump sum is £12 of lump sum for every £1 of annual pension surrendered.  Scheme membership from 1 April 2009:  No automatic lump sum. Any lump sum is to be provided by commutation of pension. The terms for the conversion of pension in to lump sum is £12 of lump sum for every £1 of annual pension surrendered.	No automatic lump sum. Any lump sum is to be provided by commutation of pension (within overriding HMRC limits). The rule for the conversion of pension to lump sum is £12 of lump sum for every £1 of annual pension surrendered.
account of early paymer	nt in some circumstances (in	On retirement from age 60, subject to reduction on account of early payment in some circumstances (in accordance with ERA protections).
On retirement after age 50 with employer's consent a pension and lump sum based on actual scheme membership completed may be paid.	On retirement after age 55 (or age 50 for active members with certain protections on grounds of redundancy of efficiency) with employer's consent a pension and lump sum based on actual scheme membership completed may be paid.	Benefits paid on redundancy or efficiency grounds (for members aged 55 or over) are paid with no actuarial reduction.  Otherwise, benefits are subject to reduction on account of early payment as mentioned in the previous row, unless this is waived by the employer.
are paid with no actuaria Otherwise, benefits are account of early paymer	al reduction. subject to reduction on	
	At the time that benefits come into payment, members have the option to exchange ('commute') some of the retirement pension into additional lump sum. The terms for the conversion of pension in to lump sum is £12 of lump sum for every £1 of annual pension surrendered.  On retirement after age account of early paymer accordance with ERA processor of the conversion of pension in to lump sum for every £1 of annual pension surrendered.	At the time that benefits come into payment, members have the option to exchange ('commute') some of the retirement pension into additional lump sum. The terms for the conversion of pension in to lump sum is £12 of lump sum for every £1 of annual pension surrendered.  At the time that benefits come into payment, members have the option to exchange ('commute') some of the retirement pension into additional lump sum. The terms for the conversion of pension in to lump sum is £12 of lump sum for every £1 of annual pension surrendered.  Scheme membership from 1 April 2009:  No automatic lump sum. Any lump sum is to be provided by commutation of pension. The terms for the conversion of pension in to lump sum is £12 of lump sum for every £1 of annual pension surrendered.  On retirement after age 60, subject to reduction on account of early payment in some circumstances (in accordance with ERA protections).  On retirement after age 50 with employer's consent a pension and lump sum based on actual scheme membership completed may be paid.  Benefits paid on redundancy or efficiency grounds are paid with no actuarial reduction.  Otherwise, benefits are subject to reduction on account of early payment, unless this is waived by



Provision	Benefit Structure To 31 March 2009	Benefit Structure From 1 April 2009 to 31 March 2015	Benefit Structure From 1 April 2015
Ill-health benefits	In the event of premature retirement due to permanent illhealth or incapacity, an immediate pension and lump sum are paid based on actual scheme membership plus an enhancement period of scheme membership.  The enhancement period is dependent on scheme membership at date of leaving and is seldom more than 6 years 243 days.  No reduction is applied due to early payment.	In the event of premature retirement due to permanent ill-health or incapacity and a reduced likelihood of obtaining gainful employment (local government or otherwise) before age 65, an immediate pension and lump sum are due based on actual scheme membership plus an enhanced period of scheme membership.  The enhancement period is: 25% of the period to age 65, if there is reasonable prospect of undertaking gainful employment before age 65; or  100% of the period to age 65, if there is no likelihood of undertaking gainful employment prior to age 65.	As a result of permanent ill-health or incapacity and a reduced likelihood of obtaining gainful employment (local government or otherwise) before age 65.  Immediate payment of unreduced benefits.  Enhanced to scheme membership, dependent on severity of ill health.  100% of prospective pension to age 65 where no likelihood of undertaking any gainful employment prior to age 65.  25% of prospective pension to age 65 where reasonable prospect of undertaking gainful employment before reaching age 65.
Flexible retirement	After 5th April 2006, a member who has attained the age of 50, with his employer's consent, reduces the hours he works, or the grade in which he is employed, may elect in writing to the appropriate Administering Authority that such benefits may, with his employer's consent, be paid to him notwithstanding that he has not retired from that employment.  Benefits are paid immediately and subject to actuarial reduction unless the reduction is waived by the employer.	consent, reduces the hours he employed, may make a reque Administering Authority to reco	eive <b>all or part</b> of his benefits, and subject to actuarial reduction unless



Provision	Benefit Structure To 31 March 2009	Benefit Structure From 1 April 2009 to 31 March 2015	Benefit Structure From 1 April 2015
Pension increases	arising from the paymer are increased partially u	nt of additional voluntary contribunder the Pensions (Increases)	dant's pensions other than benefits outions are increased annually. Pensions Act 1971 and partially in accordance with relating to pre 88 GMP, post 88 GMP and
Death after retirement	A spouse's or civil partner's pension of one half of the member's pension (generally post 1 April 1972 service for widowers' pension and post 6 April 1988 for civil partners) is payable; plus  If the member dies within five years of retiring and before age 75 the balance of five years' pension payments will be paid in the form of a lump sum; plus  Children's pensions may also be payable.	payable at a rate of 1/160th of multiplied by final pay is payable of the member dies within ten	years of retiring and before age 75 the payments will be paid in the form of a
Death in service	A lump sum of two times final pay; plus A spouse's or civil partner's pension of one half of the illhealth retirement pension that would have been paid to the scheme member if he had retired on the day of death (generally post 1 April 1972 service for widowers' pension and post 6 April 1988 for civil partners); plus		cohabiting partner's pension payable at a 's total (augmented to age 65) al pay; plus
Leaving service options	A transfer payment to e in value to the deferred  If the member has comp	it conditions similar to general relither a new employer's scheme pension; or pleted less than two years sche	ne membership, deferred benefits with etirement provisions; or or a suitable insurance policy, equivalent time membership, a return of the member's am deduction and less tax at the rate of



Provision	Benefit Structure To 31 March 2009	Benefit Structure From 1 April 2009 to 31 March 2015	Benefit Structure From 1 April 2015			
State pension scheme		tracted-out of the State Second Pension and the benefits payable to each ranteed to be not less than those required to enable the Fund to be contracted-				
Assumed pensionable pay		N/A	This applies in cases of reduced contractual pay (CP) resulting from sickness, child related and reserve forces absence. In these circumstances benefits are based on an assumption of what pay would have been had the reduction not occurred.			
50/50 option		N/A	Optional arrangement allowing 50% of main benefits to be accrued on a 50% contribution rate.			

Note: Certain categories of members of the Fund are entitled to benefits that differ from those summarised above.

# **Discretionary benefits**

The LGPS Regulations give employers a number of discretionary powers. The effect on benefits or contributions as a result of the use of these provisions as currently contained within the Local Government Pension Scheme Regulations has been allowed for in this valuation to the extent that this is reflected in the membership data provided. No allowance has been made for the future use of discretionary powers that will be contained within the scheme from 1 April 2015.



# Appendix C: About the valuation

For more details please refer to the Fund's Funding Strategy Statement.

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 currently unknown. This cost will not be known with certainty until the last benefit is paid to the last pensioner. The core purpose of this valuation is to estimate what this cost will be, so that the Fund can then develop a strategy to meet it.

Such a valuation can only ever be an estimate – as the future cannot be predicted with certainty. However, as actuaries, we can use our understanding of the Fund and the factors that affect it to determine an anticipated cost which is as sensible and realistic as possible. A decision can then be made as to how much is set aside now to meet this anticipated cost. The pace of this funding can vary according to the level of prudence that is built into the valuation method and assumptions.

For this valuation, as for the previous valuation, our calculations identify separately the expected cost of members' benefits in respect of scheme membership completed before the valuation date ("past service") and that which is expected to be completed after the valuation date ("future service").

#### Past service

The principal measurement here is the comparison at the valuation date of the assets (taken at market value) and the value placed on the Fund's liabilities (calculated using a market-based approach). By maintaining a link to the market in both cases, this helps ensure that the assets and liabilities are valued in a consistent manner. Our calculation of the Fund's liabilities also explicitly allows for expected future pay and pension increases.

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.

The funding target is to eliminate any deficit (or surplus) over a specified period and therefore get back to a funding level of 100%. To do so, additional contributions may be required to be paid into the Fund, either via lump sums or by increasing the contribution rate. These additional contributions are known as the past service adjustment.

#### **Future service**

In addition to benefits that have already been earned by members prior to the valuation date, employee members will continue to earn new benefits in the future. The cost of these new benefits must be met by both the employer and the employees. The employer's share of this cost is known as the future service contribution rate.

For valuation results for the Fund, I have calculated the future service rate as the cost of benefits members will earn over the entirety of their remaining working lifetime, taking account of expected future salary increases until retirement and revaluation of accrued CARE benefits in line with CPI. This funding method is known as the Attained Age Method and is appropriate for funds which are no longer admitting new entrants.



Combining this future service rate with any past service adjustment required to repay a deficit (or reduce a surplus) gives us the total contribution rate. The total rate for the Fund as a whole is known as the common contribution rate. This is really just a notional figure. In practice, the employer will have a contribution rate which reflects its particular circumstances.

# The sensitivity of valuation results

The aim of this valuation is not only to determine these important figures but also to demonstrate their sensitivity to a number of key influences. This will promote an understanding of how the expected cost of the Fund may change in response to uncertain future events (e.g. changes in life expectancy or investment returns). Please refer to **Section 5** for details of the sensitivity analysis.



# Appendix D: Data

This section contains a summary of the membership, investment and accounting data provided by the Administering Authority for the purposes of this valuation (the corresponding membership and investment data from the previous valuation is also shown for reference). For further details of the data, and the checks and amendments performed in the course of this valuation, please refer to our separate report dated 23 July 2014.

#### Membership data

#### **Employee members**

	31 March 2011		31 Ma	rch 2014
	Number Pensionable Pay* (£000)		Number Pensionable Pa (£000)	
Total employee membership	1,499	37,617	1,193	32,655

<sup>\*</sup>actual pay (not full-time equivalent)

# **Deferred pensioners**

	31 March 2011		31 Ma	rch 2014
	Number			Deferred pension
		(£000)		(£000)
Total deferred membership	1,296	2,199	1,252	2,412

The figures above also include any "frozen refunds" and "undecided leavers" at the valuation date.

# **Current pensioners, spouses and children**

	31 March 2011		31 Ma	rch 2014
	Number	Pension (£000)	Number	Pension (£000)
Members	1,089	5,797	1,183	6,705
Dependants	269	683	309	873
Children	22	18	19	26
Total pensioner members	1,380	6,497	1,511	7,605

Note that the membership numbers in the table above refer to the number of records provided to us and so will include an element of double-counting in respect of any members who are in receipt (or potentially in receipt of) more than one benefit.

Membership Profile	Average Age (years)		FWL (years)	
	2011	2014	2011	2014
Employees	50.9	51.5	9.0	11.7
Deferred Pensioners	50.2	50.9	-	-
Pensioners	66.3	67.4	-	-

The average ages are weighted by liability.

The expected future working lifetime (FWL) indicates the anticipated length of time that the average employee member will remain as a contributor to the Fund. Note that it allows for the possibility of members leaving, retiring early or dying before retirement.



#### Assets at 31 March 2014

A summary of the Fund's assets (excluding members' money-purchase Additional Voluntary Contributions) as at 31 March 2014 and 31 March 2011 is as follows:

Asset class	Market Value at 31 March 2011	Allocation	Market Value at 31 March 2014	Allocation
	(0003)	%	(0003)	%
Equities	190,970	74%	221,274	66%
Bonds	38,212	15%	53,888	16%
Property (including alternatives)	22,204	9%	40,601	12%
cash and net current assets	5,626	2%	21,362	6%
Total	257,012	100%	337,125	100%

# Accounting data - revenue account for the three years to 31 March 2014

Consolidated accounts (£000)		Year to		
	31 March 2012	31 March 2013	31 March 2014	Total
ncome				
Employer - normal contributions	7,830	7,147	7,126	22,104
Employer - additional contributions	0	0	0	0
Employer - early retirement and augmentation strain contributions	298	0	0	298
Employee - normal contributions	2,332	2,234	2,196	6,763
Employee - additional contributions	26	27	26	79
Fransfers In Received (including group and individual)	0	0	0	0
Other Income	0	0	0	0
Total Income	10,486	9,408	9,349	29,243
Expenditure				
Gross Retirement Pensions	6,579	7,015	7,358	20,953
Lump Sum Retirement Benefits	1,712	2,136	1,819	5,667
Death in Service Lump sum	144	237	213	594
Death in Deferment Lump Sum	0	0	0	0
Death in Retirement Lump Sum	0	0	0	0
Gross Refund of Contributions	0	2	0	2
Transfers out (including bulk and individual)	67	112	218	397
Fees and Expenses	145	110	110	365
Total Expenditure	8,647	9,613	9,719	27,978
Net Cashflow	1,839	-205	-370	1,265
Assets at start of year	257,012	271,449	311,910	257,012
Net cashflow	1,839	-205	-370	1.265
Change in value	12,597	40,666	25,585	78,848
Assets at end of year	271,449	311,910	337,125	337,125
Approximate rate of return on assets	4.9%	15.0%	8.2%	30.5%

Note that the figures above are based on the Fund accounts provided to us for the purposes of this valuation, which were fully audited at the time of our valuation calculations.



# Appendix E: Assumptions

**Financial assumptions** 

Financial assumptions	31 March 2011	31 Marc	ch 2014
	(% p.a.)	Funding Basis (%p.a)	Gilts Basis (%p.a)
Discount rate	5.8%	5.0%	3.5%
Retail Price inflation	3.6%	3.5%	3.5%
Pay increases*	5.1**	5.0%**	5.0%***
Pension increases:			
pension in excess of GMP	2.8%	2.7%	2.7%
post-88 GMP	2.8%	2.7%	2.7%
pre-88 GMP	0.0%	0.0%	0.0%
Revaluation of deferred pension	2.8%	2.7%	2.7%
Revaluation of accrued CARE pension	-	2.7%	2.7%
Expenses	0.3%	0.3%	0.3%

<sup>\*</sup>Excluding promotional increases

# **Mortality assumptions**

Mortanty assumptions	
Longevity assumptions	31 March 2014
Longevity - baseline	Vita curves
Longevity - improvements	
CMI Model version used	CMI_2012
Starting rates	CMI calibration based on data from Club Vita using the latest available data as at December 2012.
Long term rate of improvement	Period effects:
	1.25% p.a. for men and women.
	Cohort effects:
	0% p.a. for men and for women.
Period of convergence	Period effects:
	CMI model core values i.e. 10 years for ages 50 and below and 5 years for those aged 95 and above, with linear transition to 20 years for those aged between 60 and 80.
	Cohort effects:
	CMI core i.e. 40 years for those born in 1947 or later declining linearly to 5 years for those born in 1912 or earlier.
Proportion of convergence remaining at mid point	50%

The longevity improvement assumption is based on the latest industry standard and combined information from our longevity experts in Club Vita. The start point for the improvements has been based on observed death rates in the Club Vita data bank over the period.

In the short term we have assumed that the 'cohort effect' of strong improvements in life expectancy currently being observed amongst a generation born around the early and mid-1930s will start to tail off, resulting in life expectancy increasing less rapidly than has been seen over the last decade or two. This is known as 'peaked'.

In the long term (post age 70) we have assumed that increases in life expectancy will stabilise at a rate of increase of 1 year per decade for men and women. This is equivalent to assuming that longer term mortality rates will fall at a rate of 1.25% p.a. for men and women.

<sup>\*\* 2.4%</sup> p.a. for 2011/12, 3.1% p.a. 2012/13, reverting to 5.1% p.a. thereafter

<sup>\*\*\* 2%</sup> p.a. for 2014/15 and 2015/16, reverting to 5.0% p.a. thereafter.



However, we have assumed that post age 90 improvements in mortality are hard to achieve, declining between ages 90 and 120 so that no improvements are seen at ages 120 and over.

As a member of Club Vita, the longevity assumptions that have been adopted at this valuation are a bespoke set of VitaCurves that are specifically tailored to fit the membership profile of the Fund. These curves are based on the data you have provided us with for the purposes of this valuation. Full details of these are available on request.

# Other demographic valuation assumptions

Retirements in ill health Allowance has been made for ill-health retirements before

Normal Pension Age (see table below).

Withdrawals Allowance has been made for withdrawals from service (see

table below).

Family details A varying proportion of members are assumed to be married (or

have an adult dependant) at retirement or on earlier death. For example, at age 60 this is assumed to be 90% for males and 85% for females. Husbands are assumed to be 3 years older

than wives.

Commutation 50% of future retirements elect to exchange pension for

additional tax free cash up to HMRC limits for service to 1 April

2009 (equivalent 75% for service from 1 April 2009).

50:50 option No members will choose the 50:50 option.

The tables below show details of the assumptions actually used for specimen ages. The promotional pay scale is an annual average for all employees at each age. It is in addition to the allowance for general pay inflation described above. For membership movements, the percentages represent the probability that an individual at each age leaves service within the following twelve months.



# **Death in Service tables:**

	Incidence per 1000 active members per annum								
Age	Male officers and Post 98	Male Manuals	Female officers and Post 98	Female Manuals					
	Death	Death	Death	Death					
20	0.26	0.32	0.14	0.17					
25	0.26	0.32	0.14	0.17					
30	0.31	0.38	0.20	0.26					
35	0.36	0.45	0.34	0.43					
40	0.61	0.77	0.54	0.68					
45	1.02	1.28	0.88	1.11					
50	1.63	2.04	1.29	1.62					
55	2.55	3.19	1.70	2.13					
60	4.59	5.74	2.18	2.72					
65	7.65	9.56	2.79	3.49					

# **III Health Early Retirements tables**

Tier 1

	Incidence for 1000 active members per annum									
Age	Male Officers & Post 98 Males		Male M	1anuals		cers & Post 98 males	Female Manuals			
	II	l Health	III He	ealth	III F	Health	III He	ealth		
	FT	PT	FT	PT	FT	PT	FT	PT		
20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
25	0.00	0.00	0.76	0.60	0.19	0.15	0.99	0.79		
30	0.00	0.00	1.39	1.11	0.25	0.20	1.44	1.15		
35	0.19	0.15	2.08	1.66	0.50	0.40	1.98	1.58		
40	0.32	0.25	3.02	2.42	0.76	0.60	2.88	2.30		
45	0.69	0.55	4.16	3.33	1.01	0.81	3.78	3.02		
50	1.76	1.41	6.17	4.94	1.89	1.51	5.04	4.03		
55	6.91	5.53	14.61	11.69	7.01	5.61	13.54	10.83		
60	12.16	9.73	23.42	18.74	14.86	11.89	23.81	19.05		
65	23.10	18.48	45.15	36.12	26.71	21.37	45.15	36.12		

Tier 2

	Incidence for 1000 active members per annum								
Age		cers & Post 98 Males	Male M	1anuals		cers & Post 98 males	Female Manuals		
	II	l Health	III He	ealth	III F	Health	III He	ealth	
	FT	PT	FT	PT	FT	PT	FT	PT	
20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
25	0.00	0.00	0.80	0.64	0.20	0.16	1.05	0.84	
30	0.00	0.00	1.47	1.18	0.27	0.21	1.53	1.22	
35	0.20	0.16	2.21	1.77	0.54	0.43	2.10	1.68	
40	0.33	0.27	3.21	2.57	0.80	0.64	3.06	2.45	
45	0.74	0.59	4.42	3.53	1.07	0.86	4.02	3.21	
50	2.37	1.90	8.31	6.65	2.54	2.03	6.78	5.43	
55	5.34	4.27	11.29	9.03	5.42	4.33	10.47	8.37	
60	4.58	3.66	8.82	7.05	5.60	4.48	8.96	7.17	
65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	



# Withdrawal

# Less than 1 year

	Incidence for 1000 active members per annum											
٨٠٠	Male C	Officers	Male N	lanuals	Female	Officers	Female	Manuals	Post 98	3 Males	Post 98 Females	
Age	Withd	rawals	Withd	rawals	Withd	rawals	Withdrawals		Withdrawals		Withdrawals	
	FT	PT	FT	PT	FT	PT	FT	PT	FT	PT	FT	PT
20	304.04	506.74	304.04	506.74	288.39	400.55	288.39	400.55	557.41	750.00	384.52	640.87
25	200.83	334.72	200.83	334.72	194.00	269.45	194.00	269.45	368.19	736.38	258.67	431.11
30	142.46	237.40	142.46	237.43	162.58	225.80	162.58	225.80	261.17	522.34	216.77	361.28
35	111.28	185.44	111.28	185.47	140.22	194.75	140.22	194.75	204.02	408.04	186.96	311.60
40	89.55	149.18	89.55	149.25	116.62	161.98	116.62	161.98	164.17	328.34	155.50	259.16
45	73.28	121.99	73.28	122.13	96.01	133.34	96.01	133.34	134.34	268.69	128.01	213.35
50	56.76	94.52	56.76	94.60	73.15	101.60	73.15	101.60	104.06	208.12	97.54	162.56
55	49.18	81.86	49.18	81.97	56.39	78.32	56.39	78.32	90.17	180.34	75.18	125.30
60	29.81	49.62	29.81	49.68	26.21	36.40	26.21	36.40	54.65	109.30	34.94	58.24

# Between 1-2 years

		Incidence for 1000 active members per annum											
٨٥٥	Male C	Officers	Male N	lanuals	Female	Officers	Female	Manuals	Post 98	3 Males	Post 98 Females		
Age	Withd	rawals	Withd	rawals	Withd	rawals	Withd	rawals	Withd	rawals	Withdrawals		
	FT	PT	FT	PT	FT	PT	FT	PT	FT	PT	FT	PT	
20	152.02	253.37	152.02	253.37	144.20	200.27	144.20	200.27	278.70	557.41	192.26	320.44	
25	100.42	167.36	100.42	167.36	97.00	134.72	97.00	134.72	184.10	368.19	129.33	215.56	
30	71.23	118.70	71.23	118.71	81.29	112.90	81.29	112.90	130.59	261.17	108.39	180.64	
35	55.64	92.72	55.64	92.74	70.11	97.38	70.11	97.38	102.01	204.02	93.48	155.80	
40	44.77	74.59	44.77	74.62	58.31	80.99	58.31	80.99	82.09	164.17	77.75	129.58	
45	36.64	60.99	36.64	61.07	48.00	66.67	48.00	66.67	67.17	134.34	64.00	106.67	
50	28.38	47.26	28.38	47.30	36.58	50.80	36.58	50.80	52.03	104.06	48.77	81.28	
55	24.59	40.93	24.59	40.99	28.19	39.16	28.19	39.16	45.08	90.17	37.59	62.65	
60	14.90	24.81	14.90	24.84	13.10	18.20	13.10	18.20	27.32	54.65	17.47	29.12	

# Greater than 2 years

	Incidence for 1000 active members per annum											
Age	Male C	Officers	Male N	lanuals	Female Officers		Female Manuals		Post 98	8 Males	Post 98 Females	
Age	Withd	rawals	Withd	rawals	Withd	rawals	Withd	rawals	Withd	rawals	Withd	rawals
	FT	PT	FT	PT	FT	PT	FT	PT	FT	PT	FT	PT
20	89.89	149.82	89.89	149.82	85.26	118.42	85.26	118.42	164.80	329.60	113.69	189.48
25	59.38	98.96	59.38	98.96	57.36	79.66	57.36	79.66	108.86	217.71	76.48	127.46
30	42.12	70.19	42.12	70.20	48.07	66.76	48.07	66.76	77.22	154.43	64.09	106.81
35	32.90	54.82	32.90	54.84	41.46	57.58	41.46	57.58	60.32	120.64	55.28	92.13
40	26.48	44.10	26.48	44.13	34.48	47.89	34.48	47.89	48.54	97.08	45.97	76.62
45	21.66	36.05	21.66	36.11	28.38	39.42	28.38	39.42	39.72	79.44	37.85	63.08
50	16.78	27.94	16.78	27.97	21.63	30.04	21.63	30.04	30.77	61.53	28.84	48.06
55	14.54	24.19	14.54	24.24	16.67	23.15	16.67	23.15	26.66	53.32	22.23	37.05
60	8.81	14.66	8.81	14.69	7.75	10.76	7.75	10.76	16.16	32.31	10.33	17.22

# **Promotional salary scale**

	Promotional Salary Scales								
Age		Male Officers & Post 98 Males		lanuals		cers & Post males	Female Manuals		
	FT	PT	FT	PT	FT	PT	FT	PT	
20	100	100	100	100	100	100	100	100	
25	135	116	100	100	118	105	100	100	
30	169	134	100	100	137	111	100	100	
35	192	146	100	100	151	116	100	100	
40	208	153	100	100	163	121	100	100	
45	222	154	100	100	166	122	100	100	
50	236	154	100	100	166	122	100	100	
55	239	154	100	100	166	122	100	100	
60	239	154	100	100	166	122	100	100	
65	239	154	100	100	166	122	100	100	



# Appendix F: Events since valuation date

## **Post-valuation events**

These valuation results are in effect a snapshot of the Fund as at 31 March 2014. Since that date, various events have had an effect on the financial position of the Fund. Whilst we have not explicitly altered the valuation results to allow for these events, a short discussion of these "post-valuation events" can still be beneficial in understanding the variability of pension funding.

#### **Investment conditions since 31 March 2014**

In the period from the valuation date to 31 January 2015, investment markets moved in the following manner:

- asset returns have been between 12-14%
- long term Government bond yields have fallen by more than long term expected price inflation, which is likely to have increased the past service liabilities by around 17-20%

It should be noted that the above is for information only: the figures in this report have all been prepared using membership data, audited asset information and market-based assumptions all as at 31 March 2014. In particular, we do not propose amending the contribution rates listed in the Rates & Adjustments Certificate on the basis of these market changes. In addition, these rates are finalised within a risk-measured framework as laid out in the Fund's Funding Strategy Statement (FSS).

We do not propose altering the FSS to include allowance for post-valuation date market changes, since this principle would then need to be adopted for future valuations even if markets had worsened since the valuation date (thus increasing contribution rates). Such a change in principle would then obstruct advance planning by employers. Only allowing for market changes where these reduced contribution rates, and not where they increased the rates, would not be consistent with prudent financial management of the Fund.

# Other events

In addition to changes in market conditions since the valuation date, we have also considered the potential impact of planned membership movements, expected to occur in the near future. Our conclusion is that no changes to the agreed rates or the FSS are required.



# Appendix G: Rates and Adjustments certificate

In accordance with regulation 32(1) of the Administration Regulations we have made an assessment of the contributions that should be paid into the Fund by the participating employer for the period 1 April 2015 to 31 March 2018 in order to maintain the solvency of the Fund.

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 25 March 2015 and our report on the actuarial valuation dated 25 March 2015.

The required minimum contribution rates are set out in the table overleaf.

# Signature:

Date: 25 March 2015 25 March 2015

Name: Richard Warden Steven Scott

Qualification: Fellow of the Institute and Fellow of the Institute and

Faculty of Actuaries Faculty of Actuaries

Firm: Hymans Robertson LLP Hymans Robertson LLP

20 Waterloo Street 20 Waterloo Street

Glasgow Glasgow

G2 6DB G2 6DB



# Statement to the Rates and Adjustments certificate

The Common Rate of Contribution payable by each employing authority under regulation 32(4)(a) of the Administration Regulations for the period 1 April 2015 to 31 March 2018 is 11.1% of pensionable pay (as defined in Appendix B).

Individual Adjustments are required under regulation 32(4)(b) of the Administration Regulations for the period 1 April 2015 to 31 March 2018 resulting in Minimum Total Contribution Rates expressed as a percentage of pensionable pay are as set out below.

Period	Employer Minimum Contribution Rate
1 April 2015 to 31 December 2015	21.7%
1 January 2016 to 31 December 2016	22.9%
1 January 2017 to 31 December 2017	24.1%
1 January 2018 to 31 March 2018	24.1%

#### **Notes**

Contributions expressed as a percentage should be paid into Lothian Buses Pension Fund ('the Fund') at a frequency in accordance with the requirements of the Regulations.

Further sums should be paid to the Fund to meet the costs of any early retirements and/or augmentation (i.e. additional membership or additional pension) using methods and factors issued by us from time to time, or GAD guidance if we consider it to be appropriate.

In addition, further sums may be required to be paid to the Fund by the employer to meet the capital costs of any ill-health retirements that exceed those included within our assumptions.

The certified contribution rates represent the minimum level of contributions to be paid. The employer may pay further amounts at any time and future periodic contributions may be adjusted on a basis approved by the Fund actuary.

Hymans Robertson LLP has carried out an actuarial valuation of the Lothian Buses Pension Fund ("the Fund") as at 31 March 2014, details of which are set out in the report dated 25 March 2015 ("the Report"), addressed to City of Edinburgh Council ("the Client"). The Report was prepared for the sole use and benefit of our Client and not for any other party; and Hymans Robertson LLP makes no representation or warranties to any third party as to the accuracy or completeness of the Report.

The Report was not prepared for any third party and it will not address the particular interests or concerns of any such third party. The Report is intended to advise our Client on the past service funding position of the Fund at 31 March 2014 and employer contribution rates from 1 April 2015, and should not be considered a substitute for specific advice in relation to other individual circumstances.

As this Report has not been prepared for a third party, no reliance by any party will be placed on the Report. It follows that there is no duty or liability by Hymans Robertson LLP (or its members, partners, officers, employees and agents) to any party other than the named Client. Hymans Robertson LLP therefore disclaims all liability and responsibility arising from any reliance on or use of the Report by any person having access to the Report or by anyone who may be informed of the contents of the Report.

Hymans Robertson LLP is the owner of all intellectual property rights in the Report and the Report is protected by copyright laws and treaties around the world. All rights are reserved.

The Report must not be used for any commercial purposes unless Hymans Robertson LLP agrees in advance.