

Hymans Robertson LLP has carried out an actuarial valuation of the Hertfordshire County Council Pension Fund ("the Fund") as at 31 March 2013, details of which are set out in the report dated 28 March 2014 ("the Report"), addressed to Hertfordshire County 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.

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Hertfordshire County Council Pension Fund 2013 Actuarial Valuation Valuation Report

HYMANS ■ ROBERTSON

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1 Executive summary

We have carried out an actuarial valuation of the Hertfordshire County Council Pension Fund ('the Fund') as at 31 March 2013. 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 2013 in respect of benefits earned by members up to this date.

Past Service Position	31 March 2010	31 March 2013
	(£m)	(£m)
Past Service Liabilities	2,951	3,525
Market Value of Assets	2,194	2,908
Surplus / (Deficit)	(757)	(617)
Funding Level	74.3%	82.5%

The decrease in deficit reflects the strong investment performance that the Fund has achieved since the previous valuation which has increased the value of the assets. This has been offset by the decrease in the real gilt yield which has increased the value placed on the Fund's liabilities.

Contribution rates

The table below summarises the average employer contribution rate that would be required, based on this triennial valuation.

Contribution Rates	31 March 2010	31 March 2013
	(% of pay)	(% of pay)
Employer future service rate (incl. expenses)	16.8%	18.7%
Past Service Adjustment (20 year spread)	9.3%	7.3%
Total employer contribution rate (incl. expenses)	26.0%	26.1%
Employee contribution rate	6.6%	6.3%
Expenses	0.4%	0.4%

The increase in the total employer contribution rate is primarily due to the decrease in the real gilt yields which has increased the employer future service rate. The past service adjustment has decreased due to the fall in deficit.

The common contribution rate is a theoretical figure – an average across the whole Fund. In practice, each employer that participates in the Fund has its own underlying funding position and circumstances, giving rise to its own contribution rate requirement. The minimum contributions to be paid by each employer from 1 April 2014 to 31 March 2017 are shown in the Rates and Adjustment Certificate in **Appendix G**.



2 Introduction

Purpose

The main purposes of this valuation are:

- to assess the extent to which the Administering Authority's funding objectives were met at 31 March 2013;
- to identify the future contributions payable by the employers that participate in the Fund in order to meet the Administering Authority's funding objectives;
- to enable completion of all relevant certificates and statements in connection with all applicable regulations;
- to comment on the main risks to the Fund that may result in future volatility in the funding position or to employers' contributions.

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 (mentioned in **section 7**);
- The Discussion Document (dated 12 November 2013) which outlined the preliminary assumption proposals and whole fund results;
- The formal agreement by the Administering Authority of the actuarial assumptions used in this document, at a meeting dated 30 September 2013;
- The stabilisation modelling carried out for certain employers, as detailed in our reports and presentation to the Administering Authority at the meeting dated 31 May 2013; and
- The Funding Strategy Statement, confirming the different contribution rate setting approaches for different types of employer or in different circumstances.

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 are shown below.

Financial assumptions	31 March 2010		31 March 2013	
	Nominal	Real	Nominal	Real
Discount Rate	6.1%	2.8%	4.8%	2.3%
Salary Increases*	5.3%**	2.0%	3.8%	1.3%
Price Inflation / Pension Increases	3.3%	-	2.5%	-

* Plus an allowance for promotional pay increases.

**1% p.a. for 2010/11 and 2011/12, 3.8% p.a. for 2012/13, 2013/14 and 2014/15, reverting to 5.3% p.a. thereafter.

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 downward shift in the expected returns on risky assets since the 2010 valuation, we believe the expected returns in excess of the returns on government bonds to be broadly unchanged since 2010. Further, the Fund Actuary and Investment advisor discussed an appropriate target long term investment return. Therefore, we are satisfied that an AOA of 1.8% p.a. is a prudent assumption for the purposes of this valuation. This results in a discount rate of 4.8% p.a.

Price inflation / pension increases

Due to further analysis of the CPI index since 2010, we expect the average long term difference between RPI and CPI to be 0.8% p.a. compared with 0.5% p.a. at the 2010 valuation.



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 long term assumption for salary increases is RPI plus 0.5% p.a. This is a change in approach from 2010 where we assumed 1% p.a. for 2 years, RPI p.a. for the following 3 years and then RPI plus 1.5% p.a. thereafter.

We have set a lower long term rate of salary growth to reflect both short term pay constraints and the belief that general economic growth and hence pay growth may be at a lower level than historically experienced for a prolonged period of time.

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 expected pay rises 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:

Assumed life expectancy at age 65	Actives & Deferreds		Current Pensioners	
	Male	Female	Male	Female
2010 valuation - baseline	18.1	20.8	18.1	20.8
2010 valuation - improvements	22.9	25.7	21.0	23.8
2013 valuation - baseline	20.0	22.7	20.1	22.5
2013 valuation - improvements	24.3	26.7	22.3	24.5

Further details of the mortality 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 2013. We have also included an allowance for expected future payments to be received in relation to the Magistrates bulk transfer as we understand these have been included in the audited asset value. The audited asset value also includes an allowance for the expected future payments in respect of early retirement strain and augmentation costs granted prior to the valuation date, for consistency with the liabilities and with the previous valuation.

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 tailor 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 Discussion Document.



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 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 employer 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 2013. The 31 March 2010 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.

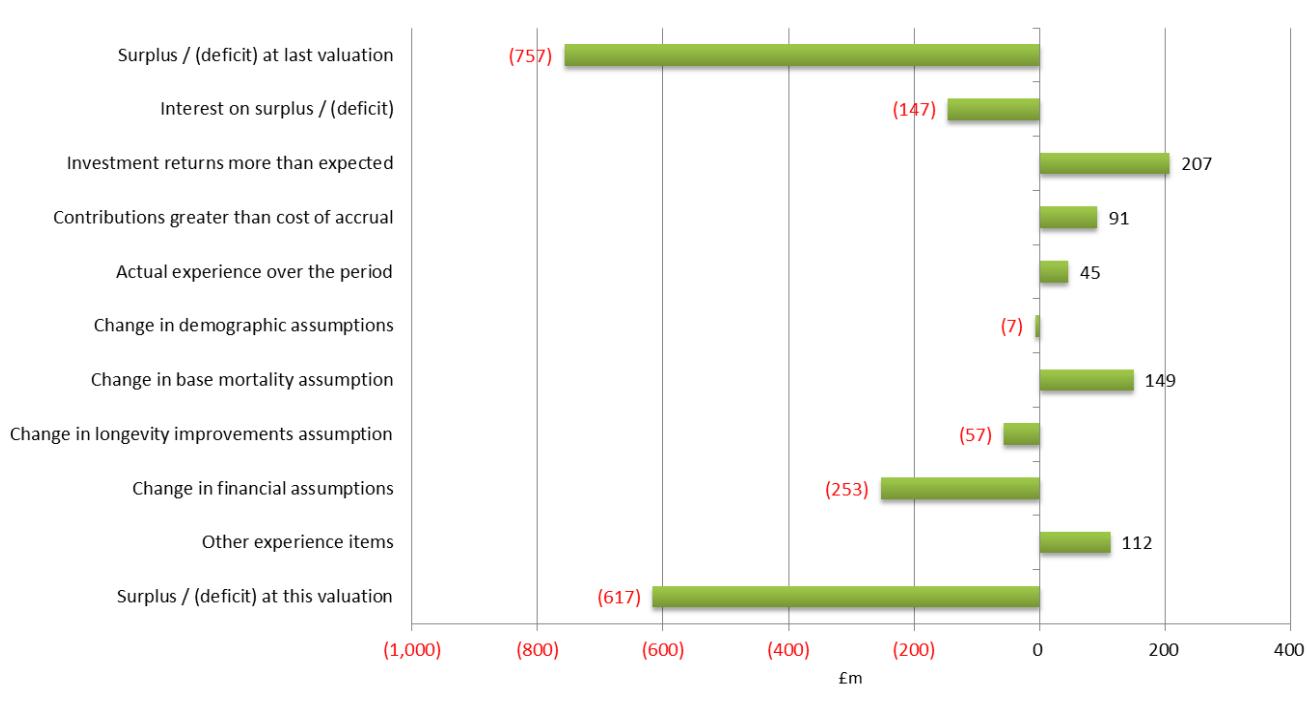
Valuation Date	31 March 2010	31 March 2013
Past Service Position	(£m)	(£m)
Past Service Liabilities		
Employees	1,167	1,277
Deferred Pensioners	553	690
Pensioners	1,232	1,558
Total Liabilities	2,951	3,525
Market Value of Assets	2,194	2,908
Surplus / (Deficit)	(757)	(617)
Funding Level	74.3%	82.5%

The main funding objective was not met: there was a shortfall of assets to the assessed cost of members’ benefits of £617m.



Summary of changes to the funding position

The chart below illustrates the factors that caused the funding position to improve between 31 March 2010 and 31 March 2013:



Further comments on some of the items in this chart:

- There is an interest cost of £147m. This is broadly three years of compound interest at 6.1% p.a. applied to the previous valuation deficit of £757m.
- Investment returns being higher than expected since 2010 lead to a gain of £207m. This is roughly the difference between the actual and expected three-year return (roughly 9%) applied to the whole fund assets from the previous valuation of £2,194m, with a further allowance made for cashflows during the period.
- The overall impact of demographic experience has been a gain of £136m. Underlying this figure, contributions greater than cost of accrual, salary growth less than expected, ill-health retirement experience and early retirement experience have all had a positive impact. This has been partially offset by pension increases being greater than expected and, withdrawal, mortality and commutation experience all having a small negative impact.
- The impact of the change in demographic assumptions has been a loss of around £7m.
- The change in mortality assumptions (baseline and improvements) has given rise to a gain of £92m. This is due to the saving from using Club Vita curves at this valuation of £149m which has been partially offset by the change in assumed future longevity improvements.
- The change in financial conditions between the previous valuation has led to a loss of £253m. This is due to a decrease in the real discount rate between 2010 and 2013. This has been partially been offset by the 0.8% p.a. increase in our assumption of the gap between RPI and CPI, and our lower long term assumption for salary growth.
- Other experience items, such as changes in the membership data, have served to decrease the deficit at this valuation by around £112m.



- Note that the benefit changes that come into effect as at 1 April 2014 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 the Fund employers would need to pay to meet the estimated cost of members' benefits that will be earned after 31 March 2013 (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 2013 and shows the 31 March 2010 for comparison.

Valuation Date	31 March 2010	31 March 2013
Future service rate	% of pay	% of pay
Employer future service rate (excl. expenses)	16.3%	18.3%
Expenses	0.4%	0.4%
Total employer future service rate (incl. expenses)	16.8%	18.7%
Employee contribution rate	6.6%	6.3%

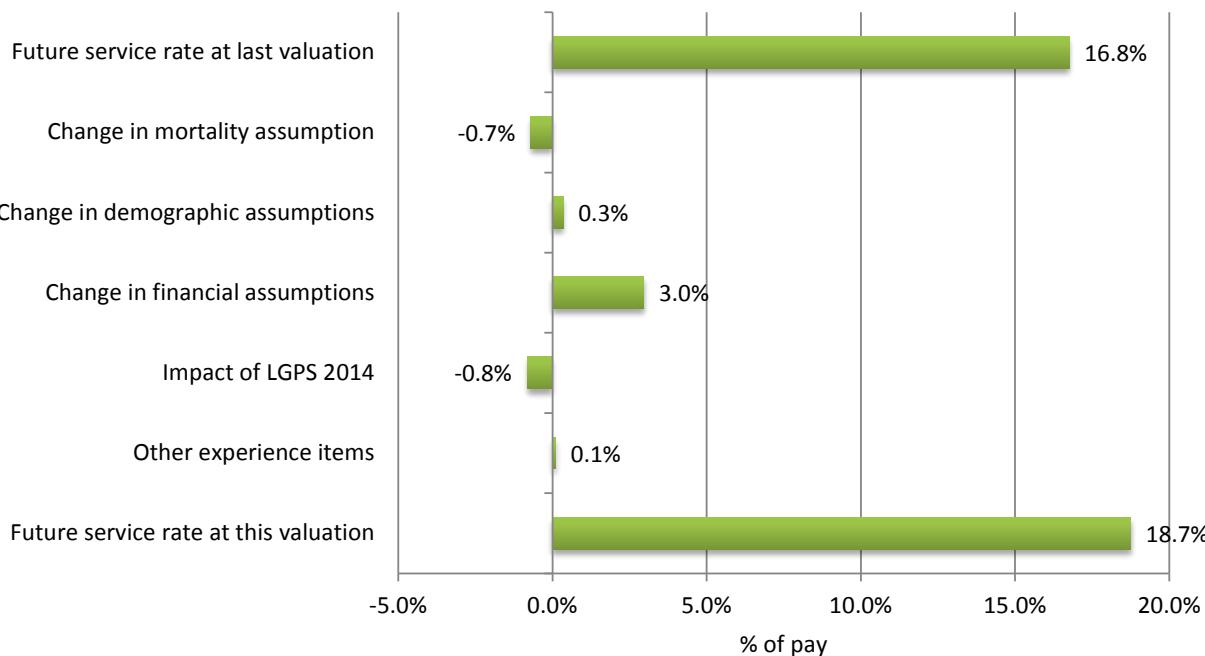
Note that the employee contribution rate includes any additional contributions being paid by employees as at 31 March 2013 into the Fund. This future service contribution rate makes no allowance for the past service deficit in the Fund described above.

The average future service rate for Fund employers is 18.7% of pay. This rate is calculated as at 31 March 2013 and therefore forms part of the total contribution rate payable by employers from 1 April 2014. Note this rate makes an allowance for changes to the benefit structure that takes effect from 1 April 2014. In practice, a future service rate for each employer has been calculated which is based on their particular circumstances and membership profile. The rate above is an average future service rate for the Fund as a whole.



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 2010 and 31 March 2013:



As can be seen from this chart, the factors that have had the biggest impact on the future service rate between 2010 and 2013 are broadly similar to those discussed for the past service position.

In addition to this, the impact of the LGPS 2014 scheme has resulted in a reduction in contribution rate of 0.8% of payroll.

Total common contribution rate payable

The total (or “common”) contribution rate payable is the average future service rate for Fund employers plus an additional amount to recover the deficit and bring the funding level back to 100% over a period of 20 years, as set out in the Funding Strategy Statement. This additional amount is referred to as the past service adjustment.

The common contribution rate based on the funding position as at 31 March 2013 is detailed below along with the results for 31 March 2010:

Valuation Date	31 March 2010	31 March 2013
Total contribution rate	% of pay	% of pay
Future service rate (incl. expenses)	16.8%	18.7%
Past service adjustment (20 year spread)	9.3%	7.3%
Total employer contribution rate	26.0%	26.1%

This does not represent the rate which any one employer is actually required to pay, nor is it the average of the actual employer rates. The actual employer contributions payable from 1 April 2014 are given in **Appendix G**, and these have been devised in line with the Funding Strategy Statement: see **section 6**.



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 2013.

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.

Assumption	Change	Impact	
		Deficit (£m)	Future service rate (% of pay)
Discount rate	Increases by 0.5%	Falls by £296m	Falls by 2.9%
Salary increases	Increases by 0.5%	Rises by £85m	-
Price inflation / pension increases	Increases by 0.5%	Rises by £236m	Rises by 2.9%
Life expectancy	Increases by 1 year	Rises by £106m	Rises by 0.7%

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 biggest 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 therefore 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 1.8% 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 2013 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.

Index Linked Gilt Yield	-0.10%	80%	86%	91%
		(666)	(493)	(320)
-0.30%	25.6%	23.5%	21.4%	
	78%	83%	87%	
	(788)	(617)	(442)	
-0.50%	28.1%	26.1%	24.0%	
	75%	80%	84%	
	(915)	(742)	(569)	
	30.7%	28.7%	26.6%	
	5912	6412	6912	
	FTSE 100 Price Index			

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 2013 are affected by adopting different longevity assumptions.

Longevity assumption	Impact	
	Deficit (£m)	Future service rate
2013 valuation (with improvements)	(617)	18.7%
2013 valuation (further improvements)	(756)	19.7%
1 year extra	(866)	20.4%

The shaded box contains the results for this valuation.

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 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.

Factor	Impact	
	Funding level	Future service rate
Greater level of ill health retirement	Decreases	Marginal
Reduced level of withdrawals	Decreases	Marginal
Rise in average age of employee members	Marginal effect	Increases
Lower take up of 50:50 option	No impact	Increases

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 and employers (e.g. relating to early / ill health retirements or salary increases) in a bid to curtail any adverse impact on the Fund.



- Pooling certain employers together at the valuation and then setting a single (pooled) contribution rate that they will all pay. This can help to stabilise contribution rates (at the expense of cross-subsidy between the employers in the pool during the period between valuations).
- Carrying out a review of the future security of the Fund's employers (i.e. assessing the strength of 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 exactly 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. An assessment can then be made as to whether long term, secure employers in the Fund can stabilise their future contribution rates (thus introducing more certainty into their future budgets) without jeopardising the long-term health of the Fund. This is exactly what our ComPASS tool does.
- Purchasing ill health liability insurance to mitigate the risk of an ill health retirement impacting on solvency and funding level of an individual employer where appropriate.
- Monitoring different employer characteristics in order to build up a picture of the risks posed. Examples include membership movements, cash flow positions and employer events such as cessations.

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 different types of employer in different circumstances have their contributions 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.;
- the Fund's risk register; and
- the register of Fund employers.

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 2016. In light of the uncertainty of future financial conditions, we recommend that the financial position of the Fund (and for individual employers in some cases) is 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.

New employers joining the Fund

Any new employers or admission bodies joining the Fund should be referred to the Fund actuary for individual calculation as to the required level of contribution.

Additional payments

Employers 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 by employers 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 by employers to meet the capital costs of any ill-health retirements that exceed those allowed for within our assumptions.



Cessations and bulk transfers

Any Admission Body who ceases to participate in the Fund should be referred to us in accordance with Regulation 38 of the Administration Regulations.

Any bulk movement of scheme members:

- involving 10 or more scheme members being transferred from or to another LGPS fund, or
- involving 2 or more scheme members being transferred from or to a non-LGPS pension arrangement should be referred to us to consider the impact on the Fund.



7 Reliances and limitations

Scope

This document has been requested by and is provided to Hertfordshire County Council in its capacity as Administering Authority to the Hertfordshire County Council 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 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 February 2014.

Actuarial Standards

The following Technical Actuarial Standards¹ 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.

Barry McKay

Fellow of the Institute and Faculty of Actuaries

28 March 2014

Julie West

Fellow of the Institute and Faculty of Actuaries

28 March 2014

¹ 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 value placed on 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 their employers 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 each of the Fund's employers pays money into the Fund at a rate which will target the cost of its share of the liabilities in respect of benefits already earned by 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 if it were to stop admitting new members today, it would 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 2014.



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 shouldn't 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 2008	Benefit Structure From 1 April 2008	Benefit Structure From 1 April 2014
Normal retirement age (NRA)	Age 65.	Age 65.	Equal to the individual member's State Pension Age (minimum 65).
Earliest retirement age (ERA) on which immediate unreduced benefits can be paid on voluntary retirement	As per NRA (age 65). Protections apply to active members in the scheme immediately prior to 1 October 2006 who would have been entitled to immediate payment of unreduced benefits prior to 65, due to: The benefits relating to various segments of scheme membership are protected as set out in Schedule 2 to the Local Government Pension Scheme (Transitional Provisions) Regulations 2008 and associated GAD guidance.		As per NRA (minimum age 65). Protections apply to active members in the scheme for pensions earned up to 1 April 2014, due to: a) Accrued benefits relating to pre April 2014 service at age 65. b) Continued 'Rule of 85' protection for qualifying members. c) Members within 10 yrs. of existing NRA at 1/4/12 – no change to when they can retire and no decrease in pension they receive at existing NRA.
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.	Banded rates (5.5%-7.5%) depending upon level of full-time equivalent pay. A mechanism for sharing any increased scheme costs between employers and scheme members is included in the LGPS regulations.	Banded rates (5.5%-12.5%) depending upon level 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.
Pensionable pay	All salary, wages, fees and other payments in respect of the employment, excluding non-contractual overtime and some other specified amounts. Some scheme members may be covered by special agreements.		Pay including non-contractual overtime and additional hours.



Provision	Benefit Structure To 31 March 2008	Benefit Structure From 1 April 2008	Benefit Structure From 1 April 2014
Final pay	<p>The pensionable pay in the year up to the date of leaving the scheme. Alternative methods used in some cases, e.g. where there has been a break in service or a drop in pensionable pay.</p> <p>Will be required for the statutory underpin and in respect of the final salary link that may apply in respect of certain members of the CARE scheme who have pre April 2014 accrual.</p>		N/A
Period of scheme membership	Total years and days of service during which a member contributes to the Fund. (e.g. transfers from other pension arrangements, augmentation, or from April 2008 the award of additional pension). For part time members, the membership is proportionate with regard to their contractual hours and a full time equivalent). Additional periods may be granted dependent on member circumstances.		N/A
Normal retirement benefits at NRA	<p>Annual Retirement Pension - 1/80th of final pay for each year of scheme membership.</p> <p>Lump Sum Retirement Grant - 3/80th of final pay for each year of scheme membership.</p>	<p>Scheme membership from 1 April 2008:</p> <p>Annual Retirement Pension - 1/60th of final pay for each year of scheme membership.</p> <p>Lump Sum Retirement Grant – None except by commutation of pension.</p>	<p>Scheme membership from 1 April 2014:</p> <p>Annual Retirement Pension - 1/49th of pensionable pay (or assumed pensionable pay) for each year of scheme membership.</p> <p>Lump Sum Retirement Grant - None except by commutation of pension</p>
Option to increase retirement lump sum benefit	In addition to the standard retirement grant any lump sum is to be provided by commutation of pension (within overriding HMRC limits). 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 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 terms for the conversion of pension in to lump sum is £12 of lump sum for every £1 of annual pension surrendered.
Voluntary early retirement benefits (non ill-health)	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 55, subject to reduction on account of early payment in some circumstances (in accordance with ERA protections).



Provision	Benefit Structure To 31 March 2008	Benefit Structure From 1 April 2008	Benefit Structure From 1 April 2014
Employer's consent early retirement benefits (non ill-health)	<p>On retirement after age 55 with employer's consent.</p> <p>Benefits paid on redundancy or efficiency grounds are paid with no actuarial reduction.</p> <p>Otherwise, benefits are subject to reduction on account of early payment, unless this is waived by the employer.</p>		<p>Benefits paid on redundancy or efficiency grounds are paid with no actuarial reduction.</p> <p>Employer's consent is no longer required for a member to retire from age 55. However, benefits are subject to reduction on account of early payment, unless this is waived by the employer.</p>
Ill-health benefits	<p>As a result of permanent ill-health or incapacity.</p> <p>Immediate payment of unreduced benefits.</p> <p>Enhancement to scheme membership, dependent on actual membership.</p> <p>Enhancement seldom more than 6 years 243 days.</p>	<p>As a result of permanent ill-health or incapacity and a reduced likelihood of obtaining gainful employment (local government or otherwise) before age 65.</p> <p>Immediate payment of unreduced benefits.</p> <p>Enhanced to scheme membership, dependent on severity of ill health.</p> <p>100% of prospective membership to age 65 where no likelihood of undertaking any gainful employment prior to age 65;</p> <p>25% of prospective membership to age 65 where likelihood of obtaining gainful employment after 3 years of leaving, but before age 65; or</p> <p>0% of prospective membership where there is a likelihood of undertaking gainful employment within 3 years of leaving employment.</p>	<p>As a result of permanent ill-health or incapacity and a reduced likelihood of obtaining gainful employment (local government or otherwise) before NRA.</p> <p>Immediate payment of unreduced benefits.</p> <p>Enhanced to scheme membership, dependent on severity of ill health.</p> <p>100% of prospective membership to age NRA where no likelihood of undertaking any gainful employment prior to age NRA;</p> <p>25% of prospective membership to age NRA where likelihood of obtaining gainful employment after 3 years of leaving, but before age NRA; or</p> <p>0% of prospective membership where there is a likelihood of undertaking gainful employment within 3 years of leaving employment.</p>



Provision	Benefit Structure To 31 March 2008	Benefit Structure From 1 April 2008	Benefit Structure From 1 April 2014
Flexible retirement	<p>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.</p> <p>Benefits are paid immediately and subject to actuarial reduction unless the reduction is waived by the employer.</p>	<p>A member who has attained the age of 55 and who, with his employer's consent, reduces the hours he works, or the grade in which he is employed, may make a request in writing to the appropriate Administering Authority to receive all or part of his benefits,</p> <p>Benefits are paid immediately and subject to actuarial reduction unless the reduction is waived by the employer.</p>	
Pension increases	All pensions in payment, deferred pensions and dependant's pensions other than benefits arising from the payment of additional voluntary contributions are increased annually. Pensions are increased partially under the Pensions (Increases) Act and partially in accordance with statutory requirements (depending on the proportions relating to pre 88 GMP, post 88 GMP and excess over GMP).		
Death after retirement	<p>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</p> <p>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</p> <p>Children's pensions may also be payable.</p>	<p>A spouse's, civil partner's or nominated cohabiting partner's pension payable at a rate of 1/160th of the member's total membership multiplied by final pay (generally post 1 April 1972 service for widowers' pension and post 6 April 1988 for civil partners and nominated cohabiting partners) is payable; plus</p> <p>If the member dies within ten years of retiring and before age 75 the balance of ten years' pension payments will be paid in the form of a lump sum; plus</p> <p>Children's pensions may also be payable.</p>	



Provision	Benefit Structure To 31 March 2008	Benefit Structure From 1 April 2008	Benefit Structure From 1 April 2014
Death in service	<p>A lump sum of two times final pay; plus</p> <p>A spouse's or civil partner's pension of one half of the ill-health 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</p> <p>Children's pensions may also be payable.</p>	<p>A lump sum of three times final pay; plus</p> <p>A spouse's, civil partner's or cohabiting partner's pension payable at a rate of 1/160th of the member's total (augmented to age 65) membership (generally post 1 April 1972 service for widowers' pension and post 6 April 1988 for civil partners and nominated cohabiting partners), multiplied by final pay; plus</p> <p>Children's pensions may also be payable.</p>	
Leaving service options	<p>If the member has completed three months' or more scheme membership, deferred benefits with calculation and payment conditions similar to general retirement provisions ; or</p> <p>A transfer payment to either a new employer's scheme or a suitable insurance policy, equivalent in value to the deferred pension; or</p> <p>If the member has completed less than three months' scheme membership, a return of the member's contributions with interest, less a State Scheme premium deduction and less tax at the rate of 20%.</p>		<p>If the member has completed two years or more scheme membership, deferred benefits with calculation and payment conditions similar to general retirement provisions ; or</p> <p>A transfer payment to either a new employer's scheme or a suitable insurance policy, equivalent in value to the deferred pension; or</p> <p>If the member has completed less than two years scheme membership, a return of the member's contributions with interest, less a State Scheme premium deduction and less tax at the rate of 20%.</p>
State pension scheme	The Fund is contracted-out of the State Second Pension and the benefits payable to each member are guaranteed to be not less than those required to enable the Fund to be contracted-out.		



Provision	Benefit Structure To 31 March 2008	Benefit Structure From 1 April 2008	Benefit Structure From 1 April 2014
Assumed pensionable pay		N/A	This applies in cases of reduced contractual pay (CPP) resulting from sickness, child related and reserve forces absence, whereby the amount added to the CPP is the assumed pensionable pay rather than the reduced rate of pay actually received.
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 2014.



Appendix C: About the valuation

For more details please refer 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 employer's 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 employers and employees. The employers' share of this cost is known as the future service contribution rate.

For the valuation results for the Fund as a whole, we have calculated the future service rate as the cost of benefits being earned by members over the year following the valuation, taking account of expected future salary increases until retirement. If new entrants are admitted to the Fund to the extent that the overall membership profile remains broadly unchanged (and if the actuarial assumptions are unchanged) then the future service rate should be reasonably stable.

This funding method we have used is known as the Projected Unit Method. As well as the whole fund, it is appropriate for individual employers that continue to admit new entrants to the Fund.



However, some participating employers may have a policy of not admitting new entrants. In this case, the membership profile will inevitably begin to age. Under these circumstances, the Projected Unit Method is arguably no longer appropriate and will not promote sufficient stability in the future service rate. For these employers, we will adopt a funding method known as the Attained Age Method, which effectively looks at the cost of benefits that members will earn over the entirety of their remaining working lifetime (rather than just the year following the valuation).

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, each individual employer will have a contribution rate which reflects their own 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.

Membership data – whole fund

Employee members

	31 March 2010		31 March 2013	
	Number	Pensionable Pay* (£000)	Number	Pensionable Pay* (£000)
Total employee membership	28,375	493,640	28,642	462,383

*actual pay (not full-time equivalent)

Deferred pensioners

	31 March 2010		31 March 2013	
	Number	Deferred pension (£000)	Number	Deferred pension (£000)
Total deferred membership	30,392	31,909	34,538	38,791

The figures above also include any “status 2” and “status 9” members at the valuation date.

Current pensioners, spouses and children

	31 March 2010		31 March 2013	
	Number	Pension (£000)	Number	Pension (£000)
Members	17,580	75,973	19,802	95,246
Dependants	2,817	6,836	2,914	7,814
Children	192	254	173	274
Total pensioner members	20,589	83,064	22,889	103,334

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)	
	2010	2013	2010	2013
Employees	52.0	52.0	7.4	8.9
Deferred Pensioners	51.0	51.3	-	-
Pensioners	67.5	67.8	-	-

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.



Membership data – individual employers

Employer code	Employer Name	Employees		Deferreds		Pensioners	
		Number	Actual Pay (£000)	Number	Pension (£000)	Number	Pension (£000)
1	Hertfordshire County Council	7,014	133,379	22,580	17,021	11,838	45,427
2	Magistrates Courts Committee	0	*	114	303	118	705
3	Hertfordshire Police Authority	1,501	38,405	1,040	1,999	600	2,566
4	Hertfordshire Career Services Ltd	1	*	84	286	73	450
10	Historical Authority	0	0	1	*	0	0
50	Local Government NHS Overlap	1	*	0	0	0	0
55	Commission for New Towns - Stevenage	0	0	6	4	43	280
56	Commission for New Towns - Welwyn Garden City	0	0	1	*	29	195
57	Hertfordshire Probation Board	192	5,065	214	301	204	1,206
58	Hostorical Authority	0	0	0	0	1	*
60	Hertfordshire Valuation Tribunal	2	*	4	*	3	*
63	Hockerill School	0	0	0	0	4	*
68	Welwyn Parish Council	4	*	0	0	2	*
69	St Albans Diocesan Board for Social Responsibility	0	0	0	0	1	*
71	Lee Valley Water	0	0	0	0	2	*
74	Hertfordshire Action on Disability	5	*	0	0	14	51
77	Colne Valley Water Company	0	0	0	0	1	*
79	Letchworth Garden City Heritage Foundation	68	2,254	99	238	86	636
80	Rhodes Museum Foundation	0	0	0	0	1	*
83	Watford Sheltered Workshop	0	0	0	0	1	*
84	St Georges of Harpenden	1	*	4	*	0	0
87	Hertfordshire Housing Consortium	0	0	0	0	2	*
88	Welwyn Hatfield Sports Centre Trust	1	*	11	22	8	35
90	Aldenham Parish Council	8	139	4	*	9	26
91	Walkern Parish Council	1	*	1	*	0	0
93	Buntingford Town Council	1	*	0	0	2	*
94	Hatfield Town Council	14	316	10	28	7	32
101	Broxbourne Borough Council	409	7,975	688	862	494	2,421
102	Dacorum Borough Council	650	15,463	875	1,846	903	5,341
103	East Herts District Council	320	8,412	322	812	468	3,145
104	Hertsmere Borough Council	239	6,757	450	1,101	466	2,937
105	North Herts District Council	282	7,622	577	1,080	656	3,952
106	St Albans District Council	324	8,443	471	1,047	612	4,002
107	Stevenage Borough Council	489	12,619	625	1,371	729	4,040
108	Three Rivers District Council	246	6,542	309	614	385	2,334
109	Watford Borough Council	348	10,059	617	1,595	784	4,879
110	Welwyn & Hatfield District Council	206	5,846	577	1,301	723	4,661
111	Commission for New Towns - Hemel Hempstead	0	0	3	*	24	79
112	Rickmansworth & Uxbridge Valley Water Company	0	0	0	0	1	*
114	West Hertfordshire Computer Consortium	0	0	2	*	3	*
115	Thames Water Authority	0	0	0	0	2	*
116	West Herts Crematorium	16	267	12	30	24	80
120	Knebworth Parish Council	2	*	0	0	2	*
121	Ware Town Council	7	156	4	*	9	34
122	Bishop's Stortford Town Council	8	170	8	13	7	68
123	Sawbridgeworth Town Council	5	*	1	*	3	*
124	North Mymms Parish Council	5	*	0	0	3	*
125	Hertford Town Council	13	278	5	*	7	43
126	Tring Town Council	1	*	0	0	1	*
127	Age Concern Hertfordshire	0	0	0	0	3	*
128	Chauncy Housing Association	0	0	0	0	2	*
129	Alban Deaf Association	0	0	0	0	1	*
130	Croxley Green Parish Council	2	*	0	0	0	0
131	Berkhamsted Town Council	4	*	2	*	4	*
134	Abbots Langley Parish Council	13	244	8	17	11	69
135	Hemel Hempstead Day Centre Ltd	0	0	0	0	2	*
136	Dacorum Council for Voluntary Service	1	*	0	0	2	*
137	Kimpton Parish Council	1	*	0	0	1	*
138	Royston Town Council	3	*	5	*	6	27
139	Harpden Town Council	13	302	13	19	5	*
140	Elstree & Borehamwood Town Council	4	*	6	11	11	56
141	Hertford Museum Trust	0	0	1	*	2	*
143	University Of Hertfordshire	1,071	28,817	1,268	1,634	858	3,589
144	Society of Education Officers	0	0	0	0	1	*
145	Hertfordshire Care Trust	0	0	1	*	1	*
146	Rickmansworth School	0	0	12	12	15	58



Employer code	Employer Name	Employees		Deferreds		Pensioners	
		Number	Actual Pay (£'000)	Number	Pension (£'000)	Number	Pension (£'000)
147	Watford Grammar School for Girls	0	0	23	10	29	59
148	Chorleywood Parish Council	7	134	4	*	1	*
149	Colney Heath Parish Council	1	*	4	*	1	*
150	Parmiter's School	0	0	19	12	9	15
151	St Mary's RC School	0	0	8	5	1	*
152	Francis Bacon School	0	0	29	33	9	18
153	Hertfordshire Training & Enterprise Council	0	0	7	46	5	*
154	Christchurch JMI	0	0	6	2	3	*
155	Shenley Park Trust	0	0	1	*	3	*
156	Watford Boys Grammar School	0	0	18	5	9	44
157	Parkside 1st School	0	0	2	*	3	*
158	Quantum Care Ltd	59	1,074	173	275	409	1,459
159	Hertingfordbury Cowper Primary	0	0	5	*	2	*
160	Ashlyns School	0	0	17	10	10	30
161	Bushey Hall School	0	0	8	11	7	14
162	Dame Alice Owen's School	0	0	20	6	20	56
163	Mount Grace School	0	0	19	12	9	22
164	Queens School	0	0	11	9	9	40
165	Bushey Meads School	0	0	35	26	13	32
166	Hertford Regional College	243	4,041	328	374	149	435
167	North Hertfordshire College	218	4,696	240	303	136	368
168	Oaklands College	321	4,857	472	465	265	963
169	West Hertfordshire College	240	4,843	438	490	298	861
170	Bishops Stortford High School	0	0	30	30	15	24
171	Nicholas Breakspearne School	0	0	14	6	12	27
172	St Michael's RC School	0	0	9	1	9	28
173	St. Giles School	0	0	2	*	2	*
174	Goffs School	0	0	28	21	17	54
175	John Henry Newman School	0	0	17	9	13	28
176	Marlborough School	0	0	26	10	15	29
177	Leventhorpe School	0	0	35	25	11	32
178	Chancellors School	0	0	25	17	9	45
179	St Joan of Arc RC School	0	0	26	19	12	31
180	St Clement Danes VA	0	0	19	16	13	66
181	Wroxham JMI	0	0	3	*	3	*
182	Brookman's Park JMI	0	0	13	4	3	*
183	Little Reddings JMI and Nursery	0	0	7	6	1	*
184	St Catherines of Sienna RC JMI	0	0	6	1	1	*
185	John Warner School	0	0	15	8	8	22
186	Cheshunt School	0	0	11	6	12	39
187	St Mary's High School	0	0	18	9	9	28
188	Herts & Essex High School	0	0	21	24	10	31
189	William Sutton Housing Association	0	0	14	100	62	608
190	St Mary's Catholic School	0	0	19	12	9	22
191	Northaw JMI School	0	0	4	*	2	*
192	Little Heath JMI School	0	0	5	*	3	*
193	Cuffley JMI School	0	0	3	*	3	*
195	Holmshill School	0	0	0	0	3	*
196	Riversmead Housing Association	48	1,520	15	43	35	222
197	Carers in Hertfordshire	1	*	0	0	0	0
198	Exemplas	3	*	2	*	3	*
199	Rickmansworth Citizens Advice Bureau	0	0	0	0	3	*
202	Hertfordshire Association of Local Councils	2	*	1	*	0	0
203	Hertford Citizens Advice Bureau	0	0	1	*	0	0
204	St Albans Citizens Advice Bureau	0	0	1	*	2	*
206	Oxhey & District Citizens Advice Bureau	0	0	0	0	1	*
208	Herts Family Mediation Service	0	0	0	0	1	*
209	Ware & District Citizens Advice Bureau	0	0	2	*	0	0
210	Abbots Langley Citizens Advice Bureau	0	0	0	0	1	*
212	Group for the Rootless of Watford	1	*	2	*	2	*
213	Highfield Park Trust	1	*	2	*	2	*
214	Stevenage Leisure Ltd	35	783	103	149	26	157
215	Association of Charity Officers	0	0	1	*	2	*
216	Sandridge Parish Council	3	*	0	0	3	*
217	St Stephens Parish Council	7	161	2	*	3	*
218	Weston Voluntary Nursery	0	0	1	*	0	0



Employer code	Employer Name	Employees		Deferreds		Pensioners	
		Number	Actual Pay (£'000)	Number	Pension (£'000)	Number	Pension (£'000)
219	Wellfield Trust	0	0	1	*	0	0
220	Shenley Parish Council	0	0	0	0	1	*
221	University Bus	42	962	49	44	40	118
222	Radlett Centre Trust	3	*	4	*	0	0
223	Leonard Cheshire	0	0	61	80	232	433
224	Markyate Parish Council	2	*	0	0	0	0
225	Buntingford Citizens Advice Bureau	0	0	0	0	1	*
226	Nash Mills Parish Council	1	*	0	0	1	*
227	Elstree Film and Television Studios Ltd	0	0	0	0	1	*
229	Watford Rural Parish Council	1	*	0	0	1	*
230	Citizens Advice Bureau in Hertsmere	1	*	3	*	11	20
231	Stanstead Abbots Parish Council	1	*	0	0	1	*
232	London Colney Parish Council	2	*	0	0	0	0
233	Mears Building Contractors Ltd	0	0	3	*	1	*
234	Watford Town Centre Partnership Limited	0	0	1	*	0	0
235	Digica FMS	0	0	1	*	2	*
236	Hertsmere Leisure Trust	0	0	36	46	11	33
238	Cleanaway Limited	16	296	7	16	3	*
239	Womans Royal Voluntary Society	0	0	1	*	0	0
240	MACE Ltd	1	*	18	98	15	208
241	North Hertfordshire Homes	72	2,110	39	162	53	243
242	Churchhill Contract Services Limited	0	0	2	*	1	*
243	University of Hertfordshire	0	0	0	0	8	30
244	Hertfordshire E-Learning Partnership	1	*	4	*	0	0
246	Offley Place Ltd	0	0	2	*	1	*
248	John O'Conner (Grounds Maintenance)	3	*	4	*	4	*
249	Welwyn Hatfield Leisure Limited	31	487	41	62	6	19
251	Dacorum Sports Trust	103	1,581	60	59	19	40
252	The Fairway Public House Limited	1	*	1	*	0	0
253	North Hertfordshire Hospice Care Association	0	0	1	*	0	0
256	Hertfordshire NHS Partnership Trust	42	1,104	84	335	54	399
257	Hayward Services Ltd	0	0	1	*	2	*
258	Redbourn Parish Council	1	*	0	0	1	*
259	Superclean Services Wolthorpe Ltd	0	0	1	*	1	*
261	National Car Parks	2	*	0	0	2	*
262	Kameleon 4	1	*	0	0	1	*
263	East Herts Citizens Advice Service	0	0	1	*	9	16
264	Broxbourne Housing Association	48	1,654	12	22	21	102
265	TSG Mechanical Services Ltd	0	0	0	0	3	*
266	Art Café	0	0	2	*	0	0
267	Serco (Welwyn Hatfield BC)	37	766	9	26	8	36
268	Aspire Leisure Trust	0	0	9	37	0	0
270	Citizens Advice Service in Three Rivers	2	*	1	*	2	*
271	Stevenage Homes	1	*	73	240	42	288
272	E2BN	4	*	1	*	0	0
273	Letchworth Garden City Council	0	0	2	*	3	*
274	DC Leisure Management Ltd	0	0	6	9	0	0
275	Stevenage Leisure (Aspire)	0	0	15	13	5	*
276	Goldsborough Home Care	74	833	19	37	96	241
277	Hertfordshire Community Meals	4	*	0	0	1	*
278	Watford Community Housing Trust	21	588	40	168	18	118
281	Codicote Parish Council	0	0	0	0	1	*
282	Elstree Film Studios	2	*	1	*	0	0
283	Mears (WH)	39	1,050	9	38	14	95
284	Mitie Property Services	26	600	10	32	15	98
285	Central Parking Systems	0	0	3	*	2	*
286	Thrive Homes	36	1,142	35	167	22	146
287	Northgate Information Solutions UK	1	*	3	*	1	*
288	Hitchin Markets Ltd	2	*	0	0	0	0
289	SLM (Watford)	27	352	4	*	0	0
290	Wheat Hampstead Parish Council	2	*	0	0	0	0
291	Woolmer Green Parish Council	2	*	0	0	0	0
292	Pro-Action Herts	0	0	0	0	1	*
293	ARP Trading LTd	0	0	30	158	6	31
294	Steria Services Ltd	6	165	4	*	2	*
295	EEIDB	0	0	2	*	1	*
296	Community Building Services	4	*	0	0	2	*
297	Principle Cleaning	0	0	1	*	0	0



Employer code	Employer Name	Employees		Deferreds		Pensioners	
		Number	Actual Pay (£'000)	Number	Pension (£'000)	Number	Pension (£'000)
298	SLM (East Herts)	27	218	11	22	0	0
300	Office & General Environmental Services	1	*	1	*	0	0
301	Hertsmere Leisure	1	*	4	*	0	0
302	Hertfordshire Community Meals (SACDC)	3	*	0	0	0	0
304	Serco	0	0	1	*	1	*
306	Francis Combe Academy	52	910	25	45	4	*
307	Bushey Academy	42	793	18	14	3	*
308	Herts Community Meals (Dacorum)	1	*	2	*	8	24
309	Loretto College	2	*	0	0	0	0
310	Europa Facilities Management	0	0	1	*	0	0
311	Community Housing Trust	125	3,113	14	32	17	75
312	Stevenage Leisure (North Herts) Hitchin	5	*	0	0	0	0
313	Hayward Services Ltd (Hemel)	3	*	2	*	0	0
314	Colosseum Theatre	0	0	1	*	0	0
316	Principle Cleaning (2009)	0	0	11	18	1	*
317	Broxbourne Academy	53	803	5	*	0	0
318	Watford Council for Voluntary Service	1	*	0	0	0	0
319	Caterplus Ltd	2	*	1	*	0	0
320	Knights Templar Academy	61	783	13	10	2	*
321	Serco Shared Managed Services	219	5,429	29	105	5	*
322	CP Plus (Welwyn and Hatfield)	3	*	0	0	1	*
323	Yavneh college	31	548	5	*	0	0
324	Sandringham School Academy Trust	47	550	5	*	3	*
325	John Warner	34	579	5	*	1	*
326	Parmiters School	54	697	3	*	2	*
327	Bovingdon Primary Academy	71	488	13	2	1	*
328	Hitchin Girls School	46	608	5	*	1	*
329	Longdean School	57	716	8	8	0	0
330	Mount Grace School	49	612	6	8	2	*
331	Hammond Academy	37	307	11	2	3	*
332	Chauncy School	50	544	7	7	2	*
333	Verulam School	41	617	6	3	0	0
334	Watford Grammar School for Boys (Academy)	60	699	3	*	1	*
335	Watford Grammar School for Girls (Academy)	55	727	8	7	6	25
336	Rickmansworth School	38	480	6	15	1	*
337	Dame Alice Owens School	51	669	2	*	6	13
338	St Clement Danes School	27	454	5	*	0	0
339	Queens School	40	734	2	*	1	*
340	Freman College	22	334	4	*	0	0
341	Roundwood Park School	50	684	5	*	1	*
342	Leventhorpe Trust	37	611	2	*	1	*
343	Summercroft Primary School	48	366	4	*	1	*
344	The Highfield School	3	*	0	0	0	0
345	Sir John Lawes School	37	623	10	8	3	*
346	Goffs School	59	930	2	*	2	*
347	St Albans Girls School	38	559	9	11	4	*
350	Watford & District YMCA	1	*	0	0	0	0
352	Action for Children	2	*	1	*	1	*
353	Birchwood High School	65	913	4	*	0	0
355	Greneway (The Royston Schools Academy Trust)	27	229	4	*	0	0
356	Meridian (The Royston Schools Academy Trust)	36	428	1	*	0	0
357	Roysia (The Royston Schools Academy Trust)	13	107	2	*	0	0
358	Onslow St Audreys	30	463	2	*	0	0
359	Bishops Hatfield Girls School	30	450	3	*	1	*
360	Fusion Lifestyle	2	*	1	*	0	0
361	Applecroft School	28	244	2	*	0	0
362	Stanborough School	39	579	6	2	2	*
363	Bushey Meads School	49	761	0	0	3	*
364	Little Reddings Primary School	30	192	2	*	0	0
365	The John Henry Newman School	75	977	5	*	0	0
366	St Joan of Arch Catholic School	48	528	5	*	0	0
367	Nicholas Breakspear	23	386	0	0	0	0
368	St Michaels Catholic High School	41	556	3	*	0	0
369	Sele	30	427	2	*	0	0
370	Richard Hale Academy	1	*	0	0	0	0
371	Marlborough School Science College	70	1,037	3	*	2	*
372	Presdales School	48	551	1	*	0	0



Employer code	Employer Name	Employees		Deferreds		Pensioners	
		Number	Actual Pay (£000)	Number	Pension (£000)	Number	Pension (£000)
373	Woolgrove School	40	316	1	*	0	0
374	Ralph Sadleir School	2	*	0	0	0	0
375	Hertswood Academy	61	917	1	*	0	0
376	Fleetville Infants and Nursery	45	428	5	*	2	*
377	Fleetville JMI	28	212	2	*	0	0
378	Kings Langley Parish Council	3	*	0	0	0	0
379	Aldenham Renaissance Ltd	2	*	0	0	0	0
380	Updata Infrastructure Uk Ltd	3	*	0	0	0	0
381	Loreto College	30	415	3	*	0	0
382	Wroxham Primary	27	166	5	*	0	0
383	Tring School	82	806	10	8	1	*
384	St Mary's C of E	54	590	5	*	0	0
386	Serco (DBC)	10	196	1	*	0	0
387	Ringway Infrastructure Service Ltd	33	925	2	*	2	*
388	Our Lady Catholic School	13	103	0	0	0	0
389	Beaumont School	66	541	4	*	0	0
390	St Thomas More	23	126	4	*	0	0
391	St John's CE JMI School	27	149	1	*	0	0
392	St George's School	94	1,093	3	*	1	*
393	St Catherine of Siena	9	143	1	*	0	0
394	Pre-School Learning Alliance	3	*	1	*	0	0
395	Evergreen The Cleaning Co Ltd	2	*	0	0	0	0
396	Saint Mary's Catholic Primary School	12	75	0	0	0	0
397	Alban City Free School	6	40	1	*	0	0
398	Allsorts Children Centre	3	*	0	0	0	0
399	Northgate Primary Sch Trust AC	30	228	5	*	0	0
400	Department of Health	0	0	0	0	4	*
401	Knightsfield (AC)	11	125	1	*	0	0
403	Churchill Contract Services Ltd	1	*	0	0	0	0
404	Serco (HCS)	13	508	1	*	1	*
405	Hatfield Community Free School	9	95	0	0	0	0
406	Da Vinci Studio School	3	*	0	0	0	0
407	Berrygrove Academy	60	547	6	2	0	0
408	Monkswalk School (AC)	49	703	1	*	0	0
409	Samuel Ryder Academy	17	234	0	0	0	0
410	Garden City Academy (Radburn)	17	164	1	*	0	0
411	Edwards and Blake(Praewood Sch)	2	*	0	0	0	0
412	Opus UK Ltd	4	*	0	0	0	0
414	Kings Langley School (AC)	43	631	1	*	1	*
415	Principle Cleaning Services	1	*	0	0	0	0
416	Crime Reduction Initiative	2	*	0	0	0	0
417	Hitchin Boys School	40	427	2	*	0	0
418	Links ESC (AC)	29	462	0	0	0	0
420	Hertsmere Leisure Trust	51	817	2	*	3	*
421	Manderville Primary School	33	295	0	0	0	0
422	Balfour Beatty Limited	13	168	0	0	0	0
423	PSLA (Holywell)	10	35	0	0	0	0
426	Hertsmere Leisure(oughton Children)	8	117	1	*	0	0
427	Caterlink (BB)	6	43	0	0	0	0
429	Christ Church C ofE School (AC)	5	*	0	0	0	0
430	Chaulden Junior School	1	*	0	0	0	0
434	Stevenage Leisure - Letchworth	2	*	0	0	0	0
435	Stevenage Leisure - Royston	2	*	0	0	0	0
437	Stevenage Leisure - Knights Templar/HCC	2	*	0	0	0	0
450	Department of Transport - Motor Tax	0	0	0	0	8	23
475	Department of Transport - Road Construction Unit	0	0	3	*	3	*
888	LEA Schools	9,778	75,614	0	0	0	0

*Where there are 5 or less members the salary/pension figure has been hidden for data protection purposes



Assets at 31 March 2013

A summary of the Fund's assets (excluding members' money-purchase Additional Voluntary Contributions) as at 31 March 2013 and 31 March 2010 is as follows:

Asset class	Market Value at 31 March 2010 (£'000)	Allocation %	Market Value at 31 March 2013 (£'000)	Allocation %
UK equities	638,333	29%	930,158	32%
UK fixed interest gilts	86,854	4%	125,758	4%
UK corporate bonds	154,398	7%	225,209	8%
UK index-linked gilts	76,757	4%	106,767	4%
Overseas equities	930,364	43%	1,127,461	39%
Overseas bonds	91,181	4%	116,842	4%
Property	74,556	3%	161,350	6%
Cash and net current assets	136,213	6%	114,360	4%
Total	2,188,656	100%	2,907,904	100%

Note that, for the purposes of determining the funding position at 31 March 2013, the asset value we have used also includes the present value of expected future early retirement strain payments.

Accounting data – revenue account for the three years to 31 March 2013

Consolidated accounts (£'000)	Year to			Total
	31 March 2011	31 March 2012	31 March 2013	
Income				
Employer - normal contributions	80,069	79,458	77,417	236,945
Employer - additional contributions	24,169	26,165	34,887	85,220
Employer - early retirement and augmentation strain contributions	11,012	4,314	2,082	17,408
Employee - normal contributions	32,293	30,512	29,495	92,300
Employee - additional contributions	706	631	457	1,794
Transfers In Received (including group and individual)	15,641	12,314	7,914	35,869
Other Income	2	2	3	7
Total Income	163,892	153,395	152,255	469,543
Expenditure				
Gross Retirement Pensions	84,741	92,504	100,223	277,468
Lump Sum Retirement Benefits	22,468	25,421	21,854	69,743
Death in Service Lump sum	3,193	2,481	2,695	8,369
Death in Deferment Lump Sum	0	0	0	0
Death in Retirement Lump Sum	0	0	0	0
Gross Refund of Contributions	39	9	13	61
Transfers out (including bulk and individual)	12,803	8,493	8,251	29,547
Fees and Expenses	2,092	1,985	1,892	5,969
Total Expenditure	125,336	130,893	134,928	391,158
Net Cashflow	38,557	22,502	17,327	78,385
Assets at start of year	2,188,657	2,421,651	2,520,578	2,188,657
Net cashflow	38,557	22,502	17,327	78,386
Change in value	194,438	76,425	369,999	640,862
Assets at end of year	2,421,651	2,520,578	2,907,904	2,907,904
Approximate rate of return on assets	8.8%	3.1%	14.6%	28.6%

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 2010 (% p.a.)	31 March 2013 (% p.a.)
Discount rate	6.1%	4.8%
Price inflation	3.8%	3.3%
Pay increases*	5.3%	3.8%
Pension increases:	3.3%	2.5%
pension in excess of GMP	3.3%	2.5%
post-88 GMP	2.8%	2.5%
pre-88 GMP	0.0%	0.0%
Revaluation of deferred pension	3.3%	2.5%
Expenses	0.4%	0.4%

*An allowance is also made for promotional pay increases (see table below). Note that the assumption at 31 March 2010 is actually 1% p.a. for 2010/11 and 2011/12, 3.8% p.a. for 2012/13, 2013/14 and 2014/15, reverting to 5.3% p.a. thereafter.

Mortality assumptions

Longevity assumptions	31 March 2013
Longevity - baseline	Vita curves
Longevity - improvements	
CMI Model version used	CMI_2010
Starting rates	CMI calibration based on data from Club Vita using the latest available data as at December 2011.
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%

We have suggested a longevity improvement assumption 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.

Various scaling factors have been applied to the mortality tables to reflect the predicted longevity for each class of member and their dependants. Full details of these are available on request.



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	Assumed future retirements, uniformly distributed across the non-pensioner membership, elect to exchange pension for additional tax free cash up to HMRC limits. For benefits accrued prior to 1 April 2008 it is assumed 55% of the permitted HMRC maximum will be taken as cash and for benefits accrued after 31 March 2008, it is assumed 80% of the permitted HMRC will be taken as cash.
50:50 option	10% of members (uniformly distributed across the age, service and salary range) 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 table**

Age	Incidence per 1000 active members per annum			
	Male officers and Post 98	Male Manuals	Female officers and Post 98	Female Manuals
	Death	Death	Death	Death
20	0.21	0.27	0.12	0.15
25	0.21	0.27	0.12	0.15
30	0.26	0.32	0.18	0.22
35	0.30	0.37	0.30	0.37
40	0.51	0.64	0.48	0.60
45	0.85	1.07	0.77	0.97
50	1.36	1.71	1.13	1.42
55	2.13	2.68	1.49	1.87
60	3.83	4.82	1.90	2.39
65	6.38	8.03	2.44	3.07

III Health Early Retirements tables**Tier 1**

Age	Incidence for 1000 active members per annum							
	Male Officers & Post 98 Males		Male Manuals		Female Officers & Post 98 Females		Female Manuals	
	III Health		III Health		III Health		III Health	
	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	0.60	0.60	0.15	0.11	0.79	0.79
30	0.00	0.00	1.11	1.11	0.20	0.15	1.15	1.15
35	0.15	0.11	1.66	1.66	0.40	0.30	1.58	1.58
40	0.25	0.19	2.42	2.42	0.60	0.45	2.30	2.30
45	0.55	0.42	3.33	3.33	0.81	0.60	3.02	3.02
50	1.41	1.06	4.94	4.94	1.51	1.13	4.03	4.03
55	5.53	4.15	11.69	11.69	5.61	4.20	10.83	10.83
60	9.73	7.30	18.74	18.74	11.89	8.92	19.05	19.05
65	18.48	13.86	36.12	36.12	21.37	16.03	36.12	36.12

Tier 2

Age	Incidence for 1000 active members per annum							
	Male Officers & Post 98 Males		Male Manuals		Female Officers & Post 98 Females		Female Manuals	
	III Health		III Health		III Health		III Health	
	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	0.64	0.64	0.16	0.12	0.84	0.84
30	0.00	0.00	1.18	1.18	0.21	0.16	1.22	1.22
35	0.16	0.12	1.77	1.77	0.43	0.32	1.68	1.68
40	0.27	0.20	2.57	2.57	0.64	0.48	2.45	2.45
45	0.59	0.44	3.53	3.53	0.86	0.64	3.21	3.21
50	1.90	1.42	6.65	6.65	2.03	1.53	5.43	5.43
55	4.27	3.20	9.03	9.03	4.33	3.25	8.37	8.37
60	3.66	2.75	7.05	7.05	4.48	3.36	7.17	7.17
65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

**Tier 3**

Age	Incidence for 1000 active members per annum									
	Male Officers & Post 98				Male Manuals		Female Officers & Post 98			
	Males		Females		Females		Males		Females	
	III Health		III Health		III Health		III Health		III Health	
	FT	PT	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	0.00	0.00
25	0.00	0.00	0.48	0.38	0.09	0.07	0.55	0.44		
30	0.09	0.07	0.77	0.62	0.15	0.12	0.77	0.61		
35	0.12	0.10	1.16	0.93	0.30	0.24	1.11	0.88		
40	0.21	0.17	1.61	1.29	0.39	0.31	1.53	1.22		
45	0.48	0.38	2.32	1.86	0.62	0.50	1.96	1.56		
50	0.26	0.21	0.68	0.54	0.24	0.20	0.58	0.46		
55	0.37	0.30	0.77	0.61	0.45	0.36	0.76	0.61		
60	0.21	0.17	0.42	0.33	0.25	0.20	0.42	0.33		
65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		

Withdrawal**Less than 2 years' service**

Age	Incidence for 1000 active members per annum											
	Male Officers		Male Manuals		Female Officers		Female Manuals		Post 98 Males		Post 98 Females	
	Withdrawals		Withdrawals		Withdrawals		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	1000.00	384.52	640.87
25	200.83	334.72	201.20	335.01	194.07	269.50	194.43	269.79	368.19	736.38	258.74	431.17
30	142.53	237.46	143.05	237.91	162.69	225.89	163.17	226.27	261.24	522.40	216.89	361.38
35	111.38	185.51	112.17	186.19	140.45	194.94	141.07	195.43	204.11	408.11	187.19	311.79
40	89.71	149.31	90.77	150.23	116.92	162.22	117.80	162.92	164.33	328.47	155.80	259.40
45	73.64	122.28	75.03	123.55	96.49	133.73	97.50	134.54	134.71	268.98	128.49	213.73
50	56.96	94.68	57.28	95.02	73.34	101.75	73.60	101.96	104.26	208.28	97.73	162.71
55	49.47	82.09	49.77	82.44	56.73	78.59	56.97	78.78	90.46	180.57	75.53	125.58
60	29.97	49.75	30.13	49.94	26.40	36.55	26.52	36.65	54.81	109.43	35.13	58.39

More than 2 years' service

Age	Incidence for 1000 active members per annum											
	Male Officers		Male Manuals		Female Officers		Female Manuals		Post 98 Males		Post 98 Females	
	Withdrawals		Withdrawals		Withdrawals		Withdrawals		Withdrawals		Withdrawals	
	FT	PT	FT	PT	FT	PT	FT	PT	FT	PT	FT	PT
20	119.85	199.76	119.85	199.76	113.69	157.90	113.69	157.90	219.73	439.46	151.58	252.63
25	79.17	131.95	79.31	132.06	76.50	106.24	76.64	106.35	145.14	290.28	101.99	169.97
30	56.18	93.60	56.39	93.78	64.13	89.05	64.32	89.20	102.98	205.93	85.50	142.46
35	43.90	73.12	44.22	73.40	55.37	76.84	55.61	77.04	80.46	160.88	73.79	122.91
40	35.36	58.85	35.79	59.22	46.09	63.95	46.44	64.22	64.78	129.48	61.42	102.26
45	29.03	48.18	29.59	48.71	38.04	52.72	38.44	53.04	53.10	106.03	50.65	84.25
50	22.45	37.31	22.58	37.46	28.91	40.11	29.01	40.19	41.10	82.10	38.52	64.14
55	19.50	32.35	19.62	32.50	22.36	30.98	22.46	31.06	35.66	71.18	29.77	49.50
60	11.82	19.60	11.88	19.69	10.41	14.41	10.46	14.45	21.61	43.14	13.85	23.02

**Promotional salary scale**

Age	Promotional Salary Scales							
	Male Officers & Post 98 Males		Male Manuals		Female Officers & Post 98 Females		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 2013. 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 2013

In the period from the valuation date to early March 2014, investment markets moved in the following manner:

- asset returns have been 6% - 7%.
- long term Government bond yields have risen by more than long term expected price inflation, which is likely to have reduced past service liabilities by around 7%.

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 2013. In particular, we do not propose amending any of the contribution rates listed in the Rates & Adjustments Certificate on the basis of these market changes, and all employer contribution rates are based on valuation date market conditions. 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

Other than investment conditions changes above, I am not aware of any material changes or events occurring since the valuation date.



Appendix G: Rates and adjustments certificate

In accordance with regulation 36(1) of the Administration Regulations we have made an assessment of the contributions that should be paid into the Fund by participating employers for the period 1 April 2014 to 31 March 2017 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 and our report on the actuarial valuation dated 28 March 2014.

The required minimum contribution rates are set out in the table below,

Signature:

Date:	28 March 2014	28 March 2014
Name:	Barry McKay	Julie West
Qualification:	Fellow of the Institute and Faculty of Actuaries	Fellow of the Institute and Faculty of Actuaries
Firm:	Hymans Robertson LLP 20 Waterloo Street Glasgow G2 6DB	Hymans Robertson LLP 20 Waterloo Street Glasgow G2 6DB



Statement to the rates and adjustments certificate

The Common Rate of Contribution payable by each employing authority under regulation 36(4)(a) of the Administration Regulations for the period 1 April 2014 to 31 March 2017 is 26.1% of pensionable pay (as defined in Appendix B).

Individual Adjustments are required under regulation 36(4)(b) of the Administration Regulations for the period 1 April 2014 to 31 March 2017 resulting in Minimum Total Contribution Rates expressed as a percentage of pensionable pay are as set out below.

The contributions shown include expenses and the expected cost of lump sum death benefits but exclude early retirement strain and augmentation costs which are payable by Fund employers in addition.



Employer code	Employer name	Minimum Contributions for the Year Ending			Notes
		31 March 2015	31 March 2016	31 March 2017	
Scheduled bodies					
1	Hertfordshire County Council	20.6%	20.6%	20.6%	
3	Police & Crime Commissioner for Hertfordshire	14.8% plus £1,392,000	14.8% plus £1,392,000	14.8% plus £1,392,000	
57	Hertfordshire Probation Trust (previously Board)	24.1%	-	-	1
60	Hertfordshire Valuation Tribunal	27.6% plus £28,000	27.6% plus £28,000	27.6% plus £28,000	
101	Broxbourne Borough Council	15.7% plus £274,000	15.7% plus £274,000	15.7% plus £274,000	
102	Dacorum Borough Council	16.0% plus £1,943,000	16.0% plus £1,943,000	16.0% plus £1,943,000	
103	East Herts District Council	16.6% plus £600,000	16.6% plus £600,000	16.6% plus £600,000	
104	Hertsmere Borough Council	16.1% plus £967,000	16.1% plus £967,000	16.1% plus £967,000	
105	North Herts District Council	15.5% plus £565,000	15.5% plus £565,000	15.5% plus £565,000	
106	St Albans District Council	16.8% plus £1,115,000	16.8% plus £1,219,000	16.8% plus £1,322,000	
107	Stevenage Borough Council	16.8% plus £1,538,000	16.8% plus £1,664,000	16.8% plus £1,791,000	
108	Three Rivers District Council	16.1% plus £205,000	16.1% plus £205,000	16.1% plus £205,000	
109	Watford Borough Council	15.9% plus £1,900,000	15.9% plus £2,100,000	15.9% plus £2,300,000	
110	Welwyn & Hatfield District Council	17.0% plus £888,000	17.0% plus £888,000	17.0% plus £888,000	
116	West Herts Crematorium	21.0% plus £45,000	21.0% plus £47,000	21.0% plus £49,000	
LEA Schools and Academies					
	Schools and Academies pool	25.3%	25.3%	25.3%	
306	Francis Combe Academy	14.6%	14.6%	14.6%	
323	Yavneh College	18.5%	18.5%	18.5%	
337	Dame Alice Owens School	24.8%	24.8%	24.8%	
381	Loreto College	25.2%	25.2%	25.2%	
Further Education Establishments					
143	University of Hertfordshire	23.7%	23.7%	23.7%	
166	Hertford Regional College	22.9%	22.9%	22.9%	
167	North Hertfordshire College	20.5%	20.5%	20.5%	
168	Oaklands College	25.4%	26.1%	26.7%	
169	West Hertfordshire College	27.2%	27.2%	27.2%	
Resolution bodies					
272	E2BN	18.9%	18.9%	18.9%	
Parish & Town Councils					
68	Welwyn Parish Council	24.8%	24.8%	24.8%	
90	Aldenham Parish Council	24.8%	24.8%	24.8%	
91	Walkern Parish Council	24.8%	24.8%	24.8%	
93	Buntingford Town Council	24.8%	24.8%	24.8%	
94	Hatfield Town Council	24.8%	24.8%	24.8%	
120	Knebworth Parish Council	24.8%	24.8%	24.8%	
121	Ware Town Council	24.8%	24.8%	24.8%	
122	Bishop's Stortford Town Council	24.8%	24.8%	24.8%	
123	Sawbridgeworth Town Council	24.8%	24.8%	24.8%	
124	North Mymms Parish Council	24.8%	24.8%	24.8%	
125	Hertford Town Council	24.8%	24.8%	24.8%	
126	Tring Town Council	24.8%	24.8%	24.8%	
130	Croxley Green Parish Council	24.8%	24.8%	24.8%	
131	Berkhamsted Town Council	24.8%	24.8%	24.8%	
134	Abbots Langley Parish Council	24.8%	24.8%	24.8%	
137	Kimpton Parish Council	24.8%	24.8%	24.8%	
138	Royston Town Council	24.8%	24.8%	24.8%	
139	Harpden Town Council	24.8%	24.8%	24.8%	
140	Elstree & Borehamwood Town Council	24.8%	24.8%	24.8%	
148	Chorleywood Parish Council	24.8%	24.8%	24.8%	
149	Colney Heath Parish Council	24.8%	24.8%	24.8%	
202	Hertfordshire Association of Local Councils	24.8%	24.8%	24.8%	
216	Sandridge Parish Council	24.8%	24.8%	24.8%	
217	St Stephens Parish Council	24.8%	24.8%	24.8%	
224	Markyate Parish Council	24.8%	24.8%	24.8%	
226	Nash Mills Parish Council	24.8%	24.8%	24.8%	
229	Watford Rural Parish Council	24.8%	24.8%	24.8%	
231	Stanstead Abbotts Parish Council	24.8%	24.8%	24.8%	
232	London Colney Parish Council	24.8%	24.8%	24.8%	
258	Redbourn Parish Council	24.8%	24.8%	24.8%	
290	Wheathamsted Parish Council	24.8%	24.8%	24.8%	
291	Woolmer Green Parish Council	24.8%	24.8%	24.8%	
378	Kings Langley Parish Council	24.8%	24.8%	24.8%	



Employer code	Employer name	Minimum Contributions for the Year Ending			Notes
		31 March 2015	31 March 2016	31 March 2017	
Admitted bodies					
74	Hertfordshire Action on Disability	20.0%	20.0%	20.0%	
79	Letchworth Garden City Heritage Foundation	17.3% plus £295,000	17.3% plus £306,000	17.3% plus £318,000	
88	Gosling Sports Park	26.8% plus £46,000	26.8% plus £46,000	26.8% plus £46,000	
136	Dacorum Council for Voluntary Service	26.0% plus £177,000	26.0%	26.0%	
158	Quantum Care Ltd	25.7% plus £866,000	25.7% plus £866,000	25.7% plus £866,000	
189	Affinity Sutton				2
196	Riversmead Housing Association	19.0% plus £265,000	19.0% plus £275,000	19.0% plus £286,000	
197	Carers in Hertfordshire	29.5% plus £16,000	29.5%	29.5%	
198	Exemplas	25.0%	25.0%	25.0%	
212	Group for the Rootless of Watford				
213	Highfield Park Trust	14.6%	14.6%	14.6%	
214	Stevenage Leisure Limited	19.7% plus £65,000	19.7% plus £67,000	19.7% plus £70,000	
221	University Bus	21.9% plus £29,000	21.9% plus £30,000	21.9% plus £31,000	
222	Radlett Centre Trust	21.1%	21.1%	21.1%	
230	Citizens Advice Bureau in Hertsmere	25.2% plus £2,000	25.2% plus £2,000	25.2% plus £2,000	
Community Admission Bodies					
251	Dacorum Sports Trust	20.6%	20.6%	20.6%	
270	Citizens Advice Service in Three Rivers	26.2% plus £1,500	26.2% plus £1,500	26.2% plus £1,500	
Transferee Admission Bodies					
238	Veolia	14.2%	14.2%	14.2%	
241	North Hertfordshire Homes	21.2%	21.2%	21.2%	
248	John O'Conner (Grounds Maintenance)	23.2%	23.2%	23.2%	
249	Welwyn Hatfield Leisure Limited	21.9%	21.9%	21.9%	
252	The Fairway Public House Limited	19.1%	19.1%	19.1%	
256	Hertfordshire NHS Partnership Trust	18.1%	18.1%	18.1%	
261	National Car Parks	-	23.8%	23.8%	3
264	B3 Living (formerly Broxbourne Housing Association)	22.0% plus £119,000	22.0% plus £124,000	22.0% plus £129,000	
267	Serco (Welwyn Hatfield BC)	-	-	21.5%	3
276	Goldsborough Home Care	-	-	-	3
277	Herts Community Meals	24.9%	24.9%	24.9%	
278	Watford Community Housing Trust	20.9%	20.9%	20.9%	
282	Elstree Film Studio	-	-	-	3
283	Mears Building Contractors Ltd	22.4%	22.4%	22.4%	
284	Mitie Property Services	-	-	-	3
286	Thrive Homes	16.9%	16.9%	16.9%	
287	Northgate Information Solutions	15.0%	15.0%	15.0%	
288	Hitchin Markets	17.1%	17.1%	17.1%	
289	Sports and Leisure Management	17.9%	17.9%	17.9%	
294	Steria	18.4%	18.4%	18.4%	
298	Sports and Leisure Management	17.9%	17.9%	17.9%	
300	Office and General	-	25.7%	25.7%	3
301	Hertsmere Leisure Trust	17.2%	17.2%	17.2%	
302	Herts Community Meals (St. Albans)	16.0%	17.0%	18.0%	
308	Herts Community Meals (Dacorum)	19.0%	19.0%	19.0%	
309	Edwards and Blake (Loreto School)	16.1%	16.1%	16.1%	
311	Welwyn and Hatfield Community Housing Trust	20.1%	20.1%	20.1%	
312	Stevenage Leisure Limited	19.7%	19.7%	19.7%	
313	Haywards Services Limited	-	25.0%	25.0%	3
318	Watford Council for Voluntary Services	26.2%	26.2%	26.2%	
321	Serco Limited (Shared Managed Service)	16.8%	16.8%	16.8%	
322	CP Plus Limited	19.4%	21.9%	24.3%	
350	Watford and District YMCA	-	21.2%	21.2%	3
352	Action for Children	14.6%	14.6%	14.6%	
380	Updata Infrastructure UK Ltd	20.3%	20.3%	20.3%	
386	Serco (DBC)	22.2%	22.2%	22.2%	
387	Ringway Infrastructure	25.2% plus £28,000	25.2%	25.2%	4
394	Pre School Learning Alliance (Westfield)	18.0%	18.0%	18.0%	4
395	Evergreen Cleaning Co Ltd	15.4%	15.4%	15.4%	
398	St Mary's Trading Ltd (Allsorts)	17.0%	17.0%	17.0%	
402	NSL Ltd.	20.9%	20.9%	20.9%	
403	Churchill Contract	16.8%	16.8%	16.8%	
404	Serco SMS	16.8%	16.8%	16.8%	
411	Edwards & Blake Ltd (Praewood School)	20.9%	20.9%	20.9%	
412	Opus (uk) Ltd	23.8%	23.8%	23.8%	4
413	Haywards Services Limited	20.8%	20.8%	20.8%	
416	Crime Reduction Initiative	30.2%	30.2%	30.2%	4
420	Hertsmere Leisure Trust	18.1%	18.1%	18.1%	
422	Balfour Beatty LTD	18.5%	18.5%	18.5%	
423	PSLA (Holywell)	22.5%	22.5%	22.5%	
426	Hertsmere Leisure (Oughtonhead)	18.6% plus £14,000	18.6%	18.6%	4
427	Caterlink (BB)	20.8%	20.8%	20.8%	
433	ABM Catering Ltd	29.7%	29.7%	29.7%	
434	SLL (NHDC - Letchworth)	19.7%	19.7%	19.7%	
435	SLL (NHDC - Royston)	19.7%	19.7%	19.7%	
437	SLL (Knights Templar)	20.7%	20.7%	20.7%	



Employer code	Employer name	Minimum Contributions for the Year Ending			Notes
		31 March 2015	31 March 2016	31 March 2017	
Former employers with no active members					
2	Magistrates Courts Committee				
55	Commission for New Towns - Stevenage				
56	Commission for New Towns - Welwyn Garden City				
63	Hockerill School				
69	St Albans Diocesan Board for Social Responsibility				
71	Lee Valley Water				
77	Colne Valley Water Company				
80	Rhodes Museum Foundation				
83	Watford Sheltered Workshop				
87	Hertfordshire Housing Consortium				
111	Commission for New Towns - Hemel Hempstead				
112	Rickmansworth & Uxbridge Valley Water Company				
114	West Hertfordshire Computer Consortium				
115	Thames Water Authority				
127	Age Concern Hertfordshire	£31,000	£32,000	£33,000	
128	Chauncy Housing Association				
129	St. Albans Society for the Deaf				
135	Hemel Hempstead Day Centre Ltd				
141	Hertford Museum Trust	£130,000	£135,000	£140,000	
145	Hertfordshire Care Trust				
153	Hertfordshire Training & Enterprise Council				
155	Shenley Park Trust	£22,000	£23,000	£24,000	
203	Hertford Citizens Advice Bureau				
204	St Albans Citizens Advice Bureau	£32,000	£34,000	£35,000	
208	Herts Family Mediation Service				
215	Association of Charity Officers	£9,000	£11,000	£11,000	
218	Weston Voluntary Nursery				
219	Wellfield Trust				
220	Shenley Parish Council				
234	Watford Town Centre Partnership Limited				
239	Womans Royal Voluntary Society				
246	Offley Place Ltd				
253	North Hertfordshire Hospice Care Association				
263	East Herts Citizens Advice Service	£2,000	£2,000	£2,000	
266	Art Café	£7,000	£7,000	£7,000	
273	Letchworth Garden City Council				
281	Codicote Parish Council				
319	Caterplus				
360	Fusion Lifestyle				
379	Aldeham Renaissance				
415	Principle Cleaning				

Notes

1 Hertfordshire Probation Trust is part of a re-organisation and its membership, assets and liabilities will transfer to the Greater Manchester Pension Fund on 1 June 2014.

2 Affinity Sutton have a contractual agreement in place with the Administering Authority which requires the funding position to be updated on an annual basis. If a deficit arises in any of the annual funding updates Affinity Sutton will be required to pay contributions to pay off the deficit.

3 The employer is close to their contract end date and has a surplus. With an aim to reduce the surplus and target a 100% funding level on cessation I have proposed that no employer contributions are paid until the planned contract end date. Please note that employee contributions still have to be paid into the fund.

4 The employer has a risk sharing agreement with their Awarding Authority. The contribution rates above are the minimum that is required to be paid into the pension fund for the next three years. If this is greater than outlined in the risk sharing agreement then this should be dealt with by the Awarding Authority and the employer.



Further comments

Stabilisation

The following employers have had their contribution rates stabilised following a separate modelling exercise that we carried out on their behalf:

- Hertfordshire County Council
- Broxbourne Borough Council
- Dacorum Borough Council
- East Herts District Council
- Hertsmere Borough Council
- North Herts District Council
- St Albans District Council
- Stevenage Borough Council
- Three Rivers District Council
- Watford Borough Council
- Welwyn and Hatfield District Council
- Police & Crime Commissioner for Hertfordshire
- Schools and Academies pool