

Hymans Robertson LLP has carried out an actuarial valuation of the Bedfordshire Pension Fund ("the Fund") as at 31 March 2010, details of which are set out in the report dated 30 March 2011 ("the Report"), addressed to Bedford Borough Council ("the Client"). The Report was prepared for the sole use and benefit of our Client and not for any other party; and Hymans Robertson LLP makes no representation or warranties to any third party as to the accuracy or completeness of the Report.

The Report was not prepared for any third party and it will not address the particular interests or concerns of any such third party. The Report is intended to advise our Client on the past service funding position of the Fund at 31 March 2010 and employer contribution rates from April 2011, and should not be considered a substitute for specific advice in relation to other individual circumstances.

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Bedfordshire Pension Fund

ACTUARIAL VALUATION 2010



Valuation Report

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## Executive summary

I have carried out an actuarial valuation of the Bedfordshire Pension Fund ('the Fund') as at 31 March 2010. 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 2010 in respect of benefits earned by members up to this date.

Past Service Position	(£m)
Past Service Liabilities	1618
Market Value of Assets	1168
Surplus / (Deficit)	(449)
<b>Funding Level</b>	<b>72%</b>

The results show that the Fund had not met its objective of holding sufficient assets to meet the estimated current cost of past service benefits at 31 March 2010. The funding level has fallen from 80% at the previous valuation at 31 March 2007 to 72% at this valuation. This has resulted in the deficit increasing from £274m at 31 March 2007 to £449m at 31 March 2010.

The deterioration of the funding position reflects the adverse conditions which the Fund has had to contend with since the previous valuation. In particular, investment returns for the three years to 31 March 2010 were significantly poorer than anticipated.

### Contribution rates

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

Contribution Rates	(% of pay)
Future Service Rate	13.9%
Past Service Adjustment (20 year spread)	8.7%
<b>Total (Common) Contribution Rate</b>	<b>22.7%</b>

The common contribution rate for the whole Fund at 31 March 2010 is 22.7% of pay. This comprises the anticipated cost of new benefits being earned by members in future (13.9%) plus the additional contributions required to repay the deficit over a 20 year period (8.7%). These rates are in addition to the contributions that will be made by members.

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. Accordingly, an adjustment to the common rate has been determined for each employer. The minimum contributions to be paid by each employer from 1 April 2011 to 31 March 2014 are shown in the Rates and Adjustments Certificate in **Appendix H**.

### Assumptions

The results shown above make a prudent allowance for the expectation that the Fund's equity-type investments will outperform gilts/bonds over the long term – the latter being in theory a closer match to the Fund's liabilities. If we were to make no allowance for this anticipated outperformance and no short term reduction in assumed salary increases, I estimate that the funding level at 31 March 2010 would be 50%, the deficit £1185m and the common contribution rate 45.0%.

My calculations explicitly allow for the change in benefit indexation from RPI to CPI, as announced in the Emergency Budget of June 2010. No allowance has been made for the possible effect on the Fund of the outcomes of Lord Hutton's review of public sector pensions as these are still uncertain at the time of writing.

The results of the valuation are highly sensitive to the actuarial assumptions I have made about the future. If actual future demographic and economic experience does not match these assumptions, the financial position of the Fund could improve or deteriorate materially. This is precisely why the position of the Fund is monitored via regular valuations.

The image shows two handwritten signatures. The first signature on the left is 'Gemma Sefton' and the second signature on the right is 'Peter Summers'.

Gemma Sefton FFA and Peter Summers FIA

Fellow of the Institute and Faculty of Actuaries

For and on behalf of Hymans Robertson LLP

30 March 2011

# Introduction

I have carried out an actuarial valuation of the Bedfordshire Pension Fund as at 31 March 2010. This is my report to Bedford Borough Council ('the Administering Authority') on the results of the valuation.

## 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 2010;
- 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 relevant regulations;
- to comment on the main risks to the Fund that may result in future volatility in the funding position or to employers' contributions.

## Scope

This report is provided solely for the purpose of the Administering Authority to consider the management of the Fund and, in particular, to fulfil their and my statutory obligations. It should not be used for any other purpose (e.g. for accounting purposes under FRS17 / IAS19 or termination valuations under Regulation 38 of the Administration Regulations). It should not be released or otherwise disclosed to any third party except as required by law or with my prior written consent, in which case it should be released in its entirety. This report can be passed to the Fund's employers for the purpose of providing information on the funding position at 31 March 2010.

Hymans Robertson LLP accepts no liability to any other party unless we have expressly accepted such liability.

## Reliances and limitations

This valuation report complies with all of the relevant regulations and professional standards, as set out in **Appendix A**.

The figures in this report are based on our understanding of the benefit structure of the LGPS as at 31 March 2010. Details of this are provided in **Appendix B**.

The results of the valuation are dependent on the quality of the data provided to us by the Administering Authority for the specific purpose of this valuation. I am satisfied that the data provided was fit for the purposes of this valuation. This data is summarised in **Appendix C**.

## About the Fund

The Fund is part of the Local Government Pension Scheme (LGPS) and is a multi-employer defined benefit pension scheme. It is contracted out of the State Second Pension.

### Funding Strategy Statement

The Administering Authority prepares a Funding Strategy Statement (FSS) in respect of the Fund, in collaboration with me (the Fund's actuary) and after consultation with the Fund's employers and investment adviser. The FSS has been reviewed as part of the 2010 triennial valuation exercise and I have taken account of this as part of my valuation of the Fund.

### Funding objectives

The objectives of the Fund's funding policy are broadly as follows:

- to ensure the long-term solvency of the Fund as a whole and of the share of the Fund attributable to the solvency of each of the notional sub-funds allocated to individual employers;
- to ensure that sufficient funds are available to meet all benefits as they fall due for payment;
- not to restrain unnecessarily the investment strategy of the Fund, so that the Administering Authority can seek to maximise investment returns (and hence minimise the cost of the benefits) for an appropriate level of risk;
- to help employers recognise and manage pension liabilities as they accrue with consideration to the effect on the operation of their business where the Administering Authority considers this appropriate;
- to minimise the degree of short-term change in the level of each employer's contributions where the Administering Authority considers it reasonable to do so;
- to use reasonable measures to reduce the risk to other employers and ultimately to the Council Tax payer from an employer defaulting on its pension obligations;
- to address the different characteristics of the disparate employers (or groups of employers) to the extent that this is practical and cost-effective;
- to maintain the affordability of the Fund to employers as far as is reasonable over the longer term.

### What are the Fund's liabilities?

The Fund's liabilities are essentially the benefits promised to Fund members (past and current contributors) and, upon their death, any benefits promised to their dependants. This valuation places a current or present value on these liabilities in order to arrive at an estimated cost at the valuation date.

It is important to realise that the results of this valuation can only ever be an estimate. The actual cost of providing members' benefits is not known in advance, as it will be influenced by future events which are uncertain.

The final cost of members' benefits will depend on three main factors:

#### (i) The benefits promised to members.

The Fund provides pensions and other benefits to members and their beneficiaries. The benefits in force on the valuation date are set out in the following pieces of legislation:

- The Local Government Pension Scheme (Benefits, Membership and Contributions) Regulations 2007 (the “Benefits Regulations”) as amended.
- The Local Government Pension Scheme (Administration) Regulations 2008 (the “Administration Regulations”) as amended.
- The Local Government Pension Scheme (Transitional Provisions) Regulations 2008 (the “Transitional Regulations”) as amended.

These benefits are common to all employers participating in the Fund.

The benefits and member contributions payable by and to the LGPS respectively were amended with effect from 1 April 2008. The results presented in this valuation report make full allowance for these changes.

There are a small number of discretionary powers that may be exercised by the Administering Authority or by individual employers. With the exception of an employer’s power to augment a member’s benefits or to allow a member to receive their benefits earlier than planned without reduction (e.g. upon early retirement) I would not expect the exercise of these powers to have a material effect on the valuation results. In any event, I would expect additional employer payments, in addition to the employer contributions set out in the rates and adjustments certificate, to be made in respect of such events unless agreed otherwise.

**(ii) The profile of the membership.**

The profile of the members (e.g. their pensionable pay, age, sex and category) affects how much their future benefits will ultimately cost the Fund.

The cost of the benefits is expressed as a percentage of the pensionable pay of employee members. As the proportion of pensioner and deferred members increases relative to employee members so the contribution rate (as a percentage of pay) becomes more sensitive to the funding position and not simply the cost of new benefits being earned by members in future. A summary of the data at this and the previous valuation is given in Appendix C.

**(iii) The level of benefits paid, when they will come into payment and how long they will be paid for.**

All of these factors depend on future experience, such as when members will retire and how long they will live for after retirement. In assessing the anticipated cost of members’ benefits, I need to make assumptions about this future experience. I explain these actuarial assumptions later in this report.

The purpose of the valuation is to assess how much the Fund needs to hold now to pay those benefits, taking account the above factors and its funding objectives.

**What are the Fund’s assets?**

The Fund’s assets are invested by the Administering Authority. The market value of assets at 31 March 2010 (excluding money purchase AVC funds) was £1,168m, as shown in the audited accounts for the Fund for the period ending on 31 March 2010 that have been provided to me by the Administering Authority. No part of the Fund was comprised of insurance policies at 31 March 2010.

## Funding method and assumptions

I have used a funding method and set of assumptions for this valuation that are consistent with the Administering Authority's funding objectives set out in its Funding Strategy Statement. The methodology and assumptions are described below, and in more detail in **Appendix D** and **Appendix E** respectively.

### Funding method

For this valuation, as for the previous valuation, I have used a funding method which identifies separately the estimated cost of members' benefits in respect of scheme membership completed before 31 March 2010 ('past service') and in respect of scheme membership expected to be completed after 31 March 2010 ('future service').

#### Past service

The method I have adopted compares the assets (taken at market value) with the value placed on the Fund's past service liabilities (calculated using a market-based approach) at the valuation date. By maintaining a link to the market in both cases, this helps ensure that the assets and liabilities are valued in a consistent manner. My calculation of the Fund's liabilities also explicitly allows for anticipated future pay and pension increases.

The funding level is the value of the assets divided by the value of the past service liabilities. Where the funding level is greater than 100% there is a surplus in the fund (i.e. where assets are greater than the value of the past service benefits). Where the funding level is less than 100% there is a shortfall (i.e. where the assets are lower than the value of the past service benefits). The funding target is to achieve a funding level of 100% over a specific period.

#### Future service

To determine the contribution rate required to cover the estimated cost of future service benefits, I have adopted the following methods:

- For the Fund as a whole and for employers who will continue to admit new entrants to the Fund: the "Projected Unit Method".
- For employers who no longer admit new entrants to the Fund: the "Attained Age Method".

In both cases, an allowance for the anticipated future expenses of the Fund is added to the calculated contribution rate.

#### Total contribution rate

The total contribution rate comprises the future service rate plus any "past service adjustment".

The past service adjustment is the additional employer contribution required to bring the funding level back to 100% over an agreed period if there is a deficit (conversely, a contribution reduction can apply if there is a surplus). The past service adjustment can be expressed as a monetary amount or as a percentage of the value of the members' pensionable pay over the period.

### Actuarial assumptions

In the actuarial valuation, I must use assumptions 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** exactly 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 they will exchange some of their pension for tax-free cash.

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.

Details of our recommended assumptions for this valuation are set out below.

### Financial assumptions

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

Assumption	Description	31 March 2010	
		Nominal	Real
Price Inflation (CPI)	Market expectation of long term future inflation as measured by the difference between yields on fixed and index-linked Government bonds at the valuation date, less 0.5% p.a.	3.3%	-
Pay increases*	CPI plus 2.0% p.a.	5.3%	2.0%
"Gilt-based" discount rate	Yield on fixed interest (nominal) and index-linked (real) Government bonds	4.5%	1.2%
Funding basis discount rate	"Gilt-based" discount rate plus an Asset Outperformance Assumption of 1.9% p.a.	6.4%	3.1%

\* 1% p.a. for the three years following the valuation, reverting to 5.3% p.a. thereafter. Plus an allowance for promotional pay increases.

### Discount rate

The funding valuation is effectively a budgeting 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, I need to 'discount' these future cashflows back to the valuation date at a suitable rate.

Different valuations can be categorised by the approach taken to setting the discount rate. For example, under the accounting standard FRS17, the discount rate is determined as the yield on AA-rated corporate bonds. By comparison, a discontinuance valuation will likely use the yield on suitably dated Government bonds. For a funding valuation such as this one, I have set the discount rate 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. I allow for this by applying an Asset Outperformance Assumption, which is effectively a margin in excess of the yield available on Government bonds.

For the purposes of this valuation, I have adopted an Asset Outperformance Assumption of 1.9% p.a. This results in a discount rate of 6.40% p.a.

The selection of an appropriate Asset Outperformance Assumption is a matter of judgement, based on available evidence. It is one way of measuring the degree of prudence in the funding strategy. I believe that an Asset Outperformance Assumption of 1.9% p.a. is a prudent one for the purposes of this valuation. However, the degree of risk inherent in the Fund's investment strategy should always be considered as fully as possible when setting out a funding strategy.

## Price inflation / pension increases

The Chancellor of the Exchequer announced in his Emergency Budget on 22 June 2010 that the Consumer Price Index (CPI) rather than the Retail Prices Index (RPI) will be the basis for future increases to public sector pensions in payment and in deferment. I have allowed for this in my valuation calculations as at 31 March 2010.

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, I have adopted a similar approach. However, I have then adjusted this market-derived RPI rate downwards by 0.5% p.a. to derive the assumption for CPI.

## Salary increases

My long term assumption for salary increases is RPI plus 1.5% p.a. This translates to CPI plus 2.0% p.a.

However, the Government has announced that pay for public sector employees will be frozen for a period of two years, with a flat increase of £250 being applied to all those earning less than £21,000 p.a. Although this "pay freeze" does not officially apply to local government employers, it has been suggested that they will be expected to show similar restraint in respect of pay awards. Based on an analysis of the membership in LGPS funds, and after discussion and agreement with the Administering Authority, I believe that the average expected increase in pensionable pay across all employers should be around 1% p.a. for the next three years. I have set the salary increase assumption at this valuation to 1% p.a. for the three years following the valuation. After this point, the assumption will revert back to the long-term rate of CPI plus 2.0% p.a.

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). I have also made a separate allowance for expected pay rises granted in the future as a result of members achieving 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.

## 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, I 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
2007 valuation longevity	20.7	23.6	19.6	22.5
2010 valuation - baseline	19.5	21.6	19.5	21.1
2010 valuation - improvements	23.6	25.6	21.6	23.2

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

I 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 2010.

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

## Funding position at 31 March 2010

The Administering Authority has prepared a Funding Strategy Statement which sets out its funding objectives for the Fund. In broad terms, the main funding objective is to hold sufficient assets in the Fund to meet the assessed cost of members' past service benefits and the main contribution 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, I have used the funding method and actuarial assumptions described in the previous section of this report. My results are presented in the form of a 'funding level'. This is the ratio of the value of assets to the assessed cost of members' past service benefits (based on service accrued by members prior to the valuation date). A funding level of 100% would correspond to the objective being met exactly. The table below compares the value of the assets and liabilities at 31 March 2010.

Valuation Date	31 March 2010
Past Service Position	(£m)
Past Service Liabilities	
Employees	654
Deferred Pensioners	313
Pensioners	651
Total Liabilities	1618
Market Value of Assets	1168
<b>Surplus / (Deficit)</b>	<b>(449)</b>
<b>Funding Level</b>	<b>72%</b>

At 31 March 2010 the funding level was 72%.

The main funding objective was not met: there was a shortfall of assets to the assessed cost of members' benefits of £449m.

### Future service

I 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 2010 (the 'future service contribution rate'). Again, I have used the method and assumptions set out in the previous section of this report. 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:

Valuation Date	31 March 2010
Future service rate	% of pay
Cost of new benefits earned in future	20.1%
Expenses	0.4%
Total	20.5%
Employee contribution rate	6.6%
<b>Future service rate (employer)</b>	<b>13.9%</b>

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Note that this future service contribution rate makes no allowance for the £449m past service shortfall in the Fund described above.

The average future service rate for Fund employers is 13.9% of pensionable pay. This rate is calculated at 31 March 2010 and, in theory, forms part of the total contribution rate payable by employers from 1 April 2011. However, in practice, I have calculated a future service rate for each employer which is based on their particular circumstances and their total contribution rates are based on this, rather than the average future service rate for the Fund as a whole.

A comparison of the results of this valuation and the previous one at 31 March 2007 is provided in **Appendix F**.

## Funding position: changes since the previous valuation

The previous formal actuarial valuation of the Fund was carried out with an effective date of 31 March 2007. Since then, there have been changes to the Fund and its membership and to the economic environment in which the Fund operates. Many of these changes have affected the valuation results and these are summarised below.

### Changes to the funding objective

There are no changes to the funding objectives, as set out in the Funding Strategy Statement, that have a direct effect on the valuation results as at 31 March 2010 disclosed in this report.

### Changes to the Fund's benefit structure

The various changes to the benefit structure of the LGPS that took effect from 1 April 2008 were detailed in the previous valuation report dated March 2008. As I had already made an allowance for these changes in my valuation calculations at 31 March 2007, they are not responsible for the change in the funding position between 31 March 2007 and 31 March 2010.

### Changes to the Fund's membership

The Fund membership has changed since the previous valuation, as new employee members have joined the Fund and members have left the Fund, retired and died. Whilst membership changes were anticipated at the previous valuation, the actual changes have inevitably not exactly matched the assumptions made at the previous valuation.

### Changes to the Fund's assets

The Fund's assets have been augmented by employer and employee contributions paid in and transfer values received. However, the assets have been depleted by retirement benefit payments, transfer values, refunds paid and payment of administration and other expenses. Most importantly, investment returns for the three years to 31 March 2010 were much lower than anticipated.

Overall, the Fund's assets have grown since the previous valuation but by a much smaller amount than anticipated. This has had an adverse impact on the funding position.

### Changes to the estimated cost of the Fund's liabilities

#### Economic factors

The underlying bond yields that form the foundation of our discount rate assumption were the same at 31 March 2010 as they were at the previous valuation. My Asset Outperformance Assumption has also remained constant. The discount rate I have used to estimate the cost of future benefit payments is therefore unchanged.

Benefit payments themselves are linked to inflation – via pension increases and also salary increases. Market expectations of inflation, as measured by the Retail Prices Index (RPI), have risen since the previous valuation. However, this has been largely offset by the Government's policy to link future pension increases to the Consumer Price Index (CPI).

Rising price inflation is often accompanied by rising salary inflation. However, salaries in the public sector are under considerable pressure at present and many LGPS employee members are likely to receive much lower pay rises in the short term and I have made an allowance for this in my calculations.

The overall effect of economic factors on the value of the Fund's liabilities at this valuation is broadly neutral.

## Demographic factors

The value placed on the Fund's liabilities is also affected by when future benefits are expected to come into payment and how long they are expected to be paid for. A key factor in this is the life expectancy of members.

The assumptions relating to the longevity of current and future pensioners have changed since the previous valuation, to reflect the recent experience of the Fund and other evidence published by the Actuarial Profession.

Some of the other demographic assumptions that we use have also changed since the previous valuation in light of recent experience e.g. the predicted nature and amount of early leavers and ill health early retirements.

Since the introduction of the new LGPS many members now have two tranches of pension - namely that which was accrued before and after 1 April 2008. In theory, these can be paid without reduction from two different retirement ages. In practice, the member can only retire once and so both pensions are paid from a single age.

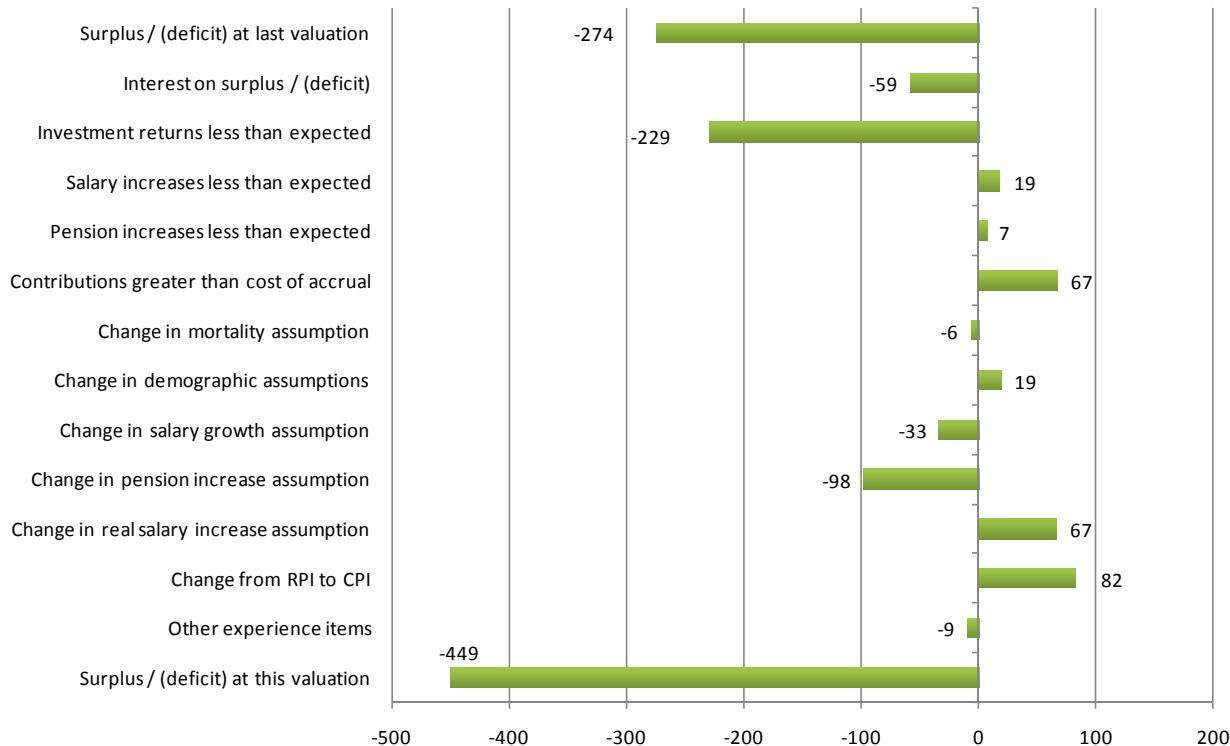
In order to ensure that we are treating these accrued benefits correctly in our valuation calculations, we are now explicitly calculating the appropriate retirement age for each member (rather than simply using the age provided in the membership data extract).

We have assumed that employees who joined before 1 October 2006 (and are subject to Rule of 85 protections on their pre-April 2008 benefits) but reach age 60 after 31 March 2020 will, on average, draw all of the benefits at age 65.

The overall effect of changes in demographic factors has also been broadly neutral.

## Summary of changes to the funding position

The chart below illustrates the factors that caused the funding position to deteriorate between 31 March 2007 and 31 March 2010:



### Experience

- Investment returns being lower than expected since 2007 lead to a loss of £229m. This is roughly the difference between the actual and expected three-year return (around 20%) applied to the whole fund assets from the previous valuation of £1,080m with a further allowance made for cashflows during the period.
- Contributions paid were higher than the cost of benefits accrued over the inter-valuation period. This resulted in a profit of around £67m.
- The overall impact of demographic experience (including contributions higher than benefits accruing and early retirement experience) has been a profit arising of around £93m. Underlying this figure, withdrawals and pensioner mortality have had a slight positive impact.

### Assumptions

- The change in financial conditions and long term financial assumptions between the previous valuation and this one, have given rise to a gain of around £18m. This figure consisted of:
  - restricting our salary assumption to 1% p.a. over the next 3 years resulting in a reduction in the value placed on liabilities of about £67m;
  - allowing for the change in the inflation index from RPI to CPI for setting future pension increases resulting in a reduction in the value placed on liabilities of about £82m; and
  - the change in the other underlying financial conditions which (overall) increased the value placed on liabilities by about £131m.
- The change in longevity assumptions has given rise to a loss of around £6m. This figure is the aggregate of a profit of about £98m due to adjustments in baseline mortality offset by an increased allowance for future longevity improvements which required an increase in reserves of about £104m.
- The change in demographic assumptions has given rise to a profit of around £19m. This figure consists of changes to the cost and incidence of ill-health early retirements, withdrawals and an assumption that younger members of the scheme will take their pensions at age 65 (rather than at their 'Rule of 85' age), as described in the previous page of this report.

## Employer contributions payable

### Whole Fund

The average future service rate for Fund employers is 13.9% of pensionable pay. This is the average future contribution rate payable over the long term by the Fund employers to meet the cost of benefits earned by members after the valuation date. This reflects the Administering Authority's funding objectives and is based on the assumptions set out in this report.

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 2010 is detailed below:

Valuation Date	31 March 2010
<b>Total contribution rate</b>	<b>% of pay</b>
Future service rate	13.9%
Past Service Adjustment (20 year spread)	8.7%
<b>Total contribution rate</b>	<b>22.7%</b>

### Individual employers

The common contribution rate is very much a theoretical figure for the Fund as a whole. In practice, each employer in the Fund has its own underlying contribution rate based on:

- The future service rate that covers the cost of new benefits being earned by that particular employer's membership after the valuation date.
- The funding position of that particular employer's share of the Fund (i.e. their share of the Fund's surplus or deficit and an assessment of an appropriate period of time over which the employer can eliminate this).
- Any mechanisms employed to promote the stability of that particular employer's contribution rate. These are agreed with the Administering Authority and may involve mechanisms such as phasing in any changes in contribution rates over a number of years or pooling the valuation results of a number of employers.
- Any employers that have opted to implement a stabilised contribution rate, whereby any increases or decreases to the employer's rate over an agreed period are curtailed. This can usually only be justified for long term, secure employers following a rigorous modelling exercise. Those employers that have opted for this approach are listed below the Rates and Adjustments Certificate in Appendix H.

All of these issues come together in a contribution rate strategy which is set out in general terms in the Funding Strategy Statement. The contribution rates to be paid by individual employers from 1 April 2011 are set out in the Rates and Adjustments Certificate in **Appendix H**. Note that these are the minimum contribution requirements for each employer.

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.

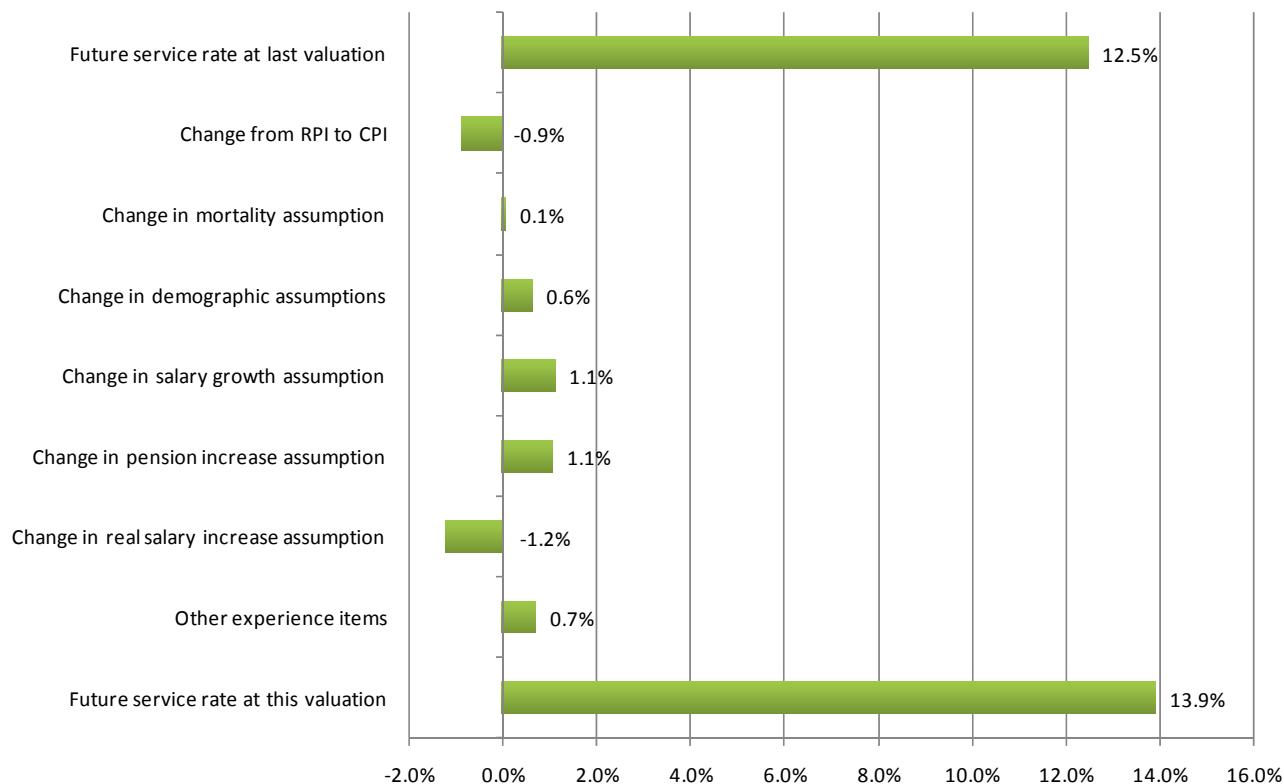
Further sums should be paid to the Fund by employers to meet the capital costs of any unreduced early retirements, reduced early retirements before age 60 and/or augmentation (i.e. additional membership or additional pension) using the methods and factors issued by me from time to time or as otherwise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

The contributions shown in the Rates and Adjustment Certificate 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.

### 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 2007 and 31 March 2010:



## 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 2013. In light of the uncertainty of future financial conditions, I 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

I 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 me as the Fund actuary for individual calculation as to the required level of contribution. They should also agree to pay the capital costs (as a one-off lump sum payment) of any early retirements or augmentation based on my advice and using methods and factors issued by the actuary from time to time, together with any additional contributions that may be required if their ill-health early retirement experience is worse than assumed.

### Other matters

Any Admission Body who ceases to participate in the Fund should be referred to me 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 me to consider the impact on the Fund.

## 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 2010.

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 **managed**.
- These risks should then be **monitored** to assess whether any risk management strategy 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 two of the 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	
		Funding level	Deficit
Discount rate	Increases by 0.5%	Rises by 6%	Falls by £142m
Salary increases	Increases by 0.5%	Falls by 2%	Rises by £35m
Price inflation / pension increases	Increases by 0.5%	Falls by 4%	Rises by £89m
Life expectancy	Increases by 1 year	Falls by 2%	Rises by £49m
Exchange of pension for tax-free cash	Increase take-up by 10%	Rises by 1%	Falls by £16m

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 our assumptions simultaneously and so the precise effect on the funding position is therefore more complex.

## Investment risk

### Valuation results at 31 March 2010 on a gilts basis

The current investment strategy of the Fund includes a high proportion of equity-type assets (such as equities and property). In the long term, it is expected that such assets will outperform gilts, which are generally considered to be a closer match to the future benefit outflows from the Fund. The scale of this outperformance is a matter of judgement based on available evidence. In deriving the discount rate for the purposes of this valuation, I have assumed that the assets held by the Fund will outperform index-linked gilts by 1.9% per annum. I consider this to be a prudent assumption.

However, this outperformance cannot be guaranteed and the Administering Authority must consider the implications of this on the funding position. The following chart summarises the effect on the valuation results if no advance credit is taken for additional outperformance above gilt returns (i.e. if a 'gilts basis' was used to value the liabilities).

Valuation Date	31 March 2010
Past Service Position	(£m)
Total Liabilities	2354
Market Value of Assets	1168
<b>Surplus / (Deficit)</b>	<b>(1,185)</b>
<hr/>	
Funding Level	50%
<hr/>	
Contribution rates	% of pay
Future service rate	27.9%
Past Service Adjustment (20 year spread)	17.2%
<b>Total contribution rate</b>	<b>45.0%</b>

On this basis, the Administering Authority would need assets of some £2,354m to fully fund the liabilities at the valuation date. Given the actual market value of the Fund's assets, this would result in a funding shortfall of £1185m. Note that this gilts basis does not include the 1% salary freeze for three years that features in the ongoing funding basis.

### 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 1.9% p.a.

The table below shows how the funding level (top), deficit (middle) and total contribution rate (bottom) would vary if investment conditions at 31 March 2010 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	0.50%	61%	66%	70%	74%	78%	
		(646)	(575)	(505)	(434)	(363)	
0.70%	27.4%	27.4%	26.0%	24.6%	23.3%	21.9%	
		63%	68%	72%	77%	81%	
0.90%	25.6%	(591)	(520)	(449)	(379)	(308)	
		25.6%	24.2%	22.7%	21.4%	20.0%	
	23.9%	66%	70%	75%	79%	84%	
		(537)	(467)	(396)	(325)	(255)	
		23.9%	22.4%	21.0%	19.6%	18.2%	
		4680	5180	5680	6180	6680	
<b>FTSE 100 Price Index</b>							

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 2010 are affected by adopting different longevity assumptions.

Longevity assumption	Impact		
	Funding level	Deficit (£m)	Future service rate
2007 valuation longevity	73%	(435)	13.6%
2010 valuation (baseline)	78%	(339)	12.2%
2010 valuation (with improvements)	72%	(449)	13.9%
2010 valuation (further improvements)	70%	(498)	15.2%
1 year extra longevity	68%	(548)	15.9%

The shaded box contains the results for this valuation. This allows for a “cohort effect”. The cohort effect allows for a generation of people born between the two world wars whose life expectancy seems to continue to increase i.e. that generation continues to survive in large numbers each year. A key question would be how much longer we will continue to see this. Current evidence suggests people are living 2 years longer every decade and this phenomenon presently shows no signs of slowing. The mortality assumptions adopted for this valuation allow for people living around 0.75 years longer per decade. We have not allowed for the potential full improvements in life expectancy at this valuation and have effectively adopted a “wait and see” approach.

The “further improvements” are a more cautious set of assumptions that make an allowance for the continuation of recently observed high levels of improvement in life expectancy, arising from this “cohort effect”. The assumptions adopted here result in people living around 1.5 years longer per decade over the long term.

The last row illustrates the effect of assuming that members live for one year longer than these further improvements imply.

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 change in such a way that would rank them as amongst the highest risks facing the Fund and therefore the analysis is qualitative rather than quantitative.

Risk	Impact	
	Funding level	Future service rate
Greater level of ill health retirement	Decreases	Increases
Greater level of withdrawals	Increases	Decreases
Rise in average age of employee members	Marginal effect	Increases
Pay and price inflation higher than anticipated	Decreases	Increases
Members convert less pension to cash at retirement than assumed	Decreases	Increases
Changes to Regulations that make benefit package more favourable to members	Decreases (if changes affect past service)	Increases

### 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 the risks 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 at future valuations that are purposely 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.
- Insure against specific risks, where such insurance is available (e.g. ill health liability insurance).
- 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).

Adopting one or more of these measures can assist with the management of risk within the pension fund.

## Summary

I have carried out an actuarial valuation of the Bedfordshire Pension Fund ('the Fund') as at 31 March 2010. 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 2010 in respect of benefits earned by members up to this date.

Past Service Position	(£m)
Past Service Liabilities	1618
Market Value of Assets	1168
Surplus / (Deficit)	(449)
<b>Funding Level</b>	<b>72%</b>

The deterioration of the funding position reflects the adverse conditions which the Fund has had to contend with since the previous valuation. In particular, investment returns for the three years to 31 March 2010 were significantly poorer than anticipated.

### Contribution rates

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

Contribution Rates	(% of pay)
Future Service Rate	13.9%
Past Service Adjustment (20 year spread)	8.7%
<b>Total (Common) Contribution Rate</b>	<b>22.7%</b>

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. Accordingly, an adjustment to the common rate has been determined for each employer. The minimum contributions to be paid by each employer from 1 April 2011 to 31 March 2014 are shown in the Rates and Adjustment Certificate in **Appendix H**.



Gemma Sefton FFA and Peter Summers FIA

Fellow of the Institute and Faculty of Actuaries

30 March 2011

## Appendix A: Regulations and professional standards

### **LGPS regulations**

This valuation is carried out in accordance with regulation 36 of the Administration Regulations, which specifies that the Administering Authority must obtain:

- an actuarial valuation of the assets and liabilities of the Fund as at 31 March 2010 and in every third year thereafter;
- a report by an actuary in respect of the valuation; and
- a Rates and Adjustments Certificate prepared by an actuary.

Within the Rates and Adjustments Certificate I am required to specify:

- the employers' common contribution rate which, in my opinion, should be paid by all employers so as to ensure the Fund's solvency, and
- any individual adjustments (increases or decreases) to the common contribution rate which, in my opinion, are required by reason of any circumstances peculiar to a particular employer,

which for this valuation apply for each year of the period of three years beginning with 1 April 2011.

Under the provisions of the Regulations, I am required to have regard to:

- the existing and prospective liabilities of the Fund arising from circumstances common to all those bodies participating in the Fund,
- the desirability of maintaining as nearly constant a common rate as possible, and
- the current version of the Administering Authority's funding strategy statement.

### **Professional standards**

#### **Guidance Note 9 (GN9)**

This report has been prepared in accordance with version 8.1 of the guidelines 'GN9: Funding Defined Benefits - Presentation of Actuarial Advice' published by the Board for Actuarial Standards. However the following aspects of GN9 are not relevant to the LGPS and its funds in the current circumstances and I have therefore not reported on them:

- Paragraph 3.4.16 of GN9 requires the actuary to include the certification of technical provision in relation to a valuation under Part 3 of the Pensions Act 2004. As Part 3 of the Pensions Act 2004 does not apply to the LGPS, this report does not comply with paragraph 3.4.16 of GN9; and
- Part 3.5 of GN9 requires the actuary to report on the value of the liabilities that would arise had the Fund wound up on the valuation date (based on the cost of buying out the accrued benefits with insurance policies). As the LGPS is a statutory scheme, there is no regulatory provision for scheme wind up and the scheme members have a statutory right to their accrued benefits. Therefore the concept of solvency on a buy-out basis does not apply to the Fund. Accordingly, this report does not comply with part 3.5 of GN9.

The previous formal actuarial valuation was carried out as at 31 March 2007 and the results were set out in our report dated March 2008.

### Technical Actuarial Standards

Technical Actuarial Standards (TASs) are issued by the Board for Actuarial Standards and they set the standard for certain items of actuarial work, in terms of the type of information provided and the way it is communicated. As your actuary, I must comply with these standards when presenting the results of the triennial valuation.

This valuation report complies with the Technical Actuarial Standards on Reporting (TAS R) and Data (TAS D) for the purpose of recording the results of the actuarial valuation at 31 March 2010.

## Appendix B: Summary of the Fund's benefits

The non-discretionary Fund benefits that I have taken into account in this valuation for active members are summarised below.

Provision	Benefit Structure To 31 March 2008	Benefit Structure From 1 April 2008
Normal retirement age (NRA)	Age 65.	Age 65.
Earliest retirement age (ERA) on which immediate unreduced benefits can be paid on voluntary retirement	<p>As per NRA (age 65).</p> <p>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:</p> <ul style="list-style-type: none"> <li>(a) having previously had an NRA of age 60 (or after age 60 on attaining 25 years of scheme membership), due to being a member of the scheme immediately prior to 1 April 1998; or</li> <li>(b) having the potential to satisfy the rule of 85 prior to age 65 (if the sum of age (whole years) and membership (whole years) is 85 or more).</li> </ul> <p>The benefits relating to various segments of scheme membership are protected as follows, which means their benefits are calculated based on the above definitions of earliest retirement age in relation to these protected periods of scheme membership.</p> <ul style="list-style-type: none"> <li>(a) A member born on 31 March 1956 or earlier – membership up to 31 March 2016 protected;</li> <li>(b) A member born between 1 April 1956 and 31 March 1960 inclusive and who would reach their Earliest Retirement Age by 31st March 2020 – Membership prior to 31 March 2008 fully protected and membership between 1 April 2008 and 31 March 2020 subject to some protection (tapered);</li> <li>(c) All other members in the scheme immediately prior to 1 October 2006 – membership up to 31 March 2008 protected.</li> </ul>	
Member contributions	<p>Officers - 6% of pensionable pay</p> <p>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.</p>	<p>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.</p>
Pensionable pay	<p>All salary, wages, fees and other payments in respect of the employment, excluding non-contractual overtime and some other specified amounts.</p> <p>Some scheme members may be covered by special agreements.</p>	
Final pay	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.	
Period of scheme membership	Total years and days of service during which a member contributes to the Fund. Additional periods may be granted (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).	

Provision	Benefit Structure To 31 March 2008	Benefit Structure From 1 April 2008
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. Additional lump sum can be provided by commutation of pension (within overriding limits) on a basis of £12 additional lump sum for each £1 of pension surrendered.</p>	<p>Scheme membership to 31 March 2008:</p> <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>
Option to increase retirement lump sum benefit	<p>At the time that benefits come into payment, members have the option to exchange ('commute') some of the retirement pension into additional lump sum. The terms for the conversion of pension in to lump sum is £12 of lump sum for every £1 of annual pension surrendered.</p>	<p>Scheme membership to 31 March 2008:</p> <p>At the time that benefits come into payment, members have the option to exchange ('commute') some of the retirement pension into additional lump sum. The terms for the conversion of pension in to lump sum is £12 of lump sum for every £1 of annual pension surrendered.</p> <p>Scheme membership from 1 April 2008:</p> <p>No automatic lump sum. Any lump sum is to be provided by commutation of pension. The terms for the conversion of pension in to lump sum is £12 of lump sum for every £1 of annual pension surrendered.</p>
Voluntary early retirement benefits (non ill-health)	<p>On retirement after age 60 a pension and lump sum based on actual scheme membership completed may be paid, subject to reduction on account of early payment in some circumstances (in accordance with ERA protections).</p>	
Employer's consent early retirement benefits (non ill-health)	<p>On retirement after age 50 with employer's consent a pension and lump sum based on actual scheme membership completed may be paid.</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>On retirement after age 55 with employer's consent a pension and lump sum based on actual scheme membership completed may be paid.</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>Active members in the scheme immediately prior to 1 April 2008 who leave before 31 March 2010 have a protected earliest retirement age of 50.</p>

Provision	Benefit Structure To 31 March 2008	Benefit Structure From 1 April 2008
III-health benefits	<p>In the event of premature retirement due to permanent ill-health or incapacity, an immediate pension and lump sum are paid based on actual scheme membership plus an enhancement period of scheme membership.</p> <p>The enhancement period is dependent on scheme membership at date of leaving and is seldom more than 6 years 243 days.</p> <p>No reduction is applied due to early payment.</p>	<p>In the event of premature retirement due to permanent ill-health or incapacity and a reduced likelihood of obtaining gainful employment (local government or otherwise) before age 65, an immediate pension and lump sum are due based on actual scheme membership plus an enhanced period of scheme membership.</p> <p>The enhancement period is:</p> <p>25% of the period to age 65, if there is no likelihood of undertaking gainful employment within 3 years of leaving employment; or</p> <p>100% of the period to age 65, if there is no likelihood of undertaking gainful employment prior to age 65.</p> <p>A third tier, with no enhancement, is due where there is a likelihood of undertaking gainful employment within 3 years of leaving employment.</p>
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, he may elect in writing to the appropriate administering authority and 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 <b>all or part</b> 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	<p>All pensions in payment, deferred pensions and dependant's pensions other than benefits arising from the payment of additional voluntary contributions are increased annually.</p> <p>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).</p>	
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
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>	
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.	

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

### **Discretionary benefits**

The Local Government Pension Scheme (Benefits, Membership and Contributions) Regulations 2007 give employers a number of discretionary powers, including:

- the power to increase membership of an active member (Regulation 12);
- the award of additional pension to active members (Regulation 13)
- the payment of benefits with the employer's consent prior to age 60 (Regulation 30);
- the payment of benefits due to flexible retirement (Regulation 18)
- the determination that the early payment of pension benefits should not be reduced for compassionate reasons (Regulation 30(5));
- not applying the suspension of spouses' pensions on remarriage or cohabitation for members who retired before 1 April 1998.

The effect on benefits or contributions as a result of the use of these provisions 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. My assumptions do not anticipate any saving from the suspension of spouses' pension; to the extent that this continues, there will be a saving.

## Appendix C: Data

This section contains a summary of the membership, investment and accounting data provided to me 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).

### Membership data – whole fund

#### Employee members

Employee membership	31 March 2010		31 March 2007	
	Number	Pensionable Pay* (£000)	Number	Pensionable Pay* (£000)
<b>Full-time employee members</b>				
Male officers	702	25,481	946	31,430
Female officers	1,180	33,212	1,537	38,335
Male manuals	292	6,793	379	8,074
Female manuals	71	1,486	95	1,727
Post-April 1998 males	2,342	66,812	1,930	49,689
Post-April 1998 females	3,321	87,015	2,786	64,377
<b>Total full-time employee members</b>	<b>7,908</b>	<b>220,801</b>	<b>7,673</b>	<b>193,632</b>
<b>Part-time employee members</b>				
Male officers	34	620	44	703
Female officers	1,029	14,963	1,333	17,402
Male manuals	28	311	34	330
Female manuals	292	2,643	470	4,042
Post-April 1998 males	733	7,053	595	5,634
Post-April 1998 females	7,871	72,669	6,304	52,610
<b>Total part-time employee members</b>	<b>9,987</b>	<b>98,259</b>	<b>8,780</b>	<b>80,722</b>
<b>Total employee membership</b>	<b>17,895</b>	<b>319,060</b>	<b>16,453</b>	<b>274,354</b>

\*actual pay (not full-time equivalent)

The average age of employee members at 31 March 2010 was 51.5 and the average expected future working lifetime of employee members is 7.8 years. Both of these figures are weighted by liability.

#### Deferred pensioners

Deferred pensioner membership	31 March 2010		31 March 2007	
	Number	Deferred pension (£000)	Number	Deferred pension (£000)
Male officers	3,603	7,036	2,751	6,118
Female officers	11,491	11,465	8,023	8,626
Male manuals	676	1,078	723	1,062
Female manuals	1,321	637	1,425	614
<b>Total deferred pensioner members</b>	<b>17,091</b>	<b>20,216</b>	<b>12,922</b>	<b>16,420</b>

The deferred pension shown includes revaluation up to and including that granted by the 2010 Pension Increase Order. The average age of deferred pensioners at 31 March 2010 was 50.8 (this figure is weighted by liability). The figures above also include any “status 2” and “status 9” members at the valuation date.

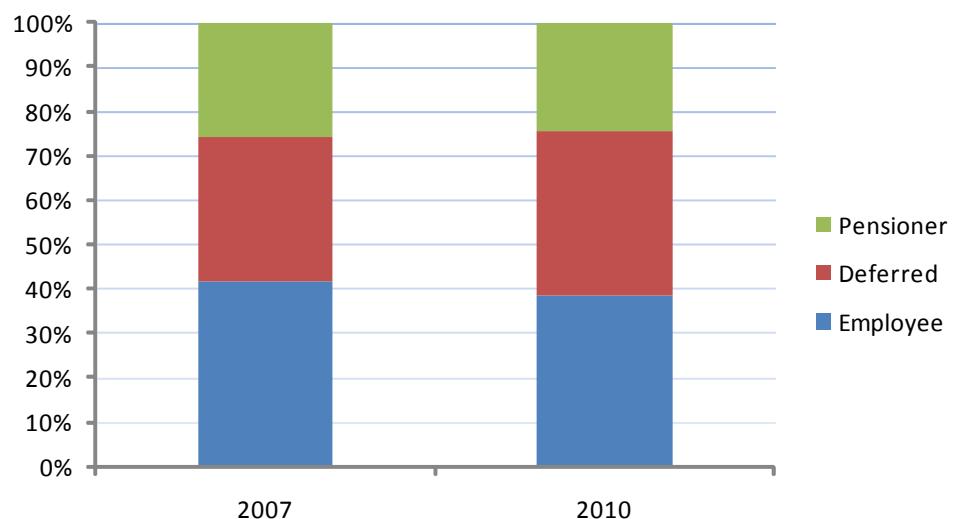
### Current pensioners, spouses and children

Pensioner membership	31 March 2010		31 March 2007	
	Number	Pension (£000)	Number	Pension (£000)
<b>Normal / early retirement</b>				
Male officers	2,227	19,299	1,922	15,385
Female officers	3,699	12,292	2,914	8,809
Male manuals	846	2,896	876	2,968
Female manuals	1,340	1,610	1,251	1,372
<b>III health retirement</b>				
Male officers	288	2,416	310	2,451
Female officers	593	2,771	603	2,637
Male manuals	322	1,461	376	1,608
Female manuals	338	634	363	634
<b>Dependants</b>				
Widows	1,228	3,325	1,229	3,142
Widowers	334	332	226	235
Male children	36	41	42	46
Female children	60	65	49	45
<b>Total pensioner members</b>	<b>11,311</b>	<b>47,142</b>	<b>10,161</b>	<b>39,332</b>

The average age of current pensioner members at 31 March 2010 (weighted by liability and excluding spouses', civil partners' and children's pensions in payment) was 67.1.

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.

The chart below summarises the membership at this valuation and at the previous one.



## Membership data – individual employers

Employer code	Employer name	Employees		Deferreds		Pensioners	
		Number	Actual Pay (£000)	Number	Pension (£000)	Number	Pension (£000)
201	BEDFORDSHIRE COUNTY COUNCIL	9	108,528	5,834	5,027,349	2,021	7,032,328
202	BEDFORDSHIRE PROBATION SERVICE	165	4,106,845	139	323,791	107	642,785
203	BEDFORDSHIRE MAGISTRATES	0	0	127	423,212	58	281,183
204	BEDFORD BOROUGH COUNCIL	1	20,000	511	968,217	707	3,807,571
205	LUTON BOROUGH COUNCIL	4572	84,423,735	3,759	4,420,395	2,121	9,239,982
206	MID BEDFORDSHIRE DISTRICT COUNCIL	0	0	222	578,949	280	1,865,145
207	SOUTH BEDFORDSHIRE DISTRICT COUNCIL	0	0	485	900,134	495	2,813,601
208	CRANFIELD UNIVERSITY	493	9,864,238	721	962,943	671	2,578,326
210	UNITED COUNTIES OMNIBUS CO LTD	0	0	1	1,612	15	66,778
211	BEDS AND RIVER IVEL DRAINAGE BOARD	17	466,150	6	7,172	17	110,209
212	BIGGLESWADE TOWN COUNCIL	10	170,305	4	6,180	3	5,862
214	KEMPSTON BURIALS JOINT COMMITTEE	2	31,102	1	1,130	1	6,593
216	TEMPSFORD PARISH COUNCIL	0	0	0	0	1	300
217	TODDINGTON PARISH COUNCIL	1	20,746	2	1,257	2	2,957
218	LEIGHTON LINSLADE TOWN COUNCIL	26	564,732	17	23,575	16	32,370
219	POTTON TOWN COUNCIL	1	16,870	0	0	2	12,391
220	SANDY TOWN COUNCIL	6	116,721	0	0	4	20,230
221	AMPTHILL TOWN COUNCIL	5	137,404	4	13,150	3	8,535
223	DEPARTMENT OF HEALTH	0	0	0	0	11	44,757
224	ANGLIAN WATER	0	0	0	0	4	33,408
226	STOTFOLD TOWN COUNCIL	3	36,357	2	3,250	0	0
227	SHUTTLEWORTH COLLEGE	0	0	2	2,866	2	4,208
228	ST FRANCIS' CHILDRENS SOCIETY	13	303,748	14	33,521	8	41,524
229	DEPARTMENT OF TRANSPORT	0	0	0	0	2	6,592
230	DUNSTABLE TOWN COUNCIL	27	668,351	28	41,625	12	73,348
231	FLITWICK TOWN COUNCIL	21	433,284	9	9,547	2	7,202
232	LONDON LUTON AIRPORT	0	0	66	367,060	219	1,209,490
233	UNIVERSITY OF BEDFORDSHIRE	502	13,313,717	509	677,642	224	734,889
234	BEDS PILGRIMS HOUSING ASSOCIATION	272	7,665,690	168	390,870	81	433,798
235	QUEENSBURY SCHOOL	32	579,310	12	13,655	11	39,025
236	Bedcoda	0	0	1	3,276	0	0
237	HOUGHTON REGIS TOWN COUNCIL	12	241,596	1	638	4	34,344
238	BARNFIELD COLLEGE	196	3,885,916	183	183,809	75	236,072
239	BEDFORD COLLEGE	226	4,343,906	296	253,417	69	178,712
240	CENTRAL BEDFORDSHIRE COLLEGE	74	1,334,183	93	113,097	61	177,680
241	LUTON 6TH FORM COLLEGE	77	1,523,281	60	59,892	27	66,610
242	MANSHEAD UPPER SCHOOL	58	692,138	46	22,441	12	19,522
243	THOMAS WHITEHEAD SCHOOL	16	128,032	5	5,864	4	4,981
244	SHARNBROOK UPPER SCHOOL	61	979,939	35	27,170	13	43,755
245	ASHCROFT HIGH SCHOOL	61	1,019,654	29	25,691	7	17,157
246	CRAWLEY GREEN INFANTS SCHOOL	27	256,257	11	649	6	9,202
247	HOLYWELL MIDDLE SCHOOL	26	228,775	26	5,410	2	6,594
248	ICKNIELD HIGH SCHOOL	87	1,147,446	53	25,884	22	23,330
249	LEA MANOR HIGH SCHOOL	45	702,453	30	16,316	8	26,055
250	LINCROFT MIDDLE SCHOOL	45	498,002	29	15,086	6	7,500
251	STOPSYLE HIGH SCHOOL	60	838,916	34	18,768	10	31,672
252	WOOTTON UPPER SCHOOL	67	851,164	42	18,695	16	33,365
253	CHRISTIAN FAMILY CARE	5	147,791	10	14,032	5	19,326
254	ASHTON ST PETERS LOWER SCHOOL	10	93,142	11	7,630	4	6,266
255	ARAGON HOUSING	88	2,252,647	80	159,460	38	220,531
256	ASHTON MIDDLE SCHOOL	42	272,375	12	4,618	4	9,136
257	BEDFORDSHIRE POLICE AUTHORITY	937	22,731,985	449	714,289	242	1,196,197
258	BEDFORD BEREAVEMENT CARE LTD	7	171,764	5	6,921	4	15,391
259	ST MARGARETS SPECIAL	0	0	1	117	8	24,221
260	SUNDON LOWER SCHOOL	7	50,835	4	2,094	1	3,416
261	BEDS AND LUTON COMBINED FIRE AUTHORITY	141	3,344,073	48	73,619	30	135,427
262	ST JOHNS SPECIAL SCHOOL	89	837,138	103	37,477	7	22,765
263	HARROLD PRIORY MIDDLE SCHOOL	15	164,589	12	7,638	1	1,644
264	MOGGERHANGER LOWER SCHOOL	5	41,387	7	1,787	0	0
265	TURVEY LOWER SCHOOL	3	35,462	2	372	0	0
267	WESTONING LOWER SCHOOL	8	67,148	8	3,029	0	0
268	KEMPSTON TOWN COUNCIL	3	58,593	2	209	1	9,752
269	ARDLEY HILL LOWER SCHOOL	7	89,863	2	1,985	3	2,227
270	BEDS CC PENSIONS PRE APRIL 1997	0	0	1,220	1,733,667	3,133	11,128,291
271	STRATTON UPPER SCHOOL	81	1,000,219	41	19,580	6	20,579
272	SAMUEL WHITBREAD SCHOOL	83	1,102,016	56	13,271	10	32,363
273	LANGFORD LOWER SCHOOL	8	65,676	2	584	0	0
274	MARK RUTHERFORD SCHOOL	29	272,940	36	12,713	7	17,450
275	ROBERT BRUCE MIDDLE SCHOOL	53	469,902	56	9,210	11	15,984
276	RAYNESFORD LOWER SCHOOL	13	75,708	17	3,458	3	1,649
277	SHEFFORD LOWER SCHOOL	31	228,652	5	5,326	3	2,758
278	NEWNHAM MIDDLE SCHOOL	37	388,740	17	8,340	3	8,068
279	SOUHTCOTT LOWER SCHOOL	20	164,748	11	7,010	1	266
280	HBS BUSINESS SERVICES GROUP LIMITED	0	0	68	237,109	56	320,367

Employer code	Employer name	Employees		Deferreds		Pensioners	
		Number	Actual Pay (£000)	Number	Pension (£000)	Number	Pension (£000)
281	BEDFORD TOWN CENTRE CO LTD	2	69,953	1	382	0	0
282	CHEYNES INFANT SCHOOL	18	148,489	14	6,477	0	0
283	ELSTOW LOWER SCHOOL	19	204,290	14	7,334	1	1,537
284	EDUCATION ACTION ZONE	0	0	0	0	1	25,684
285	LEARNING FOR LIFE	0	0	1	12,138	1	23,998
286	EASTCOTTS PARISH COUNCIL	1	12,340	0	0	0	0
287	LEALANDS HIGH SCHOOL	23	390,467	20	25,550	4	24,528
288	BRIGHT STARS - THORNHILL	0	0	2	307	0	0
290	TOWN & COUNTRY MARKETS	0	0	2	3,721	2	13,685
291	SUPERCLEAN	0	0	17	29,430	7	9,470
292	GALLIFORD TRY SERVICES	5	52,513	7	2,898	3	9,196
293	CADDINGTON PARISH COUNCIL	1	18,663	0	0	0	0
294	BROMHAM PARISH COUNCIL	2	37,535	1	599	0	0
295	HARLINGTON PARISH COUNCIL	2	25,144	0	0	0	0
296	ARLESEY TOWN COUNCIL	2	48,107	2	111	0	0
298	BIDDENHAM, UPPER SCHOOL	77	937,838	40	14,001	6	9,230
299	AMEY INFRASTRUCTURE SERVICES	33	866,679	8	13,439	9	59,963
300	ACTIVE LUTON	197	2,859,180	108	58,262	8	31,031
301	BROMHAM LOWER SCHOOL	31	164,522	24	3,588	0	0
302	Wootton Parish Council	0	0	0	0	0	0
303	BEDFORDSHIRE AND LUTON MENTAL HEALTH TRUST	97	2,119,532	34	83,780	14	44,861
304	ERCU	0	0	0	0	30	201,488
305	BARNFIELD SOUTH ACADEMY	38	577,685	7	3,450	2	6,391
306	BARNFIELD WEST ACADEMY	50	664,144	22	12,906	3	3,652
307	ST CHRISTOPHER'S FELLOWSHIP	28	683,420	14	36,461	0	0
308	HAZELDENE LOWER SCHOOL	27	204,768	9	3,983	1	3,470
309	RAMSEY MANOR LOWER SCHOOL	26	184,137	2	730	1	3,439
310	ARNOLD MIDDLE SCHOOL	38	301,144	8	7,010	1	1,697
311	HASTINGSBURY UPPER SCHOOL	58	681,608	19	8,336	2	4,958
313	LUTON CULTURAL SERVICES TRUST	162	2,884,052	30	23,084	5	10,561
314	MACINTYRE HOUSING	12	297,184	2	5,678	0	0
315	GRAND UNION HOUSING	49	1,546,404	2	4,617	3	16,344
316	MARSTON MORETAIN PARISH COUNCIL	1	14,830	0	0	0	0
317	COMMUNITY HOUSING ASSOCIATION	5	122,084	0	0	0	0
318	KINGS HOUGHTON MIDDLE SCHOOL	39	439,724	8	2,730	3	2,479
319	CENTRAL BEDFORDSHIRE	4581	72,115,151	502	498,572	110	784,334
320	BEDFORD BOROUGH COUNCIL	3187	53,778,720	264	262,863	82	567,557
321	ALL SAINTS ACADEMY	43	690,272	8	2,512	0	0
322	CIVICA UK LTD	2	28,833	0	0	0	0
323	OPERON	3	52,852	0	0	0	0

### Assets at 31 March 2010

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

Asset class	Market Value at 31 March 2010 (£000)	Allocation %
UK equities	270,500	23%
UK fixed interest gilts	47,100	4%
UK corporate bonds	159,700	14%
UK index-linked gilts	43,600	4%
Overseas equities	439,800	38%
Overseas bonds	7,400	1%
Property	92,100	8%
Cash and net current assets	108,130	9%
<b>Total</b>	<b>1,168,330</b>	<b>100%</b>

A brief comparison of the asset allocation of the Fund at this and the previous valuation is shown below:

Asset class	Asset Allocation	
	31 March 2010	31 March 2007
Equities	61%	69%
Bonds	22%	16%
Property	8%	10%
Cash & other assets	9%	5%
<b>Total</b>	<b>100%</b>	<b>100%</b>

#### Accounting data – revenue account for the three years to 31 March 2010

Consolidated accounts (£000)	Year to			Total
	31 March 2008	31 March 2009	31 March 2010	
<b>Income</b>				
Employer - normal contributions	37,234	40,924	45,335	123,493
Employer - additional contributions	17,284	18,256	15,957	51,497
Employer - early retirement and augmentation strain contributions	5,321	4,905	8,874	19,100
Employee - normal contributions	17,190	19,883	20,528	57,601
Employee - additional contributions	637	544	702	1,883
Transfers In Received (including group and individual)	13,743	10,143	14,947	38,833
Other Income	54	(4)	3	53
<b>Total Income</b>	<b>91,463</b>	<b>94,651</b>	<b>106,346</b>	<b>292,460</b>
<b>Expenditure</b>				
Gross Retirement Pensions	42,395	45,216	49,038	136,649
Lump Sum Retirement Benefits	8,231	8,256	14,589	31,076
Death in Service Lump sum	629	1,244	550	2,423
Death in Deferment Lump Sum	67	70	151	288
Death in Retirement Lump Sum	89	48	361	498
Gross Refund of Contributions	18	26	17	61
Transfers out (including bulk and individual)	8,376	10,286	10,919	29,581
Fees and Expenses	1,212	1,036	1,160	3,408
<b>Total Expenditure</b>	<b>61,017</b>	<b>66,182</b>	<b>76,785</b>	<b>203,984</b>
<b>Net Cashflow</b>	<b>30,446</b>	<b>28,469</b>	<b>29,561</b>	<b>88,476</b>
<b>Assets at start of year</b>	<b>1,079,577</b>	<b>1,074,800</b>	<b>887,416</b>	
Net cashflow	30,446	28,469	29,561	
Change in value	(35,223)	(215,853)	251,353	
<b>Assets at end of year</b>	<b>1,074,800</b>	<b>887,416</b>	<b>1,168,330</b>	
<b>Approximate rate of return on assets</b>	<b>-3.2%</b>	<b>-19.8%</b>	<b>28.8%</b>	<b>-0.1%</b>

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

## Appendix D: Funding method

Using the actuarial assumptions described earlier (and summarised in Appendix E) I have estimated the payments which will be made from the Fund throughout the future lifetimes of existing employee members, deferred pensioners, pensioners and their dependants. I have then calculated the amount of money which, if invested now, should be sufficient to meet all of these payments in future, assuming that future investment returns are in line with the discount rate. This amount is the estimated cost of members' benefits. I have calculated separately the estimated cost of benefits arising from scheme membership accrued by members before the valuation date ('past service') and from scheme membership after the valuation date ('future service').

### **Past service funding position**

I have compared the value of the assets with the estimated cost of members' past service benefits (i.e. the past service liabilities) at 31 March 2010. My calculation of the liabilities allows for all expected future pay and pension increases. The ratio of the asset value to the past service liabilities is known as the 'funding level'. If the funding level is more than 100% there is a 'surplus'; if it is less than 100% there is a 'shortfall'.

### **Future service contribution rate**

#### **Whole fund and employers admitting new entrants**

I have calculated the estimated cost of benefits that will be earned by existing employee members over the year following 31 March 2010, allowing for all expected future pay and pension increases. This amount is expressed as a percentage of the members' pensionable pay over the year following the valuation date and is known as the 'future service contribution rate'.

This method of assessing the future contribution requirement is applied only to the Fund's membership at the valuation date. If new entrants are admitted to the Fund to the extent that the membership profile remains broadly unchanged (and if the actuarial assumptions are unchanged) then the future service contribution rate assessed at future valuations should be reasonably stable. However, if the average age of employee members rises (for example if few or no new entrants are admitted to the Fund), and if the actuarial assumptions are unchanged, then the future service contribution rate will increase.

This funding method is known as the Projected Unit Method.

#### **Employers not admitting new entrants**

I have calculated the estimated cost of benefits that will be earned by existing employee members over their expected future working lifetime, allowing for all expected future pay and pension increases. This amount is expressed as a percentage of the members' pensionable salaries over their expected future working life and is known as the 'future service contribution rate'.

This method of assessing the future contribution requirement is applied only to the Fund's membership at the valuation date. If no new entrants are admitted to the Fund, so that the membership profile gradually ages, (and if the actuarial assumptions are unchanged) then the contribution rate assessed at future valuations should be reasonably stable, provided that any surplus or shortfall in the past service position is reflected in the contribution rate.

This funding method is known as the Attained Age Method.

### **Future service contribution rate: all cases**

Under each of the two methods described above to calculate the future service contribution rate, the estimated cost of any lump sum death in service benefits is separately assessed as the amount which is likely to be paid out in an average year, based on the membership structure at the valuation date.

The total 'future service contribution rate' is then the sum of the 'Projected Unit Method' rate or the 'Attained Age Method' rate (whichever is appropriate to the employer) plus the lump sum death benefit cost. It is the rate at which the Fund's employers, together with the employee members, should contribute to the Fund to meet the cost of members' benefits expected to arise from service after the valuation date. Employee members will be contributing at fixed rates (albeit with various tiers). Therefore the employer future service contribution rate is the total future service contribution rate less the member contribution rate. An addition is then made to cover the expected future expenses of administering the Fund.

## Appendix E: Assumptions

### Financial assumptions

Financial assumptions	31 March 2007 Funding basis (%pa)	31 March 2010	
		Funding basis (%pa)	Gilts basis (%pa)
<b>Discount rate</b>	6.4%	6.4%	4.5%
<b>Price inflation</b>	3.2%	3.3%	3.3%
<b>Pay increases*</b>	4.7%	5.3%	5.3%
<b>Pension increases:</b>			
pension in excess of GMP	3.2%	3.3%	3.3%
post-88 GMP	2.8%	2.8%	2.8%
pre-88 GMP	0.0%	0.0%	0.0%
<b>Revaluation of deferred pension</b>	3.2%	3.3%	3.3%
<b>Expenses</b>	0.4%	0.4%	0.4%

\*An allowance is also made for promotional pay increases (see table below). Note that the assumption for the funding basis at 31 March 2010 is actually 1% p.a. for the three years following the valuation, reverting to 5.3% p.a. thereafter.

### Mortality assumptions

Longevity assumptions	31 March 2010
Longevity - baseline	VitaCurves
Longevity - improvements	Medium Cohort with 1% minimum improvements

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	Future pensioners are assumed to elect to exchange pension for additional tax-free cash up to 50% of HMRC limits for service to 31 March 2008 and 75% of HMRC limits for service from 1 April 2008.

The tables below show details of the assumptions actually used for specimen ages. The promotional pay scale is in addition to the allowance for general pay inflation described above. For membership movements, the figures represent the number of members per 1000 at each age that are assumed to leave service within the following twelve months.

#### Withdrawals for members with 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	
	Withdraw als		Withdraw als		Withdraw als		Withdraw als		Withdraw als		Withdraw als	
	FT	PT	FT	PT	FT	PT	FT	PT	FT	PT	FT	PT
20	202.69	337.82	202.69	337.82	192.26	267.03	192.26	267.03	371.61	743.21	256.35	427.25
25	133.89	223.15	133.89	223.15	129.33	179.63	129.33	179.63	245.46	490.92	172.44	287.41
30	94.97	158.29	94.97	158.29	108.39	150.54	108.39	150.54	174.11	348.23	144.51	240.86
35	74.19	123.65	74.19	123.65	93.48	129.84	93.48	129.84	136.01	272.03	124.64	207.74
40	59.70	99.50	59.70	99.50	77.75	107.99	77.75	107.99	109.45	218.90	103.67	172.78
45	48.85	81.42	48.85	81.42	64.00	88.90	64.00	88.90	89.56	179.12	85.34	142.23
50	37.84	63.07	37.84	63.07	48.77	67.74	48.77	67.74	69.37	138.75	65.03	108.38
55	32.79	54.65	32.79	54.65	37.59	52.21	37.59	52.21	60.11	120.23	50.12	83.54
60	19.87	33.12	19.87	33.12	17.47	24.27	17.47	24.27	36.43	72.86	23.29	38.82

#### Withdrawals for members with 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	
	Withdraw als		Withdraw als		Withdraw als		Withdraw als		Withdraw als		Withdraw als	
	FT	PT	FT	PT	FT	PT	FT	PT	FT	PT	FT	PT
20	149.82	249.70	149.82	249.70	142.11	197.37	142.11	197.37	274.67	549.33	189.48	315.79
25	98.96	164.93	98.96	164.93	95.59	132.77	95.59	132.77	181.43	362.85	127.46	212.43
30	70.20	116.99	70.20	116.99	80.11	111.27	80.11	111.27	128.69	257.39	106.81	178.02
35	54.84	91.39	54.84	91.39	69.09	95.97	69.09	95.97	100.53	201.06	92.13	153.54
40	44.13	73.54	44.13	73.54	57.47	79.82	57.47	79.82	80.90	161.79	76.62	127.70
45	36.11	60.18	36.11	60.18	47.31	65.71	47.31	65.71	66.20	132.40	63.08	105.13
50	27.97	46.61	27.97	46.61	36.05	50.07	36.05	50.07	51.28	102.55	48.06	80.10
55	24.24	40.39	24.24	40.39	27.78	38.59	27.78	38.59	44.43	88.86	37.05	61.74
60	14.69	24.48	14.69	24.48	12.91	17.94	12.91	17.94	26.93	53.86	17.22	28.70

#### III health retirements – Tier 1

Age	Incidence per 1000 active members per annum							
	Male Officers & Post 98		Male Manuals		Female Officers & Post 98		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	0.27	0.27	0.05	0.04	0.31	0.31
30	0.05	0.04	0.44	0.44	0.08	0.06	0.43	0.43
35	0.07	0.05	0.66	0.66	0.17	0.13	0.62	0.62
40	0.12	0.09	0.91	0.91	0.22	0.16	0.86	0.86
45	0.27	0.20	1.31	1.31	0.35	0.26	1.10	1.10
50	0.74	0.55	1.92	1.92	0.69	0.52	1.63	1.63
55	4.08	3.06	8.35	8.35	4.90	3.67	8.29	8.29
60	16.73	12.55	32.54	32.54	19.35	14.51	32.54	32.54

### III health retirements – Tier 2

Age	Incidence per 1000 active members per annum							
	Male Officers & Post 98		Male Manuals		Female Officers & Post 98		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	1.14	1.14	0.21	0.16	1.33	1.33
30	0.21	0.16	1.86	1.86	0.36	0.27	1.84	1.84
35	0.29	0.21	2.78	2.78	0.71	0.54	2.65	2.65
40	0.50	0.37	3.86	3.86	0.93	0.70	3.67	3.67
45	1.14	0.86	5.57	5.57	1.50	1.12	4.69	4.69
50	3.98	2.98	10.31	10.31	3.71	2.78	8.79	8.79
55	5.70	4.27	11.65	11.65	6.84	5.13	11.58	11.58
60	3.26	2.44	6.33	6.33	3.76	2.82	6.33	6.33

### III health retirements – Tier 3

Age	Incidence per 1000 active members per annum							
	Male Officers & Post 98		Male Manuals		Female Officers & Post		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
25	0.00	0.00	0.38	0.38	0.07	0.05	0.44	0.44
30	0.07	0.05	0.62	0.62	0.12	0.09	0.61	0.61
35	0.10	0.07	0.93	0.93	0.24	0.18	0.88	0.88
40	0.17	0.12	1.29	1.29	0.31	0.23	1.22	1.22
45	0.38	0.29	1.86	1.86	0.50	0.37	1.56	1.56
50	0.21	0.16	0.54	0.54	0.20	0.15	0.46	0.46
55	0.30	0.22	0.61	0.61	0.36	0.27	0.61	0.61
60	0.17	0.13	0.33	0.33	0.20	0.15	0.33	0.33

### Death in service

Age	Incidence per 1000 active members per annum			
	Male Officers & Post 98		Female Officers & Post 98	
	Death	Death	Death	Death
20	0.25	0.32	0.14	0.18
25	0.25	0.32	0.14	0.18
30	0.30	0.38	0.21	0.26
35	0.35	0.44	0.35	0.44
40	0.60	0.76	0.56	0.70
45	1.00	1.26	0.91	1.14
50	1.60	2.02	1.33	1.67
55	2.50	3.15	1.75	2.20
60	4.50	5.67	2.24	2.82

### 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

## Appendix F: Comparison of valuation results with 2007

The tables below summarise the valuation results for the Fund as a whole at this valuation and at the previous valuation.

Valuation Date	31 March 2007	31 March 2010
Past Service Position	(£m)	(£m)
Past Service Liabilities		
Employees	597	654
Deferred Pensioners	233	313
Pensioners	524	651
Total Liabilities	1354	1618
Market Value of Assets	1080	1168
<b>Surplus / (Deficit)</b>	<b>(274)</b>	<b>(449)</b>
<b>Funding Level</b>	<b>80%</b>	<b>72%</b>

Valuation Date	31 March 2007	31 March 2010
Future service rate	% of pay	% of pay
Cost of new benefits earned in future	18.6%	20.1%
Expenses	0.4%	0.4%
Total	19.0%	20.5%
Employee contribution rate	6.5%	6.6%
<b>Future service rate</b>	<b>12.5%</b>	<b>13.9%</b>

## Appendix G: Post-valuation events

### Post-valuation events

These valuation results are effectively a snapshot of the Fund as at 31 March 2010. 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 (other than for the switch from RPI to CPI-based pension increases) a short discussion of these “post-valuation events” can still be beneficial in understanding the likelihood of meeting the various funding objectives.

### Investment conditions since 31 March 2010

In the period since the valuation date, investment markets moved in the following manner:

- equity markets have risen slightly
- bond yields have fallen
- anticipated price inflation has fallen

The table below compares the initial valuation results presented in this report with those that would have applied if our assumptions had been based on current market conditions (in this case, assumptions as at 15 March 2011).

Assumptions as at:	31 March 2010 (£m)	15 March 2011 (£m)
<b>Past Service Position</b>		
Total Liabilities	1618	1725
Market Value of Assets	1168	1259
<b>Surplus / (Deficit)</b>	<b>(449)</b>	<b>(466)</b>
<b>Funding Level</b>	<b>72%</b>	<b>73%</b>
<b>Contribution rates</b>	<b>% of pay</b>	<b>% of pay</b>
Future service rate	13.9%	13.9%
Past service adjustment (20 year spread)	8.7%	8.7%
<b>Total contribution rate</b>	<b>22.7%</b>	<b>22.7%</b>

### Lord Hutton review of public sector pensions

As you will be aware, the Government has set up an independent review of public sector pensions including the LGPS, chaired by Lord Hutton. This review will look at issues such as affordability, fairness, impact on mobility and plurality of current public service provision.

At the time of writing, the precise effect on the LGPS is not fully known and therefore I believe it would be inappropriate to make any allowance for this in the results of this particular valuation. When this situation becomes clearer we will keep you informed of the likely impact of any proposed changes to the LGPS on the Fund's financial position, as and when they arise.

## Appendix H: Rates and Adjustments Certificate

In accordance with regulation 36(1) of the Administration Regulations I have made an assessment of the contributions that should be paid into the Fund by participating employers for the period 1 April 2011 to 31 March 2014 in order to maintain the solvency of the Fund.

The method and assumptions used to calculate the contributions set out in the Rates and Adjustments certificate are detailed in the Funding Strategy Statement dated 28 February 2011 and my report on the actuarial valuation dated March 2011.

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

Signature:

The image shows two handwritten signatures. The first signature on the left is 'Gemma Sefton' and the second signature on the right is 'Peter Summers'.

Date: 30 March 2011

Name: Gemma Sefton FFA and Peter Summers FIA

Qualification: Fellow of the Institute and Faculty of Actuaries

Firm: 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 2011 to 31 March 2014 is 22.7% 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 2011 to 31 March 2014 resulting in Minimum Total Contribution Rates expressed as a percentage of pensionable pay are as set out below:

Employer code	Employer name	Contributions currently being paid in 2010/11	Minimum Contributions for the Year Ending		
			31 March 2012	31 March 2013	31 March 2014
<b>Major Scheduled Bodies</b>					
320	Bedford Borough Council	21.9%	21.9%	21.9%	23.9%
319	Central Bedfordshire	21.9%	21.9%	21.9%	23.9%
205	Luton Borough Council	12.6% plus £5,689,000	12.6% plus £5,746,000	12.6% plus £5,803,000	14.6% plus £5,861,000
202	Bedfordshire Probation Service	16.2%	13.1% plus £431,000	13.1% plus £435,000	13.1% plus £440,000
257	Bedfordshire Police Authority	12.9%	12.9%	12.9%	14.9%
261	Bedfordshire & Luton Combined Fire Authority	11.9%	11.9% plus £117,000	11.9% plus £118,000	13.9% plus £119,000
<b>Parish and Town Councils</b>					
211	Beds & River Ivel Drainage Board	17.3%	17.3%	17.3%	19.3%
212	Biggleswade Town Council	17.3%	17.3%	17.3%	19.3%
216	Tempsford Parish Council	17.3%	17.3%	17.3%	19.3%
217	Toddington Parish Council	17.3%	17.3%	17.3%	19.3%
218	Leighton Linslade Town Council	17.3%	17.3%	17.3%	19.3%
219	Potton Town Council	17.3%	17.3%	17.3%	19.3%
221	Ampthill Town Council	17.3%	17.3%	17.3%	19.3%
226	Stotfold Town Council	17.3%	17.3%	17.3%	19.3%
230	Dunstable Town Council	17.3%	17.3%	17.3%	19.3%
231	Flitwick Town Council	17.3%	17.3%	17.3%	19.3%
293	Caddington Parish Council	17.3%	17.3%	17.3%	19.3%
294	Bromham Parish Council	17.3%	17.3%	17.3%	19.3%
295	Harlington Parish Council	17.3%	17.3%	17.3%	19.3%
296	Arlesey Town Council	17.3%	17.3%	17.3%	19.3%
316	Marston Moretaine Town Council	17.3%	17.3%	17.3%	19.3%
<b>Colleges</b>					
208	Cranfield University	17.0% plus £940,000	17.0% plus £1,642,000	17.0% plus £1,658,000	17.0% plus £1,675,000
233	University of Bedfordshire	15.3%	13.5% plus £818,000	13.5% plus £827,000	13.5% plus £835,000
238	Barnfield College	14.8%	14.5% plus £153,000	14.5% plus £154,000	14.5% plus £156,000
239	Bedford College	11.9%	14.2% plus £113,000	14.2% plus £114,000	14.2% plus £115,000
240	Central Bedfordshire College	15.1%	15.2% plus £89,000	15.2% plus £90,000	15.2% plus £91,000
241	Luton Sixth Form College	14.3%	15.2%	15.2% plus £27,000	15.2% plus £55,000
<b>Other Employers</b>					
228	St Francis' Children's Society	19.0%	13.0% plus £46,000	13.0% plus £46,000	13.0% plus £47,000
234	BPFA	17.7%	16.9% plus £200,000	16.9% plus £400,000	16.9% plus £616,000
253	Christian Family Care	25.5%	19.8% plus £47,000	19.8% plus £48,000	19.8% plus £48,000
255	Aragon Housing	12.9% plus £50,000	12.9% plus £187,000	12.9% plus £189,000	12.9% plus £191,000
281	Bedford Town Centre Company Ltd	8.2%	11.3%	11.3%	11.3%
292	Galliford Try Services	13.8%	15.9%	15.9%	15.9%
299	Amey Infrastructure Services	18.1%	28.8%	28.8%	28.8%
300	Active Luton	14.7%	11.7% plus £44,000	11.7% plus £45,000	11.7% plus £45,000
303	Bedfordshire & Luton Mental Health Trust	15.0%	14.7% plus £40,000	14.7% plus £41,000	14.7% plus £41,000
305	Barnfield South Academy	12.7%	13.6% plus £3,000	13.6% plus £3,000	13.6% plus £3,000
306	Barnfield West Academy	12.0%	12.1% plus £2,000	12.1% plus £2,000	12.1% plus £2,000
307	St Christopher's Fellowship	15.9%	16.4% plus £2,000	16.4% plus £2,000	16.4% plus £2,000
313	Luton Cultural Services Trust	12.8%	13.4%	13.4%	13.4%
314	Macintyre Housing	-	12.9%	12.9%	12.9%
315	Grand Union Housing	-	12.9%	12.9%	12.9%
317	Community Housing Association	19.1%	18.3%	18.3%	18.3%
321	All Saints Academy	21.9%	12.8% plus £4,000	12.8% plus £4,000	12.8% plus £4,000
322	Civica UK Ltd	18.6%	7.2%	7.2%	7.2%

## Further comments

### III health liability insurance

If an employer has ill health liability insurance in place with a suitable insurer and provides satisfactory evidence to the administering authority, then their Minimum Total Contribution Rate may be reduced by their insurance premium, for the period the insurance is in place.

## Stabilisation

The following employers have had their contribution rates stabilised following a separate modelling exercise that I carried out on behalf of the Administering Authority:

Bedford Borough Council;

Bedfordshire Police Authority;

Bedfordshire and Luton Combined Fire Authority;

Central Bedfordshire;

Luton Borough Council; and

Parish and Town Councils.