

# **FUNDING REPORT OF THE ACTUARIAL VALUATION AS AT 31 MARCH 2013**

## **WEST MIDLANDS INTEGRATED TRANSPORT AUTHORITY PENSION FUND**

MARCH 2014

A large, stylized graphic of a lighthouse beam of light is positioned diagonally across the page. The beam is white and bright, fading into a dark blue sky. The background of the slide is a dark blue sky with scattered clouds, and a lighthouse is visible on the right side.

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## 1

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## Introduction

This report is addressed to West Midlands Integrated Transport Authority as the Administering Authority of the West Midlands Integrated Transport Authority Pension Fund ("the Administering Authority") and is provided to meet the requirements of Regulation 36 of the Local Government Pension Scheme (Administration) Regulations 2008 (as amended). It describes the factors considered when carrying out the actuarial valuation as at 31 March 2013 and the decisions reached as a result.

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

- The expected cost of providing the benefits built up by members at the valuation date (the "liabilities"), and compare this against the funds held by the Fund (the "assets").
- An appropriate plan for making up the shortfall if there are less assets than liabilities.
- The contributions needed to cover the cost of the benefits that active members will build up in the future and other costs incurred in running the Fund.

**Signature:**



**Date of signing:** 31 March 2014

**Name:**

Paul Middleman

**Qualification:** Fellow of the Institute and Faculty of Actuaries

This report has been prepared in accordance with the version of the *Pensions Technical Actuarial Standard* current at the date this report is signed. It also complies with the relevant requirements of *Technical Actuarial Standards R: Reporting Actuarial Information, D: Data and M: Modelling*, where they apply to this report. These Standards are all issued by the Financial Reporting Council. The calculations referred to in the report use methods and assumptions appropriate for reviewing the financial position of the Fund and determining contribution rates for the future for participating employers. The funding updates referred to in this report are not as accurate as those that would arise from a full actuarial valuation as some approximations have been made and they are not based on updated individual membership data. Mercer does not accept liability to any third party in respect of this report; nor do we accept liability to the Administering Authority if the information provided in this report is used for any purpose other than that stated. The report may be disclosed to members and others who have a statutory right to see it. It may also be disclosed to any participating employer and, if the Administering Authority and Mercer consent, it may be disclosed to other third parties.

## 2

## Key results of the funding assessment

### 2.1. Past service funding position

The funding position needs has been assessed at the valuation date. However, since the valuation date there have been significant changes in the financial market position. In particular there has been an increase in gilt yields, which underpin the assessment of the past service liability values and therefore the long term funding target.

In determining the overall balance sheet position and contribution requirements for the Fund as at 31 March 2013, I therefore feel it is appropriate to include allowance for this explicitly in the balance sheet. The allowance is based on changes to 31 December 2013 but adjusted back to 31 March 2013. The allowance is shown in the table opposite and has largely been maintained up to the date of signing this report. Therefore, I am content the allowance can be built into the recovery plan for individual employers.

	31 March 2013 £m	31 March 2010 £m
(i) Total assets for valuation purposes	449	382
Liabilities:		
Active Members	126	124
Deferred Members	65	49
Pensioners	372	280
(ii) Total Liabilities	563	453
(iii) Offset to allow for market changes after the valuation date*	28	n/a
<b>Past service shortfall [(i)-(ii)+(iii)]</b>	<b>(86)</b>	<b>(71)</b>
Funding level	84%	84%

\* allows for impact on assets and liabilities

As shown above, at the previous valuation at 31 March 2010 the shortfall was £71m, equivalent to a funding level of 84%. The key reasons for the changes between the two valuations are considered in 3.2.

The liability value at the valuation shown in the table is known as the Fund's "funding target". The funding target is calculated using assumptions that the Administering Authority has determined are appropriate, having consulted with the Actuary, and are also set out in the Administering Authority's Funding Strategy Statement (FSS).

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

In practice, each employer's position is assessed separately. The Schedule to the Rates and Adjustments Certificate (attached as Appendix H) sets out the contributions for each employer over the three year period to 31 March 2017. The individual rates take into account the differing circumstances of each employer or employer group and the funding plan, as laid down in the FSS. Contribution requirements for the period from 1 April 2017 onwards will be agreed as part of the next actuarial valuation as at 31 March 2016 and will be confirmed in the Rates and Adjustments Certificate and Schedule accompanying that valuation report.

## 2.2. Normal contribution rate

The valuation looks at the average employer contribution rate required to cover the cost of the benefits (including death benefits) over the valuation certificate (the “Common Contribution Rate”). A summary of the assumptions used is provided in Appendix A.

The table on the right gives a breakdown of the Common Contribution Rate for the 2013 valuation and also shows the corresponding rate at the 2010 valuation for comparison.

As for the past service position, in determining the Common Contribution Rate to apply from 1 April 2014, allowance has been made for the reversion in yields that took place between 31 March 2013 and 31 December 2013, the impact of which is shown in the table.

The benefits earned under the LGPS change with effect from 1 April 2014, and the Common Contribution Rate at the 2013 valuation allows for these changes. The impact of these benefit changes on the Common Contribution Rate is given in section 3.3 alongside the main reasons for the change in the Common Contribution rate since 2010 valuation.

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

	% of Pensionable Pay	
	31 March 2013	31 March 2010
(i) Normal contribution rate for retirement and death benefits	31.7	24.9
(ii) Average member contribution rate	6.6	6.5
(iii) Offset to allow for market changes after the valuation date	3.6	n/a
Common Contribution Rate [(i)-(ii)-(iii)]	21.5	18.4

## 2.3. Correcting the shortfall

The funding objective as set out in the FSS is to achieve and maintain a funding level of 100% of liabilities (the Funding Target). In line with the FSS, where a shortfall exists at the effective date of the valuation a deficit recovery plan will be put in place which requires additional contributions to correct the shortfall (or contribution reductions to refund any surplus).

The deficit is to be eliminated by additional cash contributions for each employer as specified the Rates and Adjustments Certificate appended to this report. For West Midlands Travel Limited it was agreed that the current level of deficit contributions will continue until 31 March 2017 as part of the implementation of the pensioner buy-in contract (see Section 3.1).

# 3

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## Experience since last valuation

### 3.1. Summary of key inter-valuation experience

The last actuarial valuation was carried out with an effective date of 31 March 2010. Since the last valuation the Government announced that the benefit structure under the LGPS will change with effect from 1 April 2014. The changes do not affect benefits earned prior to 1 April 2014, and so do not directly affect the funding level or shortfall of the Fund as detailed in section 2.1, but do affect the Common Contribution Rate for the Fund as quoted in section 2.2 (the impact of the changes is given below). Details of the benefits are given in Appendix D.

The average salary increase (weighted by liability) for the Fund members who were in service for the whole of the inter-valuation period was 2.2% per annum.

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

- April 2011 3.1%
- April 2012 5.2%
- April 2013 2.2%

During the inter-valuation period, the gross investment return on the Fund's invested assets (i.e. ignoring the pensioner buy-in policy) has averaged 8.4% per annum.

A key change since the 2010 valuation has been the implementation of a bulk annuity insurance contract with Prudential Life Insurance Limited ("the buy-in"), in April 2012. This means that the insurer effectively meets part of the pension payments relating to

ex-West Midlands Travel Limited employees based on the in-force pensioners and dependants as at 11 August 2011 and has led to a significant step change in the Fund's risk profile.

As a result of the buy-in, the Fund receives reimbursement of level pension payments for pensioners covered by the contract which amounted to £17.5 million per annum at 31 March 2013.

### 3.2. Reasons for the change in funding position since the last actuarial valuation

As noted in 2.1, the shortfall at 31 March 2010 was £71m. The table below sets out the main reasons for the change in the shortfall since 31 March 2010.

Analysis of changes in funding position	£m
Shortfall at the 2010 valuation	(71)
<i>Unwinding of interest on 2010 shortfall</i>	(13)
<i>Investment returns versus expectations (allowing for impact of buy-in premium paid)</i>	20
<i>Contributions paid (allowing for impact of special contributions received re Pre 1986 recharges)</i>	41
<i>Change in demographic assumptions</i>	(2)
<i>Change in financial assumptions between 1 April 2010 and 31 March 2013</i>	(82)
<i>Interest rate protection from buy-in contract</i>	20
<i>Member movements and other factors</i>	(27)
<i>Net adjustment to shortfall due to post valuation date market changes</i>	28
Shortfall at the 2013 valuation	(86)

The above analysis highlights the key factors affecting the Fund since the previous valuation:

- Experience over the inter-valuation period has been largely positive, with improvements in the position due to positive investment performance, the impact of contributions paid by employers and from the West Midlands Pension Fund in respect of pre 1986 pension increase recharges.

- However, the shortfall increased significantly due to changes in underlying financial conditions, principally reductions in real gilt yields. This has been offset somewhat by the interest rate protection provided by the buy-in policy.
- As discussed in section 2, these financial conditions have improved since 31 March 2013 (although not to 31 March 2010 levels), reducing the impact on the shortfall (as shown above) and this has been allowed for in the assessment of contribution requirements.
- Certain changes made to the underlying assumptions to reflect the current economic climate and the outlook for future salary growth have also had a positive impact on the shortfall.

### 3.3. Reasons for the change in Common Contribution Rate since the last actuarial valuation

The table below sets out the main reasons for the change in the Common Contribution Rate.

Analysis of changes in Common Contribution Rate	%
Common Contribution Rate at the 2010 valuation	18.4
<i>Change in membership profile</i>	0.1
<i>Change in demographic assumptions</i>	0.8
<i>Change in financial assumptions between valuations</i>	2.6
<i>Impact of LGPS changes from 1 April 2014</i>	0.5
Common Contribution Rate at the 2013 valuation	21.5

- The change in the long-term assumptions adopted has caused a significant increase in the employer contribution requirement. This has been driven in large part by the significant fall in gilt yields over the inter-valuation period although the impact of this has been offset somewhat by post valuation date changes in market conditions when determining the final contribution rate payable (the assumptions used to calculate the contribution rate, and their derivation, are discussed in Appendix A).
- Based on the profile of the active membership (e.g. in terms of age/retirement age protections etc), the upcoming changes to the LGPS have also led to a small increase in employer costs.

# 4

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## Variability and risk

The contributions for participating employers set out in the Schedule to the Rates and Adjustments Certificate (Appendix H) have been determined as described in Appendix A of this report and in line with the parameters as set out in the Funding Strategy Statement.

The funding of defined benefits is by its nature uncertain. When actual experience is not in line with the assumptions adopted a surplus or shortfall will emerge at the next actuarial assessment and will require a subsequent contribution adjustment to bring the funding back into line with the target.

It is likely, especially in the short-term, that the assumptions will not be borne out in practice. It is therefore important to consider the potential impact on the employer contribution rates of actual experience differing from what has been assumed. The details in this section do this, based on the valuation results for the Fund as a whole.

It should be borne in mind that the valuation results set out in Section 2 of this report, and the assumptions on which they are based, represent only one outcome, and measures which are set for funding purposes might well not be appropriate in other circumstances.

### 4.1. Projected funding position at next actuarial valuation

As part of this valuation, the Fund has agreed with the Employers to put in place a recovery plan to pay off the shortfall allowing for an adjusted position as set out in Section 2.1. The next actuarial valuation will take place with an effective date of 31 March 2016. If experience up to that date is in line with the assumptions made for this current actuarial valuation and the certified employer contributions are paid, the expected funding level projected from 31 December 2013 would be 85% at 31 March 2016.

## 4.2. Least risk basis

In assessing the value of the Fund's liabilities (the funding target), allowance has been made for asset out-performance and an Inflation Risk Premium as described in Appendix A, taking into account the investment strategy adopted by the Fund, as set out in the Fund's Statement of Investment Principles (SIP).

It is not possible to construct a portfolio of investments which produces a stream of income exactly matching the expected liability outgo. However, it is possible to construct a portfolio which closely matches the liabilities and represents the least risk investment position. Such a portfolio would consist mainly of a mixture of long-term index-linked and fixed interest gilts. Investment of the Fund's assets in line with the least risk portfolio would minimise fluctuations in the Fund's ongoing funding level between successive actuarial valuations.

If, at the valuation date, the Fund had been invested in this portfolio, then in carrying out the valuation it would not be appropriate to make any allowance for out-performance of the Fund investments or an Inflation Risk Premium. On this basis of assessment, the assessed value of the Fund's liabilities at the 2013 valuation would have been significantly higher, by approximately 15% and the funding level would be correspondingly reduced to approximately 69% and an equivalent deficit of £200 million at 31 March 2013 (prior to any adjustment for post valuation date market changes). At the previous valuation at 31 March 2010 the shortfall on the least risk basis was £147m, equivalent to a funding level of 84%.

## 4.3. Material risks faced by the Fund

This section provides a broad overview of the risks faced by the Fund and their potential mitigation. However, this issue is covered in greater detail in the Funding Strategy Statement.

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

Examples of such risks, and how the Administering Authority manages them, are:

- If any employer becomes unable to pay contributions or to make good deficits in the future, the Fund's assets will be lower than expected and the funding level will be worse than expected. If the reason for the employer not paying the agreed contributions is one of financial difficulties, then the Administering Authority's focus would switch to the need to secure as far as possible that any debt from the employer on it exiting the Fund can be recovered. This risk can be mitigated by regular employer covenant reviews, strengthening of covenant as appropriate, and monitoring of changes in employer covenant. In the ultimate default of an employer any shortfall would then become the responsibility of any guarantor or all other employers in the Fund. If an employer terminates participation and becomes an Existing Employer under the Regulations then the shortfall will be determined as per the advice of the Fund Actuary taking into account of the circumstances of the employer.
- If market levels and / or gilt yields change such that the liability values increase by more (or decrease by less) than the assets, the funding position would be worse than expected although this would be offset somewhat by the interest rate protection afforded by the buy-in policy. An increase in employer contributions would be expected as a result. The same comments would apply if general population mortality studies and analysis of the Fund show that pensioners are living longer, or if improvements in mortality are found to be at a faster rate than allowed for. The analysis shown below illustrates the quantitative impact of such changes.
- If future investment returns on assets are lower than assumed in the valuation, the Fund's assets will be lower, and the funding level worse, than expected. The Administering Authority has a process in place to monitor investment performance, and they review the Fund's investment strategy alongside each actuarial valuation to ensure it is consistent with the funding strategy adopted. The strategy for the invested assets is being considered and will be updated following completion of the valuation.
- If members make decisions around their options such that those decisions increase the Fund's liabilities (e.g. by not commuting pensions for cash to the extent assumed), the funding position would be worse than expected. As a result, future employer contributions might then need to be increased.

#### 4.4. Sensitivity of funding position to changes in key assumptions

The value placed on the Fund's liabilities is critically dependent on the assumptions used to carry out the calculations. If future experience differs from the assumptions used, then the projected future funding level will be different from the level described above in section 4.1.

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

	Increase in shortfall at the 2013 valuation (£m)	Increase in the average future service contribution rate at the 2013 valuation (% of Pensionable Pay)
Discount rate reduces by 0.25%*	13	1.5
Long-term inflation is 0.25% higher than assumed	19	1.4
Pensionable Salary growth is 0.5% higher than assumed	2	Nil
Members live one year longer than assumed*	5	0.6
Growth assets fall by 25%	35	n/a

\* allows for corresponding change in the value of the buy-in asset

The same changes in the opposite direction would reduce the shortfall and the average future service contribution rate by a similar order of magnitude.

# APPENDIX A

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## Assumptions

### A.1. How the benefits are valued

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

Assumption	Why it is important and how it impacts on the liabilities
Discount rate	<p>The majority of benefits in a pension scheme are paid many years in the future. In the period before the benefits are paid, the Administering Authority invests the funds held by the scheme with the aim of achieving a return on those funds. When calculating how much money is needed now to make these benefit payments, it is appropriate to make allowance for the investment return that is expected to be earned on these funds. This is known as "discounting".</p> <p>The higher the investment return achieved, the less money needs to be set aside now to pay for benefits. The calculation reflects this by placing a lower value on the liabilities if the discount rate is higher.</p> <p>The discount rate adopted to set the Funding Target is derived by mapping projected cashflows arising from accrued benefits to a yield curve (which is based on market returns on UK Government gilt stocks and other instruments of varying durations), in order to derive a market consistent gilt yield for the profile and duration of the Scheme's projected cashflows. The buy-in policy cashflows have a different shape and expected duration when compared to the total Fund liabilities.</p> <p>In order to place a value on the buy-in policy for determining the overall assets of the Fund, a single equivalent discount rate has been calculated by mapping the projected cashflows arising from the buy-in in a similar way to that described above.</p>

Assumption	Why it is important and how it impacts on the liabilities
	<p>When assessing the liabilities an Asset Out-performance Assumption ("AOA") is added representing views on covenant of the participating employers and the expected long-term investment strategy for the assets backing the liabilities.</p> <p>In relation to the liabilities the following assumptions have been made:</p> <p>West Midlands Travel Ltd:</p> <ul style="list-style-type: none"> <li>• An AOA of 2.5% per annum is added for the period pre-retirement and 0.5% per annum for the period post-retirement for all members except those retired members covered by the buy-in contract.</li> <li>• For retired members covered by the buy-in contract no AOA is applied in relation to all liabilities</li> </ul> <p>Preston Bus Limited:</p> <ul style="list-style-type: none"> <li>• An AOA of 2.0% per annum for the period pre-retirement and 0% per annum for the period post-retirement.</li> </ul> <p>Details of the discount rates used to calculate the funding target, buy-in policy asset value and the cost of future service are detailed in section A.2.</p>

Assumption	Why it is important and how it impacts on the liabilities
Inflation	<p>Pensions in payment increase in line with price inflation. Salary growth is also normally linked to price inflation in the long term. A higher inflation assumption will, all other things being equal, lead to a higher value being placed on the liabilities.</p> <p>The inflation assumption will be taken to be the investment market's expectation for RPI inflation based on the difference between yields derived from conventional and index-linked UK Government gilts, reflecting the profile and duration of the Scheme's accrued liabilities but subject to the following two adjustments:</p> <ul style="list-style-type: none"> <li>• An allowance for supply/demand distortions in the bond market and</li> <li>• An adjustment due to retirement pensions being increased annually by the change in the Consumer Price Index rather than the Retail Price Index.</li> </ul> <p>The overall reduction to market implied RPI inflation at the valuation date is 1.0% per annum, compared to 0.8% per annum in 2010. The increase in this assumption reflects a general increase in expectations of the long term difference between RPI and CPI. Of this 1% per annum reduction, 0.3% per annum relates to the "Inflation Risk Premium" i.e. representing the allowance for supply/demand distortions in the bond market.</p>
Pensionable Salary growth	<p>Benefits earned prior to 1 April 2014 for active members are based on their salaries immediately before retirement, so it is necessary to make an assumption about future Pensionable Salary growth. The higher this assumption, the higher the value placed on the liabilities for active members.</p> <p>For the 2013 valuation, it has been assumed that salary increases will be in line with the CPI inflation assumption described above. This has been modified from the assumption at the previous valuation (of 1.5% p.a. above CPI) to reflect reduced future expectations following consultation with the relevant employer and the evidence supplied to support this assumption.</p>
Pension increases	<p>Increases to pensions are assumed to be in line with the inflation (CPI) assumption described above. The pension increase assumption is modified appropriately to reflect any benefits which are not fully indexed in line with inflation. The payments received from the buy-in policy do not increase from their original amount.</p>

Assumption	Why it is important and how it impacts on the liabilities
Life expectancy	<p>Pensions are paid while the member (and potentially their spouse or partner) is alive. The longer people live, the greater is the cost of providing a pension. Allowing for longer life expectancy therefore increases the liabilities.</p> <p>The mortality assumptions will be based on information in relation to self-administered pension schemes published by the Continuous Mortality Investigation CMI, making allowance for future improvements in longevity and the experience of the scheme. The mortality tables used are adjusted to reflect the Fund's membership profile and recent mortality experience, and are set out in the summary section below.</p> <p>For all members, it is assumed that the accelerated trend in longevity seen in recent years will continue in the longer term and as such, the assumptions build in an allowance for longevity 'improvement' year on year in the future in line with the 2013 CMI projections subject to a long-term improvement trend of 1.25% per annum, an increase from the 1.0% per annum assumed at the 2010 valuation.</p> <p>Members who have retired on the grounds of ill health are assumed to exhibit average mortality equivalent to that for a good health retiree at an age 3 years older.</p>
Commutation	<p>It has been assumed that, on average, 50% of retiring members will take the maximum tax-free cash available at retirement and 50% will take a 3/80ths cash sum (the standard for pre April 2008 service). The members have the option to commute part of their pension at retirement in return for a lump sum at a rate of £12 cash for each £1 per annum of pension given up.</p>

Assumption	Why it is important and how it impacts on the liabilities
Early retirements (non-ill health)	<p><b>Active Members</b></p> <p>Some members are entitled to receive their benefits (or a part of their benefits) unreduced from an age prior to the Fund's normal pension age under the "Rule of 85" provisions of the Regulations. This age will be at some point between ages 60 and 65, depending on the length of a member's pensionable service. The calculations in respect of the relevant service to which these terms apply (basically pre April 2008 service but with transitional protections for certain members) allow for a proportion of the active membership to retire in normal health prior to age 65 in the proportions shown in section A.2.</p> <p>For post April 2008 service (other than protected service) the situation is different since the "Rule of 85" rule has been removed (and for post October 2006 service for new entrants to the Scheme from that date). For this service we have assumed the earliest age at which unreduced benefits become an entitlement is 65, except for those members who have protected status under the transitional provisions in which case it is the member's protected age.</p> <p>For service to be accrued from 1 April 2014 (other than for members benefitting from transitional protections) we have assumed that the earliest age at which members will be entitled to receive their unreduced benefits will be their State Pension Age. Where the State Pension Age is greater than the post 2008 assumed retirement age, early retirement factors are applied in line with the standard Scheme factors produced by the Government Actuary's Department. This does not affect the funding target at this valuation, but has been allowed for in the calculations of the Common Contribution Rate.</p> <p><b>Deferred Members</b></p> <p>It has been assumed that deferred members retire at their earliest retirement age for receiving unreduced benefits. For pre 1 April 2008 service, the retirement age will be at some point between ages 60 and 65 depending on the length of a member's pensionable service and taking into account the "Rule of 85" provisions of the Regulations. For post 1 April 2008 service the retirement age will be 65, except for those members who have protected status under the transitional provisions.</p> <p>For both active and deferred members, no allowance has been made for non-ill health early retirements prior to the ages specified above. Additional capital contributions will be paid by employers in respect of the cost of these retirements.</p>

<b>Assumption</b>	<b>Why it is important and how it impacts on the liabilities</b>
Early retirements (ill-health)	No allowance has been made for ill-health early retirements. Additional capital contributions will be paid by the employer in respect of the cost of these retirements.
Proportions with dependants on death	The Fund pays benefits to qualifying dependants (spouse/civil partner/dependent child) on the death of a member. Therefore, the proportion of members with a qualifying dependant impacts on the total cost of benefit provision, with a higher proportion of dependants meaning a higher cost. The valuation calculations assume a proportion of the active membership to retire in normal health prior to age 65, as set out in the table in section A.2.  The proportion of members assumed to have a qualifying dependant has been reduced compared to the 2010 valuation following consultation with employers. It is now assumed that in 85% of death cases a pension will become payable to a qualifying dependant. At the 2010 valuation an age related scale applied (e.g. 95% at age 55 and 90% at age 65).
Expenses	Expenses are met out of the Fund, in accordance with the Regulations. This is allowed for by additional contributions as required from participating employers. These additional contributions are reassessed at each valuation. Investment expenses have been allowed for implicitly in determining the discount rates.
Discretionary benefits	The costs of any discretion exercised by an employer in order to enhance benefits for a member through the Fund will be subject to additional contributions from the employer as required by the Regulations as and when the event occurs. As a result, no allowance for such discretionary benefits has been made in the valuation.

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

## A.2. Assumptions used to calculate the funding target and future service cost

The tables below summarise the key assumptions used in the calculation of the Funding Target and those used for the 31 March 2010 actuarial valuation (the financial assumptions have been split by participating employer).

### West Midlands Travel Ltd

Financial assumptions	31 March 2013	31 March 2010
Discount rate*:		
a. Pre Retirement (Non Pensioners)	5.5% p.a.	7.0% p.a.
b. Post Retirement (Non Pensioners)	3.5% p.a.	5.0% p.a.
c. Post Retirement (Non Buy-in Pensioners)	3.5% p.a.	4.5% p.a.
d. Post Retirement (Buy-in Pensioners)	3.0% p.a.	n/a
e. Buy-In Asset Valuation	2.5% p.a.	n/a
Assumed long term CPI inflation	2.6 % p.a.	3.0 % p.a.
Salary increases – Long term	2.6 % p.a.	4.5% p.a.
Salary increases – Short term	n/a	2 year adjustment in line with pay deal
Pension increases in payment	2.6 % p.a.	3.0 % p.a.

\* See section A.3. for comments on post valuation date changes to the discount rate

**Preston Bus Ltd**

<b>Financial assumptions</b>	<b>31 March 2013</b>	<b>31 March 2010</b>
Discount rate*:		
a. Pre Retirement	5.0% p.a.	6.5% p.a.
b. Post Retirement	3.0% p.a.	4.5% p.a.
Assumed long term CPI inflation	2.6 % p.a.	3.0 % p.a.
Salary increases – Long term	n/a	n/a
Pension increases in payment	2.6 % p.a.	3.0 % p.a.
* See section A.3. for comments on post valuation date changes to the discount rate		
<b>Demographic assumptions</b>	<b>31 March 2013</b>	<b>31 March 2010</b>
Pre retirement mortality – base table	PA92 year of birth tables adjusted by 1 year to reflect the Fund's membership profile	PA92 year of birth tables adjusted by 1 year to reflect the Fund's membership profile
Pre retirement mortality – future improvements:		
Males	Medium cohort projections	Medium cohort projections
Females	Medium cohort projections	Medium cohort projections
Post retirement mortality – base table	CMI Self Administered Pension Schemes (SAPS) tables with scheme and member category specific adjustments (see further detail below)	CMI Self Administered Pension Schemes (SAPS) tables with scheme and member category specific adjustments (see 2010 valuation report for further details)
Post retirement mortality – future improvements:		
Males	CMI_2013_M [1.25%]	CMI_2009_M [1%]
Females	CMI_2013_F [1.25%]	CMI_2009_F [1%]
Withdrawal	(see further detail below)	(see 2010 valuation report)
Proportions married	(see further detail below)	(see 2010 valuation report)

### Post retirement mortality

		Base Table	Improvements	Adjustment (M / F)
Current pensioners	Normal health	S1PA	CMI_2013 [1.25%]	111% / 103%
	III-health	S1PA	CMI_2013 [1.25%]	Normal health + 3 years
	Dependants	S1PMA / S1DFA	CMI_2013 [1.25%]	207% / 126%
	Future dependants	S1PMA / S1DFA	CMI_2013 [1.25%]	113% / 106%
Current active / deferred	Active normal health	S1PA	CMI_2013 [1.25%]	111% / 103%
	Deferred	S1PA	CMI_2013 [1.25%]	111% / 103%
	Future dependants	S1PMA / S1DFA	CMI_2013 [1.25%]	113% / 106%

An **age rating** applied to an actuarial table has the effect of assuming that beneficiaries have a life expectancy equal to those older (or younger) than their actual age.

For example, a “+1 year” rating would mean beneficiaries are assumed to have the mortality of someone one year their senior which has the effect of reducing their life expectancy and hence reducing the assessed value of the corresponding liabilities.

A **weighting** applied to an actuarial table has the effect of increasing or reducing the chance of survival at each age, which increases or reduces the corresponding life expectancy.

For example, a “111%” weighting would mean beneficiaries have mortality rates 11% higher than the unadjusted table which reduces the assessed value of the corresponding liabilities.

The mortality assumptions used for the 2013 valuation result in the following life expectancies.

	<b>Years</b>
Life expectancy for a male aged 65 now	21.4
Life expectancy at 65 for a male aged 45 now	23.1
Life expectancy for a female aged 65 now	24.2
Life expectancy at 65 for a female aged 45 now	26.1

### **Early retirement**

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

Age	<b>% retiring per annum</b>	
	Males	Females
60	55	55
61	30	30
62	25	25
63	25	25
64	25	25
65	100	100

## Withdrawal

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

Age	% leaving per annum	
	Males	Females
25	13.50	14.92
35	3.39	4.18
45	1.69	2.59

## Partners and Dependents Proportions

It has been assumed that 85% of death cases will give rise to a dependant's pension (spouse's and partner), and that spouses/partners of female (male) members are three years older (younger), on average than the member.

### **A.3. Post Valuation Date changes in market conditions**

The shortfall, Common Contribution Rate and contributions payable under the recovery plan are calculated using the same assumptions as those used to calculate the funding target with the exception that, as noted in section 2.1 adjustments have been made for post valuation date market changes. In terms of assumptions the principal change is that the discount rates have increased by 0.6% per annum when assessing the value of the Funding target and 0.7% per annum when considering the value of the buy-in policy.

## APPENDIX B

### Summary membership data

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

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

The total salaries of active members as at 31 March 2013 (including non-contractual overtime) which becomes pensionable from 1 April 2014 in the new LGPS was £19.5m per annum.

In addition to the current pensioners and spouses in the table, there were 13 current dependant pensioners as at 31 March 2013 with pensions totalling £20,000 per annum.

The total number of pensioners included within the buy-in policy as at 31 March 2013 was 3,310 with pensions bought-in totalling £17.5m per annum.

	31 March 2013	31 March 2010
<b>Active members</b>		
Number	741	926
Total Pensionable Salaries (£000s p.a.) <sup>1</sup>	17,273	20,916
Average Pensionable Salary (£ p.a.)	23,310	22,588
Average age <sup>2</sup>	54.0	53.3
Average past service <sup>3</sup>	27.0	27.2
<b>Deferred pensioners<sup>4</sup></b>		
Number	863	1,009
Total deferred pensions revalued to valuation date (£000s p.a.)	2,993	3,161
Average deferred pension (£ p.a.)	3,468	3,132
Average age <sup>2</sup>	52.7	51.3
<b>Current Pensioners and Spouses</b>		
Number	3,609	3,311
Total pensions payable (£000s p.a.) <sup>5</sup>	23,081	19,573
Average Pension	6,395	5,912
Average Age <sup>2</sup>	68.6	66.8

<sup>1</sup> Including actual pay for part time members

<sup>2</sup> Weighted by accrued pension/deferred pension/pension

<sup>3</sup> Weighted by salary

<sup>4</sup> Including frozen refunds

<sup>5</sup> including pension increases recharged to Centro

## APPENDIX C

### Assets

The market value of the Fund's assets (including the buy-in asset value) was £448,936,000 on the valuation date. Of this, £270,000,000 was in respect of the buy-in asset value with the remaining £178,936,000 representing the Fund's invested assets.

The Administering Authority's investment strategy is to proportion the Fund's assets by asset class. Details of the investment strategy can be found in the Statement of Investment Principles. The actual distribution of assets will vary over time due to changes in financial markets. The table to the right shows the distribution of the invested assets at the valuation date (alongside the buy-in asset value).

As a result of the buy-in exercise in 2012, as commented on in section 3, it was agreed that alongside the Fund's main investment strategy, a notional "Ghost Strategy" would be implemented which was based on the Fund's investment strategy applying before the buy-in took place (namely a 45%/55% split between equities and

	Actual market value of assets at 31 March 2013		
	£000s	% (including buy-in)	% (excluding buy-in)
<b>Bonds:</b>			
Fixed gilts	4,160	0.9	2.3
Index-linked gilts	18,764	4.2	10.5
Other UK bonds	18,680	4.2	10.4
<b>Equities:</b>			
UK	10,735	2.4	6.0
Overseas	63,221	14.1	35.3
<b>Alternative Assets:</b>			
Diversified Growth Funds	61,649	13.7	34.5
Pensioner Buy-in Policy	270,000	60.1	n/a
<b>Net current assets/(liabilities)</b>	1,727	0.4	1.0
<b>Total</b>	<b>448,936</b>	<b>100.0</b>	<b>100.0</b>

bonds as at the valuation date). The returns arising from the “Ghost Strategy” would be applied to the notional asset holding in relation the asset share for Preston Bus Limited. Further details of the “Ghost Strategy” can also be found in the Statement of Investment Principles. The Administering Authority also holds additional voluntary contributions (AVCs), which are separately invested. These assets have been excluded from the market value shown as they exactly match the value of the benefits they cover.

## APPENDIX D

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### Scheme Benefits

The benefits valued within our calculations are those in force at the effective date of the valuation. Full details of these can be found in the Local Government Pension Scheme Regulations 2007/2008 (as amended). The principal regulations relating to benefits earned up to 31 March 2014 are:

The Local Government Pension Scheme (Benefits, Membership and Contributions) Regulations 2007  
(<http://timeline.lge.gov.uk/LGPS2008Regs/SI20121989/20071166.htm>)

The Local Government Pension Scheme (Administration) Regulations 2008  
(<http://timeline.lge.gov.uk/LGPS2008Regs/SI20121989/20080239.htm>)

The Local Government Pension Scheme (Transitional Provisions) Regulations 2008  
(<http://timeline.lge.gov.uk/LGPS2008Regs/SI20121989/20080238.htm>)

The benefits offered under the LGPS will change with effect from 1 April 2014, and the regulations relating to benefits earned after that date are:

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

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

We have made no allowance for other changes which may be introduced in the future.

Benefits recharged to individual employers on a £ for £ basis have been excluded from the calculation of the valuation liabilities. In addition the pension increase liabilities in relation to pre-October 1986 service which are a responsibility of CENTRO (a participating employer in the West Midlands Pension Fund) have been excluded from the valuation.

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

UK and European law requires pension schemes to provide equal benefits to men and women in respect of service after 17 May 1990 (the date of the “Barber” judgement) and this includes providing equal benefits accrued from that date to reflect the differences in GMPs. There is no consensus or legislative guidance as to what adjustments have to be made to scheme benefits to correct these inequalities for ongoing schemes (i.e. for schemes other than those which are in the Pension Protection Fund). The valuation makes no allowance for removal of these inequalities. It is consequently possible that additional funding will be required for equalisation once the law has been clarified. It is recommended that the Administering Authority seek further professional advice if it is concerned about this issue.

## APPENDIX E

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### Summary of Income and Expenditure

INCOME	Year ending 31 March			
	2011	2012	2013	Total
	£000s	£000s	£000s	£000s
<b>Fund at beginning of year</b>	<b>382,160</b>	<b>392,032</b>	<b>426,892</b>	<b>382,160</b>
Contributions to Fund:				
Employees	1,329	1,252	1,166	3,747
Employers/Other	7,731	34,687	12,192	54,610
Transfer Values received	0	3	189	192
Other Income (including Buy-in)	8	6	16,712	16,726
Change in market value of investments	26,209	26,380	18,826	71,415
EXPENDITURE				
EXPENDITURE	Year ending 31 March			
	2011	2012	2013	Total
	£000s	£000s	£000s	£000s
Pensions for members/spouses/partners/dependants	20,091	21,181	22,409	63,681
Retiring allowances and death gratuities	4,518	4,709	3,950	13,177
Transfer Values paid	47	418	0	465
Investment expenses	376	823	471	1,670
Administration expenses	373	337	211	921
<b>Fund at end of year</b>	<b>392,032</b>	<b>426,892</b>	<b>448,936</b>	<b>448,936</b>

## APPENDIX F

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### Analysis of experience of the membership of the Fund for the period 1 April 2010 to 31 March 2013

The analysis below compares the actual experience over the 3 year period with the assumptions used for the 2013 valuation.

	Actual	Expected	%
Withdrawals	33	21	157
Pensioner Deaths	193	189	102

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

## APPENDIX G

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### Rates and Adjustments Certificate issued in accordance with Regulation 36 of the Administration Regulations

**Name of Fund**

**West Midlands Integrated Transport Authority  
Pension Fund**

#### **Primary Contribution Requirements**

I hereby certify that, in my opinion, the common rate of employers' contributions payable in each year of the period of three years beginning 1 April 2014 should be at the rate of 21.5 per cent of Pensionable Pay.

I hereby certify that, in my opinion, the amount of the employers' contributions payable in each year of the period of three years beginning with 1 April 2014, as set out above, should be individually adjusted as set out in the attached schedule. Contributions will be paid monthly in arrears with each payment normally being due by the 19th of the following month (or the 22nd if paid electronically).

#### **Further Adjustments**

A further individual adjustment shall be applied in respect of each early retirement occurring in the period of three years covered by this certificate. This further individual adjustment will be calculated in accordance with methods agreed from time to time between the Fund's Actuary and the Administering Authority.

The contributions set out in the attached schedule represent the minimum contribution which may be paid by each employer in total over the 3 years covered by the certificate. Additional contributions or a different pattern of contributions may be paid if requested by the

employer concerned at the sole discretion of the Administering Authority as agreed with the Actuary. The total contributions payable by each employer will be subject to a minimum of zero.

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

### **Regulation 36(8)**

No allowance for early retirements (including ill-health retirements) has been made in determining the results of the valuation, on the basis that the costs arising will be met by additional contributions.

**Signature:**



**Date of signing:**

31 March 2014

**Name:**

Paul Middleman

**Qualification:**

Fellow of the Institute and Faculty of Actuaries

## APPENDIX H

### Schedule to the Rates and Adjustment Certificate dated 31 March 2014

Employers	2014/15		2015/16		2016/17	
	Individual Adjustment (% of pay plus £s lump sum)	Total Contribution Rate (% of pay plus £s lump sum)	Individual Adjustment (% of pay plus £s lump sum)	Total Contribution Rate (% of pay plus £s lump sum)	Individual Adjustment (% of pay plus £s lump sum)	Total Contribution Rate (% of pay plus £s lump sum)
West Midlands Travel Ltd	0% plus £5,500,000	21.5% plus £5,500,000	0% plus £5,500,000	21.5% plus £5,500,000	0% plus £5,500,000	21.5% plus £5,500,000
Preston Bus Limited	-21.5% plus £350,000	£350,000	-21.5% plus £350,000	£350,000	-21.5% plus £350,000	£350,000

Notes:

#### **West Midlands Travel Ltd (WMTL)**

The contributions above are conditional on the suitable guarantee arrangements remaining in place for the employer relating to its participation in the Fund.

#### **Preston Bus Limited (PBL)**

The contributions certified above for PBL are based on the Actuary's and Administering Authority's analysis of the financial covenant of the employer and their reasonable affordability.

The above contributions for both employers included a total allowance of £300,000 per annum to cover expected administration expenses.



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