28 March 2022

Andy Byford
Commissioner of Transport for London
Transport for London

By email

Dear Commissioner

TfL Pensions Review: Independent Report – Final Report

Following the submission of our Interim Report in December 2021, I am pleased to attach the Independent Review's Final Report.

This marks the third and final deliverable of the Independent Review, in line with our Terms of Reference.

Yours sincerely,

Brendan Barber

Sir Brendan Barber
Lead
Independent Review

Attachment:
Final Report

TfL Independent Pensions Review

FINAL REPORT

March 2022

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1. FOREWORD FROM SIR BRENDAN BARBER

This Independent Review of TfL's pensions arrangements was initiated as a consequence of the funding agreement reached between TfL and Central Government in June 2021. That agreement provided funding certainty for a six-month period only and Government made it a condition of the agreement that this review should be conducted. TfL decided that it would be appropriate for the Review to be led by an independent person. I accepted that commission and was very grateful to secure the support of the highly esteemed pensions expert Joanne Segars. Her distinguished career record and unparalleled expertise speak for themselves.

I did not accept this commission lightly. I am all too aware of the huge sensitivity around pensions arrangements. A high-quality scheme is a much-prized condition of employment, highly valued in particular – as in TfL's case – if it is seen as just about the only benefit of employment above and beyond employees' salaries and travel concessions. Judgements about the value of pensions provision have to be seen in the context of workers' reward arrangements as a whole.

The backdrop to this Review has been difficult and complex. First and foremost there is no doubt that TfL continues to face huge economic and financial uncertainties. The COVID pandemic decimated TfL's revenues with a huge drop in passenger numbers which saw, at the height of the pandemic, a 90% drop in revenue. Although there is undoubtedly an economic bounce back as we come out of the pandemic, there remain big question marks over future passenger numbers as working patterns for millions of people are changing. Unlike most other major metro systems around the world TfL is overwhelmingly dependent on farepayers to provide the resources to run and maintain the system and also to provide the means to invest in, develop and improve the level of services provided to passengers.

The pandemic of course has also placed unprecedented demands on the public finances more generally. Not surprisingly Central Government needs to be assured that central funding that is directed to maintain vital transport services delivers full value. The evidence is, of course, compelling that investment in the capital's transport systems is not only highly important in delivering social benefits but is also absolutely critical to the functioning and development of the capital's, indeed the country's, whole economy and to the prospects for recovery and growth.

These combined pressures from a significant loss of farepayer revenues, and challenges from Central Government, will inevitably confront TfL with very tough choices. Added to this mix is the wider economic backdrop which has altered since the Review commenced and which now sees significant pressures on the cost of living, and inflation at its highest level for decades.

The other key uncertainty of more direct impact on the Review has been that – as a consequence of the continuing absence of a long-term funding settlement – the strength of the employer covenant behind the TfL Scheme has been in doubt. This is a key factor, of course, in concluding the triennial valuation of the scheme which is required to be concluded by June 2021. At the time of writing the 2021 actuarial review was still being finalised (although we understand agreement in principle has been reached between TfL and the Trustee on all the assumptions), and we understand it will yield a modest surplus. This is in no small measure due to the strong governance of the Scheme by its Trustee. The surplus indicates that there is no immediate financial pressure on the Scheme, yet longer term pressures and uncertainties persist for TfL.

So much for the background. Our approach to the review was to be as transparent and consultative as possible. We issued a general call for evidence at the outset and have met all the key stakeholder groups within TfL, including significant engagements with the scheme Trustee, and regular meetings with all TfL's recognised trade unions through a Contact Group which has met on a fortnightly basis. In line with the review's Terms of Reference, in October we provided a first report setting out the whole range of possible options for reform looking right across the UK at examples of different models. We established a set of key principles rooted in the review's Terms of Reference against which we evaluated each of the illustrated models. As a result of this in December – as required by the Terms of Reference – we made judgements on which of the different models we deemed appropriate for much more detailed analysis and consideration and which should receive no further consideration.

In this final report we set out our judgements and reflections for consideration by TfL and all the key stakeholders in the scheme including the Trustee and the recognised trade unions.

We have not sought to outline a precise route forward for a number of reasons. We – and relevant stakeholders – have had limited time to fully explore all the dimensions of the wide range of possible amendments that could be made to current arrangements and the possible trade-offs between potential scheme amendments. These are highly complex matters and will need to be carefully considered and evaluated. As part of these considerations, thought should also be given to addressing the private sector nature of the Scheme, which appears anomalous and brings added costs and complexity to the Scheme and TfL which would not arise if it were a public sector Scheme.

TfL, the Trustee, other stakeholders and Central Government would also all need to consider their positions in detail on all the highly complex issues around the processes – and potentially highly significant level of costs – in effecting changes. Central Government, for example, would need to determine its appetite for legislative change if some options were to be formally proposed for implementation. We are clear that this will not be a simple, or quick, process. Any changes, if implemented, are likely to take years, not months, to introduce.

Those considerations add up to one reason why we have decided that our most valuable role through this Review would be to set out the implications of a wide range of possible amendments to the Scheme. We have set out the range of issues that will need to be considered and the parties that will need to be involved.

Much more significantly, however, it is my strong view that ownership of the issues at stake arising from the review, and the authority to make final decisions, clearly rests with the key stakeholders namely the sponsoring employer, TfL, and the Schemes' members (and prospective members) represented by their trade unions and the Trustee. There are of course very important statutory requirements on consultations about any possible scheme changes but above and beyond the minimum statutory requirements I would expect there to be full and detailed consultations on any possible changes that TfL may propose taking forward, with the genuine objective of securing – if possible – agreement on the way forward.

Our thanks are due to many people who have assisted us in the course of the review. TfL officials have supported our work and met every request we made for information and support. All TfL's recognised unions participated actively in the work of the Contact Group.

We are grateful too to the Trustee and for the professional and technical assistance provided by the TfL's actuaries and the scheme's fund managers and advisers.

Our thanks are due to them all, but Joanne Segars and I bear sole responsibility for the Report's contents and concluding reflections.

Sir Brendan Barber
Independent Review Lead

2. EXECUTIVE SUMMARY

ABOUT THE REVIEW

- The Review was established as part of the funding agreement reached between the Government and TfL in June 2021 which required TfL to undertake a review of its pension arrangements.
- The Review has sought to operate in an open and transparent fashion. This has included establishing a Pensions Review Contact Group comprising TfL's recognised trade unions and issuing a Call for Evidence in the summer of 2021.
- In line with the requirements of the Review's Terms of Reference, an initial report setting out a long list of options, based on pension reforms seen elsewhere in the UK, was published in October 2021. This was followed in December 2021 by our Interim Report which set out a shorter list of 'in-scope' options for further consideration.
- It is those options for further consideration which are the subject of this report.

DEALING WITH FUTURE SERVICE

- Four in-scope options for future service have been considered further. More radical reform options, including defined contribution (DC) were rejected, principally because they would be highly unlikely to provide members with adequate benefits in retirement.
- Our considerations have factored in a number of wider contextual points:
    - The Scheme is the only significant benefit beyond pay available to the majority of staff. Any changes to the Scheme will have knock-on consequences for benefits and remuneration elsewhere. This is important in the context of TfL's ability to recruit and retain staff.
    - Pay for Performance (PfP) and the Senior Manager Reward Framework have an adverse effect on pensionable pay (and therefore members' final pensions). This will need to be considered in the context of fairness to members and pensions adequacy.
    - Any potential reforms have to take account of the specificities of TfL and its workforce. In particular, any tiered contribution structure must meet the specific needs of TfL. This is important in the context of fairness to all members and affordability.
- The Review has examined in detail the possible impact of the in-scope options for future service through extensive modelling of outputs. This enables an assessment of the impact of potential benefit reforms on TfL in terms of cost savings (or increases); on members' benefits; and a comparison with the current scheme for future service.
- We have developed:
    - a set of combinations of possible benefit reforms based on a mix of trade-offs (16); and
    - a set of member personas (20).
- The benefit combinations are not proposals for reform but show a range of possible outcomes.
- The modelling for the modified final salary options show savings to TfL in the range of £79.3m to £182.4m a year. The modelling for CARE schemes (including those with tiered contributions) shows cost reductions for TfL of up to £154.4m a year to a cost increase of £23.1m a year.

- Almost all of the benefit combination scenarios see reductions in the future service benefits available to members, and increased contributions compared to the current position. However, these benefit reductions or contribution increases are not evenly felt by members.
- Based on the outcomes from the modelling of the benefit combinations scenarios and the member outcomes based on the modelling of the personas:
    - some combinations may generate cost savings to TfL, helping to support the Scheme's affordability and sustainability, but may not meet the principle of fairness or adequacy for members;
    - some combinations may reduce future service costs to TfL but may continue to leave TfL facing future risks and uncertainty (eg inflation, salary escalation, longevity risk);
    - some combinations may render TfL's pension arrangement uncompetitive;
    - some combinations could be less fair to some members than others; and
    - some combinations could increase costs to TfL yet reduce risks for TfL.
- Deciding on any potential reform direction will require a careful balancing of all these factors.

DEALING WITH BENEFITS BUILT UP TO DATE

- The Review's ToR are explicit that members' benefits built up to date will be protected.
- There are various ways of achieving this:
    - basing the pension calculation at retirement on a "leaving service basis"; or
    - basing the pension calculation on the member's final salary, which is the practice in the public sector (a "final salary basis").
- Given the Scheme's revaluation rules and salary restraint, it is not clear-cut which would give the best outcome for TfL Scheme members. This will depend on member's individual circumstances; how close they are to retirement; and future pay policy at TfL.
- In considering which route to adopt, it will also be important to avoid any possible direct or indirect discrimination issues.
- One possible option could be to provide an 'underpin' which would effectively give members the higher of both options.
- Careful consideration will need to be given to these issues to ensure that members' benefits built up to date are protected. It is part of the wider considerations that will need to be made in respect of past service. The Review has been clear throughout its work that changes to future service cannot be made without consideration of past service.

TRANSITIONAL ISSUES

- Any change made to future service provision will have implications for past service and could result in a sudden maturing of the Scheme that increases the demands on TfL for additional funding. Therefore the transition to any new arrangement, together with the management of past service liabilities, require very careful consideration and handling. The two issues – past liabilities and future service – will need to be considered hand-in-hand.
- Particular attention will need to be paid to avoiding unintended consequences, including the potential for direct or indirect discrimination issues.
- In respect of future service, a number of options are available. These include: a new section of the existing Scheme; a new standalone scheme; or a public sector arrangement. Each will have its advantages and disadvantages which will need to be explored fully by TfL should it decide it wishes to pursue any options for reform.
- In respect of past service, a number of options are available including:

  - managing past service liabilities within the current Scheme;
  - an insurance company buy-in/out;
  - a transfer of past service assets and liabilities to an existing public sector scheme; or
  - a transfer of past service assets and liabilities to Government.
- Each of these issues is highly complex and will require very significant and careful consideration by TfL.
- Consideration will also need to be given to the position of Protected Persons.
- There could also be an opportunity to resolve the private sector status of this Scheme which appears clearly anomalous.
- There are a number of routes by which these (or other) transitional arrangements could be implemented. Almost all will require some form of Government involvement. It is also likely that TfL would require an early and clear commitment from Government before any firm proposals can be made, were a decision taken to pursue reform.
- The route to any new arrangement is neither straightforward nor quickly achieved.

IMPLEMENTATION CONSIDERATIONS

- The precise nature of any implementation plan can only be known once any detailed proposal for the future direction of the Scheme is known, if that is the path TfL decide to pursue. It is for TfL and other stakeholders to own and manage that process.
- There will be a wide range of issues to be considered. These range from managing a statutory consultation process; to considering how past service rights should be calculated; and the important job of communicating with members. Each is complex in its own right and will require careful consideration. Together, they present a very significant programme of work.
- There is also a wide range of stakeholders who will be involved. Some will have a statutory role (for example members, TfL’s recognised trade unions, and the Scheme Actuary) whilst other bodies may also require a role, for example The Pensions Regulator (TPR).
- TfL will be required to consult with active and prospective members, recognised trade unions and the Trustee throughout the process, ensuring that it acts in accordance with all statutory requirements.
- It is clear that any change will not be a trivial exercise, nor will it be achieved quickly. It will be a matter of years, not months, before any change can be implemented (and any cost savings experienced).
- If it is decided to pursue reform, Government will almost certainly have a role.

CONCLUDING REFLECTIONS

- The Review itself has not sought to make a single recommendation, not least as there are wider considerations relating to TfL’s funding, to which we are not party, which will be relevant to TfL’s future pension provision. TfL, as sponsoring employer, will have the responsibility to decide whether to maintain the current Scheme or to introduce changes.
- TfL and other stakeholders will need to reflect carefully on the issues raised in this report, including those related to affordability and sustainability, fairness and adequacy, the complexity of transition, and the overall value of the Scheme within TfL’s remuneration and reward framework.
- We would hope that there will be close engagement with all stakeholders as these matters are progressed with a view to reaching agreement on a way forward.

3. ABOUT THE REVIEW

SUMMARY

- The Review was established as part of the funding agreement reached between the Government and TfL in June 2021 which required TfL to undertake a review of its pension arrangements.
- The Review has sought to operate in an open and transparent fashion. This has included establishing a Pensions Review Contact Group comprising TfL's recognised trade unions and issuing a Call for Evidence in the summer of 2021.
- In line with the requirements of the Review's Terms of Reference, an initial report setting out a long list of options, based on pension reforms seen elsewhere in the UK, was published in October 2021. This was followed in December 2021 by our Interim Report which set out a shorter list of 'in-scope' options for further consideration.
- It is those options for further consideration which are the subject of this report.

WHY THE REVIEW WAS ESTABLISHED

As part of the TfL funding agreement reached between HM Government and TfL in June 2021, TfL was required to undertake a review of its pension arrangements "with the explicit aim of moving TfL's pensions arrangements onto a financially sustainable position".

The Review is required to conduct an assessment of the Scheme and to make recommendations in relation to TfL's pension arrangements that are sustainable and affordable in the long term, and fair to employees, farepayers and taxpayers. The Review has been asked to undertake this assessment within the overall context of TfL's financial challenges. In undertaking our work, we have been asked to:

- identify options for potential reform that would meet the purpose and scope of the Review;
- set out a recommended approach, including an assessment of why particular options for potential reform have been rejected as not being consistent with the purpose and scope of the Review); and
- set out an implementation plan for any next steps.

It is not, therefore, the role of the Independent Review to prescribe in detail the shape of any potential reforms to the Scheme or how they should be implemented. Rather, on the basis of the analysis and evidence, the Review has identified potential directions of travel and the issues that will need to be taken into account by TfL and other parties (including the Trustee, recognised trade unions and also Government itself) in considering implementation, transition and next steps. It will be for TfL to consider – and decide whether to accept – the Independent Review's evidence on the implications of possible changes. If change is to be proposed, there will then need to be important periods of consultation with TfL's recognised trade unions, as well as essential discussions with the Trustee and Government.

The Independent Review was launched on July 28 2021 and its full Terms of Reference (ToR) are set out in Appendix 1.

PURPOSE AND SCOPE OF THE REVIEW

The ToR set out the Purpose and Scope of the Review and the matters to which it must have regard in considering the future of the Scheme. These are:

- the need to ensure that future pension provision is fair across TfL's employees (including protecting members' benefits built up to date); and
- TfL's future pension provision is affordable and sustainable in the long term (for TfL, farepayers and taxpayers).

Additional considerations are:

- risk (and how this can be shared between farepayers, taxpayers, employees and members);
- adequacy and the provision of choice for members;
- the position of pension provision as a recruitment and retention tool; and
- how TfL's pension provision fits into the overall reward package.

The ToR are also clear that members' benefits built up to date should be protected.

THE REVIEW'S WORK TO DATE

Shortly after the Review commenced work, a Pensions Review Contact Group (PRCG), comprising representatives from all TfL's recognised trade unions was established. The PRCG has continued to meet regularly with the Independent Review team.

The Review's work has been divided into three phases:

1. Final list of options under consideration (31 October 2021);
2. Interim Report outlining the options that are being considered further and those that are being ruled out (11 December 2021); and
3. Final Report providing a full analysis of the options and a recommended approach and implementation plan (31 March 2022).

To inform the Review's work, in August 2021, we issued a Call for Evidence which sought views on how the concepts set out in the Purpose and Scope of the ToR might be defined. The Call for Evidence closed in September 2021. Responses were received from a wide range of stakeholders and provided a useful pool of information and views for the Review to draw on throughout its deliberations. The Review is grateful to the organisations and individuals who took the time to respond.

A summary of the Review's work to date is provided below.

OCTOBER 2021 LETTER

In its letter to the Commissioner for Transport for London, dated 28 October 2021, the Independent Review provided a long list of the full range of options for reform under consideration. The list of potential options was informed by observing the wide range of pension reforms seen elsewhere across the public and private sectors in the UK. However, the Review noted that the reforms implemented elsewhere reflected the specificities of the sponsoring employer and their respective labour markets and may not, therefore, be appropriate for TfL. It was also noted that whilst the reforms had reduced costs to employers of their pension arrangements, they had also reduced the value of pension provision for members – in some cases significantly so.

The long list of options concerned changes to future service only. The Review was clear that any changes to future service would have an impact on past service and the implications for the funding of the Scheme.

The full range of possible options for reform is set out below:

Figure 1: Range of possible reform options[1]

	DB	AMENDED DEFINED BENEFIT			HYBRID			PURE DC	
	DB FINAL SALARY (AS IS)	DB FINAL SALARY	DB CARE + TIERED CONTS	DB CARE	DB CARE +DC	CDC	CASH BALANCE	DC	AUTO-ENROL'T
Accrual Rate	1/60th	1/60th	1/49th	1/60th	1/75th to salary cap then DC	1/80th	Targets pot of money at retirement	n/a	n/a
Salary cap[1]	£170,400	Yes	£172,800	Annual increases to pensionable pay capped at RPI	£59,884	-	n/a	Base salary	Band earnings[14]
Member Contribution	5%	5%[5]	Tiered (5.5%-12.5%)	7.24%	9.8%	6%	3%	5-8%	5%[15]
Employer Contribution[2]	26.9%	39% (min 5%)	19%[7]	10.86%	21.4%	13.6%	Balance to meet target pot	5-10%	3%
Basis	BoC[3]	BoC	BoC	Shared cost	Shared cost	Shared cost	BoC	n/a	n/a
Indexation – pensions in payment (cap)	RPI (5%)[4]	CPI	CPI	CPI	CPI	Depends on funding position	n/a	n/a	n/a
NRA (paid unreduced from)	65 (60)	65 (60)	SPA[8]	65[8]	65	67	60	TRA[12]	TRA
EXAMPLE ORGANISATIONS	TfL	NATIONAL GRID[6]	LGPS	NETWORK RAIL	USS	ROYAL MAIL[10]	BARCLAYS (legacy)[11]	BBC (LifePlan)[13]	NEST

MORE RISK WITH THE EMPLOYER — RISK — MORE RISK WITH THE MEMBER

See Appendix 2 for footnotes.

[1] From Annex 3, Submission to the Commissioner of Transport for London from the Independent Pensions Review, 28 October 2021

INTERIM REPORT

On 9 December 2021, the Review published its Interim Report. Based on the full spectrum of possible options for reform (described in Figure 1 above), the Interim Report set out options for potential reform that would be considered further (in-scope options) and those that would be excluded from further consideration (out of scope options).

In arriving at this assessment of in-scope and out of scope options, the Review considered all the options outlined in the letter to the Commissioner of 28 October 2021 against a set of principles (the Assessment Principles) themselves based on the ToR. The Assessment Principles, which are set out below in Figure 2, were discussed with, and received input from, the trade union Contact Group, the Scheme Trustee and TfL.

Figure 2: Principles for Assessing Potential Options for Reform (Assessment Principles)

ASSESSMENT PRINCIPLES

1. Adequacy of benefit provision at retirement including the provision of ill-health early retirement and death in service benefits.
2. A scheme with high take up levels.
3. Protection of members' benefits built up to date.
4. A pension arrangement within the wider context of TfL's remuneration and reward package that is competitive for recruitment and retention purposes.
5. Fairness between different cohorts of members and generations of members.
6. An affordable level of regular contributions now and in the future which avoids excessive volatility in pension contribution levels.
7. A fair balance of contributions between members and employer.
8. A scheme that manages risk by satisfying the desire for employers for confidence in the affordability of providing benefits over the short and longer term and, on the part of the scheme members for a stable benefit structure that generates adequate benefits at retirement.
9. Sustainability over the long-term, as benefits will become payable for many decades to come, meaning an ability to pay benefits built up now and in the future and a Scheme that can adapt to the future needs of members and sudden external shocks.

In conducting its assessment of options for further consideration, the Review had two overriding objectives in mind:

1. the need to ensure members can retire with a decent level of income at retirement; and
2. the need to ensure any potential future changes do not have unintended consequences for the current scheme and TfL itself.

It was noted that none of the options for further consideration were a perfect match for the Assessment Principles. The Independent Review therefore considered those that most closely aligned to the Assessment Principles. Based on that assessment, we identified four options that would be in scope for further consideration and four options that would be ruled out of scope for further consideration as they did not sufficiently meet the requirements of the Assessment Principles. The assessment of in-scope and out of scope options was also informed by the responses from stakeholders to the Call for Evidence.

The in-scope and out-of-scope options are set out in Figure 3 below:

Figure 3: Summary – in-scope and out-of-scope options for further consideration

OPTIONS FOR FURTHER CONSIDERATION	
IN SCOPE	OUT OF SCOPE
▪ Current Final Salary Scheme arrangements ▪ Modified Final Salary Scheme ▪ CARE ▪ CARE + tiered contributions	▪ CDC ▪ Cash Balance Scheme ▪ Defined Contribution (DC) Scheme ▪ DC Auto-Enrolment Scheme

The letter to the Commissioner of 28 October and our Interim Report are available on TfL's website at www.tfl.gov.uk .

4. ABOUT THE SCHEME

HISTORY OF THE SCHEME

The TfL Pension Fund (referred to throughout this report as the Scheme) was established in its current form on 1 April 1989 as an amalgamation of two earlier schemes – the Wages Scheme and the Staff Fund. The merger was effected through a private Act of Parliament (section 16 of the London Regional Transport Act 1989) and London Regional Transport became the principal employer. TfL was established in 2000 and took over the operation of public transport in the capital when responsibility for transport was transferred from the Secretary of State for Transport to the Mayor of London. TfL was substituted as the Scheme's principal employer on 3 July 2000.

In 2007, Metronet (the contracting organisation for two of the three London Underground Public-Private Partnerships (PPPs)) went into administration. TfL guaranteed the pension liabilities and obligations of the Metronet Scheme and, when Metronet employees were transferred to London Underground Limited, these liabilities became part of the Scheme. In 2010 Tubelines Limited (the third PPP) was acquired as a wholly owned subsidiary of TfL and employees were ultimately offered the opportunity to become members of the TfL Scheme.

BENEFIT STRUCTURE

The Scheme is an open, final salary scheme and is one of just 544 open defined benefit and hybrid schemes in the UK today[2]. Benefits accrue at a rate of 1/60th of pensionable salary for each year of pensionable service. Members may take up to 25% of their pension at retirement as a tax-free lump sum. Benefits may also be paid to adult dependents and eligible children on the death of the member. Ill health early retirement benefits are also available as well as death in service benefits (of 4x the member's pensionable salary, paid at the Trustee's discretion). Benefits may vary slightly depending on when someone joined the Scheme. For example, New Members (who joined the Scheme after 1 April 1989) experience a deduction for the Lower Earnings Limit (LEL) from pensionable salaries. The fundamental benefit design has remained unchanged.

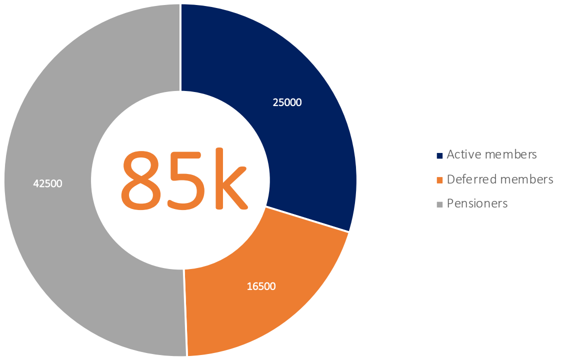
STATUS OF THE SCHEME

Despite TfL being a public sector organisation, the Scheme is regulated as a funded private sector scheme. This has consequences for how the Scheme is funded, the approach it must take to actuarial valuations and deficit recovery periods, for example, compared to public sector schemes such as those in operation in local government.

[2]Annual Landscape Report on UK Defined Benefit and Hybrid Schemes 2021. TPR. Available at: https://www.thepensionsregulator.gov.uk/en/document-library/research-and-analysis/db-pensions-landscape-2021#430a073cdb5b4f3fad785464b9d00d51

Figure 4: TfL Pension Fund 2021 – snapshot

The Scheme has around 85,000 members. Around a third are actively contributing to the Scheme



5% MEMBER

+

26.9% EMPLOYER

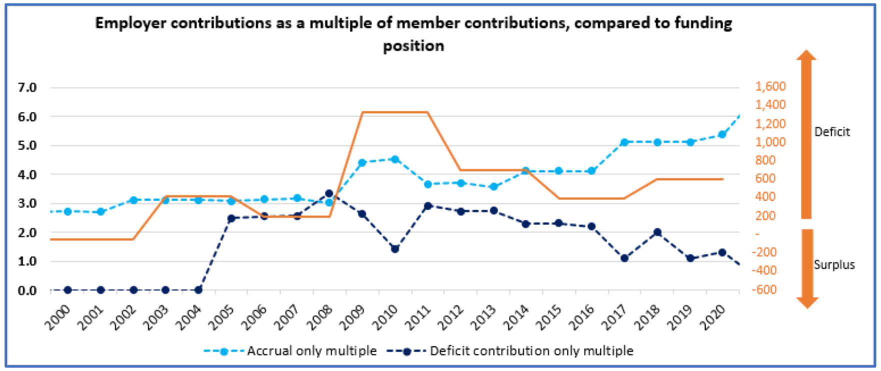
31.9% TOTAL

Total contributions are 31.9%. Members pay a fixed contributions of 5% of pensionable earnings, and TfL pays the balance. DRCs were paid as 6.4% of pensionable salary plus an additional top-up of £25.6m

£13bn Assets under management (AUM)

AUM increased by over £2bn over the year to March 31 2021

Liabilities have also increased. In 2018 they stood at £10.9 bn and are estimated to be £12.9bn currently. (Source WTW)



The ratio of employer to member contributions has increased from 2.5:1 when the scheme commenced to 6.7:1 at the 2018 valuation (Source, XPS)

All data taken from TfL Pension Fund Annual Report and Accounts 2021 unless stated otherwise

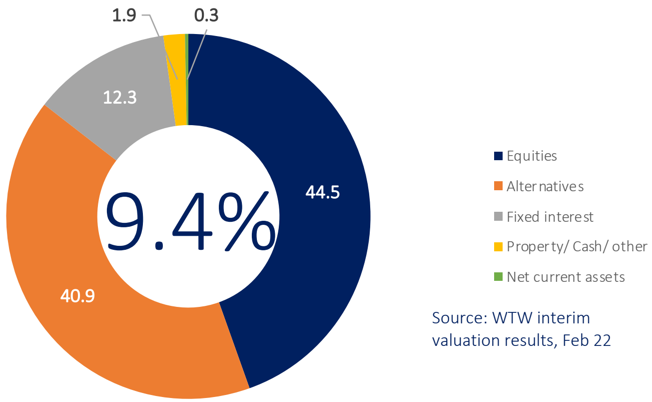
£7,890

Average pension paid out (assumes 25% tax-free lump sum (source TfL))

60

Age at which most people take pension benefits (source XPS)

The Trustee operates a sophisticated investment strategy, with 40% of assets invested in 'alternative' assets like infrastructure



Source: WTW interim valuation results, Feb 22

5-year investment returns were 9.4% per year, 0.3% below benchmark

5. DEALING WITH FUTURE SERVICE

SUMMARY

- Four in-scope options for future service have been considered further. More radical reform options, including defined contribution (DC) were rejected, principally because they would be highly unlikely to provide members with adequate benefits in retirement.
- Our considerations have factored in a number of wider contextual points:
    - The Scheme is the only significant benefit beyond pay available to the majority of employees. Any changes to the Scheme will have knock-on consequences for benefits and remuneration elsewhere. This is important in the context of TfL's ability to recruit and retain staff.
    - Pay for Performance (PfP) and the Senior Manager Reward Framework have an adverse effect on pensionable pay (and therefore members' final pensions). This will need to be considered in the context of fairness to members and pensions adequacy.
    - Any potential reforms have to take account of the specificities of TfL and its workforce. In particular, any tiered contribution structure must meet the specific needs of TfL. This is important in the context of fairness to all members and affordability.
- The Review has examined in detail the possible impact of the impact of in-scope options for future service through extensive modelling of outputs. This enables an assessment of the impact of potential benefit reforms on TfL in terms of cost savings (or increases); on members' benefits; and a comparison with the current scheme for future service.
- We have developed:
    - a set of combinations of possible benefit reforms based on a mix of trade-offs (16); and
    - a set of member personas (20).
- The benefit combinations are not proposals for reform but show a range of possible outcomes.
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- Almost all of the benefit combination scenarios see reductions in the future service benefits available to members, and increased contributions compared to the current position. However, these benefit reductions or contribution increases are not felt evenly by members.
- Based on the outcomes from the modelling of the benefit combinations scenarios and the member outcomes based on the modelling of the personas:
    - Some combinations may generate cost savings to TfL but may not meet the principle of fairness or adequacy for members.
    - Some combinations may reduce future service costs to TfL but would not completely remove the risks and uncertainty facing TfL (eg inflation, salary escalation risk).
    - Some combinations may render TfL's pension arrangement uncompetitive.
    - Some combinations could be less fair to some members than others.
    - Some combinations could increase costs to TfL yet reduce risks for TfL.
- Deciding on any potential reform direction will require a careful balancing of all these factors.

OPTIONS FOR FURTHER CONSIDERATION

In respect of future service, the Review identified four options for further consideration:

- the current final salary scheme;
- a modified final salary scheme;
- CARE scheme; and
- CARE scheme with tiered contributions.

More radical potential reform options, including defined contribution (DC) arrangements were rejected for further consideration, and would be highly unlikely to provide members with adequate benefits in retirement and would be out of line with the rest of the public sector.

Our approach to how and why we have considered further each of these options, together with a description of our approach and the issues we have taken into consideration as part of our further assessment, is described below.

CURRENT FINAL SALARY SCHEME

The Review has been clear – and our ToR require – that the current final salary scheme remains an option for future service accrual.

The current final salary scheme provides members with a stable and predictable level of benefits at retirement. Members or their dependents will also receive appropriate ill-health and death in service benefits which recognise the safety-critical nature of the employment of many TfL members. The Scheme enjoys high levels of take up, is highly valued by staff and is an important feature of the overall remuneration and reward package. As we noted in our Interim Report, the Scheme is highly valued by members – something which has become even more apparent in our discussions with TfL Scheme stakeholders since the publication of the Interim Report. We have also noted that the Scheme is seen as an important recruitment and retention tool by TfL. Moreover, as we reported in December 2021, the Scheme is the only benefit of substance (other than pay) on offer to TfL employees. Where other benefits are available, they are of lower value than might be seen in other comparable organisations. Benefits such as health care and bonuses, which might also be available in other employers, are not available to the majority of staff in TfL.

There is also certainty for members in terms of the contributions they pay as the Scheme is a balance of costs scheme – members' contributions are a fixed percentage of pensionable pay and the employer pays the balance. However, that has given rise to concern over the rising future costs to the employer of the Scheme and the ratio of contributions paid by the employer relative to members.

The current scheme – including the value of benefits payable to members and its cost to TfL (and members) is taken as the baseline against which any potential changes have been assessed.

MODIFIED FINAL SALARY SCHEME

It is expected that the 2021 actuarial valuation, which at the time of writing was still being finalised (but where we understand agreement in principle has been reached on all the assumptions) will yield a modest surplus. This is a significant turn-around from the position at the 2018 valuation which revealed a deficit of £603m and is a reflection of the strong governance and sophisticated investment strategy adopted by the Trustee. As a result of the surplus, the current deficit recovery contributions (DRCs) payable each year by TfL to the Scheme – which currently stand at £70m indexed – will cease to be payable. This represents an immediate, and significant, cost saving to TfL. However, in respect of future service, TfL's costs are expected to increase to 27.3% of pensionable pay (from the current rate of 26.9%) – an additional £4-£5m a year. This reflects a range of factors including increasing longevity and Scheme expenses, principally increases to the PPF levy. Moreover, as we noted in our Interim Report, there is considerable uncertainty and risk to the current funding position arising from improving longevity and market uncertainty.

Notwithstanding these positive results, considerable uncertainties remain about the long-term future sustainability of the Scheme and – in line with its ToR – it is important that the Review looks to the long term and beyond the current triennial valuation cycle.

We described in our Interim Report that the ratio of employer to member contributions has risen from a ratio of around 2.5 to 1 when the Scheme was established to around 6-7 to 1 following the 2018 valuation. Whilst the 2021 valuation are expected to see these drop back to around to around 5.5 to 1, once the need for deficit recovery contributions is eliminated, this is still considerably higher than the Scheme's starting position and has led to concerns about the balance of contributions borne between TfL and Scheme members.

Our Interim Report also described that the Scheme faces potential long-term risk which may place further funding pressures on the Scheme. This includes expected new requirements from the Pensions Regulator (TPR) on the trustees of defined benefit schemes to agree a Long-Term Funding Target (LTFT) with the sponsoring employer (TfL in this case). The LTFT will require the Trustee to target a level of assets a scheme would need by the time it has reached significant maturity, with the aim of reducing reliance on the employer. Given the Scheme's relative immaturity (a reflection of its open status) this would likely mean a move away from the current return-seeking investment approach to a more risk-averse approach. In turn, this could place more pressure on TfL to make up any shortfall due to a revised investment approach through higher contributions. It should be noted that this could be exacerbated if the Scheme were to close either to new members or altogether, as this would result in a sudden maturing of the Scheme and consequently a change in investment approach by the Trustee, which would crystalise a deficit of around £14bn, depending on how the investment strategy was amended. If the Scheme were to remain open, it is likely it would never get to the point of 'significant maturity'.

We also noted that future service costs are likely to continue to rise, for example as a result of continuing improvements in longevity, changes in the profile of active members, and changes to assumptions. Furthermore, the Scheme could be subject to considerable future uncertainties, and therefore risk, which could increase future funding pressures (though it is noted that a different set out outcomes could reduce TfL's funding pressures).

As part of the position agreed between the Trustee and TfL in concluding (in principle, subject to approvals) the 2021 actuarial valuation, we note that an uplift in the amount of de-risking has been agreed with a view to reducing the amount of risk to which TfL is exposed.

In light of these uncertainties, and the potential for rising future service costs, the Review concluded that a modified final salary Scheme should be considered and investigated further. This option was a good match for the Assessment Principles.

Figure 5: Assessment Principles: modified final salary scheme

ASSESSMENT PRINCIPES & MODIFIED FINAL SALARY		
Adequacy of benefit provision at retirement including the provision of ill-health early retirement and death in service benefits.	●	Members would continue to have the certainty of a final salary related benefit and a high levels of adequacy of benefits at retirement, including ill-health, survivors' and death-in service benefits.
A scheme with high take up levels.	●	As now, it is likely that a final salary scheme would be capable of generating high levels of take up.
Protection of members' benefits built up to date.	●	The Review's ToR commit TfL to protecting members' benefits built up to date
A pension arrangement within the wider context of TfL's remuneration and reward package that is competitive for recruitment and retention purposes.	●	TfL would remain as one of the few employers continuing to operate an open final salary scheme, ensuring that the Scheme retained its place as a valuable and competitive feature of TfL's reward package.
Fairness between different cohorts of members and generations of members.	●	The retention of a final salary scheme would avoid a two-tier pension arrangements and sharp divisions within the workforce. However, as with all final salary schemes, it would favour those with longer service and traditional career patterns.
An affordable level of regular contributions now and in the future which avoids excessive volatility in pension contribution levels.	●	An adjusted level of benefits could help manage future service contributions and greater certainty (less volatility) for the employer.
A fair balance of contributions between members and employer.	●	An adjusted level of contributions could help manage the balance of member and employer contributions
A scheme that manages risk by satisfying the desire for employers for confidence in the affordability of providing benefits over the short and longer term and, on the part of the scheme members for a stable benefit structure that generates adequate benefits at retirement.	●	Whilst risk would remain with the employer, an adjusted level of benefits would help manage those risks – eg inflation risk, longevity risk, salary growth risk etc.
Sustainability over the long-term, as benefits will become payable for many decades to come, meaning an ability to pay benefits built up now and in the future and a Scheme that can adapt to the future needs of members and sudden external shocks.	●	An adjusted level of benefits/ contributions could put the Scheme on a sustainable long-term footing, helping the employer to manage risk (noting that risk will remain with the employer) whilst not fettering the Trustee's return-seeking investment approach.

There are multiple ways in which the benefit arrangements of a final salary scheme can be amended. These include (but are not limited to):

- increasing the normal retirement age (NRA), for example linking it to the State Pension Age (SPA) which is scheduled to rise from its current age 66 to 68 by 2046[3];
- attaching actuarial adjustments to benefits drawn before NRA (other than in the case of ill-health);
- changing the basis used for indexing (increasing) pensions in payment and/ or pensions in deferment;
- changing the accrual rate (ie the rate at which the pension builds up) each year;

[3] Second State Pension Age Review launches, DWP, 14 December 2021. Available at https://www.gov.uk/government/news/second-state-pension-age-review-launches

- limiting the amount of any pay increase that is pensionable;
- reducing the salary cap used to determine benefits meaning higher paid workers would not be able to accrue pensions on all their earnings; and
- increasing the level of contributions and/ or the balance of contributions between members and the employer.

Such changes could be applied individually or, more likely, in combination. Different combinations of reforms would have differential impacts on different groups of members (in terms of pension in retirement) and for the employer (in terms of cost savings) compared to other combinations.

There are multiple combinations of adjustments that could be made to a final salary scheme. It would not be possible in the time available to the Review to examine each possible combination of benefit adjustments. Therefore, to illustrate the effects of different combinations of possible potential adjustments to the Scheme, the Review has developed a set of combinations of potential reforms. These combinations have been based on a mix of trade-offs – for example, changing the accrual rate but not changing member contributions and vice versa; or limiting indexation of pensions whilst placing a salary cap on higher earners to restrict the benefits they may earn within the Scheme.

It should be stressed that these scenarios are not proposals for possible benefit reform. Rather, they have simply been designed to illustrate the potential impact on TfL of any such changes in terms of the size of cost savings (or increases) and on benefits payable to members. In other words, they are designed to show orders of magnitude and ranges of outcomes. The set of combinations we have considered for a modified final salary scheme are set out below.

Figure 6: Modified final salary benefit combinations scenarios

MODIFIED FINAL SALARY COMBINATIONS

No.	FS CORE COMBINATION	VARIANT	VARIANT
1	▪ 1/80th accrual ▪ NRA linked to SPA ▪ Member contributions tiered ▪ Indexation CPI capped at 2.5% - retirement and deferment 1A	And without tiered contributions – fixed member contribution rate of 5% 1B	
2	▪ 1/60th accrual ▪ Remove right to retire on unreduced pension at 60 (ie apply ERFs from age 65) - NRA IS 65 ▪ Increase member contributions to 6% ▪ Reduce earnings cap to £120k ▪ Indexation CPI capped at 2.5% - retirement and deferment 2A	And with cap on increases to pensionable earnings of 3% [BUT STILL ALLOW FOR PROMOTIONAL INCREASES] 2B	And with increasing NRA to SPA [but no cap in pensionable pay increases] ERFS FROM SPA 2C
3	▪ 1/70th accrual ▪ 5% member contributions ▪ Reduce earnings cap to £120k ▪ Remove right to retire on unreduced pension at 60 (ie apply ERFs from age 65/NRA) 3A	And with NRA tied to SPA 3B	And with indexation CPI capped at 2.5% [but not linking NRA to SPA] 3C

CARE SCHEME

In our Interim Report we noted that CARE has become the dominant form of pension provision across the public sector. Under a CARE scheme, whilst retaining a defined benefit structure, the final pension is based on the average earnings of a member taken over the whole of their pensionable service which are then revalued to take account of inflation.

The DB nature of a CARE scheme means it has the potential to provide members with certainty and adequacy of benefits (including ill-health and early retirement benefits) and could be more favourable to members with non-traditional working patterns, eg those who work part-time, towards the end of their career. As an open DB scheme, it would mean that a CARE scheme could continue as a valuable part of the overall retention and reward framework within TfL. Balanced against this, a CARE scheme could help TfL manage some of the uncertainty of a DB scheme by helping to manage salary risk.

For these reasons, a CARE scheme was assessed as being a good match for the Assessment Principles.

Figure 7: Assessment Principles: CARE schemes

ASSESSMENT PRINCIPES & CARE SCHEMES		
Adequacy of benefit provision at retirement including the provision of ill-health early retirement and death in service benefits.		Members would continue to have the certainty of a final salary related benefit and a high levels of adequacy of benefits at retirement, including ill-health, survivors' and death-in service benefits.
A scheme with high take up levels.		As now, it is likely that a defined benefit scheme would be capable of generating high levels of take up.
Protection of members' benefits built up to date.		The Review's ToR commit TfL to protecting members' benefits built up to date.
A pension arrangement within the wider context of TfL's remuneration and reward package that is competitive for recruitment and retention purposes.		TfL would continue to offer a defined benefit scheme, one of a small number of employers to do so. The Scheme would retain its place as a valuable and competitive feature of TfL's reward package.
Fairness between different cohorts of members and generations of members.		The retention of a defined benefit scheme would avoid sharp divisions within the workforce. Some members could be better off. Depending on how calibrated, tiered contributions could create cliff edges and mean very high contributions for some.
An affordable level of regular contributions now and in the future which avoids excessive volatility in pension contribution levels.		An adjusted level of benefits could help manage future service contributions and greater certainty (less volatility) for the employer.
A fair balance of contributions between members and employer.		An adjusted level of contributions could help manage the balance of member and employer contributions.
A scheme that manages risk by satisfying the desire for employers for confidence in the affordability of providing benefits over the short and longer term and, on the part of the scheme members for a stable benefit structure that generates adequate benefits at retirement.		Whilst risk (eg investment, inflation) would remain with the employer, CARE would help the employer to manage salary progression risk.
Sustainability over the long-term, as benefits will become payable for many decades to come, meaning an ability to pay benefits built up now and in the future and a Scheme that can adapt to the future needs of members and sudden external shocks.		An adjusted level of benefits/ contributions could put the Scheme on a sustainable long-term footing, helping the employer to manage risk (noting that risk will remain with the employer) whilst not fettering the Trustee's return-seeking investment approach.

CARE SCHEME WITH TIERED CONTRIBITIONS

One feature of public sector CARE schemes is tiered contributions. Here, the contribution rate increases in line with salary. The aim is to ensure that those on lower earnings are not overburdened with high contributions by ensuring that those who can pay more do so. Such an arrangement could meet the Review's principle of ensuring that the Scheme was fair to different cohorts of members.

In local government for example, tiered contributions start at 5.5% for someone earning up to £14,600 rising to 12.5% for someone earning £165,001 or more[4].

Whilst there can be benefits to a tiered contribution structure, there can also be some drawbacks. These have been articulated in discussions with the trade union Contact Group:

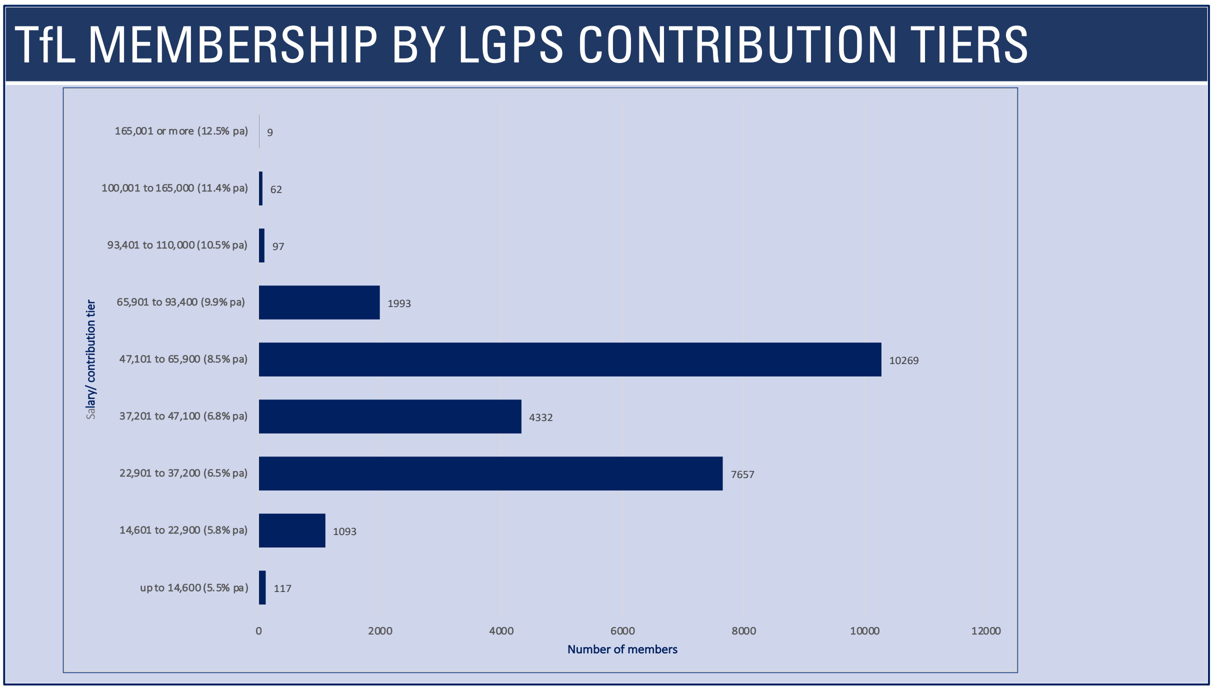
- Cliff edges between one tiering band and another can have adverse consequences. For example, a member who is promoted and moves from one contributions tier to another, could find the promotional pay increase swallowed up by the contributions increase.

- Tiering can mean that contributions levels for the higher paid can become very high which could result in some members being 'priced out' of the Scheme.

As the Review made clear in its letter to the Commissioner of 28 October 2021, any potential options for reform must link to the specificities of TfL, its workforce and Scheme. This would need to include a tiered contribution arrangement which would need to be carefully calibrated and applicable to TfL's circumstances. For example, unlike local government, TfL has a much more compressed salary structure, with the majority of the workforce in salary bands between £30,000-£60,000. If wrongly calibrated, it could result in one group of members carrying a disproportionate burden of member contributions.

Figure 8 shows the distribution of LGPS tiered contributions if applied to TfL.

Figure 8: LGPS tiered contributions applied to TfL Pension Fund membership



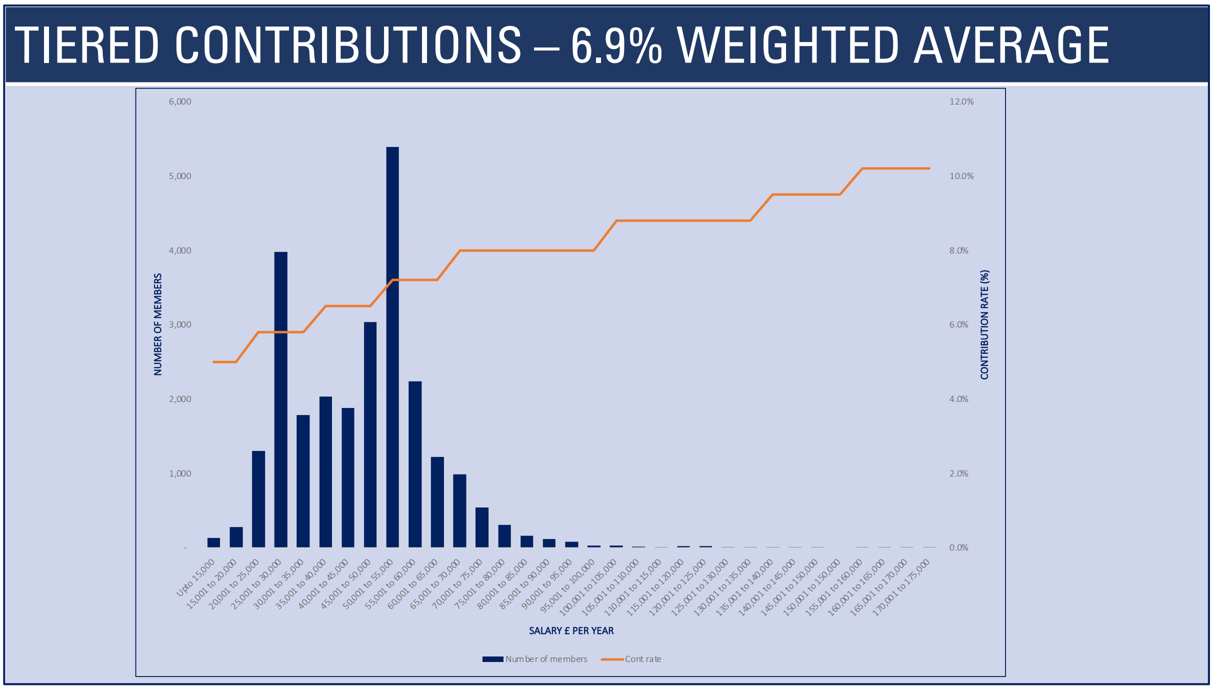
[4] Local Government Pension Scheme – contributions table 2021/22, LGA. Available at https://www.lgpsmember.org/toj/thinking-joining-how.php

The tiered contribution arrangements in the LGPS do not appear to be applicable to TfL. The Review has therefore modelled a possible tiered contribution arrangement applicable to the pay structures at TfL. These seek to retain a starting position of a 5% member contribution (as under the current scheme rules) increasing more gently at lower income levels and ensuring that those at higher levels did not contribute excessive amounts – retaining a top member contribution tier at or below that payable in the LGPS. In each case the weighted average member contribution is below that of the LGPS (which stands at 8%[5]). The potential outcomes are shown below in Figure 9 below.

This adopts a starting member contribution rate of 5% rising to 5.8% at a salary of £20,001; then to 6.5% at a salary between £35,001 to £50,000; then rising to 7.2% for those earning between £50,001 and £65,000; then to 8% for those earning between £65,001 and to £100,000; then to 8.8% for those earning between £100,001 and £135,000; 9.5% for those earning between £135,001 and £155,000; and 10.2% for those earning over £155,001. This yields a weighted average contribution of 6.9%[6].

It should be noted this is a product of the stepped increases in contributions, rather than a decision to pivot contributions around a certain core contribution rate. At 6.9%, the weighted average contribution is below that in the LGPS, which has a weighted average contribution of 8%. The starting contribution of 5% for salaries up to £20,000 a year and the highest rate of 10.5% for salaries over £155,001 is lower in the LGPS (5.5% and 12.5% respectively). In the LGPS, a contribution of 8.5% is payable on salaries between £47,101 to £65,900 a year compared to £65,001 to £100,00 in the example below. Nevertheless, higher earners would be paying more than twice as much as now.

Figure 9: TfL tiered contributions 6.9% weighted average



5 This is the weighted average contribution rate based on the salaries of the TfL Pension Fund active membership as at 31 March 2021.
6 This is the weighted average contribution rate based on the TfL Pension Fund active membership as at 31 March 2021.

As with the amended DB combinations, it should be stressed that the CARE scenarios that have been modelled are not proposals for possible benefit reform. Rather, they have simply been designed to illustrate the potential impacts on TfL of any such changes in terms of the size of cost savings (or increases) and on benefits payable to members. In other words, they are designed to show orders of magnitude and ranges of outcomes. The set of combinations for a possible range of CARE scheme are set out below.

Figure 10: CARE benefit combination scenarios – with/ without tiered contributions

CARE COMBINATIONS			
No.	CARE CORE COMBINATION	VARIANT	VARIANT
1	▪ 1/49th accrual ▪ NRA linked to SPA ▪ Indexation CPI (uncapped) - retirement and deferment ▪ ERFs applied from NRA (ie no right to an unreduced pension at 60) ▪ Tiered contributions 4A	And without tiered contributions – fixed member contribution rate of 6% 4B	And with NRA at 65 with no ERFs 4C
2	▪ 1/60th accrual ▪ NRA 65 ▪ ERFs applied from NRA ▪ Indexation CPI capped at 2.5% - retirement and deferment ▪ Member contributions 5% 5A	And with 6% member contributions 5B	And with tiered contributions 5C
3	▪ 1/70th accrual ▪ NRA at 65 ▪ ERFs applied from NRA (ie no right to an unreduced pension at 60) ▪ Member contributions 5% ▪ Indexation CPI (uncapped) – retirement and deferment 6A	And with tiered contributions 6B	

ASSESSING THE IMPACT OF POTENTIAL CHANGE ON SCHEME MEMBERS AND TFL: MODELLING AND ASSUMPTIONS

The Review has been clear from the outset, and the ToR require, that it must consider the impact of any potential changes on TfL and Scheme members.

Therefore, a major element of our assessment of the in-scope options for future service reform, has involved detailed modelling of the impact of changes to future service benefits on TfL and Scheme members.

The modelling enables:

- an assessment of any potential cost saving (or cost increase) for TfL;
- an assessment of the impact of any potential changes on members' pension entitlements at retirement;

- an assessment of the relative risk to TfL and members of each of the benefit combination scenarios modelled; and
- a comparison of any potential changes for both members and TfL with the current final salary scheme, which remains one of the in-scope options under consideration.

The Review has used the services of XPS Pensions Consulting Ltd (XPS) to undertake this modelling work. XPS are the actuarial advisers to TfL. However, the assumptions used by XPS are those defined by the Review and have been supplied to XPS via TfL. TfL and XPS have had no part in setting the assumptions and parameters used for the modelling. It should also be noted that in providing the information to the Review, XPS is bound by the professional standards of the actuarial profession to TfL as its client.

The following section describes the modelling and the assumptions used in further detail.

ASSESSING THE IMPACT ON TFL

Our modelling sought to assess the impact of possible changes to future service benefit provision on the cost to TfL of providing each of the combinations of pension arrangement. The combinations described here are to illustrate the possible impacts. We also modelled the current Scheme position. This enables us to see the future service costs to TfL of providing the current Scheme and enables a comparison with the adjusted final salary and CARE combinations.

The modelling uses a number of assumptions. Given that the 31 March 2021 actuarial valuation has not been finalised at the time of writing this report, we have adopted the draft valuation assumptions from the Fund Actuary report issued under Rule 43(3) of the Scheme Rules by the Scheme Actuary.

One key change has been made to those assumptions, however, and that is to the salary progression assumption where the latest assumption agreed between the Trustee and TfL assumes that general salary growth is set equal to RPI. All members are assumed to be New Members, and so pensionable salary is assumed to be basic salary less the LEL. The key assumptions used are set out in full in Appendix 3.

A different set of assumptions would lead to a different set of results and outcomes.

Therefore, the Review has sought to understand the sensitivities of the modelling outputs to changes in the discount rate, which is the assumption that will have the biggest effect on the expected cost of future accrual given that it determines the balance of how much of members’ benefits are expected to be funded by contributions and how much by investment returns. (The higher the level of expected return of an investment strategy, the higher the discount rate that can be used and so the lower the estimated cost of providing benefits. However, in turn, such an investment strategy will be higher risk and therefore lead to a higher chance of a deficit arising in future.)

The results of the modelling, described later in this chapter, show the orders of magnitude and impact of potential changes and enable a comparison with the current Scheme provision for future service accrual.

Should it be decided to embark on reforms following this Review, TfL would need to assess the final scale and impact of any changes on TfL in terms of cost savings (or increases) based on latest Scheme data and any final agreed option for reform. This matter is dealt with in further detail in Chapter 8.

ASSESSING THE IMPACT ON MEMBERS

The Independent Review has been clear that an important part of its assessment of any options for potential reform with regard to future service arrangements needed to include an assessment of the impact of those changes on Scheme members. In the time available, it has not been possible to assess in detail other equality factors such as age or gender, for example. However, were reforms to be pursued, TfL would need to undertake detailed analysis on these points.

We have considered this against a number of dimensions (consistent with the Assessment Principles):

- the adequacy of members' benefits;
- affordability for members (which has potential implications for take up rates, etc); and
- fairness between different generations and cohorts of members.

Important too, in our consideration, has been the position of the pension fund in the overall remuneration framework offered by TfL. As we described in our Interim Report, apart from staff travel concessions, pensions are the only benefit of significance available to the majority of staff. Therefore, any diminution in pension benefits will need to be considered in this context and may necessitate a wider reconsideration and rebalancing of the overall remuneration, reward, and benefit package.

Given the scale of the Scheme and size of its membership, it would clearly be impractical for the Review to assess the impact on every Scheme member. Instead, we have assessed the impact of potential changes on groups of typical members which we have called 'personas'.

We have established two categories of personas:

- **Static personas:** These assume that people in these roles stay in these roles throughout their pensionable service with TfL. We have created 15 'static' personas which cover the main pay bands and job roles at TfL and LU. Together they cover around 70% of the TfL workforce.

- **Career progression personas:** Obviously not everybody will remain in the same role or same grade throughout their career at TfL. Many will progress through the grades and into different roles. We have therefore identified 5 'career progression' personas which cover a selection of typical career progression patterns within the TfL Group (we have defined TfL Group here to mean TfL and its subsidiaries).

Inevitably, we have needed to make some assumptions to underpin the creation of the personas:

- **Salary:** The average median salary for each role has been selected for the pay band. The salary data is shown as at January 2022. We are aware that pay negotiations are progressing in parallel with the Independent Review that may have an impact on the results. However, as the outcome of these negotiations was not known at the time the Review undertook its analysis, we have had to make a judgement as to the date of the salary information used.

- **Average tenure:** We have assumed that for the majority of personas, the average period of pensionable service is 13 years across the membership as a whole. However, we are aware that some groups of members are likely to have longer periods of pensionable service. Therefore, we have reflected this in the assumptions about pensionable service, giving some of the personas a longer period of pensionable service.

- **Part-time working:** Whilst the majority of the Scheme's membership work full-time (taken to be 35 hours a week) a significant number, around 1,800, work on a part-time basis. It is therefore important for the Review to consider the effects of any potential changes on members with a-typical employment patterns. This is relevant to the requirement on the Review to consider fairness, ie whether particular changes or benefit designs might be more or less fair to particular groups of members. We have therefore crafted some personas based on typical part-time working patterns. For the part-time static scenario, we have selected the group with the biggest proportion of part-time workers, Customer Service Assistant (1) which accounts for 68% of all those working part-time in TfL.

The Static and Career Progression personas are described below.

Figure 11: Static personas

STATIC PERSONAS					
No.	PAYBAND/ ROLE	TfL/LU	HEADCOUNT	AVERAGE SALARY (£)	PENSIONABLE SERVICE (YEARS)
1	PB1 (eg administrator/ PA)	LU	359	37,111	13
2	PB1 (eg administrator/ PA)	TfL	755	29,516	13
3	PB2 (eg asset operations)	LU	3,079	63,022	13
4	PB2 (eg asset operations)	TfL	1,429	38,210	13
5	PB3 (eg project manager)	LU	954	65,366	13
6	PB3 (eg project manager)	TfL	2,869	56,513	13
7	PB4 (eg senior manager)	TfL	775	77,595	13
8	PB5 (eg 'head of' role)	TfL	135	102,399	13
9	TRAIN OPERATOR	LU	3,368	58,949	20
10	FLEET MAINTAINER – TRAIN MAINTAINER	LU	566	53,167	13
11	FLEET MAINTAINER – ADVANCED TRAIN MAINTAINER	LU	208	60,828	13
12	CSA (1)	LU	2749	35,926	13
13	CSA (1) – PART TIME HOURS, 17.5 HOURS PW	LU	728	35,926 [FTE]	6.5
14	SERVICE CONTROL OPS	LU	191	72,432	13
15	DIRECTOR	TfL	33	180,000	13

Figure 12: Career progression personas

CAREER PROGRESSION PERSONAS		
No.	CAREER PROGRESSION TYPE	PENSIONABLE SERVICE (YEARS)
16	SALARY PROGRESSION SCENARIO 1 – OPERATIONAL CAREER PATH (1) ▪ Initial 5 years service as CSA Multifunctional ▪ Remaining service as LU Train Operator	20
17	SALARY PROGRESSION SCENARIO 2 – NON-OPERATIONAL CAREER PATH ▪ Initial service at TfL PB2 ▪ Progressing to TfL PB3 after 3 years ▪ Progressing to TfL PB4 after 5 years	13
18	SALARY PROGRESSION SCENARIO 3 – APPRENTICE TO DIRECTOR ▪ Years 0-3 at TfL PB2 ▪ Years 4-8 at TfL PB3 ▪ Years 9-13 at TfL PB4 ▪ Years 14-18 at TfL PB5 ▪ Years 19 onwards at TfL Director	20
19	SALARY PROGRESSION SCENARIO 4 – MIX OF FULL TIME AND PART TIME WORKING ▪ Years 0-5 at TfL PB3 (full time- 5/5 days per week) ▪ Years 6-15 at TfL PB 4 (part time - 3/5 days per week) ▪ Years 16-20 at TfL PB5 (full-time – 5/5 days per week)	20
20	SALARY PROGRESSION SCENARIO 5 – OPERATIONAL CAREER PATH (2) ▪ Initial service as CSA (1) ▪ Final 5 years' service as Service Operator	13

The impacts of each of the benefit combinations scenarios on each of the personas has been modelled to show the potential impact of possible changes. Each has also been assessed against the current Scheme arrangements. This enables a comparison of the relative position for members and TfL of each of the possible changes.

Figure 13: Pay for Performance

An issue that has been raised forcefully with the Review concerns Pay for Performance (PfP) and the Senior Manager Reward Framework (SMRF) and their impact on pensionable pay.

PfP is a remuneration reward system that operates in TfL and applies to pay bands (PB) 1, 2 and 3 (and equivalent grades) for non-operational staff employed in TfL. PfP does not operate in London Underground. It has been in operation since 2015. Currently 6,331 TfL employees are covered by PfP across all three PBs.

For PB 2 and 3 pay increases are determined by the employee's performance and their 'pay zone' position which indicates relativity to the aggregate market median for all roles at that level. Pay increases are geared towards providing the largest increases to those with the highest performance and who are in a lower pay range 'zone'. So a high performer who was deemed to be above the aggregate market rate would receive a smaller percentage pay rise compared to someone who was also deemed to be a high performer but who was deemed to be below the aggregate market rate for the role. Pay increases for PBs 2 and 3 are non-discretionary. They are paid annually as percentage increases which are consolidated and will contribute to the calculation of pensionable pay. Poor performers will receive no pay increases. But because of the gearing towards those in the lower pay zones, people in the higher pay zones may also be ineligible for a percentage pay increase, because of budgetary limitations and the policy of gearing increases to those in lower pay zones (ie decelerating pay growth for those in higher pay zones to keep closer to market pay levels) even where their performance would otherwise merit an increase.

For PBs2 and 3, there is also a performance arrangement paid in the form of a one-off cash sum determined by the individual's performance rating. This payment, made from a discretionary budget determined solely by TfL, is non-consolidated and does not contribute towards the calculation of pensionable pay. In 2020, the last year in which the discretionary payments were made, bonus amounts ranged from 0%-6% of pay across the five performance ratings.

Employees in PB1 do have the potential to receive a consolidated increase to base salary in line with the overall base pay budget, subject to a satisfactory performance. In 2020, people in PB 1 earning up to £30,999 a year whose performance was rated 2 and above received a consolidated increase of 2% on base pay (which counted towards pensionable salary) with any amount over and above this paid as a non-consolidated cash lump sum. Those earning £31,000 and above (ie above the top of the PB) also received a 2% award but this was paid as a one-off lump sum. This was not consolidated and so did not contribute towards the calculation of pensionable pay.

Base pay increases across PBs 1-3 are paid from a budget determined through negotiation, between TfL and its recognised trade unions.

1,216 staff in TfL PBs 4 and 5 are covered by the Senior Managers' Reward Framework (SMRF). Base pay increases are paid from a budget which is set on a discretionary basis and the budget is also distributed on a discretionary basis aligned to general guidance on how it should be prioritised.

Typically, around 50% of people covered by the SMRF within any one year would receive an increase, which also reflects TfL's financial constraints in recent years. Such awards are consolidated and would therefore contribute to the calculation of an employee's pensionable pay. There was no annual pay review budget for base pay in 2020 or 2021. Base pay budgets for 2016-19 were set at 1% or lower. The effect has been that median internal base salaries relative to external market comparators have deteriorated significantly. The situation negatively impacts the attractiveness of TfL as an employer, particularly in the absence of other benefits. A deterioration in the Scheme's benefits could further exacerbate TfL's ability to recruit senior managers.

The SMRF also contains a performance award element. This is payable based on the performance of the individual, their business unit and TfL as a whole and is paid as a non-consolidated cash payment so does not count towards pensionable pay. Performance awards for senior managers were last paid in 2021 (in respect of 2019/20 performance which saw payments deferred). The senior manager performance reward schemes for 2020/21 were suspended. For senior managers only, there is a facility to pay bonuses via salary sacrifice into a defined contribution scheme operated by Scottish Widows. In 2021 fewer than 200 employees participated in the DC scheme.

IMPACT ON PENSIONS AND PENSIONABLE PAY

PfP and the SMRF both have a negative impact on pensionable pay:

- PfP and the SMRF can reduce the pensionable pay of some employees – for example for those in PB1 earning £31,000 who are ineligible for a consolidated award or those in the SMRF who do not see an increase to base pay or whose pay has been frozen in recent years. Were these employees to have received a base pay increase, their pensionable pay, and hence final pension, would be higher.
- Significant amounts of employees' annual reward is paid in the form of non-consolidated, non-pensionable performance awards.
- For some employees, their pensionable pay can reduce year-on-year. This is because, for New Members (ie those joining after 1 April 1989), their pensionable pay is subject to a deduction for the Lower Earnings Limit (LEL). The LEL is increased by the Government each year in line with CPI. Therefore, members' pensionable salary may have been frozen or increased by less than CPI, but the amount of LEL reduction will have increased by CPI, leaving a smaller pensionable salary sum.
- We note that there is no ability for PBs 1-3 to make voluntary contributions to the DC arrangement. This is because the minimum amount that can be paid into the DC scheme on the grounds of cost is £1,000 and most awards for those in PBs1-3 are less than this.

Therefore the effects of any changes to the Scheme may have to consider the position on pay structures on final pensionable pay. Consideration will need to be given in the context of:

- the requirement, drawn from our ToR, for fairness between different groups of members across the whole of TfL; and
- the Scheme's overall place in the reward structure and as an effective recruitment and retention tool.

MODELLING OUTPUTS – EFFECTS OF POTENTIAL CHANGES FOR TFL

For each of the combination of benefit reform options for amended final salary scheme structures and CARE options (described in Figure 6 and
Figure 10) XPS were asked to model:

- the cost implications of the total future service cost (ie the total future service costs in £ per year and as a percentage of pensionable salaries); and
- the cost of total future service cost to TfL as a percentage of pensionable salaries and in £ per year

The modelling results are described below[7].

FINAL SALARY COMBINATION RESULTS

Retaining the current 1/60ths accrual rate but amending other features of the Scheme by setting the Normal Retirement Age (NRA) to 65 and removing the right to retire at age 60 on an unreduced pension, setting increases to pensions in payment at pensions in deferment to CPI capped 2.5% whilst also increasing member contributions to 6% and applying a salary cap of £120k a year, thereby limiting the pay on which members could accrue benefits would see TfL's total pension costs for future service fall. As a percentage of pensionable salaries, total future service pension costs would fall to 24.0% from the current 30.6%. Costs to TfL, once member contributions have been considered would fall to 18.0% of pensionable salaries compared to 25.6% (excluding expenses) currently (or £299.3m a year compared to £209.7m a year). This would be a reduction of £89.6m a year. [**Combination 2A**.]

Retaining the 1/60ths rate but in addition to the changes above also placing a cap on pensionable salary increases of 3% (whilst allowing for promotional increases) would see total costs of future service as a percentage of pensionable salary fall to 22.2% from the current 30.6%. The cost of future service to TfL, once member contributions have been deducted from total costs, fall to 16.2%, a reduction of 9.4%, meaning the annual cost of future service provision would stand at £189.2m. This would be a reduction in cost of £110.1m. [**Combination 2B**.]

Applying further changes still and setting the NRA at the State Pension Age (which is taken here to be age 67, which will be the SPA for those born on or after April 1960) would reduce the cost of future service accrual still further. Total future pensionable service costs would fall to 20.6% (from the current 30.6%) and the cost to TfL would fall to 14.6% once member contributions have been taken into account, a fall of 10.9%. Total costs to TfL would stand at £171.0m compared to the current £299.3m, a reduction of £128.3m. [**Combination 2C**]

[7] It should be noted that all the costs shown here exclude administration expenses. So the 25.6% is the expected TfL contribution rate following the 2021 actuarial valuation, although in practice they will be paying 27.3% (including 0.4% ongoing expenses and 1.3% for the PPF levy). Any administrative expenses will therefore be payable in addition to the costs shown.

Changing the accrual rates further impacts the costs of future service benefits. Changing the accrual rate to 1/70ths whilst retaining member contributions at 5%, applying a salary cap of £120k and setting the NRA to age 65 (with no right to retire from age 60 without actuarial reductions) would reduce total future service costs as a percentage of pensionable salaries to 23.8% (from the current 30.6%). The costs to TfL of future service as a percentage of pensionable salaries fall to 18.8%, or £220.0m (compared to the current cost future service of £299.3m) – a reduction in costs of £79.3m. [**Combination 3A**]

Taking the same formulation but setting the NRA at SPA (with no ability to retire at 60 on an unreduced pension) further reduces the costs of future service provision. The costs of total future service provision as a percentage of pensionable salaries would stand at 22.1%. TfL's costs, after member contributions are deducted, would stand at 17.1% (compared to 25.6% currently, a fall of 8.5%) or £200.0m a year, a reduction of £99.3m compared to the current position. [**Combination 3B**]

Using this formulation but limiting indexation of pensions in payment and pensions in deferment to CPI capped at 2.5% would reduce total future service costs as a percentage of pensionable salary to 20.6% and TfL's own costs to 15.6% (compared to 25.6% currently, a reduction of 10.0%). The cost to TfL of future service costs would be £182.2m, compared to £299.3m a year today, a reduction of £117.1m a year. [**Combination 3C**]

Modelling further changes to the accrual rate has further implications for future service costs. Setting the accrual rate at 1/80ths and the NRA to SPA (with no ability to retire without reductions from age 60) with contributions for members tiered on the basis outlined in Figure 9 (referred to here as 'TfL tiered contributions' which has a weighted average level of member contributions of 6.9%. This produces a total future service cost of 16.9% (compared to 30.6% were the current Scheme to continue for future service). TfL's future service costs would stand at 10.0%, a reduction of 15.6%. compared to the current provision. Future service costs would stand at £116.9m a year compared to £299.3 today – a reduction of £182.4m a year. Of the final salary combinations modelled, this generates the greatest cost saving to TfL. [**Combination 1A**]

Using the same formulation but keeping member contributions fixed at 5% (as now) also generates total future service costs at 16.9% of total pensionable salary. Taking account of the differential member contributions compared to the previous model, TfL's future service contributions would stand at 11.9% (compared to 25.6% currently, a reduction of 13.7%). TfL's future service costs would stand at £139.1m a year, a reduction of £160.1m. [**Combination 1B**]

FINAL SALARY SENSITIVITY ANALYSIS

As noted earlier, different assumptions will lead to different outcomes. Therefore, the Review has sought to understand the effects of the modelling outputs to changes in the discount rate, which is the assumption that will have the biggest effect (positive or negative) on the outcome of the Scheme's funding position (ie whether and to what extent it is above or below a fully funded position) and inflation (which will affect the rate at which members' pensionable salaries and their benefits, having left employment and in retirement grow, for example).

First, we sought to examine what would happen if the discount rate were to fall by 0.5% a year. This could happen, for example if there was a fall in bond yields. In this case, for all the combinations modelled, the cost of future service provision would increase.

- In each case, for each of the combinations modelled, the future service cost increases, typically in the range of between 2.6% and 4.8% (or £30.9m to £56.1m) compared to applying the discount rate adopted for the 31 March 2021 draft actuarial results.

- For example, model 3A assesses the impact of reforming the benefits of the Scheme to a 1/70th accrual rate with a 5% member contribution and an earnings cap of £120k and NRA at 65 (with no ability to retire on an unreduced pension at 60). This sees TfL's future service costs rise from 18.8% of pensionable salary applying the 31 March 2021 discount rate compared to 22.5% applying a revised discount rate, an increase of £43m a year.

- The effect of a deteriorating discount rate for future service costs for the current Scheme arrangement would see the costs of future service provision rise by £54.0m a year compared to the current projected position (as at 31 March 2021). It would take TfL's future service costs to 30.2% compared to 25.6% under the 31 March 2021 projections.

We also looked at what would happen if inflation were assumed to be 0.5% higher.

- Again, in all cases, TfL's future service costs would increase relative to the current position (based on the 31 March 2021 interim valuation results).

- The smallest increases are seen for models 2B and 2C, which reflect the fact that these combinations assume a cap on the percentage of a member's salary increase that counts towards pensionable pay. In these cases, the effect of a higher assumed inflation rate is to increase costs by just £1.6m and £1.5m a year respectively.

- Conversely, the current Scheme arrangements and models 3A and 3B are most sensitive to a higher assumed inflation rate. This is because they do not apply a cap on inflation-linked increases to pensions in retirement and pensions in deferment. In the case of the current Scheme, costs would increase by around £50.6m a year, taking future service costs as a percentage of pensionable salaries from 25.6% to 29.9%. For models 3A and 3B future service costs as a percentage of pensionable salaries increase by £39.8m and £37.7m (22.2% and 20.3%) respectively.

The full results for each of the final salary options modelled, including the sensitivity analysis, is shown in Figure 15.

Figure 30 in Appendix 3 explains the drivers of change for the final salary options modelled..

CARE MODELLING RESULTS

The first set of CARE options modelled adopts a benefit structure similar to the LGPS arrangement, namely a 1/49ths accrual rate for each year of pensionable service and linking NRA to SPA (with no ability to retire from age 60 on an unreduced pension) indexing pensions in payment and deferment to CPI but with no cap. Under this model, members' contributions have been tiered meaning that those on higher salaries would pay higher levels of contributions than those on lower salaries. The basis for the tiering using 'TfL tiered contributions' (see Figure 9) gives a weighted average member contribution rate of 6.9%. In this case, total future service cost as a percentage of pensionable salaries would fall to 27.8% (from 30.6% currently). TfL's cost as a percentage of pensionable salaries would become 20.9%, a reduction of 4.7% compared to the current position. Total costs to TfL would become £244.7m a year, a reduction of £54.5m compared to the current position. [**Combination 4A**]

Adapting this further, but applying a fixed member contribution rate of 6%, rather than tiered contributions, would also see total future service costs as a percentage of pensionable salaries at 27.8%. However, TfL's future service costs would become 21.8% of pensionable salaries (as member contributions are lower than under model 4A). This is nonetheless a reduction of 3.8% compared to the current position. Total costs to TfL would become £255.2m a year compared to £299.3m currently – a reduction of £44m a year. [**Combination 4B**]

Applying the same benefit formulation but permitting retirement from age 60 with no actuarial reductions (as is currently permitted under the Scheme rules) would see total costs rise to 33.5% of pensionable salaries compared to 30.6% currently. TfL's costs would stand at 27.5% of pensionable salaries (£322.3m a year), an *increase* of 2% (£23.1m) on the current position. [**Combination 4C**]

Using an accrual rate of 1/60ths for each year of pensionable service, setting the NRA to 65 (with no ability to retire from 60 on an unreduced pension), applying increases to pensions in payment and deferment to CPI capped at 2.5% but maintaining member contributions at 5% would see total future service costs as a percentage of pensionable salaries fall to 19.3% (compared to 30.6% currently). TfL's future service costs would fall to 14.3%, or £167.0m a year (a reduction of 11.3% or £132.2m a year). [**Combination 5A**]

Taking the same formulation but increasing members' contributions to 6% for all members would also see total future service costs as a percentage of pensionable salaries stand at 19.3%, but the costs to TfL of future service provision as a percentage of pensionable salaries would fall further to 13.3% or £155.3m a year a reduction of £143.9m or 12.3% compared to the current position. [**Combination 5B**]

Taking the same formulation but applying tiered contributions in line with the 'TfL tiered contributions' (Figure 9), yielding weighted average member contribution of 6.9% would give total future service costs as a percentage of pensionable salaries of 19.3%. However, the higher member contribution (compared to 5A), would see TfL's future service cost as a percentage of pensionable salaries fall to 12.4%, a fall of 13.2%, or £154.4m a year, compared to the current position. Of the

CARE options modelled, this would generate the greatest reduction in TfL's future service costs. [**Combination 5C**]

Applying an accrual rate of 1/70ths for each year of pensionable service and a NRA of 65 (with no ability to retire from age 60 on an unreduced pension) but with member contributions retained at 5% and pensions in deferment and in retirement indexed by CPI but with no cap would see total future service costs fall to 21.0%. TfL's future service costs as a percentage of pensionable salaries falls to 16.0% to stand at £187.7m a year, a reduction of 9.5% or £111.6m. [**Combination 6A**]

Applying TfL tiered contributions with a weighted average member contribution rate of 6.9% rather than a fixed contribution would also see total future service costs as a percentage of pensionable salaries stand at 21.0%. However, the higher weighted average level of member contributions would mean that TfL's future service costs as a percentage of pensionable salaries would fall to 14.1%, a fall of 11.4% or £133.8m taking annual future service costs to TfL to £165.4m compared to £299.3m a year currently. [**Combination 6B**]

CARE SENSITIVITY ANALYSIS

As with the final salary options, different assumptions will lead to different outcomes for any CARE arrangement. Again, we have sought to understand how sensitive our modelling (and the potential outcomes) is to changes in the discount rate and inflation.
As for the final salary options, a deterioration of the discount rate would increase the future service costs of a CARE arrangement for TfL.

- The most significant increase is seen in model 4C which models a CARE arrangement with a 1/49ths accrual rate with a member contribution of 6% and with NRA set to 65 but with the ability to take a pension from age 60 unreduced, ie with no early retirement factors applied. This would see TfL's cost of future service provision as a percentage of pensionable salaries rise to 32.3%, compared to 27.5% using the core assumed discount rate (£56m a year higher than the original projected result of £322.3m a year) and 25.6% for the Scheme with the current benefit formulation, as projected by the 31 March 2021 interim valuation results. This is slightly ahead of the impact on the Scheme's current benefit structure which would see future service costs as a percentage of pensionable salary rise to 30.2% or £54m a year higher than the projected £299.3m applying to the Scheme currently.

- For model 4C, which under the 31 March 2021 discount rate assumptions sees TfL's future service costs rise would see these costs rise still further in the face of a fall in the discount rate. Future service costs would rise to 32.3% of pensionable salaries compared to 27.5% of pensionable salaries – an increase of £56.1m a year over the 31 March 2021 discount rate.

- CARE options 5A, 5B and 5C, which apply a 1/60th accrual rate with a NRA of 65 and pension increases in retirement and in deferment with no ability to retire at age 60 on an unreduced pension, are least sensitive to downward movements in the discount rate. They see the increase to TfL of future service costs as a percentage of pensionable salaries increase by around 2.7%. This is £31.3m a year in addition to the costs previously modelled for these possible benefit combinations.

We also considered the effect of rising inflation on the modelling and cost profiling of each of the CARE options modelled.

- In this instance, the CARE options which apply a 1/60th accrual rate are least sensitive to the assumed changes in inflation. This is because they have applied a cap on inflation-linked increases to pensions in retirement and pensions in deferment. Under these models, the increase over and above the previously modelled outcome was £8m a year, increasing the cost to TfL as a percentage of pensionable salaries by 0.7%

- The CARE options using a 1/49th accrual rate as their basis (alongside uncapped increases to pensions in payment and deferment) are shown to be the most sensitive to an increase in inflation. This is driven by the fact that there is no cap on inflation-linked increases, so the higher inflation is, the higher the costs to the Scheme will be. Here costs increase above the previously modelled outcomes by between £46.7m (CARE 4A and 4B) to £53.5m for CARE 4C, this reflecting the fact that pensions can be drawn from age 60 unreduced.

The full results for each of the CARE options modelled, including the sensitivity analysis, is shown in Figure 16.

The main drivers for change for the CARE options modelled are shown in Figure 31 in Appendix 3.

CONSIDERATION OF RISK

However, it is not just the cost (or cost savings) to TfL with which we are concerned. Our ToR require us to consider the long-term sustainability of the Scheme. An important dimension to achieving that sustainability is the management of risk.

As we have described earlier in this report, risks to the scheme are likely to arise from a number of quarters in future, including:

- improving longevity;
- regulatory change; and
- economic uncertainty.

We have therefore considered not just any potential *cost* implications of the amended final salary and CARE combinations modelled, but also the impact of the *risk* to TfL associated with these combinations.

It is important to note that there are a series of trade-offs between cost and risk. Schemes that have high costs may also carry high risk, but schemes with higher future service costs to TfL may also carry lower risk to TfL. In considering the design of its pension arrangements and any potential changes, TfL will need to consider both dimensions. Examples of the risk/ cost trade-offs based on the combinations of final salary and CARE models considered earlier are described below:

- Under the current Scheme arrangements, TfL carries the risks associated with the benefits costing more than expected, by virtue of it being a balance of costs arrangement, most notably the Scheme's investment, inflation, salary growth and longevity risk.

- Combination 1B adopts a 1/80ths accrual rate with a 5% member contribution (as now) with NRA linked to the state pension age and indexation of pensions in retirement and in deferment linked to CPI, capped at 2.5%. This option projects significant savings in the cost to future accrual to TfL, falling from 25.6% under the current Scheme formulation (based on the agreed 31 March 2021 valuation results) to 11.9%. However, under this option, TfL would retain the investment risk and salary growth risk. It continues to carry inflation risk, though this is mitigated somewhat because indexation is linked to CPI, not RPI and is capped at 2.5% each year (and it is noted that from 2030 RPI is expected to be aligned with CPIH).

- Final Salary combination 2B retains a 1/60th accrual rate. However, it sets the NRA at 65 with no ability to retire at 60 on an unreduced pension, limits increases to pensions in payment to CPI capped at 2.5%, applies a salary cap of £120k and limits increases to pensionable pay to 3% a year (whilst allowing for promotional increases). As described above, under this option, TfL's future service costs would fall from 25.6% of pensionable salaries to 16.2%. Under this option, however, TfL would retain the Scheme's investment risk. Its inflation risk is mitigated as CPI not RPI is used as the measure of indexation and a cap is applied, where there is no cap presently. Its salary escalation risk is mitigated in the way described for combination 1B.

- CARE combination 4C adopts a 1/49th accrual rate and a NRA of 65 but allowing retirement from age 60 on an unreduced pension (as now), though adopting inflation linked increases to pensions in retirement and in deferment based on CPI. This option would see TfL's future service costs <u>increase</u> as a percentage of pensionable salaries – from 25.6%, projected under the March 31 2021 valuation results which have been agreed in principle to 27.5% of pensionable salaries. However, despite the rising costs and more generous accrual rate, some of TfL's risks would reduce: CARE, where pensionable salaries are averaged over a member's working life, helps to manage salary escalation risk.

In each case, however, it is important to recognise that risk is not eliminated. Rather risks are transferred to members from TfL. For example members may take on more of the inflation risk as their pensions may not fully keep pace with inflation either in payment or deferment if the indexation is capped.

There are many ways in which these cost-risk trade-offs can be interpreted. Figure 14 illustrates one interpretation of the trade-offs between future service costs to TfL and risk to TfL of the Final Salary and CARE options modelled.

Figure 14: Cost/ Risk trade-offs benefit combination scenarios compared

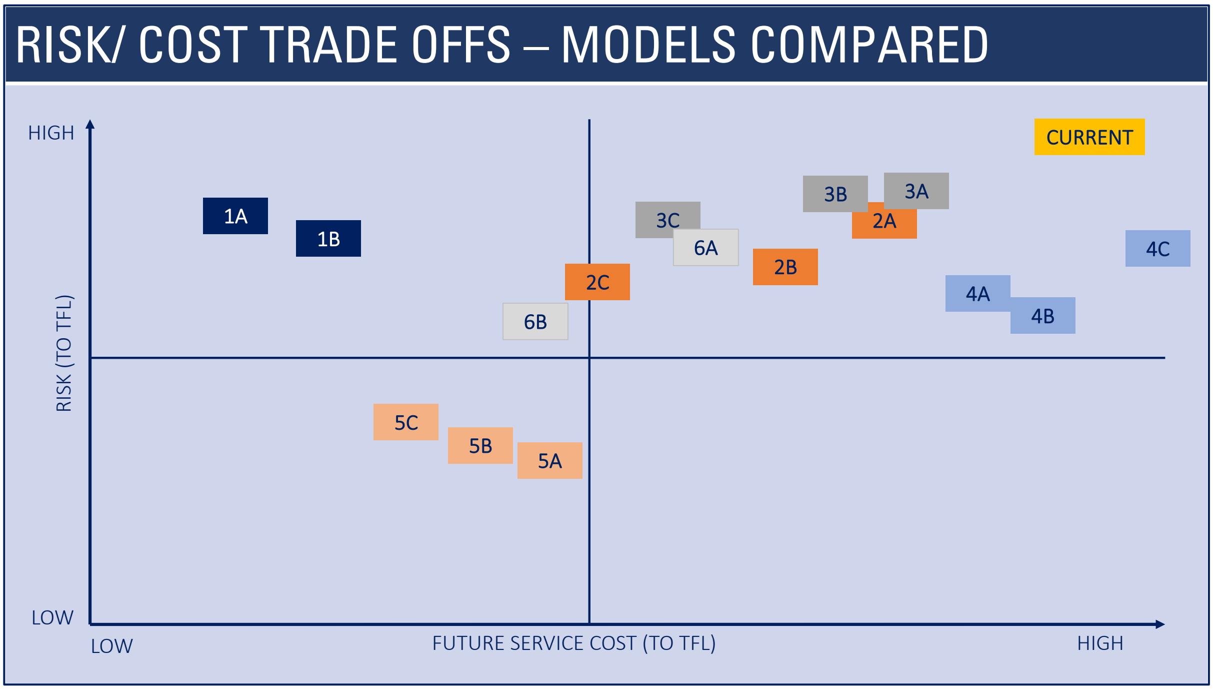


Figure 15: Comparison of modelling outputs - final salary combinations

MODELLING OUTPUTS – FINAL SALARY COMBINATIONS

OPTION REFERENCE	CURRENT	1A	1B	2A	2B	2C	3A	3B	3C
DESCRRIPTION OF OPTION	Status quo	80ths; SPA (no ERFs); CPI2.5% (ret & def), TfL tiered conts	As 1A with fixed 5% member contributions	60ths, NRA 65 (no ERFs), 6% mbr conts, CPI 2.5%, (ret & def) £120k earnings cap	As 2A with cap on salary increases at 3% pa (with allowances for promotional salary scale)	As per 2B with NRA set to SPA (no ERFs applied)	70ths, 5% member conts, earnings cap £120k, NRA 65 (no ERFs applied)	As per 3A with NRA set to SPA (no ERFs applied)	As per 3A with CPI 2.5% (in ret and def)
ACCRUAL RATE	60ths	80ths	80ths	60ths	60th	60th	70ths	70ths	70ths
NRA	65 (unreduced from 60)	SPA (no ERFs applied)	SPA (no ERFs applied)	65 (no ERFs applied)	65 (no ERFs applied)	65 (no ERFs applied)	65 (no ERFs applied)	SPA (no ERFs applied)	65 (no ERFs applied)
SALARY INCREASE PRE-RETIREMENT	RPI	RPI	RPI	RPI	RPI capped at 3% + allowance for promotion	RPI capped at 3% + allowance for promotion	RPI	RPI	RPI
REVALUATION OF DEFERRED PENSION	Existing RPI; New RPI (0/5)	CPI (0/2.5%)	CPI (0/2.5%)	CPI (0/2.5%)	CPI (0/2.5%)	CPI (0/2.5%)	Existing RPI; New RPI (0/5)	Existing RPI; New RPI (0/5)	CPI (0/2.5)
INDEXATION PENSIONS IN PAYMENT	Existing RPI; New RPI (0/5)	CPI 0(/2.5%)	CPI 0(/2.5%)	CPI 0(/2.5%)	CPI 0(/2.5%)	CPI 0(/2.5%)	Existing RPI; New RPI (0/5)	Existing RPI; New RPI (0/5)	CPI (0/2.5)
TOTAL PENSIONABLE SALARY ROLL £M	1,170	1,170	1,170	1,168	1,168	1,168	1,168	1.168	1,168
TOTAL FUTURE SERVICE COST AS % OF PENSIONABLE SALARIES (EXCLUDING EXPENSES)	30.6%	16.9%	16.9%	24.0	22.2	20.6	23.8%	22.1%	20.6%
MEMBER CONTRIBUTION RATES									
STRUCTURE	Fixed for all members	Tiered – LGPS basis	Fixed for all members	Fixed for all members	Fixed for all members	Fixed for all members	Fixed for all members	Fixed for all members	Fixed for all members
MEMBER %AGE (WEIGHTED AVERAGE WHERE TIERED)	5%	6.9%	5%	6%	6%	6%	5%	5%	5%
TFL COST AS % OF PENSIONABLE SALARIES (EXCL EXPENSES)	25.6%	10.0%	11.9%	18.0%	16.2%	14.6%	18.8%	17.1%	15.6%
DIFFERENCE V CURRENT	0.0%	-15.6%	-13.7%	-7.6%	-9.4%	-10.9%	-6.7%	-8.5%	-10.0%
£M COST PER YEAR	299.3	116.9	139.1	209.7	189.2	171.0	220.0	200.0	182.2
DIFFERENCE V CURRENT	0.0	-182.4	-160.1	-89.6	-110.1	-128.3	-79.3	-99.3	-117.1
SENSITIVITY TO DISCOUNT RATES (LESS 0.5% A YEAR)									
TFL COST (% OF PENSIONABLE SALARIES)	30.2%	12.6%	14.5%	21.6%	19.5%	17.8%	25.5%	20.6%	18.7%
TFL COST (£ PER YEAR)	353.2	147.8	170.0	251.8	227.6	208.1	263.0	241.1	218.4
DIFFERENCE (£PA) TO ORIGINAL RESULT	54.0	30.9	30.9	42.1	38.4	37.1	43.0	41.2	36.2
DIFFERENCE (£PA) VS CURRENT BENEFIT STRUCTURE UNDER THIS SENSITIVITY	0.0	-205.4	-183.2	-101.4	-125.6	-145.1	-90.2	-112.1	134.8
SENSITIVITY TO INFLATION RATE +0.5%									
TFL COST (% OF PENSIONABLE SALARIES)	29.9%	11.7%	13.6%	20.3%	16.3%	14.8%	22.2%	20.3%	17.6%
TFL COST (£ PER YEAR)	349.8	136.9	159.1	236.7	190.8	172.4	259.8	237.6	205.3
DIFFERENCE (£PER YEAR) TO ORIGINAL RESULT	50.6	20.0	20.0	27.0	1.6	1.5	39.8	37.7	23.1
DIFFERENCE (£PER YEAR) VS CURRENT BENEFIT STRUCTURE UNDER THIS SENSITIVITY	0.0	-212.9	-190.7	-113.1	-159.0	-177.4	-90.0	-112.2	-144.5

Figure 16: Comparison of modelling outputs - CARE combinations

MODELLING OUTPUTS – CARE COMBINATIONS

OPTION REFERENCE	CURRENT	4A	4B	4C	5A	5B	5C	6A	6B
DESCRRIPTION OF OPTION	Status quo	49ths, SPA (no ERFs), uncapped CPI (ret & def), TfL tiered contributions	As 4A with fixed 6% member contributions	As 4B with NRA at 65 (unreduced from 60)	60ths, NRA65 (no ERFs applied) CPI2.5% (ret & def), 5% member conts	As per 5A with 6% member contributions	As per 5A with TfL tiered tiered contributions	70ths, NRA 65, (no ERFs) member conts 5%, uncapped CPI (ret & def)	As per 6A with TfL tiered contributions
ACCRUAL RATE	60ths	49ths	49ths	49ths	60ths	60ths	60ths	70ths	70ths
NRA	65 (unreduced from 60)	SPA (no ERFs applied)	SPA (no ERFs applied)	65 (unreduced from 60)	65 (no ERFs applied	65 (no ERFs applied	65 (no ERFs applied)	65 (no ERFs applied)	65 (no ERFs applied)
SALARY INCREASE PRE-RETIREMENT	RPI	RPI	RPI	RPI	RPI	RPI	RPI	RPI	RPI
REVALUATION OF ACCRUED PENSION PRE-RETIREMENT	N/A	CPI	CPI	CPI	CPI (0/2.5)	CPI (0/2.5)	CPI (0/2.5)	CPI	CPI
REVALUATION OF DEFERRED PENSION	Existing RPI; New RPI (0/5)	CPI	CPI	CPI	CPI (0/2.5%)	CPI (0/2.5%)	CPI (0/2.5)	CPI	CPI
INDEXATION PENSIONS IN PAYMENT	Existing RPI; New RPI (0/5)	CPI	CPI	CPI	CPI (0/2.5%)	CPI (0/2.5%)	CPI (0/2.5)	CPI	CPI
TOTAL PENSIONABLE SALARY ROLL £M	1,170	1,170	1,170	1,170	1,170	1,170	1,170	1,170	1,170
TOTAL FUTURE SERVICE COST AS % OF PENSIONABLE SALARIES	30.6%	27.8%	27.8%	33.5%	19.3%	19.3%	19.3%	21.0%	21.0%
MEMBER CONTRIBUTION RATES									
STRUCTURE	Fixed for all members	Tiered – TfL example	Fixed for all members	Fixed for all members	Fixed for all members	Fixed for all members	Tiered – TfL example	Fixed for all members	Tiered – TfL example
MEMBER %AGE (WEIGHTED AVERAGE WHERE TIERED)	5%	6.9%	6%	6%	5%	6%	6.9%	5%	6.9%
TFL COST AS % OF PENSIONABLE SALARIES (EXCL EXPENSES)	25.6%	20.9%	21.8%	27.5%	14.3%	13.3%	12.4%	16.0%	14.1%
DIFFERENCE V CURRENT	0.0%	-4.7%	-3.8%	2.0%	-11.3%	-12.3%	-13.2%	-9.5%	-11.4%
£M COST PER YEAR	299.3	244.7	255.2	322.3	167.0	155.3	144.8	187.7	165.4
DIFFERENCE V CURRENT	0.0	-54.5	-44.0	23.1	-132.2	-143.9	-154.4	-111.6	-133.8
SENSITIVITY TO DISCOUNT RATES (LESS 0.5% A YEAR)									
TFL COST (% OF PENSIONABLE SALARIES)	30.2%	25.2%	26.1%	32.3%	17.0%	16.0%	15.1%	19.2%	17.3%
TFL COST (£ PER YEAR)	353.2	294.6	305.1	378.4	198.3	186.6	176.1	224.3	202.1
DIFFERENCE (£PA) TO ORIGINAL RESULT	54.0	49.8	49.8	56.1	31.3	31.3	31.3	36.6	36.6
DIFFERENCE (£PA) VS CURRENT BENEFIT STRUCTURE UNDER THIS SENSITIVITY	0.0	-58.7	-48.1	25.2	-154.9	-166.6	-177.1	-128.9	-151.1
SENSITIVITY TO INFLATION RATE +0.5%									
TFL COST (% PF PENSIONABLE SALARIES)	29.9%	24.9%	25.8%	32.1%	15.0%	14.0%	13.1%	19.0%	17.1%
TFL COST (£ PAER YEAR)	349.8	291.4	301.9	375.9	175.0	163.3	152.8	222.1	199.9
DIFFERENCE (£PA) TO ORIGINAL RESULT	50.6	46.7	46.7	53.5	8.0	8.0	8.0	34.5	34.5
DIFFERENCE (£PA) VS CURRENT BENEFIT STRUCTURE UNDER THIS SENSITIVITY	0.0	-58.4	-47.9	26.0	-174.8	-186.5	-197.1	-127.7	-149.9

MODELLING OUTPUTS - EFFECTS OF POTENTIAL CHANGES ON SCHEME MEMBERS

OUR APPROACH

We have also modelled the impact of the potential changes of the benefit combination scenarios on each of the member personas which, as we have described, are designed to be representative of groups of Scheme members. There are:

- 15 static personas; and
- 5 salary progression personas.

The details of the personas are described in Figure 11 and Figure 12.

For each persona we have examined the impact on final pension for future service of each of the possible final salary and CARE combination scenarios. We have:

- assessed the impact on members' pensions at:
  - age 60;
  - age 65; and
  - and 67.

  and

- the pension payable:
  - at retirement;
  - 5 years after retirement; and
  - 10 years after retirement.

As noted, we have assumed periods of pensionable service of either 13 or 20 years, depending on job role. For retirement at 65 and 67 we have assumed the same periods of pensionable service, ie that the member simply joins the Scheme five or seven years later.

We have also considered the contributions members would be required to make over their pensionable service.

The outputs – 20 member personas for each of the 8 benefit combination scenarios – provide a deep source of modelling outputs that enable a detailed comparison between each of the possible benefit combination scenarios but also allows member impacts to be compared to the current scheme remaining in place with benefits unamended.

As with the benefit combination scenarios, the modelling has been undertaken for the Review by XPS based on assumptions and parameters set by the Review. As such, neither TfL nor XPS has had a role in setting the assumptions or parameters for the modelling.

It is essential to note that the modelling shows the impact of any change on *future service*, that is as if the member joined the scheme, or started to accrue benefits, from the date from which any change was implemented (and compared to the position if the current final salary scheme continued unamended from that date).

Members would continue to be entitled to, and receive, any pension already built up to date. The Review's ToR provide a commitment to protecting benefits already accrued. There are various ways this can be achieved which are considered in the next section. For members already part of the Scheme, the projected future service benefits modelled here would therefore be in addition to their pension already built up.

SAMPLE MODELLING OUTPUTS

We have described below the impacts of a sub-set of the benefits combination scenarios on the future service pension entitlements of a sample set of member personas. The benefit combination scenarios that have been selected are:

- **Combination 1A** – a 1/80ths scheme with retirement age set to the state pension age (assumed to be age 67, with early retirement factors applied ie the ability to retire at 60 with no actuarial reductions removed), indexation of pensions in retirement and in deferment set to CPI capped at 2.5% and combinations tiered in line with the 'TfL tiered contributions' set out in Figure 9.

- **Combination 2A** – a 1/60ths scheme with retirement age set to 65 (with early retirement factors applied), indexation of pensions in retirement and in deferment set to CPI capped at 2.5%, member contribution rates set at 6% for all members, and a salary cap of £120,000 applied.

- **Combination 4C** – a CARE scheme with a 1/49ths accrual rate, with NRA set to 65 but here allowing retirement from age 60 on an unreduced pension, as now, indexation of pensions in retirement and in deferment set to CPI but with no cap, and 6% member contributions.

- **Combination 5A** – a CARE scheme with a 1/60th accrual rate applying retirement age set to 65 (with early retirement factors applied), indexation of pensions in retirement and in deferment set to CPI capped at 2.5%, and member contribution rates set at 5% for all members.

The member scenarios selected are:

- Persona 2 – TfL pay band 1 (static)
- Persona 7 – TfL pay band 4 (static)
- Persona 9 – Train Operator (static)
- Persona 20 – Operational career path 2, CSA1 to service operator (career progression)

In each case, the outcome is compared to the outcome for the current scheme (ie assuming it continues for future service unamended).

This mix of benefit combination scenarios and personas have been selected because they represent a spread of outcomes both for TfL (in terms of cost savings or cost increases) but also a spread of outcomes for members (in terms of potential future service benefit loss) and a cross section of members (eg terms of numbers in each group or those affected by PfP, for example).

Comparisons for each persona for each of the benefit combination scenarios are set out in Annex 4.

MEMBER OUTPUTS – MODEL 1A

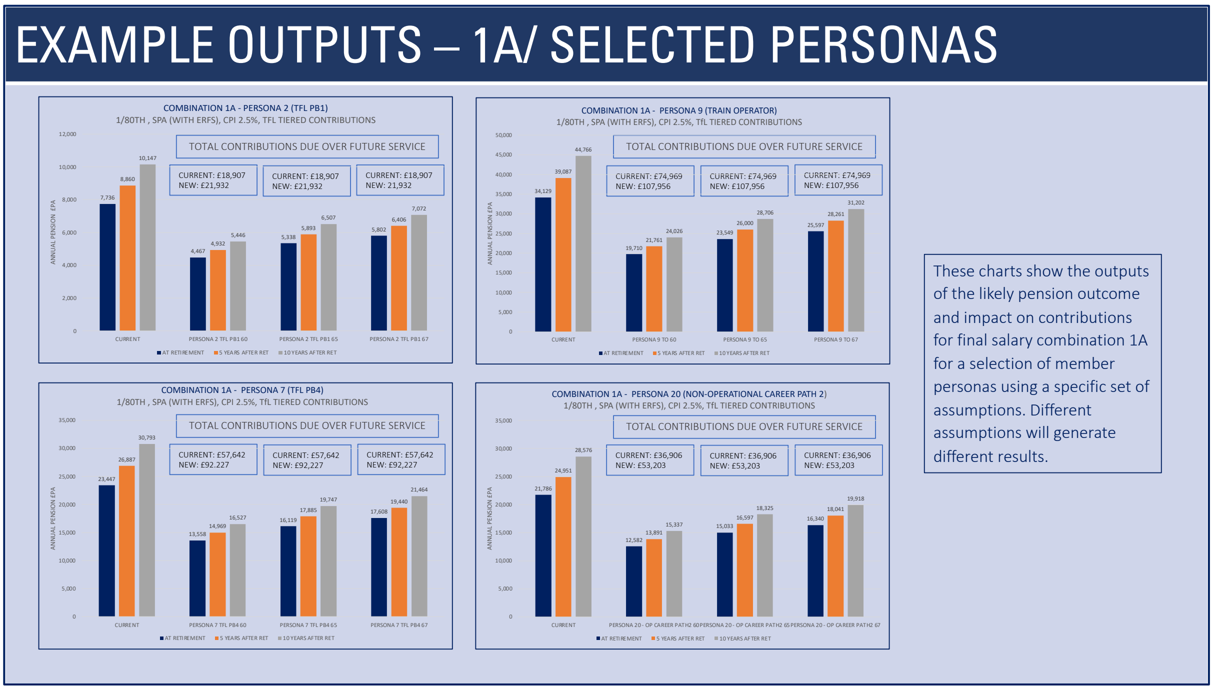
This option has the biggest impact on members' benefits for future service compared to a position where the current scheme continued unreformed. This reflects the less generous accrual rate, a later retirement age, with early retirement factors applied for retirement at 60 (meaning were the pension taken at age 60 or 65, actuarial reductions for early withdrawal would apply) and indexation of pensions in retirement and in deferment linked to CPI capped at 2.5%. This option also applies TfL tiered contributions, with a weighted average contribution rate of 6.9% compared to the current 5% for all members currently.

Persona 2 (in pay band 1) would see their pension for future service stand at £7,736 for retirement at age 60 if the current Scheme continued unamended compared to £4,467 under this benefit combination scenario. For persona 7 the pension payable at age 60 would fall from £23, 447 to £13,558. For persona 9 it would fall from £34,129 to £19,710 and for persona 20 from £21,786 to £12,582.

Under this scenario, the larger proportionate decreases at age 60 and 65 reflect the fact that actuarial reductions are applied if retirement is taken before the NRA of SPA. For example, if retirement was taken at age 67, the pension would stand at £5,802 (persona 2), £17,608 (persona 7), £25,597 (persona 9) and £16,340 (persona 20) compared to £7,736; 23,477; £34,129 and £21,786 respectively under the current scheme benefit formulation.

All members would experience an increase in contributions under this scenario. For total future service contributions, persona 2 would see their contributions increase from £18,907 to £21,932 (for retirement at 60, 65 and 67). For persona 7, member contributions would increase from £57,642 to £92,227. For persona 9, contributions would increase from £74,969 to £107,956 and for persona 20 from £36,960 to £53,203. The contribution increases are proportionately larger for personas 7 and 9 reflecting the tiering of contributions, meaning that those earning higher salaries will contribute more. For example, the percentage increase for persona 2 is around 16% compared to around 60% for persona 7. In the case of persona 20, the higher proportionate increase additionally reflects salary progression. These differential impacts will need to be considered in the context of the Independent Review's Assessment Principles of fairness to all members and adequacy.

Figure 17: Example outputs – benefit combination 1A/ selected personas



MEMBER OUTPUTS – MODEL 2A

Whilst under this benefit combination scenario, all members would receive smaller pensions than if the current Scheme continued for future accrual unamended, the outcomes are less severe than under model 1A. This is largely driven by maintaining an accrual rate of 1/60ths (compared to 1/80ths in the scenario above).

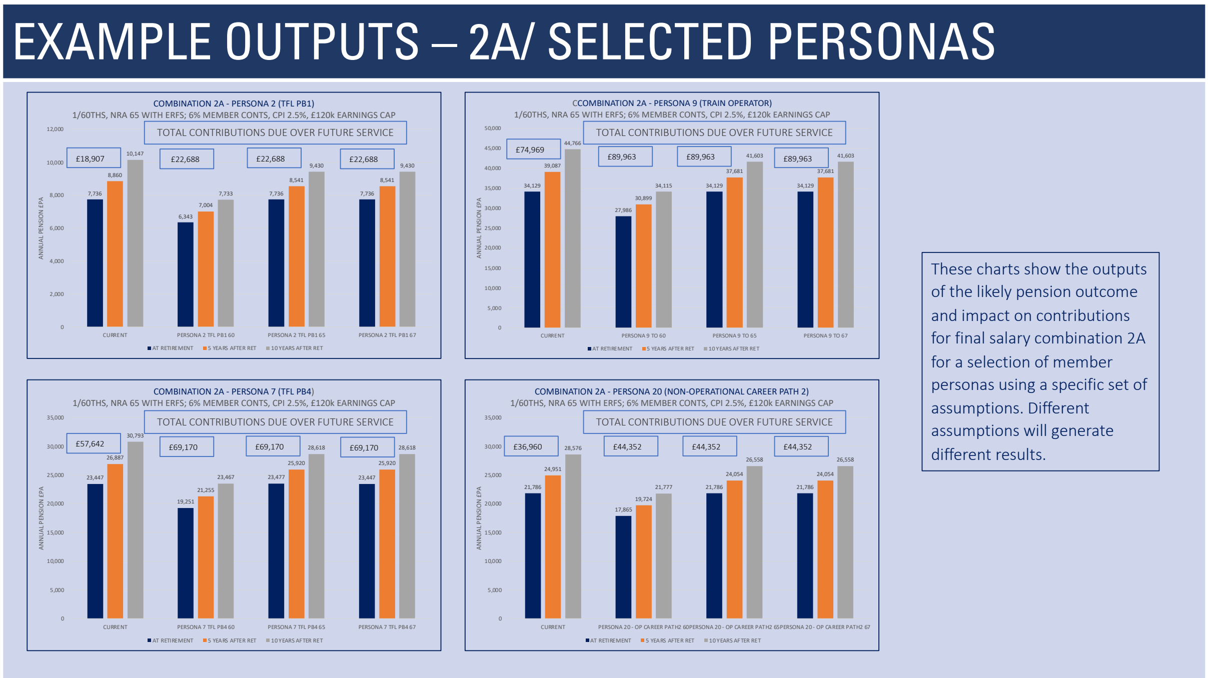
Under this scenario, persona 2 retiring at 60 would expect to receive a pension in respect of future service of £7,736 a year. This would compare to a pension of £6,343 under this benefit combination scenario. Similarly, persona 9 would see their pension at age 60 reduce from £34,129 under the current benefit formulation to £27,986 a year. However, were they to retire at age 65, the NRA that has been set for this benefit combination scenario their annual pension would revert to £7,736 and £34,129 – in other words, equivalent to the current arrangement. What can be seen here is the effect of applying actuarial reductions to take account of the earlier pension payment.

What can also be seen here is the effect of applying CPI capped at 2.5% for indexing pensions in payment and pensions in deferment. The current formulation assumes pensions in payment are indexed in line with RPI capped at 5% for New Members and RPI uncapped for Existing Members. Under the current formulation, the pension at age 60 for persona 7 would stand at £23,447, rising to £26,887 five years after retirement and £30,793 ten years after retirement. Under this formulation, the same member's pension would increase more slowly. Taking the NRA of 65, they would also receive a pension of £23,447 at retirement, but after five years this will have risen to £25,920 and £28,618 after ten years, a difference of £967 and £2,175 respectively.

Therefore, in considering the question of adequacy, it will be important not simply to examine the immediate effect on members' retirement incomes, but also the longer-term implications of benefit changes.

Under this benefit combination scenario, member contributions would increase from 5% to 6%. All members would therefore pay higher contributions compared to the current position and the total member contributions due over the period of future service are also higher. However, the overall impact of the contribution increases is less pronounced than under combination 1A in terms of the monetary amount of total contributions due. And because contributions are not tiered, higher paid members do not pay proportionately more – all will face a similar increase of around 20%.

Figure 18: Example outputs – benefit combination 2A/selected personas



MEMBER OUTPUTS - MODEL 4C

Under this model, members would receive larger pensions than under the current benefit formulation. This is a combination of the more generous accrual rate of 1/49ths, compared to 1/60ths currently and not applying early retirement factors to retirement taken from 60 (whilst setting NRA at 65) and, whilst applying CPI to the indexation of pensions in payment, not applying a cap to the size of those increases.

Under this benefit formulation, persona 2 would receive a pension in respect of future service at age 60 of £9,135 a year, compared to £7,736 under the current arrangement. The same outcomes are seen at ages 65 and 67 as early retirement factors are not applied, unlike other benefit combinations modelled. This would increase the pension by around 18%. Similarly personas 7 and 9 would witness increases to their pensions at retirement. For example, persona 9 would see their pension stand at

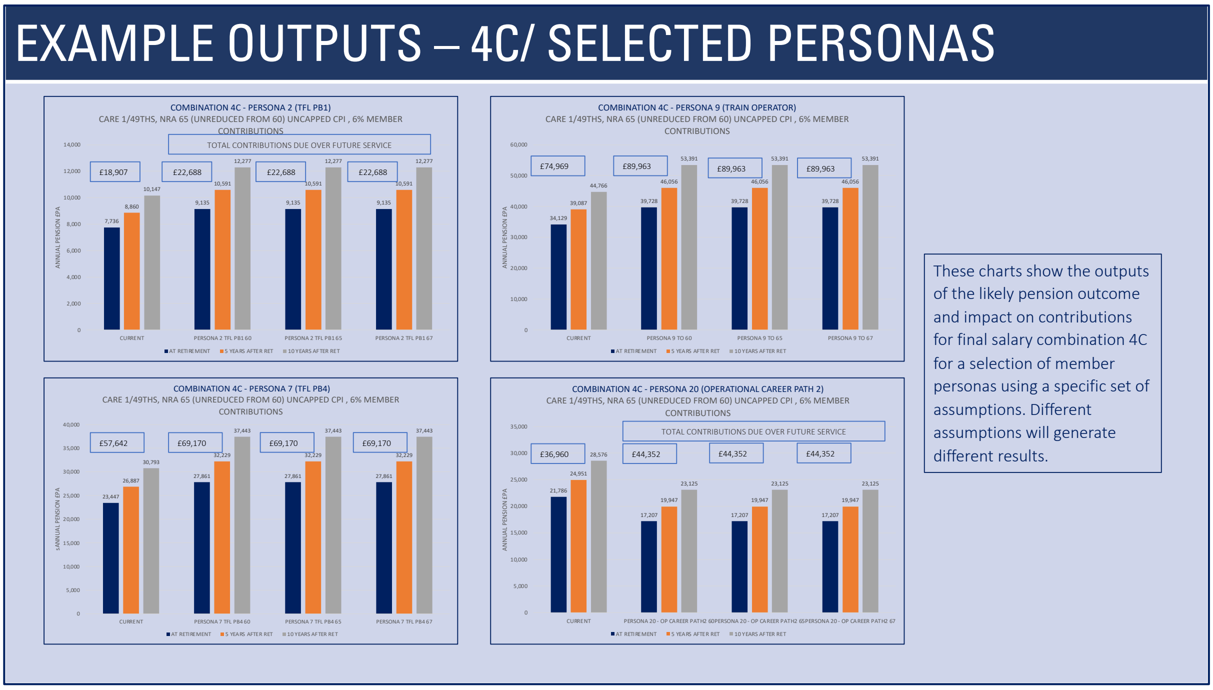
£39,728 a year, compared to £34,129 under the current scheme arrangements for future service, an increase of around 16%.

It is not just the pension at retirement that is higher. The application of uncapped CPI increases to pensions in retirement (as well as in deferment) also see higher outcomes compared to the current arrangement continuing for future accrual. For example, for persona 7, the pension five years after retirement would stand at £32,229 and £37,443 after ten years, compared to £26,887 and £30,793 respectively under the current scheme arrangements for future service.

However, not all members would benefit. As can be seen for persona 20, a calculation based on a revalued salary over the whole of someone's pensionable service could result in a lower pension than the current position. In this example, the pension payable at age 60 would stand at £17,207 a year compared to £21,786 under the current scheme arrangements carried forward for future service.

The impacts on total member contributions due for future service contributions are identical to those experienced for benefit combination scenario 2A, for those with static career paths, which reflects the universal application of a 6% member contribution rate. Those with career progression paths will experience higher contributions than is presently the case. In the case of persona 20, total contributions due in respect of future service will increase from £36,960 to £44,352. This reflects the salary escalation over their career.

Figure 19: Example outputs – benefit combination 4C/ selected personas



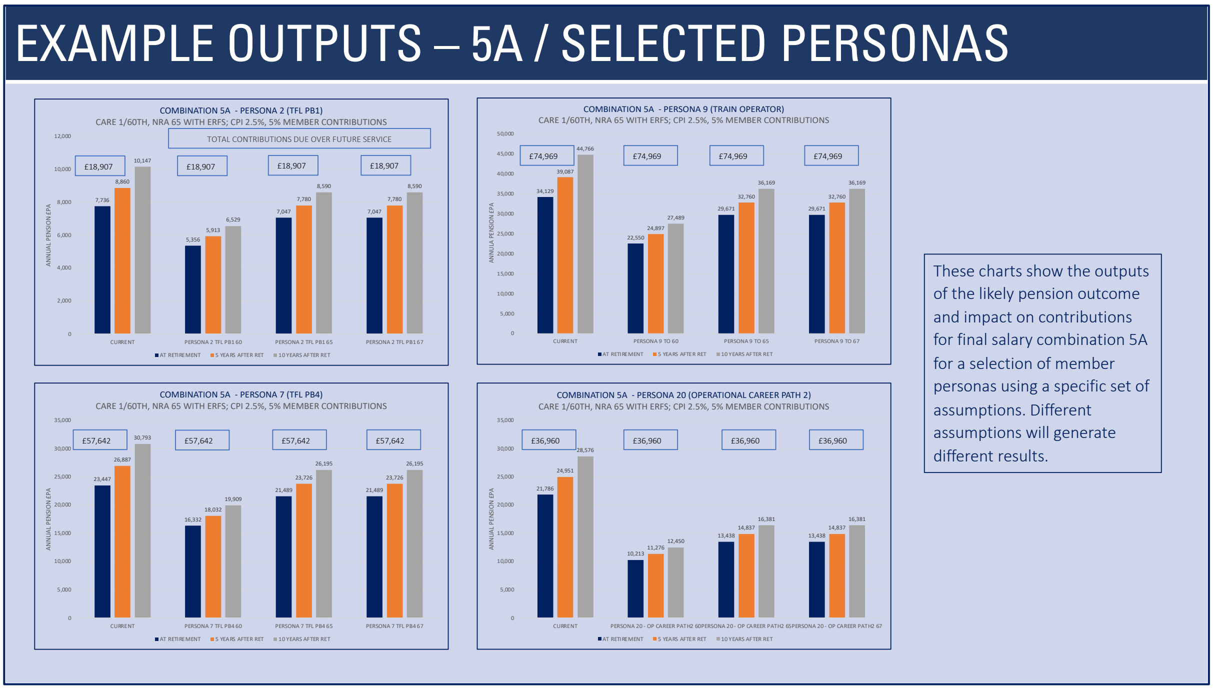
MEMBER OUTPUTS – MODEL 5A

Under this model, all members would experience a reduction in the pension payable for future service.

Persona 2 would see their pension fall from £7,736 to £5,356 a year (a fall of £2,380 or 31% a year) or to £7,047 a year if retiring at 65 or 67 (a fall of £689, or 9% a year). The larger reduction at age 60 is because this model applies early retirement factors if the pension is taken before NRA. Similarly, persona 7 would see their pension reduce from £23,447 under the current Scheme, if that were to continue for future service, to £16,332 for retirement at age 60 (a reduction of £7,145) and £21,489 a year for retirement at 65 or 67 (a reduction of £1,987). For persona 9, the pension would stand at £34,129 were the current benefit formulation to continue, compared to £22,550 for retirement at 60 and £29,671 for retirement at 65 or 67. The reduction is largest for persona 20 when retiring at age 60 as their pension would fall by 53% to £10,213 (or 38% to £13,438 for drawing their pension at age 65 or 67) compared to the current position of £21,786, a reflection of both the averaging of pensionable salary over the whole period of pensionable service (so taking account of periods of lower earnings not just pensionable salary at retirement) and the early retirement factors applied for taking the pension at age 60 rather than the NRA of age 65.

Once in payment pensions also grow less rapidly. For example, under the current arrangements, the pension will grow from £23,447 at retirement for persona 7 to £30,793 ten years after retirement, under this combination the pension at age 65 (the NRA) would be £21,489 rising to £26,195 – an increase of 22% compared to 31% under the current formulation. Under this model, contributions remain as for the current scheme in respect of total contributions due for future service.

Figure 20: Example outputs – benefit combination 5A/ selected personas



IMPACT FOR MEMBERS WITH PAST SERVICE

The modelling has, inevitably, had to make some simplifying assumptions to show the effects of implementing the benefit combination scenarios for future service.

As a result, the outcomes described above (and in full for each of the member personas in Appendix 4) show the results for *future* accrual only. In other words, the impact on future new accrual for an existing Scheme member from the date of any change to the Scheme or for a new employee joining the Scheme after any new arrangements were implemented. They do not take account of any past service existing Scheme members might have already built up. These benefits would not be lost – they would be paid *in addition to* new pension entitlements built up under new Scheme rules.

The impact of the introduction of a new benefit arrangement for future service will be different, depending on how close the member is to retirement at the point the new benefit arrangement is introduced. The impact on someone close to retirement will be smaller than the impact on someone newly starting their career at TfL because they will have a significant amount of pension benefit already built up under the existing scheme and less under any new benefit arrangement. Conversely, the impact on someone newly joining the Scheme, or further away from retirement, will be larger. For example, under benefit combination 2A, (ie a 1/60th final salary scheme with a NRA set to 65, with the right to retire from age 60 without deductions removed, member contributions set at 6%, a salary cap of £120,000 a year and indexation of pensions in retirement and deferment set at CPI capped at 2.5%) a member in the persona 9 group (a Train Operator) close to retirement with, say, 30 years in the current Scheme and 5 years in the new Scheme would have their pension reduced at retirement age by 2.6% by moving to the new arrangement for future service compared to the current Scheme. However, a member at the start of their career with 35 years of service ahead of them would see a reduction of 18% by moving to the new arrangement as their full benefits would be based on the new arrangement.

FUTURE SERVICE CONSIDERATIONS – KEY REFLECTIONS

As we described earlier in this Chapter, we have established a set of Assessment Principles to help determine the suitability of any potential options for reform.

In considering these Principles, the Review has paid particular attention to:

- The need to ensure members can retire with a decent level of income at retirement; and
- The need to ensure that any potential changes do not have any unintended consequences for the current Scheme and TfL itself.

Based on the outcomes from the modelling of the benefit combinations scenarios and the member outcomes based on the modelling of the personas:

- Some benefit combination scenarios may generate cost savings to TfL helping to support affordability and sustainability but may not meet the principle of fairness or adequacy for members – and some could see benefits available to members significantly reduced.

- Some benefit combination scenarios may reduce future service costs to TfL but may continue to leave TfL facing future risks and uncertainty (eg inflation, salary escalation, longevity risk).

- Some benefit combination scenarios may render TfL's pension arrangement uncompetitive compared to its peers by reducing the pension payable at retirement. This could pose problems for TfL's ability to recruit and retain staff.

- Some benefit combination scenarios could be less fair to some members than others. Whilst all personas modelled are negatively affected by almost all of the benefit combination scenarios modelled, the adverse effects are not always evenly felt. Moreover, some of the benefit combination scenarios include a cap on pensionable salary for the highest earners in TfL. This could be seen to be unfair to those earners – especially when considered in the context of the constrains of the SMRF, and if combined with tiered contributions.

- Some benefit combination scenarios could increase costs to TfL yet mitigate risks (such as salary escalation risk) for TfL.

Therefore, deciding on any potential reform direction will require a careful balancing of all these factors.

6. DEALING WITH BENEFITS BUILT UP TO DATE

SUMMARY

- The Review's ToR are explicit that members' benefits built up to date will be protected.
- There are various ways of achieving this:
  - basing the pension calculation at retirement on a "leaving service basis"; or
  - basing the pension calculation on the member's final salary, which is the practice in the public sector (a "final salary basis").
- Given the Scheme's revaluation rules and salary restraint, it is not clear-cut which would give the best outcome for TfL Scheme members. This will depend on member's individual circumstances; how close they are to retirement; and future pay policy at TfL.
- In considering which route to adopt, it will also be important to avoid any possible direct or indirect discrimination issues.
- One possible option could be to provide an 'underpin' which would effectively give members the higher of both options.
- Careful consideration will need to be given to these issues to ensure that members' benefits built up to date are protected. It is part of the wider considerations that will need to be made in respect of past service. The Review has been clear throughout its work that changes to future service cannot be made without consideration of past service.

The Review has been clear that changes to future service provision cannot be made without considering changes to the management and treatment of past service provision. The next chapter considers the transitional considerations related to past service benefits. In this chapter we consider the treatment of past service benefits.

In the event that changes are made to *future* service provision, the Independent Review's ToR are clear that members' benefits *built up to date* (ie their past service prior to the date on which a new scheme comes into force) will be protected.

However, there are a number of factors that need to be taken into consideration in determining how those benefits will be calculated. The most important of these is the salary used for calculating a member's past service benefits.

CALCULATION OF PAST SERVICE BENEFITS

Past service benefits could be determined by reference to:

- **Leaving service basis:** as defined under Section 67 of the Pensions Act 1995 ;
- **Final salary linkage basis:** as defined under the Public Service Pensions Act 2013; or
- **an underpin:** which would give members the higher of the two options.

Each is described below.

SECTION 67 PENSIONS ACT 1995 – MAINTAINING THE SALARY AT RETIREMENT LINK

Section 67 of the Pensions Act 1995 (s67) aims to provide protection for members' past benefits where changes are made to future service by restricting an occupational pension scheme's power of amendment. Section 67 applies to:

- **protected modifications** which are changes from a defined benefit to a defined contribution scheme (which are not considered here, as DC options have been considered as being out of scope by the Independent Review) and any change that would reduce pensions in payment; and

- **detrimental modifications** which are amendments that could adversely affect a scheme member's subsisting rights, which are the rights a member has built up to the date of any change of pension arrangement. Subsisting rights are calculated by reference to the pension entitlement a member might have accrued if they had left service immediately prior to the scheme coming into force, as set out in the Scheme rules. In the case of TfL, that would mean a member's pension would be calculated on the basis of their pensionable salary at the date of leaving, revalued according to Scheme rules and overriding legislation. In the case of TfL, this means:

    - for Existing Members (ie those who joined the Scheme on or before 1 April 1989) their benefits in deferment will increase in line with RPI; and
    - for New Members (ie those who joined the Scheme after 1 April 1989) benefits in deferment will increase in line with RPI capped at 5%.

  Under s67, changes cannot be made to subsisting rights unless:

    - The affected members (or their survivors, where the member has died) give their consent.

    or

    - They comply with the actuarial equivalence requirements. This means the Trustee must take the Scheme Actuary's advice to confirm that the actuarial value of each member's benefits will be maintained. Actuarial equivalence does not necessarily mean the same benefit formulation as previously, but that any amended benefit formulation will provide an equivalent result actuarially.

There are detailed processes that would need to be followed. If affected members' subsisting rights are protected, s67 is not engaged and so long as revaluation according to the Scheme Rules and overriding law is granted, neither member consent nor actuarial certification would be required. The Trustee must approve any protected or detrimental modifications.

Section 67 of the Pensions Act 1995 is overriding legislation (which means it takes precedence over the Scheme Rules) and sets out the minimum actions schemes must take.

PUBLIC SERVICE PENSIONS ACT 2013 – MAINTAINING THE FINAL SALARY LINK

TfL could decide to go further than the statutory minimum requirements set out in S67 of the Pensions Act 1995 and adopt the approach used by the statutory public sector schemes, such as the Local Government Pension Scheme and the Civil Service Pension Scheme, when changes were made to move from final salary to CARE arrangements.

Under the Public Sector Pensions Act 2013 (PSPA) the member's past service benefits are calculated not by reference to their pensionable salary at the point the changes were made (as is the case for s67) but their final pensionable salary at retirement or death (whichever is earlier). Pensionable service between the old and new schemes is considered to be continuous.

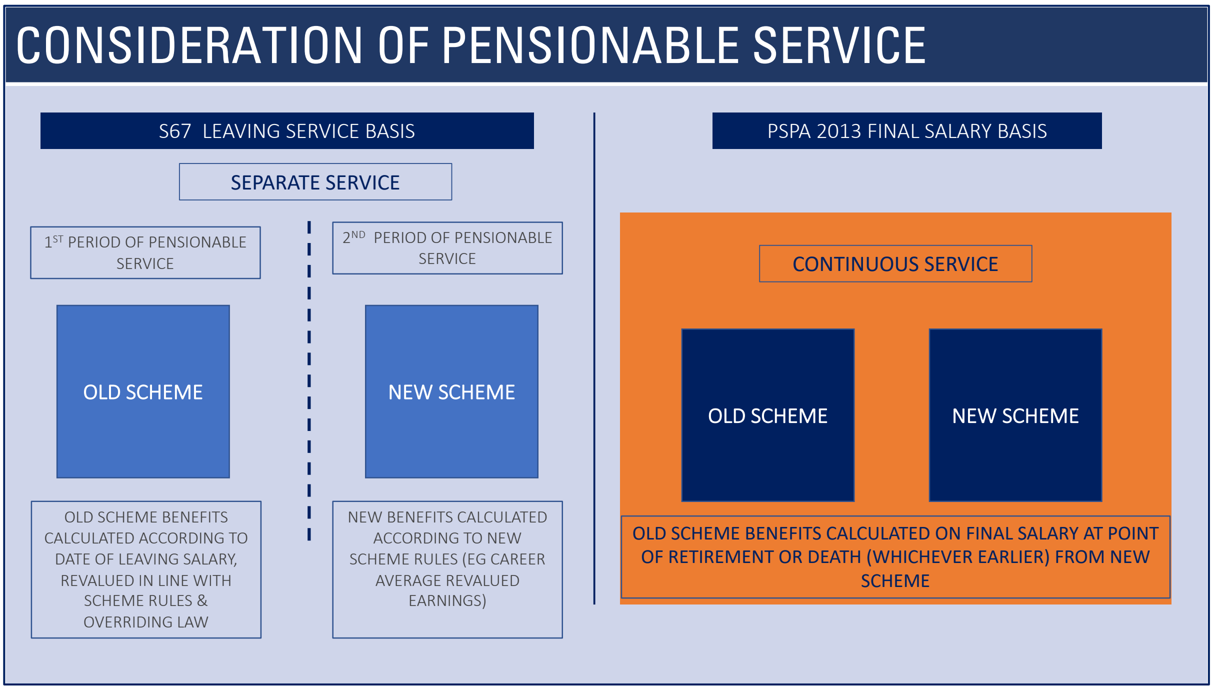
It has generally been the case that the final salary basis for the assessment of past service benefits has been more generous than the leaving service basis. However, the precise outcome will depend on how close a particular member is to retirement and their individual circumstances. TfL will need to undertake careful analysis to assess which option, on balance, will benefit the generality of members taking into account any potential direct or indirect discrimination factors (such as favouring older workers over younger workers or vice versa).

PAST SERVICE SALARY UNDERPIN

As noted above, whilst it would generally be expected that the final salary methodology would be more favourable to the generality of members, this cannot be known with certainty in advance of any changes to Scheme arrangements being made. This is particularly so in the case of TfL where benefits in deferment increase by reference to RPI (uncapped or capped at 5% a year, depending on when the member joined the Scheme) but salary increases have been below RPI or frozen over recent years in many cases. It could therefore be the case that deferred pensions increase more rapidly than pay. Whilst we would not expect pay restraint would continue over the longer term (given TfL's need to recruit and retain staff), this may be an issue for those closer to retirement.

A further option could be to provide an 'underpin'. Under this arrangement, members could be provided with the better of the benefits available under the leaving service or final salary approach. This could be more beneficial to members with past service rights. But it could also be helpful to TfL in insulating it from any possible direct or indirect discrimination issues based on age or length of service.

Figure 21: Consideration of past service benefits – leaving service and final salary basis compared



PROTECTED PERSONS

We highlighted in our Interim Report that there is a group of members (around 1,800 in number) who are "Protected Persons". This group is given special protection in respect of their pension rights under the Greater London Authority Act 1999. "Protected Persons" are people who were employed by London Regional Transport or one of its subsidiaries and who transferred to private sector companies as a result of public-private partnerships (PPPs) between 1998-2002.

Effectively, for this group, where any changes are made to the Scheme for future service that might result in a reduction in benefits, "protected persons" may continue to receive benefits equivalent in value to the benefits that existed under the rules of the Scheme at the time the member transferred.

Therefore, this group of members may, for past service and for future service, continue to accrue benefits of equivalent value to those currently offered under the Scheme, depending on the nature of any changes made to the Scheme.

FUTURE CONSIDERATIONS

As we have highlighted in our Interim Report, there is a clear link between the treatment and management of future service accrual and the treatment and management of past service liabilities.

These issues are discussed in the next chapter.

7. TRANSITIONAL ISSUES

- Any change made to future service provision will have implications for past service and could result in a maturing of the Scheme that increases the demands on TfL for additional funding. Therefore the transition to any new arrangement, together with the management of past service liabilities, require very careful consideration and handling. The two issues – past liabilities and future service – will need to be considered hand-in-hand.
- Particular attention will need to be paid to avoiding unintended consequences, including the potential for direct or indirect discrimination issues.
- In respect of future service, a number of options are available. These include:
    - a new section of the existing Scheme;
    - a new standalone scheme; or
    - a public sector arrangement.

  Each will have its advantages and disadvantages which will need to be explored fully by TfL should it decide it wishes to pursue any options for reform.
- In respect of past service, a number of options are available including:
    - managing past service liabilities within the current Scheme;
    - an insurance company buy-in/out;
    - a transfer of past service assets and liabilities to an existing public sector scheme; or
    - a transfer of past service assets and liabilities to Government.
- Each of these issues is highly complex and will require very significant and careful consideration by TfL.
- Consideration will also need to be given to the position of Protected Persons.
- There could also be an opportunity to resolve the private sector status of this Scheme which appears clearly anomalous.
- There are a number of routes by which these (or other) transitional arrangements could be implemented. Almost all will require some form of Government involvement. It is also likely that TfL would require an early and clear commitment from Government before any firm proposals can be made, were a decision taken to pursue reform.
- The route to any new arrangement is neither straightforward nor quickly achieved.

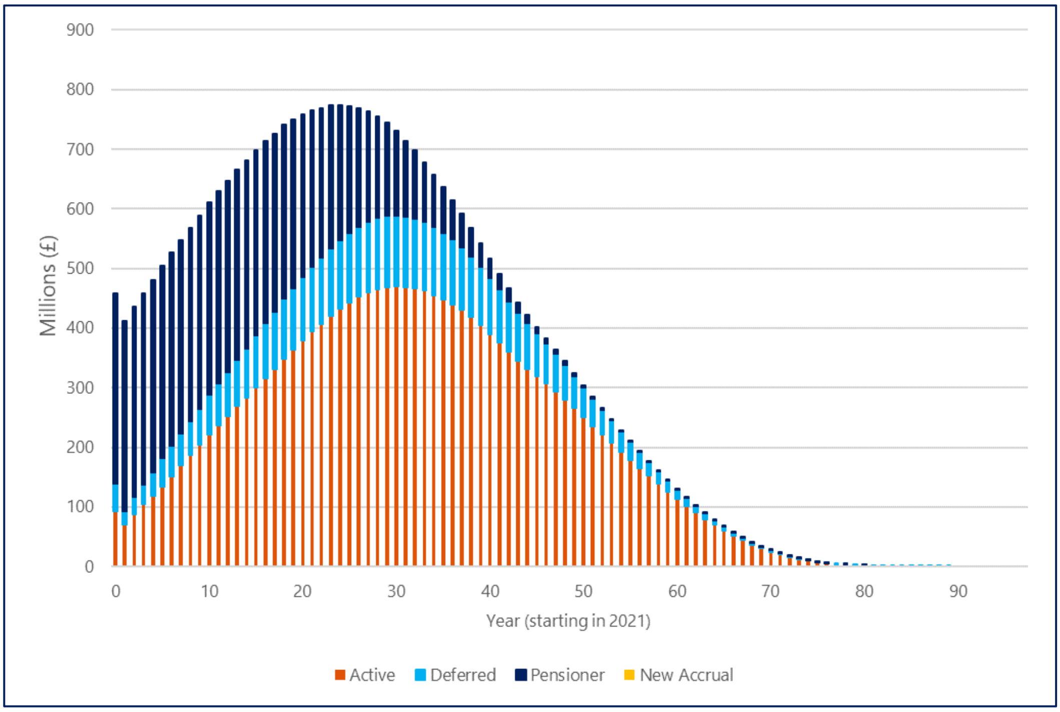
Were changes to be made to future service entitlements, very careful consideration would need to be given to how the current arrangement – and members – would be transitioned to a new arrangement. This would have implications for:

- the treatment and management of future service liabilities; and
- the treatment and management of past service assets and liabilities.

We were clear in our Interim Report and in the letter to the Commissioner of October 2021 that any changes to future service will have implications for past service liabilities. For example, the closure of the current Scheme to future accrual or to new members only would result in the crystallisation of an ultimate end point and the Scheme would start maturing over time. This would, in turn, have consequences for the current, higher risk and successful, investment strategy being pursued by the Trustee, prompting a more risk-averse investment strategy with associated lower returns. The lower returns would, in turn, crystalise funding pressures on the Scheme and yield potentially significant deficits. This would increase funding pressures on the Scheme and TfL as the principal sponsoring employer, in the form of higher employer contributions.

Figure 22 shows the impact on cashflows if the Scheme were to close to future accrual from 31 March 2021. It shows how the Scheme would mature over time, with cashflows paid out reaching a peak in around 25 years' time, before tailing off as members die without having new members join the Scheme. As the Scheme matures, the Trustee would need to better match their assets with liabilities, which would mean adopting a lower risk investment strategy with lower returns which could place funding pressures on TfL.

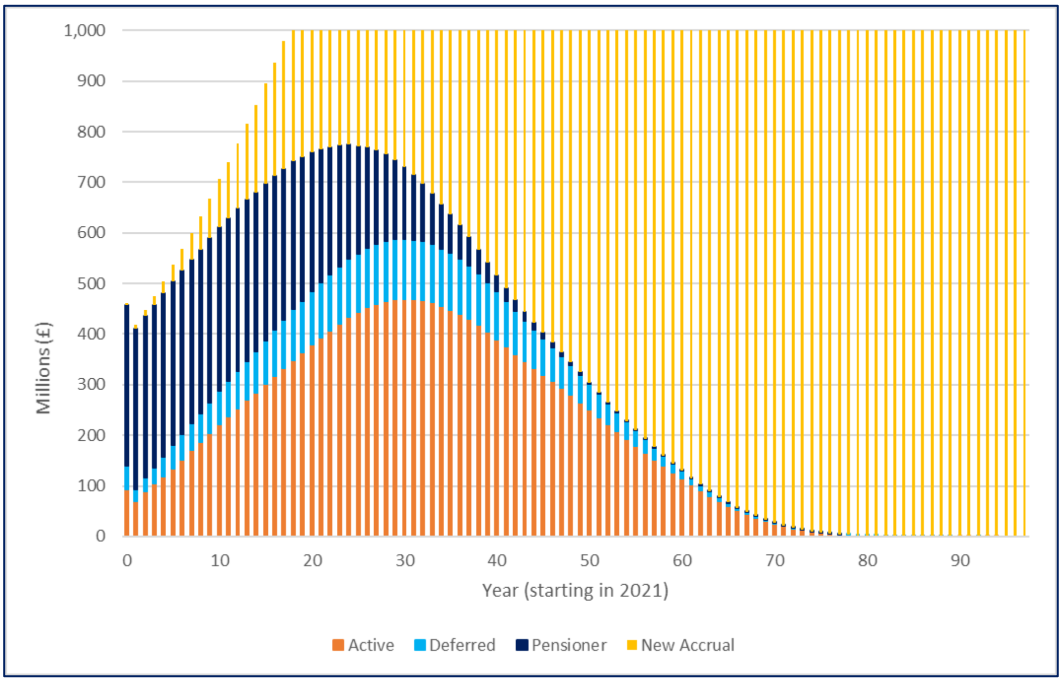
Figure 22: Expected liability cashflows if the Scheme closed to accrual on 31 March 2021



Source: XPS

By comparison, Figure 23 shows the expected liability cashflows of the Scheme if it were to remain open indefinitely. It shows that the monetary value of the expected cashflows is expected to rise over time in line with expected salary growth. In real terms it would be expected that cashflows each year would remain broadly stable (assuming the active population remains stable). The Scheme would never, therefore, be expected to reach a point of significant maturity.

Figure 23: Expected liability cashflows if the Scheme remained open to accrual indefinitely



Source: XPS

We note, too, that the complexity of any new arrangement, and the further away its structure is from the current Scheme, will have implications for the ease of transition and the speed with which any change can be affected.

These are not simple issues. We have been struck, for example, by the issues currently facing public service schemes in rectifying transitional issues as a result of the *McCloud* judgement. This has resulted in arrangements designed to protect members close to retirement at the point of transitioning from an existing scheme to a new scheme being reviewed to rectify age discrimination. The rectification exercise carries considerable cost to scheme employers.

Figure 24: The McCloud Judgement

MCCLOUD JUDGEMENT

When reforms were introduced to public service pensions in 2014/15, most scheme members were transferred to a new scheme arrangement. However, some older workers closer to retirement were given protections by being allowed to remain in their original scheme (or being given benefits equivalent in value to their old scheme).

In 2018, in the case of *McCloud,* the Court of Appeal ruled that these rules were discriminatory on the basis of age because they gave older workers a better outcome than younger workers and such age discrimination could not be objectively justified. The case initially concerned the firefighters' and judges' pension schemes, but the Government has confirmed that changes will be required to all public service schemes.

As a result. public service schemes must take steps to remedy the situation to make the scheme fair to all members and remedying the past discrimination. Remedies must be upwards – in other words, disadvantaged younger members must be put in the same position as advantaged older members. The situation must be remedied by 31 March 2022.

In the case of the LGPS, when reforms were introduced in 2014, all members were placed in the new CARE scheme. However, members who were within ten years of their normal retirement age on 1 April 2012 were provided with protection called an 'underpin'. This meant that for the protected members, when they came to retire, benefits payable under the old final salary scheme and the new career average scheme were compared and the higher benefit would be payable. Following the McCloud ruling, it was proposed to extend the underpin to younger workers who joined before 31 March 2012. From April 2022, all LGPS members would accrue benefits on a career average basis, without underpin protection, to ensure a fairer basis for future service accrual. It is estimated that 1.2m LGPS members could be affected by the change, and the cost of the remedy is estimated by Government Actuaries Department (GAD) to stand at £1.8bn over the next decades. There will also be significant costs in administering the remedy.

In other public sector schemes, members close to retirement were able to remain in the old scheme. In the case of the NHS Scheme, for example, remedying the age discrimination will mean that the old schemes (the 1995 and 2008 schemes) will close, and all members will be put into the new 2015 Scheme. In respect of discrimination that has already occurred, affected staff will be required to make a choice about whether they would like to receive the 1995/2008 benefits or the 2015 benefits for the affected period between 1 April 2015 and 31 March 2022. Members who have already retired will need to do so under their current scheme membership. After October 2023, they will be required to make a retrospective choice about how they would like to receive their benefits. The scheme will be making individual advice available to members to help them make choices between the scheme arrangements.

Legislation to finalise the McCloud remedy is, at the time of writing, still being progressed through Parliament.

MANAGEMENT OF FUTURE SERVICE BENEFITS

Were a new benefit structure for future service accrual, whether based on any of the benefit combination scenarios modelled in Chapter 5, or any other arrangement decided upon, there are various ways in which the new arrangement could be implemented. This includes:

- an arrangement under the existing Scheme;
- a new scheme, with the closed scheme running in parallel;
- a new scheme, with past service liabilities dealt with elsewhere; or
- a public sector arrangement.

Each is explored in further detail below in respect of future service. The treatment of past service liabilities is considered later in this chapter.

NEW SECTION OF CURRENT SCHEME

One option would be to establish any new benefit arrangement for future service as a new section of the existing Scheme. This could be on a ring-fenced (or sectionalised) basis or on a non-sectionalised basis where the assets and liabilities associated with future service are co-mingled with the assets and liabilities relating to past service. Benefits within the new section could be operated on a modified final salary or CARE basis using any of the benefit combination scenarios described in the previous section (or indeed any others TfL wished to pursue).

TfL would maintain control over the design of Scheme benefits and contributions (though this would be subject to Scheme Rules and the Trustee). The Trustee would remain in place and the high standards of governance we have already observed and commented upon in our previous reports would continue. The Trustee would be able to put in place an appropriate investment strategy for the new arrangement.

This could run in parallel to the current Scheme which could also manage past service liabilities if they are not transferred elsewhere (see below).

This could potentially be a simpler way to transition from one benefit arrangement to another. A proven governance and Scheme administration framework is already in place, and it would be possible to create a new section of the Scheme without recourse to primary legislation or Government intervention (assuming legislation was not needed to override Scheme Rules). In the next section of our report, we have noted that the Scheme's Trust Deed and Rules (TD&R) are unusual and quite restrictive in terms of making changes to the Scheme. Designing a new section of the Scheme could be an opportunity to revisit the current Scheme rules to allow for additional flexibility in future.

However, under a new section of the existing Scheme, future benefit accrual would still remain regulated as a private sector scheme falling within TPR's governance, funding and regulatory regime.

As we have noted earlier in this report, this will be likely to place increasing funding pressures on the Scheme in future as TPR's scheme funding requirements tighten.

NEW STANDALONE SCHEME

It would also be possible to establish an entirely new scheme for future service with either final salary or CARE benefits. This would provide a clean break with the existing Scheme, and as we have said earlier, this could have significant implications for the maturing of the current Scheme.

In this case, an entirely new trust-based arrangement could be set up. A new set of TD&R would be required, and as noted above, this could provide the opportunity to address some of the terms in the existing Scheme's TD&R. The new Scheme could utilise the existing Trustee Directors or appoint new Trustee Directors.

Such an arrangement would provide TfL with flexibility over the Scheme's design and contributions (subject to the TD&R) and the Trustee would maintain control over the investment strategy (which would vary depending on whether past service was also transferred to the new Scheme). However, the Scheme would remain regulated within the private sector regulatory regime under TPR's governance, funding and valuation regime and would be required to pay the PPF levy. A new Scheme, with the need for a new TD&R and new advisers would take some time to establish.

Subject to the points below on routes to transition, a new trust-based scheme could be established without the need for legislative intervention.

As described below, it would also be possible to establish a new standalone scheme within the public sector legislative framework.

PUBLIC SECTOR ARRANGEMENT

The introduction of a new benefit structure could be an opportunity to resolve the private sector status of the Scheme which appears anomalous.

TfL is a *public sector* body, providing a vital public service to the people and economy of the capital. TfL is a statutory body and its status as a statutory corporation under the Greater London Authority Act 1999 and regulation under the Local Government Finance rules provide the organisation with a statutory protection/ underpin. TfL cannot be wound up without an Act of Parliament. Indeed, these are leading factors behind the 'Strong' covenant assessment currently attributed to the Scheme.

Yet the Scheme is regulated as a *private sector* Scheme. Whilst this may be appropriate for a private sector organisation, it may not be appropriate for a public sector organisation. Therefore, the introduction of a new benefit arrangement might also be an opportunity to address this issue. Positioning the Scheme as a public sector scheme would mean (whether funded or unfunded) that the scheme could adopt a more appropriate discount rate and lower future service costs. If funded it could also have longer recovery periods, reflecting the strength of its public service position. It would also align pension provision with the majority of the public sector.

For future service provision, it could be possible for a new TfL pension arrangement to be established as a standalone public service pension scheme under the 2013 Public Service Pensions Act (PSPA). The Scheme could operate as a funded occupational pension scheme operating under statute rather than the TPR regulatory framework, much like the LGPS currently. Depending on the treatment of past service, doing so would remove the Scheme from the scope of TPR's remit, provide greater flexibility in respect of valuations and deficit recovery (were a deficit to arise in future), ensure that the Trustee (or those responsible for governance) could continue to pursue a sophisticated investment strategy in respect of future service and remove the need to contribute to the Pension Protection Fund (PPF).

For future service, members would be placed in the new public sector scheme. Government agreement would be required to establish the scheme as a new public sector scheme under the Act and regulations would also be needed setting out in statute the benefits and rules of the Scheme (rather than under the TD&R, as now).

Alternatively, for future service provision, TfL could become part of an existing public service scheme as set out in the PSPA 2013, for example one of the 89 local authority funds within the LGPS. To be admitted into the LGPS, an employee must be employed by a body listed in Schedule 2 of the Local Government Pension Scheme Regulations 2013 and be designated as eligible for membership. TfL is already listed as being eligible for this purpose and the London Pension Fund Authority (LPFA), which manages the pensions of former employees of the Greater London Authority and other bodies, is designated under the Regulations as the appropriate local authority fund. Arrangements would need to be put in place to manage the position of TfL's subsidiaries that do not currently fall within the scope of the Local Government Pension Scheme Regulations 2013. This is will require some involvement and action by Government.

Whilst these public sector options have the potential to provide members with certainty whilst also helping TfL manage risk, they would be highly dependent on Government intervention (through regulatory or legislative change) and could therefore take some time to effect. The Review cannot be certain of Government's appetite for intervention in this area.

PROTECTION FOR MEMBERS CLOSE TO RETIREMENT

Consideration will also need to be given to what, if any, protections are given to members close to retirement at the point of transition. As the McCloud case has identified (see Figure 24) the scope for providing protections to such members is very narrow. It is therefore likely that members close to retirement would need to be placed in the new arrangement.

MANAGEMENT OF PAST SERVICE LIABILITIES

Having decided on how future service provision should be structured the shape of benefits and the way in which the scheme should be managed, eg as part of the existing Scheme, a new scheme or part of an existing public sector Scheme – it will be necessary to determine how, and where, past service liabilities are managed.
Options include:

- remaining within the existing Scheme;
- being bought out in part or whole with an insurance company;
- being transferred to another existing scheme, eg in the public sector; and
- being transferred to Government.

Each is described in further detail below.

These options would be the same, regardless of whether past service entitlements are calculated using the "leaving service basis" or the "final salary at retirement/ death" basis described in the previous section.

MANAGEMENT OF PAST SERVICE LIABILITIES WITHIN THE SCHEME

As noted above, one option for the management of future service liabilities would be to adapt the current Scheme or to establish a new section for future service. In this case, past service liabilities could be managed within the Scheme or in a separate section for past service in parallel with the new section of the Scheme under the same trust.

Other than the potential legislative measures to effect scheme rule changes this method of managing past service liabilities would not require new legislation. Such an arrangement would be relatively simple to facilitate administratively. Members could continue to benefit from the high standards of governance and investment stewardship offered by the Trustee currently. The Trustee would also continue to be responsible for the funding and valuation arrangements. From a member point of view, this would also be simpler – they would have their benefits 'under one roof', albeit that the benefits might, technically, sit within separate arrangements. They could, for example, receive a single annual benefit statement and would have a single point of contact within the TfL Pension Fund office.

However, as we have noted above, creating a stand-alone closed section in respect of past service liabilities of the Scheme would have implications for the Scheme's investment strategy. A section that was purely concerned with past service provision, closed to new members, would be a maturing scheme (as it would have no new members and hence the membership would age over time). As a result, the Trustee would be required to adopt a more cautious, more risk averse investment strategy. This would mean a move away from return seeking assets into lower returning assets (such as corporate bonds and gilts) with the possibility that current assets would not be sufficient to meet liabilities and that funding calls on TfL increased to make good any funding shortfall.

Under this option, the Scheme would remain within the private sector regulatory framework and TPR’s governance, funding and valuation regime.

The continued management of past service liabilities within the Scheme, or in parallel to a new Scheme, could be mitigated by the addition of a Crown Guarantee (see below). This would provide greater certainty to the Trustee and allow for a less risk averse investment strategy thereby helping to better manage any future funding calls on TfL.

Were past service rights to be managed within the Scheme, the Trustee could seek to mitigate the cost of managing past service liabilities through longevity swaps. As noted earlier, a de-risking programme will form part of the outcome of the current valuation which has been agreed in principle between the Trustee and TfL, subject to approvals.

INSURANCE COMPANY BUY OUT/ BUY IN

One route that has been adopted by employers and trustees in the private sector, where the scheme is sufficiently funded (or where the employer is prepared to pay any shortfall), is to pass some, or all, of the liabilities of the Scheme to an insurance company. This is known as a ‘buy-out’ arrangement. In this case, the insurance company, and not the Scheme, would become responsible for the payment of the benefits and becomes legally responsible for meeting the obligations of the Scheme.

The capital reserving rules for insurance companies (currently known as Solvency II) mean that insurers must hold sufficient capital to cover liabilities in the event of a financial shock which is designed to provide significant protection to members.

Trustees wishing to execute a buy-out have to pay over sufficient funds to the insurer to cover the liabilities being transferred. The current buy-out valuation of the Scheme’s liabilities is estimated to be £14bn.The buy-out route would therefore not seem practical at this point.

Alternatively, the Trustees could seek to implement a ‘buy-in’ where some of the assets are transferred to an insurance company in return for a cashflow stream that reflects the liability profile of the members transferred. The trustee retains the governance responsibility for the scheme and the buy-in effectively becomes an asset of the scheme. Such a move could help the Trustee manage past service where they continue to be managed within the Scheme (or in parallel to a new Scheme arrangement) as part of a liability driven investment (LDI) strategy by transferring investment, inflation and longevity risk to the insurer.

TRANSFER OF PAST SERVICE RIGHTS TO AN EXISTING PUBLIC SECTOR SCHEME

As we have outlined above, one option for the provision of future service provision would be for benefits to accrue as part of an existing public sector arrangement. Similarly, past service liabilities and assets could be transferred to an existing public sector scheme such as the LGPS, and provisions are already in place under the PSPA 2013 to permit TfL to be admitted into the LGPS – in the case of TfL to the LPFA. Members would receive benefits according to the rules of the LGPS – a 1/49ths CARE scheme.

Under this option, the liabilities and assets in respect of past service would be transferred in bulk[8] by the Trustee to the receiving scheme. The Scheme Actuary and Trustee would be closely involved in valuing the transfer to ensure that members received fair value and complied with the relevant legislation. This would necessitate the current Scheme to be wound up, with a new arrangement being put in place for future service (which could be any of the arrangements described above). Following the bulk transfer of assets and liabilities, and TfL's admission into the LGPS in respect of past service, TfL as sponsoring employer would be required to fund any shortfall required to meet benefits attributable to TfL members in the fund. TfL may also be required to provide guarantees in respect of its contributions. As the liabilities would fall under the LGPS funding regime and not TPR's, there may be some reduction in the valuation of TfL's pension liabilities. Under this option, members' would not be entitled to PPF compensation in the event that TfL entered insolvency or ceased to operate.

Arrangements would also need to be put in place to deal with TfL's subsidiary companies.

TRANSFER OF PAST SERVICE RIGHTS TO GOVERNMENT

Taking this a step further, it would be possible to transfer the assets and liabilities in respect of past service rights to Central Government.

Were the same route to be adopted for TfL, then on a specified date, the assets and liabilities of the fund would transfer to Government. This would require new legislation specifically to permit this action. Government would take the existing assets onto its balance sheet and continue to service liabilities and pay pensions on a pay-as-you-go (PAYG) basis as an unfunded public sector arrangement in relation to the past service liabilities transferred. Future service benefits would be paid from a separate arrangement – within the public or private sector – for example along the lines outlined above.

This would relieve TfL of all risk relating to past service liabilities. These would sit as a contingent liability on the Government's balance sheet and hence would not form part of the Public Sector National Debt for National Accounts purposes. Therefore, the Government would receive around £14bn of assets which it could deploy elsewhere. It is also the case that the Scheme is currently in

[8] It should be noted that the Trust Deed and Rules do not currently provide for bulk transfers. Therefore, the matter of bulk transfers would need to be considered under any amendments to the Deed.

surplus (with a larger surplus on a public sector basis, estimated to be between £1bn and £2bn depending on the assumptions used) which means that on transfer, Government would receive a significant buffer for future risk.

As an unfunded public sector scheme, there would be no requirement for valuations in relation to past service assets and liabilities, and the liabilities would sit outside TPR's regulatory framework.

As noted, this arrangement would require primary legislation. The Scheme Actuary and Trustee would be closely involved in the valuation of assets and there would no doubt be considerable negotiation with HM Treasury on this point. Consultation with members and recognised trade unions would also be required. Again, this is likely to be a lengthy process.

DELIVERY ROUTES TO TRANSITION

All of the changes described above, for both future accrual and in respect of the treatment of past service assets and liabilities, would require changes to the current Scheme rules in order to be introduced. There are a number of routes that could be used to achieve the transition of the management of future and past service liabilities which are described in Figure 25.

Figure 25: Delivery routes to transition

ROUTE	ACTION REQUIRED AND ISSUES FOR CONSIDERATION/ TO BE ADDRESSED
SCHEME RULES	Changes to future service benefits for current and future employees and the management of past service benefits through a change to the Scheme's TD&R. Whilst this could be an efficient way to bring about change, in the case of TfL it would require the agreement of the Trustee, the Scheme Actuary and a majority of current Scheme members. It is unlikely that this would be an effective route to effect change. This is explored in further detail in the next section.
CONTRACTS OF EMPLOYMENT	It would theoretically be possible to change employees' contracts of employment to change the terms relating to pension entitlements. It may, in reality, only be practical to make such changes for new, rather than current employees. However, to do so would create a two-tier pension structure within TfL. We identified in our Interim Report that this would be an undesirable outcome which would be counter to the concept of fairness across TfL employees identified as a key Assessment Principle, and also outlined in our ToR.
SCHEME RULES OVERRIDE	The Government could introduce new legislation to override the restrictive nature of the Scheme's amendment power – either giving itself those powers, or some other body.

LGPS RULES OVERRIDE	If it was decided that a public sector route was the desirable outcome for future or past service (or both), Government could introduce legislation to allow for an override to the Scheme Rules and LGPS regulations to enable a transfer of the assets and liabilities of the TfL scheme to the LGPS.
PSPA 2012 RULES OVERRIDE	Government could add TfL (and its subsidiaries) to Schedule 10 of section 31 of the PSPA 2013. This would give TfL a statutory override in respect of powers to change the Scheme rules and enable TfL, at a date of its choosing, to close the Scheme to future accrual and to establish a new scheme arrangement (along the lines of those outlined above).

THE ROLE FOR CENTRAL GOVERNMENT

The Independent Review has been established as a condition of TfL's funding settlements agreed with the Department for Transport. Whilst the Review's ToR require us to look at the steps TfL might take to move "TfL's pension arrangements into a financially sustainable position", it is clear to us that any meaningful reform, if that is the settled outcome, will be unlikely to happen without significant and early commitment and action from Central Government. We note that this was also the view of the 2020 TfL Independent Review[9] into TfL's finances, which said that there could be a role for Government supporting liabilities through a Crown Guarantee, for example.

TYPES OF GOVERNMENT SUPPORT

Government support could take a number of forms:

- **Legislative support**: as highlighted throughout this section, legislative intervention is likely to be required to facilitate any move from the current Scheme arrangement to a new scheme arrangement, both in respect of future service accrual and the management of past service liabiltites. This is particularly so given the restrictive Scheme rules regarding changes to benefits. This could involve introducing new legislation to override existing Scheme rules or using Government powers short of legislation (eg a Treasury Order) derived from existing legislation. Either way, action from Central Government (the DfT, HMT or elsewhere) would be required. There would be costs attaching to this which Government may need to meet.

- **New Scheme arrangements**: Government support is likely to be required to help facilitate the transition of the existing Scheme (its benefits and structure) to a new arrangement. This could involve the creation of a new public sector scheme or the transfer of TfL (and its subsidiaries) to an existing public sector scheme such as the LGPS for either future or past service. As noted above, legislation could be needed to enable the existing Scheme to be wound up (if that was a necessary requirement of any new Scheme design).

[9] *TfL Independent Review – Final Report*. (December 2020)

- **Financial support or financial comfort:** Finally, it would be possible for central Government to provide the Trustee and TfL with financial comfort, to act as a further support to the Scheme's employer covenant which could be factored into its valuation and funding considerations. This could take the form of a Crown Guarantee, discussed further below.

CROWN GUARANTEE

A Crown Guarantee (CG) is effectively a guarantee (or form of insurance) from Government to underwrite or support an organisation's pension liabilities which means that in the unlikely event of TfL insolvency or ceasing to continue as a going concern (or failing to make pension contributions to the fund under the schedule of contributions) Government would meet the obligations of TfL to the Scheme. This would mean that the Scheme was able to continue to receive on-going contributions and meet its obligations to members such as the continued payment of benefits. A number of schemes within the public sector have a CG, such as parts of the Railways Pension Scheme.

The guarantee is provided by "a relevant public authority". This means a Minister of the Crown or Government Department, so for example the Secretary of State for Transport or the Department for Transport. It would be provided to the Trustee, not TfL. It would act, in effect, as an underpin to the Trustee's assessment of the sponsor covenant and determining the prudence of the Fund's Technical Provisions (ie its liabilities) and in deciding on its investment strategy. A CG could be made available for both past and future service liabilities or either, (as a partial CG).

Scheme members whose scheme has a CG are not eligible for compensation from the Pension Protection Fund (PPF) in the event of their employer becoming insolvent or ceasing to continue as a going concern and the scheme being in deficit. This is because the Government would step in instead. By the same token, the Scheme would not be required to pay the PPF levy, which currently stands at around £15m a year. The Scheme would also not be subject to the requirements of s75 of the Pensions Act 1995 which requires a significant payment to the Scheme in the event of TfL entering insolvency or ceasing to continue as a going concern or of the Scheme winding up. This is relevant in the context of TfL's subsidiary companies that are part of the Scheme should either of these bodies become insolvent or be wound up and cease to participate in the Scheme.

There would be no direct cost to Government of providing a CG. It would only be called upon in the unlikely event of TfL becoming insolvent or being unable to meet its pensions obligations. However, while we are aware that awarding a CG would not be unconditional and we understand Government has concerns about the transfer of risk and precedent-setting, there would be clear benefits for TfL, the Trustee and members in such an arrangement and we consider it may merit further consideration.

Figure 26: Sources of Government support

SOURCES OF GOVERNMENT SUPPORT

LEGISLATIVE/ QUASI LEGISLATIVE SUPPORT	CROWN GUARANTEE/ FINANCIAL COMFORT	TRANSFER OF FUTURE OR PAST SERVICE RIGHTS
▪ Legislation or Government order could be required to override Scheme rules to enable benefit change to happen (and existing Scheme to be wound up, if required). Could be new legislation or existing legislation, eg PSPA 2013 ▪ Legislation to enable the transfer of future service benefits to an existing public sector scheme (eg the LGPS) for TfL and its subsidiaries ▪ Legislation to enable the transfer of past service rights to an existing public sector scheme ▪ Legislation to establish new public sector scheme	▪ This would be support or a letter of comfort from Central Government to TfL (and the Trustee) to ensure that TfL's pension obligations can be met ▪ Could be in respect of future or past liabilities or both. ▪ Acts like a contingent asset. The Scheme can factor it into its valuation. Could help reduce cost of liabilities ▪ No direct cost to Government (unless called upon) ▪ Would not change private sector status of the Scheme	▪ Government could directly take responsibility for past service liabilities – past service rights would become an unfunded public sector arrangement in effect, and government would receive the assets in respect of past service. ▪ Past service rights could transfer to an existing public sector scheme ▪ Future service rights could be transferred to an existing public sector scheme

Whilst we are clear that Government involvement will almost certainly be required, the Independent Review cannot have a clear view on Government's appetite for introducing new legislation or providing other forms of support, let alone whether space could be found in the legislative timetable, given competing Government priorities. We note, for example, that it has taken over two years for CDC reforms to reach the statute books and it will not be until August 2022 that the trustees of CDC schemes will be able to apply for authorisation[10].

This further supports our view that there are unlikely to be any quick changes to the Scheme.

TRANSITIONAL ISSUES – KEY REFLECTIONS

If it is ultimately decided to make reforms to the current pension arrangements, there are multiple routes to a new destination for both future and past service. Each of has its own pros and cons. There are many complexities associated with each of the routes described here which will need to be carefully considered and evaluated, in particular to avoid any unintended consequences, including a sudden maturing of the Scheme. It is also clear that the treatment of future service and past service are intertwined – it will not be possible to address future service provision without addressing past service provision in parallel. It is also clear that if change is to be pursued, Government will need to take an active role in any transitional arrangements.

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[10] TPR publishes consultation on new code of practice for CDC schemes. TPR, 25 January 2022. Available at https://www.thepensionsregulator.gov.uk/en/media-hub/press-releases/2022-press-releases/tpr-publishes-consultation-on-new-code-of-practice-for-cdc-pension-schemes

8. IMPLEMENTATION CONSIDERATIONS

- The precise nature of any implementation plan can only be known once any detailed proposal for the future direction of the Scheme is known, if that is the path TfL decide to pursue. It is for TfL and other stakeholders to own and manage that process.
- There will be a wide range of issues to be considered. These range from managing a statutory consultation process; to considering how past service rights should be calculated; and the important job of communicating with members. Each is complex in its own right and will require careful consideration. Together, they present a very significant programme of work.
- There is also a wide range of stakeholders who will be involved. Some will have a statutory role (for example members and TfL's recognised trade unions) whilst other bodies may also require a role, for example The Pensions Regulator (TPR).
- TfL will be required to consult with active and prospective members, recognised trade unions and the Trustee throughout the process, ensuring that it acts in accordance with all statutory requirements.
- It is clear that any change will not be a trivial exercise, nor will it be achieved quickly. It will be a matter of years, not months, before any change can be implemented (and any cost savings experienced).
- If it is decided to pursue reform, Government will almost certainly have a role.

Our ToR required the Independent Review to set out an implementation plan for any potential recommendations.

The precise nature of any implementation plan will inevitably depend on the precise nature of any proposal to emerge from TfL which may (or may not) derive from the Independent Review's work. As has been made clear throughout this report, we have not sought to outline a single, precise, route forward. Not only has this not been possible in the time available, but it is our firm belief that responsibility for – and ownership of – the next steps rest with TfL and the stakeholders (including recognised trade unions, the Trustee and Central Government).

It is not for the Review, therefore, to prescribe any implementation steps. Rather this section sets out and describes the:

- factors that would need to be considered;
- parties that would need to be involved; and
- steps that would need to be undertaken.

This does not pre-suppose any particular conclusions or outcomes in relation to potential changes or future direction of the Scheme.

Clearly, if a decision is taken to retain the existing Scheme and retain the status quo there are no implementation issues. However, in light of the uncertainties to the cost of future accrual highlighted in our Interim Report and forthcoming regulatory changes, it is likely that the employer will wish to keep the current arrangement under review (in common with other employers operating final salary or defined benefit Schemes).

Were changes to be considered the matters to be considered to implement those changes would clearly depend on the nature of any potential reform being considered.

What is clear to us, however, is that if change were to be considered along the lines described in this report or otherwise, this would not be a trivial exercise – either in terms of time or cost (financial and human resource) to the TfL, the Trustee and stakeholders. Change (and any resulting cost benefits to TfL) could not be achieved overnight.

ISSUES TO BE CONSIDERED

Our report will be delivered to TfL. TfL will need to consider our recommendations and analysis and determine how, whether and in what form, it will take forward any plans for change. The issues that would need to be considered as part of any detailed implementation plan are set out below.

ISSUE	COMMENT
Scheme rules	Any change to the Scheme must be made in a way that is consistent with the legislation and the Scheme Rules, and any changes to benefits will need to be reflected in changes to the Scheme Rules. The Rules of the TfL Scheme contain a number of unique features, the most important of which concerns Rule 44 (Rule Amendments). This states: *1) Subject to the provisions of the 1995 Act, the Rules may be amended (including retrospectively) by the Trustees provided that the amendment be first confirmed:* *(a) by a resolution of the Principal Employer; and* *(b) if contributions or benefits are affected in any way, by the Actuary; and* *<u>(c) if the benefits payable or prospectively payable to any person are adversely affected, by a resolution of Members at a General Meeting convened for that purpose.</u>* [Independent Review's emphasis added.] *(2) If the method of calculation of benefits is amended then such amendment shall not (unless the Rule amendment specifically so states) affect the benefits payable to or in respect of a Member who has ceased to pay contributions or attained State Pension Age prior to the date from which such amendment comes into effect, and such benefits shall continue to be calculated according to the Rules in force on the date the*

	Member ceased to pay contributions or attained State Pension Age whichever is the earlier. *(3) No amendment shall be made which:* *(a) will cause the main purpose of the Scheme to cease to be that of the provision of pensions for Members on retirement and for their Dependants and Eligible Children;* *(b) authorises the payment of any of the monies held or to be held by the Trustees to the Principal Employer other than as authorised by the Trust Deed or the Rules or the application of such monies otherwise than for the purposes of the Scheme;* *(c) reduces without his consent the benefit of any person already in receipt of a pension on the date of the amendment.* As might be expected, any proposed changes to the Scheme Rules would require a resolution of TfL as Principal Employer. Also, as might be expected, the Scheme Actuary would be required to confirm any amendments if contributions or benefits are affected in any way. Rule 44 (1) c means that changes to the Scheme Rules to effect changes to current benefits or benefits payable in the future must be approved by a majority of Scheme members at a specially convened general meeting of members. All members would be entitled to vote on the changes to the Scheme rules, even where changes to benefits would not affect them. For example, were changes to be proposed to future service benefits that had no impact on current pensioners or deferred members, current pensioners or deferred members would still be entitled to vote on the proposed rule change to introduce those benefit changes. This is an unusual rule which has been in place since the Trust Deed and Rules were first drafted in 1989. In effect, it gives members a “power of veto” over any changes to the Scheme (that might be detrimental to all or some groups of members or otherwise). Whilst there have been a number of standard amendments to the rules of the Scheme (under Rule 44(1)(a) and 44(1)(b) the Review is not aware that Rule 44(1)c has ever been engaged. If TfL wishes to propose amendments to the Scheme benefits in the first instance it could explore the potential for reaching agreement with key stakeholders through the processes set out in the Scheme’s current Rules, though we note the practicalities of facilitating a meeting of the whole membership are not insignificant. In the event that agreement was not possible, then other routes would need to be considered.

	If changes were to be made to the Scheme Rules, then in addition to the approval of members, such changes would also require the approval of TfL (as principal employer) and the Trustee and the Scheme Actuary. It is worth noting that the Trustee and TfL could agree to make changes to the Scheme where this does not affect members' benefits. An example would be the level of members' contributions to the Scheme. This could extend to the introduction of a tiered contribution arrangement. Consultation with members would also be required (the process for which is described below).
Legislative changes and Government support (HMG)	There could be a number of circumstances in which legislative action or other Government support would be necessary if changes to the current Scheme arrangements were to be proposed: ▪ Given the restrictions on the ability to change Scheme Rules (described above), it is likely that legislation could be required to give effect to the desired changes (effectively overriding the Scheme Rules). ▪ Legislation could also be used to introduce the desired changes to the Scheme rules, again, overriding the terms of the current Scheme Rules. This could include Government intervention via the Public Sector Pensions Act 2013 giving TfL the power to make changes to future service benefits. In such circumstances, it is the primary legislation and not the Scheme Rules that take precedence. ▪ Depending on the nature of any changes a legislative route could be required to enable TfL to be joined to an existing public sector scheme for either past or future service. ▪ As we have highlighted, changes to future service will have consequences for past service. Legislation may be required to give effect to the way in which past service rights should continue to be managed – for example, if Government were to take on the past service liabilities and assets. ▪ Other forms of Government support could include the provision of a Crown Guarantee or other forms of support. ▪ One issue that has been highlighted, and on which we commented in our letter to the Commissioner dated 28 October 2021, is the anomalous position of the TfL Scheme, ie that it is regulated as a private sector scheme whilst very much operating in the public sector. One consideration we have discussed could involve changing

	the status of the Scheme and recognising it as a public sector scheme. As we have described in Chapter 7, this could have a number of advantages. However, such a change would also require primary legislation. Responsibility for the introduction of any legislative change would rest with Central Government. The Independent Review cannot speculate on Government's appetite for introducing legislative changes to effect changes to the Scheme or on the likelihood of any legislative timescales.
"Protected Persons"	We highlighted in our Interim Report that special consideration would need to be given to a category of member known as "protected persons" who are given special protection in respect of their pension rights under s32 of the Greater London Authority Act 1999. "Protected Persons" are people who were employed by London Regional Transport or one of its subsidiaries became employees of a private sector company as a result of outsourcings under the London Underground public-private partnerships (PPPs) between 20 March 1998 and 31 March 2002. They include employees who transferred to Metronet BCV Limited, Metronet SSL Limited, and Tubelines Limited. There are currently around 1,800 "protected persons". Protected persons are provided with the following statutory protections: a. While they are employed in the London underground railway industry, they are entitled to remain members of the Scheme; b. While their period of continuous employment remains unbroken, their employer must provide them with access to an occupational pension scheme which complies with the requirements described in c and d below: c. Where the TfL Scheme is used, the pension rights that accrue for a protected person *after* they transfer to the private sector must be "overall materially at least as good" as the benefits accruing under the Scheme immediately *before* they transferred to the private sector; and d. Where another pension scheme is used, equivalent provision must be made. In other words, if changes are made to the Scheme in respect of future service and where those changes might result in a reduction of benefits, employees who are "protected persons" may need to continue to

	receive benefits equivalent in value to the benefits that existed under the rules of the existing scheme at the time the member transferred. This is likely to mean that special arrangements may need to be put in place for this small, but significant, group of members.
Pensionable pay	In the event of the closure of the current Scheme (or any other transition to a new arrangement), TfL would need to decide the basis on which past service benefits would be calculated. As we have described in Chapter 6, this could be achieved by: ▪ basing the pension calculation at retirement on a leaving service basis; or ▪ basing the pension at retirement on a final salary basis which is the practice in the public sector; or ▪ an underpin that would give members the larger of two calculations. It would be necessary for TfL to undertake some detailed assessments to determine which route would be most advantageous for the generality of members. As we have noted, we would expect this to be the final salary basis, but the precise outcome will depend on the member's distance from retirement and their individual circumstances. As part of its assessment, TfL would need to consider any issues around direct or indirect discrimination, for example on the basis of age, of the desired option. As we have described, the use of an underpin could help insulate TfL from these issues.
Statutory consultation process	Pensions legislation[11] requires that before certain changes to a pension scheme are made, the employer must undertake a consultation with affected members and their representatives. The changes that fall within the scope of the consultation requirements (called "listed changes") include: ▪ increases to normal pension age; ▪ closing the scheme to new members; ▪ ceasing further benefit accrual; ▪ ceasing or reducing the employer's liability to contribute; ▪ introducing or increasing members' contributions; ▪ changing the rate at which pensions in payment are increased or other benefits revalued, where the change is less generous to some members than others;

[11] S259-261 of the Pensions Act 2004; the Occupational and Personal Pension Schemes (Consultation by Employers and Miscellaneous Amendments Regulations 2006); the Occupational Pension Schemes (Consultation by Employers) (Modification for Multi-employer Schemes) Regulations 2006.

	■ changing future benefit accruals ■ changing to a money purchase (DC) scheme; and ■ changing the calculation of future pensionable earnings. The "listed changes" would cover most of the options modelled in Chapter 5. The duty to consult rests with the employer, regardless of who is proposing the change (eg, if the changes are proposed by the Trustee it is still the employer that must consult) and it applies to any employer with at least 50 employees. As such, TfL would be subject to the consultation requirements. The consultation must be with "affected members". We note that the legal definition of "affected members" comprises active members and prospective members (defined as those in any scheme waiting period). Where there are recognised trade unions, they must be consulted in respect of affected members. The statutory consultation period must run for a period of at least 60 calendar days. The consultation must be meaningful, give affected members an opportunity to express their views, and must not pre-judge any outcome. The Pensions Regulator (TPR) is clear that it expects the parties to work together "in a spirit of co-operation"[12]. Whilst the statutory consultation period is 60 days, the Review would anticipate that in a scheme as large and as complex as the TfL Scheme, with such a wide range of stakeholders, the consultation processes should be intensive and would likely require a very much longer period. TPR is also clear that employers should allow "an appropriate time period for carrying out the consultation". Changes that are made to comply with legislation fall outside the scope of the consultation requirements.
Impact assessments	The analysis set out in this report models, at a high level, the impacts on TfL and Scheme members of **orders of magnitude and ranges of outcomes.** Were any detailed proposals to emerge, it would be essential to assess the impacts of any proposed changes on TfL as well as members (active, deferred, pensioner and prospective members). This would provide a

[12] *The Duty to Consult on Scheme Changes* – TPR, February 2015. Available at https://www.thepensionsregulator.gov.uk/-/media/thepensionsregulator/files/import/pdf/employer-duty-to-consult-on-scheme-changes.ashx

	mechanism for members and their representatives to consider the impact of any possible changes to their own benefits and provide an opportunity to make decisions about their retirement plans. In this report we have provided the impacts of possible changes on 20 'personas' which show at a high level the impacts of possible changes. Were any changes to be taken forward we believe it would be necessary for TfL to provide a way for members to assess the impact of any changes on their own individual circumstances, rather than the simplified personas set out in this report. TfL will also need to undertake detailed modelling to assess the wider impacts of any changes. This will include assessing whether any prospective changes will have unintended consequences, by creating intergenerational unfairness, for example, and looking at other factors including gender. Importantly, it will need to include an assessment of whether any potential changes could be deemed to be directly or indirectly discriminatory, for example on the grounds of age. As well as prospective changes, TfL will also need to assess the impact of changes to past service benefits. As we have made clear, changes to future service cannot take place without changes being made to past service benefits. Careful consideration will need to be given to the treatment and management of these past service benefits to avoid significantly inflating TfL's liabilities and financial commitments to the Scheme. The Trustee will also no doubt wish to undertake detailed analysis to understand and assess the impact of any changes to future service on past service liabilities and what, if anything, that might mean for its investment strategy and wider fiduciary duties.
Impact on wider remuneration/ reward structures	One of the principles against which options for reform were required to be considered, embedded in our ToR, was the place of the Scheme's benefits within TfL's overall remuneration and reward structure, such that it remained competitive for recruitment and retention purposes. In our first report, we noted that, beyond pay, the Scheme is the only benefit of significance available to the majority of staff. This was a point also noted by the TfL Independent Review in 2020[13]. It reinforces the view that the Scheme is a valuable benefit and one that is prized by staff.

[13] *TfL Independent Review – Final Report (December 2020)*

	Any change to the Scheme, especially where this resulted in a diminution of benefits, would therefore mean a deterioration of the overall reward and remuneration available to staff. This may have an impact on TfL's ability to recruit and retain staff. It has been made clear to us that in certain areas, TfL is already facing challenges in recruiting staff (eg in Senior Manager grades and in PB3 in TfL where pay is below market medians for some disciplines and there are now pressures regarding recruitment and retention). Therefore, TfL may need to reconsider its current remuneration and reward strategy in the wider context of recruitment and retention. This may include consideration of whether, and how, it compared to other comparable employers and how this was impacted by the scale and shape of any changes to the Scheme. Depending on the impacts of any potential Scheme changes on different groups of members, any impacts on the wider remuneration policy might also need to be differentially targeted – eg if there was a cap placed on higher earners' ability to accrue benefits, or if lower paid workers benefited from a particular change to the Scheme. Such considerations would need to form part of the consultation with recognised trade unions.
Process for establishing a new Scheme (if required)	There would be many steps required to setting up a new Scheme (including the closure of the existing Scheme). As described earlier in this report, this may require primary legislation, for example to establish a new standalone public sector scheme, or to establish TfL's pension arrangements within an existing public sector scheme. Whatever the final destination for future service provision, the process for establishing a new Scheme is likely to be lengthy. Government involvement would be likely to be necessary if the transition to a new scheme required the existing Scheme to be wound up and also if a decision were to be taken to establish a new scheme within the public sector. As we have emphasised repeatedly in each of our reports, it will not be possible to make any changes to future service without action being taken in respect of past service liabilities.
Section 75 issues	Whilst TfL is the largest employer in the Scheme, accounting for 99% of the assets and 99% of the liabilities[14], it is not the only employer. Other participating employers are grouped together under a 'Composite'

[14] As at 31 March 2018 – data taken from TfL Pension Fund Annual Report and Accounts, 2020.

	section (comprising employers including British Transport Police Authority, Thales Transport and Security Limited and Tube Lines). Chapter 7 has described a number of ways in which past service liabilities (as well as future service liabilities) could be managed. If, under one of these options, TfL were to exit the current Scheme it would trigger what is known as a s75 debt. A s75 debt is a statutory debt under section 75 and s75A of the Pensions Act 1995 and requires an exiting employer (or a participating employer in the fund who ceases to employ any members or which becomes insolvent) to fund any shortfall in the fund. The s75 debt is calculated in a specific way set down in law by reference to "full buy-out basis" ie what it would cost for an insurer to take on the Scheme's liabilities. The aim is to avoid employers walking away from their pension obligations and to ensure that, in the event the scheme is eventually wound up, the remaining employers are not saddled with the debt of the employer that has left. The s75 debt of the TfL section of the Scheme is currently calculated to be around £14bn. Any new structure would need to avoid triggering a S75 debt.
Communication with members	Any changes will need to be communicated to members, and members will have a statutory role in any consultation process as well as in any process to change the Scheme under the current Scheme Rules, as described above. Beyond these statutory communications, it will be vital to communicate with members throughout the process, not least so that members can see the effect of any changes on their own benefits. This could include the provision of benefit calculators so that members can see what any proposed changes mean for them. It may also require the provision of independent financial advice. This will be especially important if members will be required to make any decisions about the destination of their pension or their benefits and for those close to retirement. Pensions are not simple. Therefore, very careful consideration will need to go into these member communications.

WHO – ROLES AND REMITS

There would be a wide range of entities involved in the implementation of, and transition to, any new arrangement. The roles and remits of those who may need to be involved are described in brief in Figure 27.

Figure 27: Roles and remits

WHO?	REMIT
Transport for London (TfL)	TfL is the Principal Employer to the Scheme and will be the recipient of the Review's report. It will be for TfL to decide whether, and how, to take forward any proposals for changes to the Scheme. Together with the Trustee and Scheme Actuary, TfL may make limited changes under current Scheme rules, eg to employer or member contribution rates. As described above, TfL will be responsible for all statutory consultations with affected members and recognised trade unions.
Trustee	The Trustee will have an important role to play. The Trustee will need to be closely involved in discussions regarding the treatment of past service rights. Depending on the direction of any proposed changes, this could also involve a reassessment of the investment strategy in respect of past service. The Trustee will also be party to any discussions regarding the establishment of a new Scheme (if under the same Scheme) or a bulk transfer to a new scheme if that is the outcome. As described above, the Trustee (together with TfL and the Scheme Actuary) may make limited changes under current Scheme Rules – eg to employer or member contributions.
Recognised Trade Unions	The following trade unions are recognised for the purposes of collective bargaining within TfL (listed here in alphabetical order): ASLEF, PCS, Prospect, RMT, TSSA, UNISON, and Unite the Union. The unions would have a statutory role in any consultation process, as described above. But they would be central to any consultation regarding changes to the Scheme and it benefits. It would be for TfL and the unions to determine the appropriate forum. This may be an existing forum or one designed specifically for this exercise.
Scheme Actuary	The Scheme Actuary will be required to assess any possible changes. For example, determining whether any benefit changes are of equivalent value in respect of Protected Persons and for s67 purposes and if subsisting rights are adversely affected. The Scheme Actuary will also be required to assess any impact on the

	investment strategy in respect of past service, depending on the outcome.
HMG	Depending on whether any changes are taken forward and the nature of those changes, Central Government will have a decisive role in enabling any changes to be made.
The Pensions Regulator	In common with other large schemes, the TfL Scheme is subject to TPR's 1-2-1 supervisory regime which could involve an active role in overseeing any possible changes to the Scheme. In particular, it is likely that TPR will wish to be reassured that, in respect of past service, members' benefits are secured and that any implications for funding pressures arising in relation to past service liabilities are adequately managed.
Members	Where a change "adversely" affects existing members' benefits or prospective benefits, the agreement of all members in a general meeting is required under the rules of the Scheme, as described above.

FUTURE WORK PROGRAMME

As we have noted, it will be for TfL to determine if changes to the Scheme are required and consider the exact nature of any potential reforms and the way in which they should be implemented. This will involve working with the Trustee and recognised trade unions. We are also clear that there will be an essential role for Central Government in enabling any potential reforms. It will be important for TfL to have an early understanding and commitment from Government to bring forward any legislation to permit any changes that may be proposed to the Scheme.

The precise steps that will need to be taken to introduce any changes will depend on the precise nature of reforms identified for both past and future service. TfL will need to develop a detailed implementation plan should it ultimately decide it wishes to pursue any options for reform.

IMPLEMENTATION CONSIDERATIONS – KEY REFLECTIONS

There will be many steps to go through in implementing any changes to TfL's pension arrangements which will require the full engagement of multiple parties, including Government. It is clear that the process will be a lengthy one, and rapid change (and immediate costs savings) will not be realised.

9. CONCLUDING REFLECTIONS

As outlined in the foreword to this report, we have not seen it as appropriate to make detailed recommendations on a route forward.

TfL, as the sponsoring employer, has the responsibility to decide whether to maintain the current well run and highly valued scheme or whether concerns about longer term volatility, affordability and sustainability, alongside the undoubted immediate financial pressures, require them to propose to the other key stakeholders, amendments to the existing arrangements.

In this Review we have not sought to make that judgement for TfL but instead to set out with as much clarity as possible the range of reform options available to them, consistent with the Review's ToR, the implications of those options for TfL finances and longer-term risks and also, importantly, the consequences of possible changes to the value of these pension arrangements for Scheme members. Instead of a prescriptive route map for change in this final chapter we offer some concluding reflections.

TfL is clearly facing enormous financial pressures. The pandemic had an immensely damaging impact on the revenues from farepayers on which the organisation has significantly relied. Even as we emerge from that crisis there remain huge uncertainties for millions of people about future working and travel patterns and, therefore, long term revenue streams for TfL. Short term funding agreements with Central Government have enabled TfL to continue to function and it is as a condition of the agreement reached in June 2021 that this pensions Review was commissioned alongside a programme of really detailed scrutiny of every other area of TfL expenditures. A further short term funding settlement was recently agreed for the period up until 24 June 2022.

The Review is not privy to any TfL consideration of other expenditure areas and the relative pros and cons of different possible cost savings, but we recognise that our report will fall to be considered by TfL in this extraordinarily difficult context. We trust, however, that it will be recognised that long term, secure, high quality pension provision does not lend itself to short term arbitrary savings targets.

In this Review we have examined every aspect of TfL's current pensions arrangements in very great detail and, taking account of experience across the economy, looked carefully at a very wide range of possible reforms. Our first report in October described changes seen in the pensions provision in a large number of other major organisations in both the public and private sectors.

In December, in our Interim Report, we narrowed our focus to concentrate on the options which, in our judgement, best matched up to a number of important principles rooted in the Review's ToR, which referred to sustainability and affordability in the long term, fairness to employees, farepayers and taxpayers, and consistency with TfL's financial challenges ahead while protecting members' benefits built up to date.

The Review has also been taking place alongside the very important valuation process conducted by the Scheme's Trustee which is being concluded just as this Review report is being finalised and where we understand agreement in principle has been reached between TfL and the Trustee on all the assumptions. Our understanding is that the valuation indicates a modest but welcome surplus in the Scheme which will mean an end to the requirement for the additional deficit recovery contributions by TfL which have been payable during the period since the previous valuation, and which currently stand at £70m (indexed) a year. The current projected valuation outcome confirms our view that the Scheme has continued to be very well run with a sophisticated investment strategy, and there is no immediate critical funding crisis in the Scheme demanding a response.

The current strength of the Scheme is, however, based in large part on the relatively high level of contributions required from TfL as the sponsoring employer. The contributions from members into the scheme is fixed at 5% with the balance of costs to be met by TfL. When the Scheme was established, the employer contribution required was around two and a half times the level paid by Scheme members. Even after the current positive valuation, the employer contributions needed will still be between 5 and 6 times the level paid by Scheme members. In addition to immediate cost considerations impacting TfL we recognise that there are inevitable significant risks around inflation, salary movements, investment performance, and changes in longevity attached to defined benefit pensions provision. These risks, described earlier in this report, need to be understood and factored into any consideration of the long- term sustainability of TfL's arrangements.

A final key contextual point is that consideration of possible pensions changes must be undertaken recognising that the pension scheme is highly valued by staff and is a crucial component of the overall remuneration and benefits package. TfL's recognised trade unions have all strongly argued that the scheme should not be changed in any way. As experience elsewhere has shown, what has been termed the 'reform and modernisation' of pensions provision has almost invariably involved a reduction in the value of the provision for members in some cases dramatically so. The Review's report is, of course, also being finalised at an acutely difficult time in the economy more widely with sharp pressures on living costs and inflation at its highest level for decades.

All of these considerations reflect that this is not an area in which there are simple solutions or quick results if change is to be pursued. The earlier sections of the Report on implementation of possible change and potential transitional arrangements illustrate graphically that change of any sort – unless it is change that is agreed by all the relevant parties through the arrangements provided for in the Scheme's rules – would likely take years and require a major role by HMG, particularly if primary legislation were required. Even if there is the political appetite for delivering such change, legislative time would need to be found. We note that, notwithstanding clear agreement by all relevant parties on the principles of change, over two years ago, the necessary legislation, regulation and regulatory guidance to introduce CDC schemes has still not been implemented. It seems clear to us that were any path to change be embarked upon, it would be years, not months, before any change could be implemented and possibly longer still before the effects of any cost savings could be felt.

In the Report we have modelled a range of possible reforms both in order to calculate with real clarity the impact not only on TfL's costs but also on the value of benefits to, and contributions required from, members. We could of course have modelled many more combinations of possible changes, but what out modelling shows is a range of possible outcomes. It will, of course, be for TfL to decide whether to adopt one of these models, adopt an alternative combination of benefits or remain with the status quo. All the options we have considered, however, are defined benefit schemes which will provide members with certainty over the income they will receive in retirement, which will be superior to defined contribution arrangements which are prevalent in the UK today and will be comparable to wider public sector arrangements.

Our general reflections on this modelling would be:

- Not surprisingly the packages that deliver the highest cost savings for TfL also result in the greatest cuts in the value of benefits for members and would not in our view meet the objectives set in the terms of reference of delivering fairness and adequacy.

- The CARE model has now been widely adopted across public services and provides some mitigation to employers of the salary risks implicit in final salary arrangements and helps to manage longevity and inflation risk. Its adoption would provide TfL employees with a pension arrangement comparable with other public sector employees and could help with labour mobility and flexibility. It would, however, be a much greater transformation compared to making amendments to the current final salary arrangements with considerably greater transitional and implementation challenges and costs. Adding even greater complexity through tiered contributions arrangements could bring additional risks of unintended consequences with cliff edges for contribution levels as people move through the salary bands and the risk of higher paid staff, facing higher contributions, seeing the Scheme as less valuable and opting out.

- Should TfL decide that it wished to consider proposals for change to the existing final salary scheme, as the modelling illustrates, significant savings and some risk mitigation could be secured by making changes in limited areas such as the introduction of early retirement factors (recognising that the SPA is set to increase further) and the indexation of pensions in retirement and in deferment by CPI rather than RPI (which is to be phased out by 2030 in any event). Other changes which may be considered could increase these savings and mitigate risk further, such as changes to the rate at which benefits accrue or to member contribution rates. TfL will need to consider the balance of affordability and sustainability alongside matters such as fairness and adequacy when assessing what level of change might be appropriate.

- As has been noted earlier, consideration of pensions reform options needs to take account of its value within the overall terms and conditions of employment for staff and TfL’s ability to recruit and retain. The Independent Report into TfL finances published in December 2020[15] noted that senior managers’ total cash remuneration is 20% below the market position. This

[15] *TfL Independent Review – Final Report (December 2020)*

is a particular reason why we encourage TfL to examine the issues we highlighted earlier about the impact of the Pay for Performance and Senior Managers Reward Framework on pensionable pay, and therefore ultimately the value of the pensions for the staff affected.

- Should TfL decide to propose possible changes, the transitional and implementation issues involved – including the options for dealing with past service liabilities – will require clarity from HMG on their appetite for supporting change, their view of the possibility of giving the scheme public sector status, and readiness to consider a Crown Guarantee or alternative underpinning. More generally, this Review is an opportunity to re-consider the status of the Scheme. We have been struck that TfL, whilst clearly a public sector organisation, has a pension Scheme which is treated as part of the private sector. As a result, the Scheme is carrying more risk and cost than might be appropriate for an organisation that cannot be wound up without an Act of Parliament.

TfL and the other key stakeholders will need to reflect carefully and must reach their judgement on the material set out in the Report, both on the value – and the continuing costs – of maintaining the current arrangements alongside the options for possible amendments either to the current final salary-based scheme, or by producing an alternative CARE-based scheme. This period of reflection will need to take account of all the contextual considerations we have highlighted and should – in our view – include very close consultation and engagement with all the stakeholders. In particular, if TfL decide to propose amendments to the current arrangements, we hope that every effort should be made in good faith to engage actively with their recognised trade unions with the genuine objective of securing – if possible – agreement on the way forward.

APPENDIX 1: INDEPENDENT PENSION REVIEW'S TERMS OF REFERENCE

TRANSPORT FOR LONDON PENSIONS REVIEW (THE REVIEW) TERMS OF REFERENCE

1. PURPOSE OF THE REVIEW

Under the terms of the TfL funding agreement dated 1 June 2021, HM Government required that TfL conduct a review of the TfL Pension Fund (the **Scheme**) and reform options, with the explicit aim of moving TfL's pension arrangements into a financially sustainable position.

The purpose of the Review, therefore, is to conduct an assessment of the Scheme and to make recommendations in relation to TfL's pension arrangements generally that are sustainable and affordable in the long term, fair to employees, farepayers and taxpayers and consistent with TfL's financial challenges ahead, while protecting members' benefits built up to date (the **Purpose**).

2. SCHEME COVERAGE

The Review shall relate to all sections of the Scheme.

3. SCOPE OF THE REVIEW

The Review shall have regard to and consider the following matters (the **Scope**):

A. the need to ensure that future pension provision is fair across TfL's employees, including protecting members' benefits built up to date;
B. the needs of TfL in ensuring generally that TfL's future pension provision is affordable and sustainable in the long term for TfL, farepayers and taxpayers (including taking into account the volatility and risk associated with TfL's contributions to the Scheme);
C. the circumstances of the Scheme in terms of its employer covenant, member contributions, benefits, funding position on the bases required under Part 3 of the Pensions Act 2004, section 179 of the Pensions Act 2004 and section 75 of the Pensions Act 1995, investment strategy, legal status and legal constraints on making changes under its trust documentation and how this compares to other public and private sector schemes; and based on these circumstances, produce an analysis of the funding and legal issues faced by TfL in relation to the Scheme;
D. how risk should be shared between farepayers, taxpayers, employees and members;
E. wider policy considerations such as provision of choices for, and promoting adequate saving for, retirement and longer working lives;
F. the needs of TfL as an employer in terms of recruitment and retention including matters such as the overall reward package being offered; and

G. potential implementation and transitional arrangements for any recommendations.

Based on the Purpose and Scope set out above, the Review shall consider all options for reforming TfL's pension arrangements, with nothing ruled in and nothing ruled out (the Options).

4. REVIEW SCOPE EXCLUSIONS

It is recognised that TfL will be required by law to inform and consult with affected members and their union representatives about any proposals for reform which may arise as a consequence of the Review and to follow any required legislative processes. These matters are therefore excluded from the Scope.

5. REVIEW INDEPENDENT LEAD

The Review shall be independently led and facilitated by Sir Brendan Barber (the **Independent Lead**) who will be joined by Joanne Segars OBE, who will provide independent expert pensions advice.

The Independent Lead will have access to the knowledge and full co-operation of TfL, including the provision of a secretariat function.

The Independent Lead shall also have access to professional external advice in relation to legal, actuarial and technical modelling matters.

The Independent Lead will conduct the Review in accordance with these terms of reference, including the matters set out in section 6 below.

6. REPORTING DELIVERABLES

The Review will:

- identify and clearly set out the potential pros and cons of Options that would meet the Purpose and Scope; and
- set out a recommended approach (including an explanation of why the other Options considered are not being recommended) that would meet the Purpose and Scope.

These matters shall be reported as follows (the **Deliverables**):

- by 31 October 2021, the Independent Lead shall provide a final list of Options under consideration; setting out high level, general assessments on how they could meet the matters set out in the Purpose and the Scope;
- by 11 December 2021, the Independent Lead shall provide an Interim Report which shall explain the Options that are being considered in further detail and clearly describe in further detail how they meet the matters set out in the Purpose and the Scope; and
- by 31 March 2022, having considered all of the evidence and representations received, the Independent Lead shall provide a Final Report, setting out a full analysis of the Options and a recommended approach along with an implementation plan.

The Independent Lead shall meet regularly with TfL during the course of the Review period in order to discuss and report on progress and other matters pertaining to the completion of the Deliverables set out above.

7. ENGAGEMENT, EVIDENCE GATHERING AND REPRESENTATIONS

The Independent Lead of the Review shall offer interested parties (including but not limited to trade unions, the Trustee of the Scheme, HM Government, other public and private sector organisations with relevant pension arrangements) a reasonable period of time to engage with and submit evidence and representations to the Review. This will be taken account of at all stages of the Review.

The Independent Lead shall decide how this engagement shall be organised considering the period of time available to conduct the Review; for example, via written correspondence and/or meetings.

The Independent Lead shall decide upon the general views and/or specific questions to be posed in the engagement, in consideration of the matters set out in the Purpose and Scope.

APPENDIX 2: OPTIONS FOR POTENTIAL REFORM – FOOTNOTES

1. Salary cap – we have used this term to describe a variety of arrangements present in pension schemes whereby benefits may cease, or be different, for members above (or below) a certain salary level.

2. Excludes any deficit repair contributions paid by the employer.

3. BoC - Balance of Costs. Members contribute a specified amount; the employer pays the balance to fund the scheme. For shared cost schemes, contributions are split between the member and employer on a fixed proportion, eg 1/3rd member & 2/3rds employer.

4. It is noted that some Scheme members' benefits in deferment and in payment are not subject to the 5% cap. Depending when the member joined the Scheme there may be deductions or adjustments applied to pensionable salary.

5. Pensionable salary increases capped by the lower of 3% or RPI since 1 April 2013. Used as basis for calculating benefits.

6. Refers to The National Grid Electricity Group (NGES) of the Electricity Supply Pension Scheme which was closed to new members in 2006.

7. Average employer contributions across the LGPS. Subject to a cost cap – if employer contributions exceed the cost cap, member contributions or benefits must change.

8. SPA – subject to a min of 65, depending on when member joined the scheme.

9. For benefits earned post 2012. Benefits earned prior to 2012 can be taken on an unreduced basis from age 60 down to a minimum of age 50, depending on category of membership.

10. Expected to be introduced in 2022.

11. Closed to future accrual.

12. Target Retirement Age – member will select a retirement age but may retire before or after that age. This will often be state pension age.

13. Available predominantly for staff who joined after 1 December 2010.

14. Band earnings - £10,000-£50,270 for 2021/22.

15. Total statutory minimum contributions are 8% of 'band earnings'.

APPENDIX 3: MODELLING ASSUMPTIONS – DETAIL

ASSUMPTIONS USED IN THE MODELLING OF THE BENEFIT COMBINATION SCENARIOS

As described in Chapter 5, the modelling for the benefit combination scenarios adopts the 31 March 2021 valuation assumptions. This reflects the fact that at the time this report was being prepared the 2021 valuation had not been published although we understand that the valuation results have been agreed in principle. The assumptions used as those used in the Interim Report (to provide a point of consistency between the Interim Report and this Final Report) except for the salary growth assumption which has been updated.

The full details of the methodology and assumptions adopted are set out below:

Figure 28: Benefit combination scenarios - methodology and assumptions

ASSUMPTION	COMMENT
METHODOLOGY	
Effective date	All calculations are carried out with an effective date of 31 March 2021 and are in respect of future service only.
Membership data	Membership data for active members of the TfL Pension Fund, as at 31 March 2021, as supplied to XPS by TfL.
Future service	Future service cost calculations have been carried out using XPS's valuation software, PFaroe, using the assumptions set out below and based on the Trustee's preliminary results on the provisionally agreed valuation results of the 31 March 2021 actuarial valuation as set out by the Scheme Actuary. The methodology has adopted the Projected Unit method with a 1 year control period.
Expenses	Future service costs make no allowance for expenses relating to administration or PPF levies. Suitable allowances for expenses can be considered separately in respect of each benefit design. The Trustee's allowance for the 2021 valuation is 0.4% a year of salary for on-going expenses of the Scheme and 1.3% a year for the PPF and other levies. Any allowance for PPF levies will depend on if future service is provided via the private or public sector.
State Pension Age (SPA)	Where benefit combination scenarios have been modelled that set the NRA to SPA, each member's SPA has been determined based on their date of birth and sex. Members' SPAs also reflect current expectations for how and when SPAs will increase in future. We estimate the weighted average SPA for the active members to be

	67 years and 4 months. For these scenarios, no allowance has been made for early retirement.
KEY FINANCIAL ACTUARIAL ASSUMPTIONS[1]	
Discount rate – future service cost	60% confidence level. (Based on 20 year term: real rate of 1.5%)
RPI inflation	Gilt market-implied inflation curve
CPI inflation	RPI inflation curve less 1.0% before 2030 and nil thereafter
General salary escalation	This is assumed to be set equal to RPI and with adjustments made as appropriate for each benefit combination scenario
Increase in Lower earnings Limit (LEL)	CPI inflation
PENSIONS INCREASES IN DEFERMENT	
Existing Members (min zero)	RPI-based[2]
New Members (min zero, max 5%)	RPI-based[2]
GMP section (148)	RPI inflation curve plus 0.25%

1. All assumptions are taken from the draft actuarial results prepared under Rule 43(3) of the Scheme Rules, prepared by the Scheme Actuary. Data refer to assumptions as at March 2021. Assumptions prepared by Willis Towers Watson, Actuary to the Trustee.
2. Demographic assumptions used are those used by the Trustee for the 2021 actuarial valuation.
3. Adjusted for caps and floors as appropriate, including allowance for standard 1-year WTWIM inflation volatility in line with Black model.

It should be noted that a different set of assumptions will result in a different set of outcomes.

ASSUMPTIONS USED IN THE MODELLING OF THE MEMBER PERSONAS

Figure 29: Assumptions used in the modelling of the member personas

ASSUMPTION	COMMENT
METHODOLOGY	
Future service	All calculations are in respect of future service only
ASSUMPTIONS	
Salary and pay band data	Salary data as at January 2022, supplied to XPS from data supplied to the Review by TfL. Numbers of employees also as at 1 January 2022 and also supplied to XPS via the Review from data supplied by TfL.
Retirement age	Data supplied to XPS via the Review from data supplied by TfL. Three sets of results have been supplied assuming retirement ages of 60, 65 and 67.
Pensionable service	Assumed to be 13 years for most pay bands as this is the median average length of pensionable service. Data supplied to XPS via the Review from data supplied by TfL.

Salary escalation	The salaries provided have been used as the initial salaries in the calculations. It is assumed that the first salary increase for each member applies at the start of year 2 and applies at the start of each year going forward. For example, a member with 13 years of future service is assumed to receive 12 increases up to retirement. For personas 2B and 2C a 3% cap each year has been applied.
CARE accrual	Each tranche of CARE accrual has been calculated on the salary at the start of each year.
Tiered contributions	The TfL tiered contribution rate has been determined by "actual pensionable pay" in each year, not the full-time equivalent salary. This is in line with our understanding of the current practice used in other public sector schemes such as the LGPS. It is assumed that the TfL tiered pay bands increase in line with CPI each year. The suggested TfL tiered contribution structure is detailed below. Under the active membership of the Scheme as at 31 March 2021, this gives an average contribution rate of 6.9% a year. ▪ Up to £20,000 = 5% ▪ Between £20,001 and £35,000 = 5.8% ▪ Between £50,001 and £65,000 = 7.2% ▪ Between £65,001 and £100,000 = 8.0% ▪ Between £100,001 and £135,000 = 8.8% ▪ Between £135,001 and £155,000 = 9.5% ▪ Over £155,001 = 10.2%
Career progression	For the career progression personas (numbers 16-20) salaries in the future have been increased in line with RPI up to the date they have become effective. This means that under scenarios 2B and 2C where a cap is applied to the pensionable pay, someone who enters the role in the future would receive a higher pensionable pay as compared to someone who had worked the role from the start of their service. An example of this is Member 9 and Member 16 under scenario 2b: Member 9 is an LU train operator for 20 years and under scenario 2B their salary would be capped at 3% each year. Member 16 starts out as a CSA multifunctional and is promoted to an LU train operator after 5 years of service. When the promotion occurs the salary that is allowed for will have received salary increases in line with RPI.
State Pension Age (SPA)	For scenarios using the State Pension Age (SPA) it is assumed this will be 67 for all members. This is line with the average SPA for the Scheme membership and is the expected SPA for a member currently aged 47 and assumed to retire at age 60 with 13 years service. In practice, members currently aged 40, and assumed to

	retire at age 60 with 20 years' service, have a higher expected SPA. The same SPAs have been assumed for all personas for simplicity.
Commutation/ tax free cash	No allowance has been made for members to take cash at retirement.
Early retirement	Each member has an assumed retirement age of 60 and early retirement factors have been applied where applicable (5 year factor for NRA 65 and 7 year factor for SPA, assumed to be age 67 as set out above). These factors have been calculated in line with the assumptions, adopted for the 2021 actuarial valuation which we understand has been agreed in principle. In practice, it would be likely that early retirement factors would be calculated on a best estimate basis and XPS have estimated, if the discount rate on the Trustee's basis were adjusted to be set at the 50% confidence level on the Willis Towers Watson model used to set the Trustee's discount rate (rather than at the 60% confidence level that is currently used for the future service discount rate), this would cause the factors to decrease by around 2% (i.e. a member's pension would be 2% lower).

Early retirement factors

The early retirement factors used are detailed below:

	RPI pre-retirement (CPI (0, 2.5%) post retirement	RPI max 3% pre-retirement, (CPI (0, 2.5%) post retirement	RPI pre-retirement RPI 0%,5% post-retirement)	CPI pre-retirement CPI (0%,2.5%) post-retirement	CPI (0%,2.5%) pre-retirement CPI (0%,2.5%) post-retirement
2 year	0.920	0.910	0.910	0.900	0.900
5 year	0.820	0.800	0.800	0.790	0.790
7 year	0.770	0.740	0.740	0,740	0.720

Membership status	All members are assumed to be currently 'New Members' as defined in the TfL Pension Fund Rules, ie a member who joined the Fund after 1 April 1989. This means that the member's increases in retirement are capped at 5% a year. It also means that their pensionable salary is determined by their basic salary less a deduction equal to the Lower Earnings Limit (LEL).
Lower Earnings Limit (LEL)	The LEL for the 2021/22 tax year is £6,240 and this is assumed to increase in line with CPI inflation each year.
Earnings Cap	The Earnings cap for the 2021/22 tax year is £172,800. This has been assumed to increase in the same way as salaries (allowing for the 3% p.a. cap in the relevant scenarios). It is assumed that all members would be affected by the Earnings Cap, i.e. are "Class A" members as defined in the TfL Pension Fund Rules.

Financial assumptions	For the purposes of the persona calculations average rates have been derived for the different types of increase, based on the full yield curves used for the 31 March 2021 valuation and rounded. These are ser out below: ▪ Salary growth = 3.5% ▪ RPI max 5% = 2.75% ▪ CPI uncapped = 3.0% ▪ CPI max 2.5% = 2.0%

Again, it should be noted that a different set of assumptions would lead to a different set of outcomes.

In the figures below we have set out the approximate impact of each of the main benefit changes in isolation, to help in assessing the main drivers for each of the different benefit designs. It should be noted that these are approximate only and cannot simply be added together as the savings interact with each other – for example, the impact of changing retirement ages will be less if the accrual rate had been changed to 80ths. However, they help to illustrate the relative significance of the different factors.

Figure 30: Drivers of cost savings to TfL of possible benefit changes on final scenarios

FINAL SALARY SCENARIOS			
IMPACTORS/DRIVERS (CONSIDERED IN ISOLATION)		APPROXIMATE REDUCTION IN TFL COST AS % OF PENSIONABLE SALARIES	APPROXIMATE REDUCTION IN TFL COST A YEAR BASED ON A £1,170M PAYROLL (£M)
IMPACT OF CHANGING ACCRUAL FROM 60THS	To 70ths	-4.3%	-50
	To 80ths	-7.5%	-88
IMPACT OF CHANGING RETIREMENT AGE FROM 65 (UNREDUCED FROM 60)	To 65 (no allowance for early retirement)	-2.5%	-30
	To SPA (no allowance for early retirement)	-4.5%	-53
IMPACT OF CHANGING PENSION INCREASES IN DEFERMENT/PAYMENT FROM RPI MAX 5% A YEAR	To CPI max 2.5% p.a.	-4.3%	-51
IMPACT OF CHANGING CONTRIBUTIONS FROM 5%	To 6%	-1.0%	-12
	To TfL tiered contributions	-1.9%	-22

Figure 31: Drivers of cost savings to TfL of possible changes to CARE scenarios

CARE SCENARIOS			
IMPACTORS/DRIVERS (CONSIDERED IN ISOLATION)		APPROXIMATE REDUCTION IN TFL COST AS % OF PENSIONABLE SALARIES	APPROXIMATE REDUCTION IN TFL COST A YEAR BASED ON A £1,170M PAYROLL (£M)
MOVING FROM FINAL SALARY TO CARE	With CPI uncapped increases	-3.6%	-42
CHANGING INCREASES IN DEFERMENT/PAYMENT FROM UNCAPPED CPI	To CPI max 2.5% p.a.	-5.6%	-65
CHANGING ACCRUAL FROM 60THS	To 49ths	6.0%	70
	To 70ths	-3.8%	-44
CHANGING RETIREMENT AGE FROM 65, UNREDUCED FROM 60	To 65 (no allowance for early retirement	-2.5%	-30
	To SPA (no allowance for early retirement)	-4.5%	-53
CHANGING CONTRIBUTIONS FROM 5%	To 6%	-1.0%	-12

APPENDIX 4: MEMBER IMPACT MODELLING OUTPUTS IN FULL

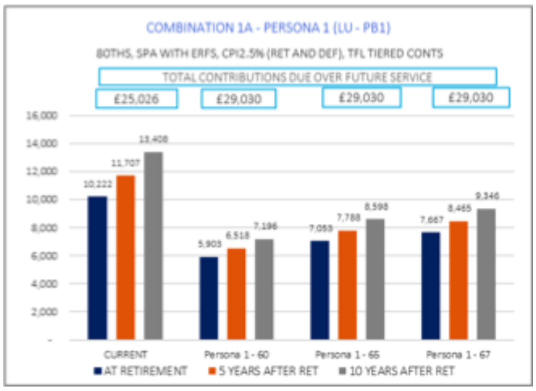
In Chapter 5 we provided examples of the impacts of potential benefit reforms for future service on a sample of member personas. In this Appendix we provide the outcomes for each of the member personas for each of the potential benefit combination reform scenarios using the same assumptions. The detailed assumptions used to derive these outcomes are set out at the end of this Appendix.

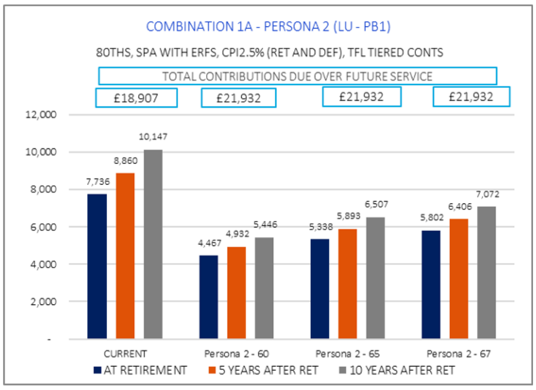
In each, for each member persona and for each benefits combination scenario we show the pension the member would receive at retirement; the pension they would receive five years after retirement; and the pension they would receive ten years after retirement. Also shown are the contributions that would be required from the member in each case.

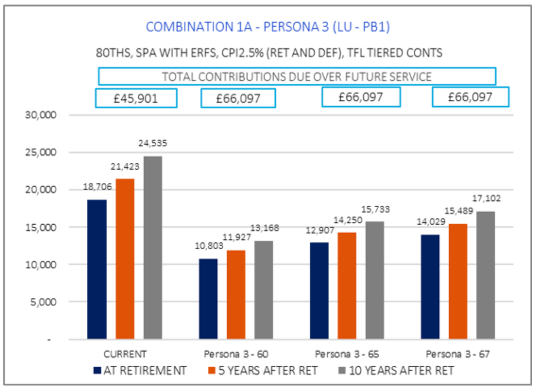
To enable a comparison, for each outcome we have also shown the pension and contributions required if the current scheme were to continue for future service on its current basis.

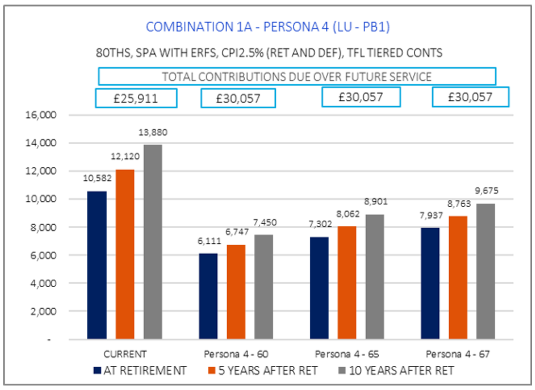
As we have noted in Chapter 5, the charts below illustrate the effect of changes to future service entitlements and would be in addition to any past service benefits built up to the date of a change to scheme benefit and/ or contribution rules. We also note in Chapter 5 that the precise impact of any future service change will depend on the member's precise circumstances, including how close or otherwise they are to retirement.

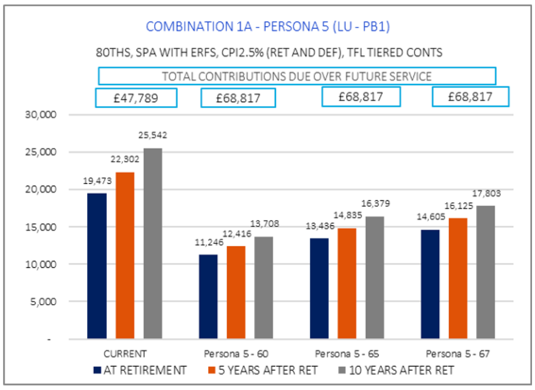
1A: 80ths; SPA (no ERFs); CPI capped at 2.5% for pensions in retirement and in deferment, TfL tiered contributions

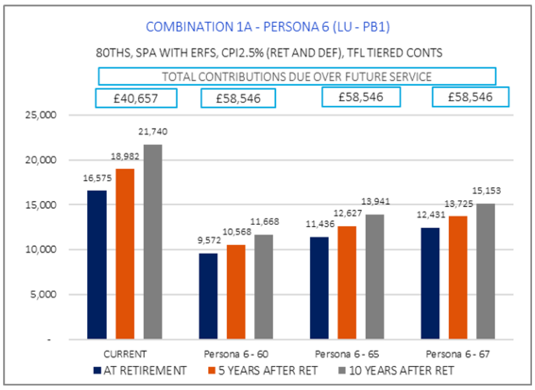


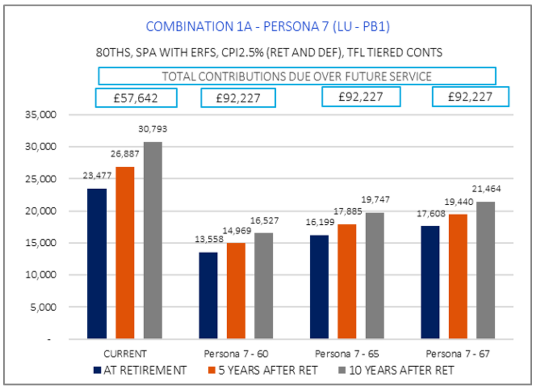


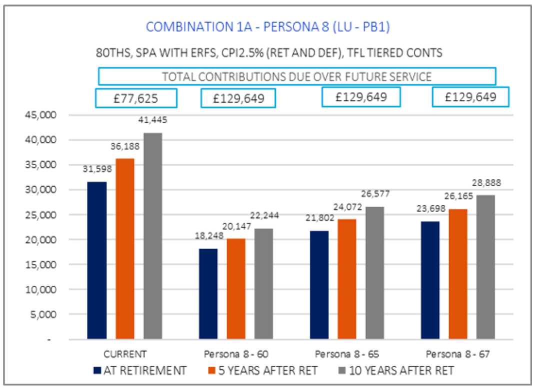


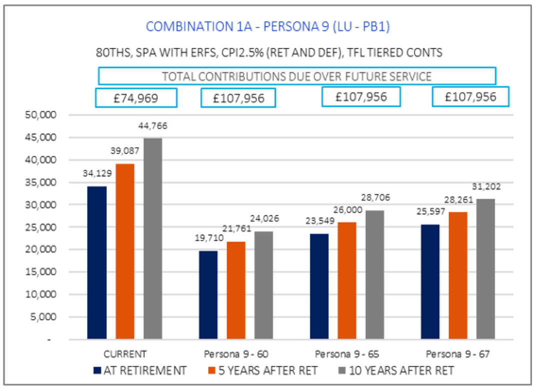


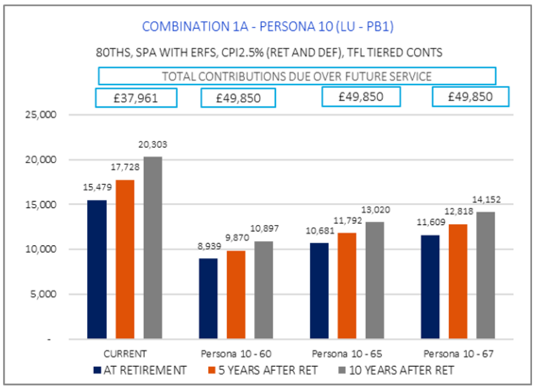


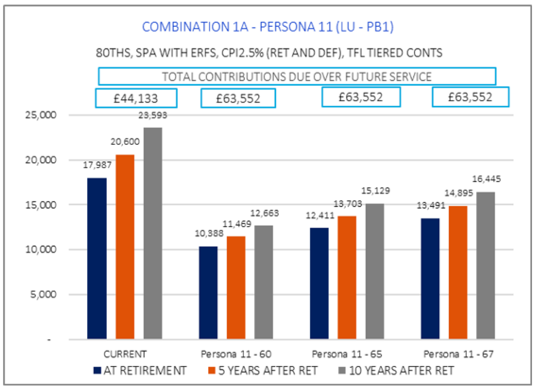


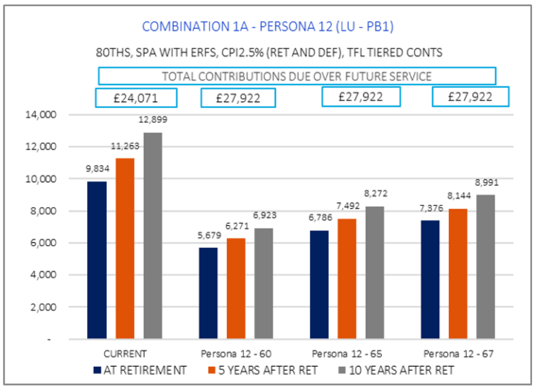


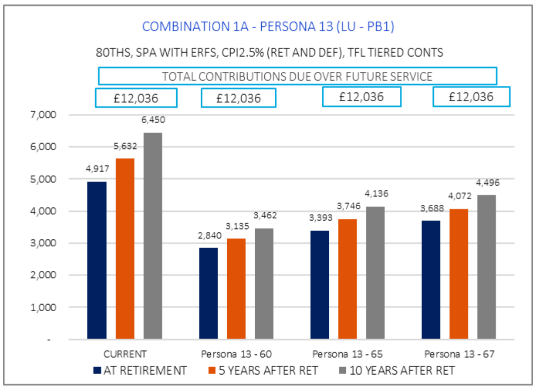


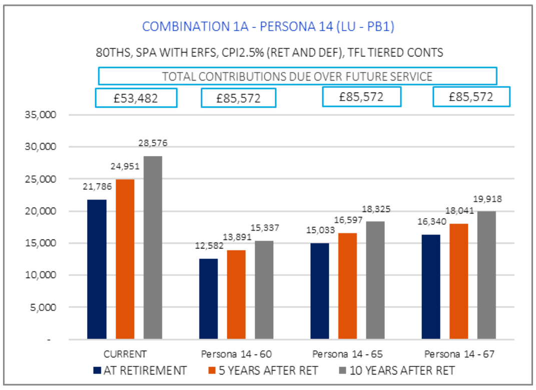

COMBINATION 1A - PERSONA 9 (LU - PB1)
80THS, SPA WITH ERFS, CPI2.5% (RET AND DEF), TFL TIERED CONTS
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£74,969
£107,956
£107,956
£107,956
34,129
39,087
44,766
19,710
21,761
24,026
23,549
26,000
28,706
25,597
28,261
31,202
CURRENT
Persona 9 - 60
Persona 9 - 65
Persona 9 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET

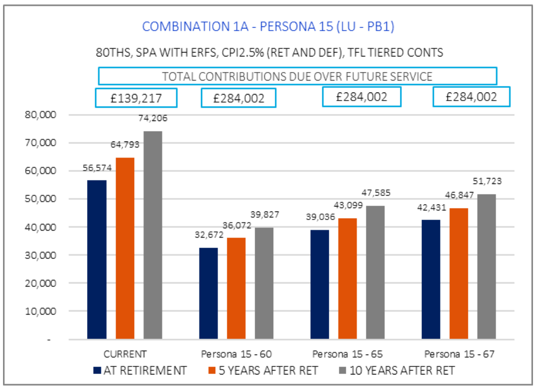

COMBINATION 1A - PERSONA 10 (LU - PB1)
80THS, SPA WITH ERFS, CPI2.5% (RET AND DEF), TFL TIERED CONTS
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£37,961
£49,850
£49,850
£49,850
15,479
17,728
20,303
8,939
9,870
10,897
10,681
11,792
13,020
11,609
12,818
14,152
CURRENT
Persona 10 - 60
Persona 10 - 65
Persona 10 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET

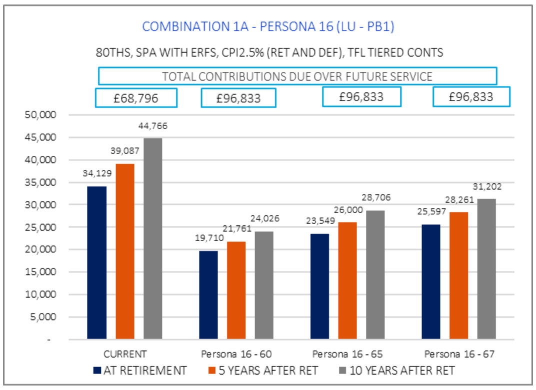

COMBINATION 1A - PERSONA 11 (LU - PB1)
80THS, SPA WITH ERFS, CPI2.5% (RET AND DEF), TFL TIERED CONTS
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£44,133
£63,552
£63,552
£63,552
17,987
20,600
23,593
10,388
11,469
12,663
12,411
13,703
15,129
13,491
14,895
16,445
CURRENT
Persona 11 - 60
Persona 11 - 65
Persona 11 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET

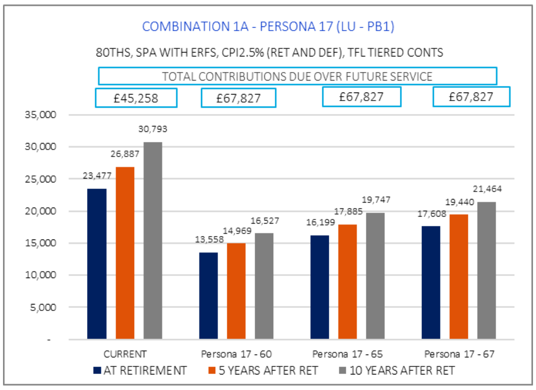

COMBINATION 1A - PERSONA 12 (LU - PB1)
80THS, SPA WITH ERFS, CPI2.5% (RET AND DEF), TFL TIERED CONTS
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£24,071
£27,922
£27,922
£27,922
9,834
11,263
12,899
5,679
6,271
6,923
6,786
7,492
8,272
7,376
8,144
8,991
CURRENT
Persona 12 - 60
Persona 12 - 65
Persona 12 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET

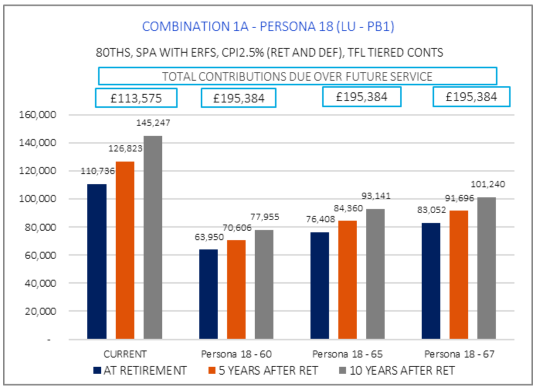

COMBINATION 1A - PERSONA 13 (LU - PB1)
80THS, SPA WITH ERFS, CPI2.5% (RET AND DEF), TFL TIERED CONTS
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£12,036
£12,036
£12,036
£12,036
4,917
5,632
6,450
2,840
3,135
3,462
3,393
3,746
4,136
3,688
4,072
4,496
CURRENT
Persona 13 - 60
Persona 13 - 65
Persona 13 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET

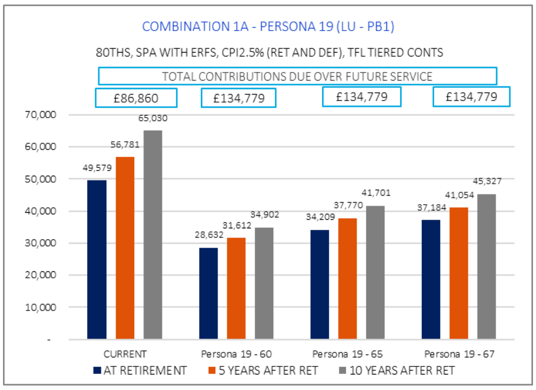

COMBINATION 1A - PERSONA 14 (LU - PB1)
80THS, SPA WITH ERFS, CPI2.5% (RET AND DEF), TFL TIERED CONTS
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£53,482
£85,572
£85,572
£85,572
21,786
24,951
28,576
12,582
13,891
15,337
15,033
16,597
18,325
16,340
18,041
19,918
CURRENT
Persona 14 - 60
Persona 14 - 65
Persona 14 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET

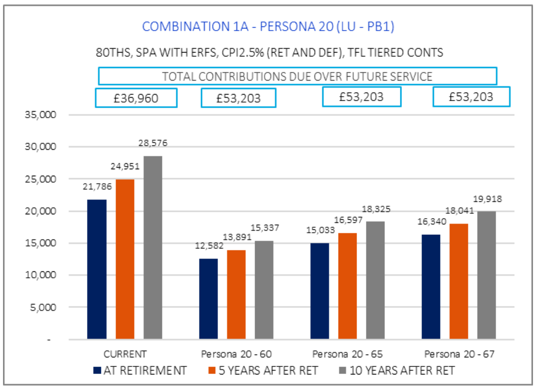

COMBINATION 1A - PERSONA 15 (LU - PB1)
80THS, SPA WITH ERFS, CPI2.5% (RET AND DEF), TFL TIERED CONTS
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£139,217
£284,002
£284,002
£284,002
56,574
64,793
74,206
32,672
36,072
39,827
39,036
43,099
47,585
42,431
46,847
51,723
CURRENT
Persona 15 - 60
Persona 15 - 65
Persona 15 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET


COMBINATION 1A - PERSONA 16 (LU - PB1)
80THS, SPA WITH ERFS, CPI2.5% (RET AND DEF), TFL TIERED CONTS
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£68,796
£96,833
£96,833
£96,833
34,129
39,087
44,766
19,710
21,761
24,026
23,549
26,000
28,706
25,597
28,261
31,202
CURRENT
Persona 16 - 60
Persona 16 - 65
Persona 16 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET

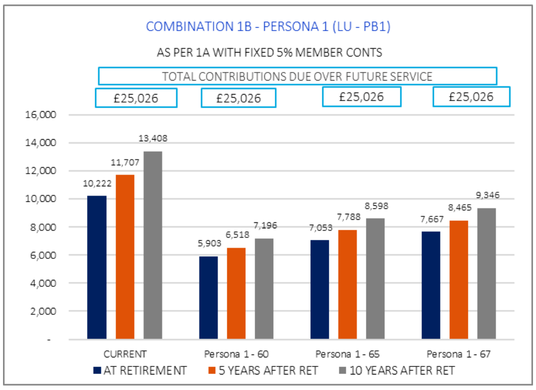


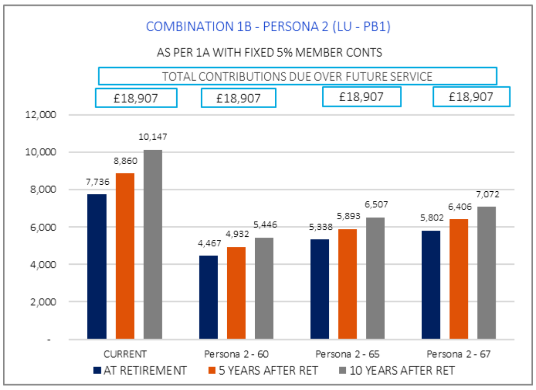


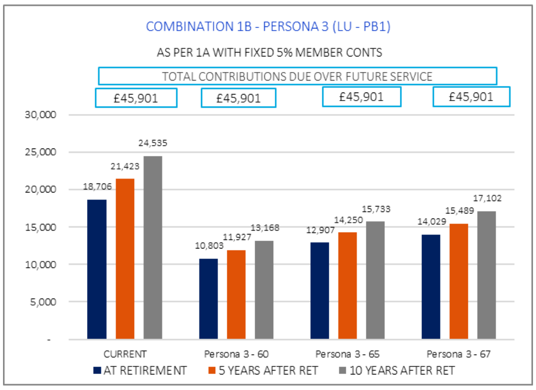


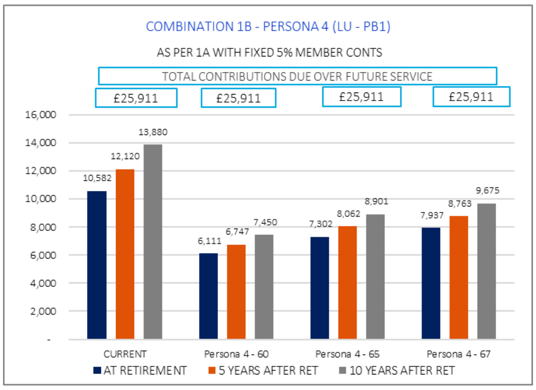


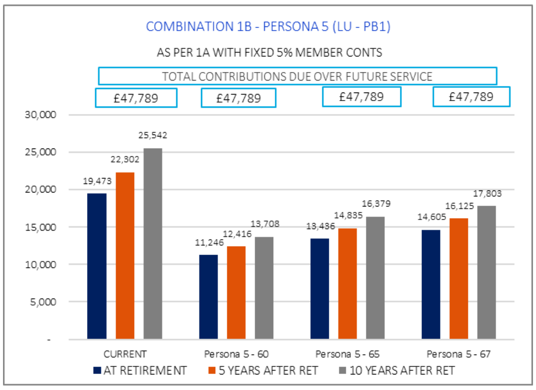
1B: 80ths; SPA (no ERFs); CPI capped at 2.5% for pensions in retirement and in deferment, fixed 5% contributions

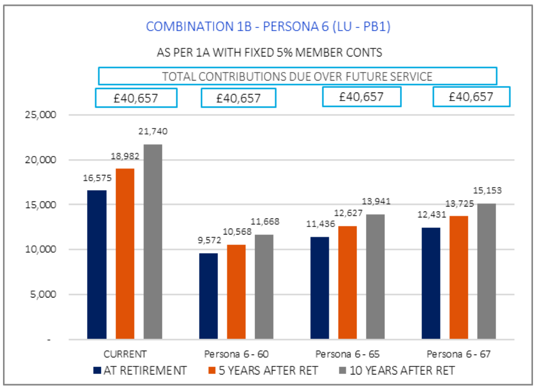


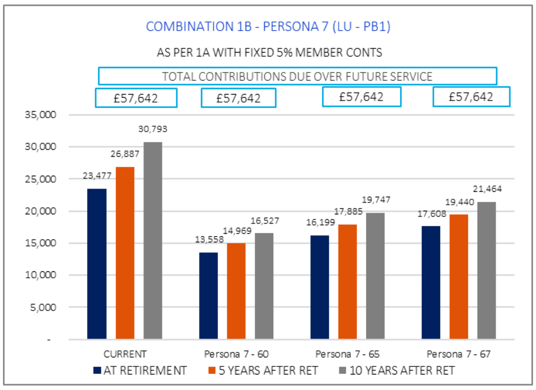


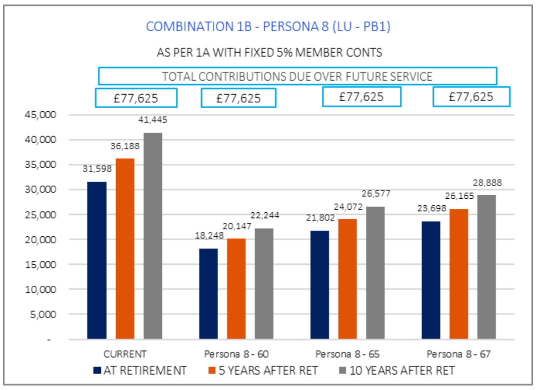


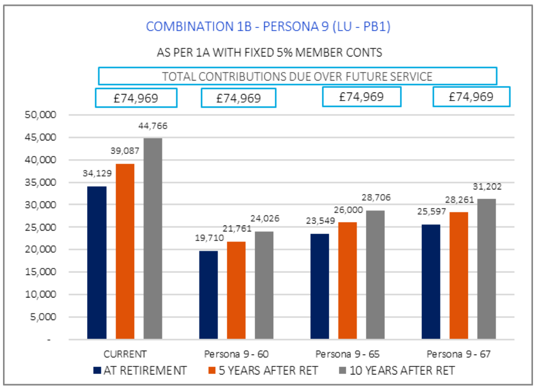


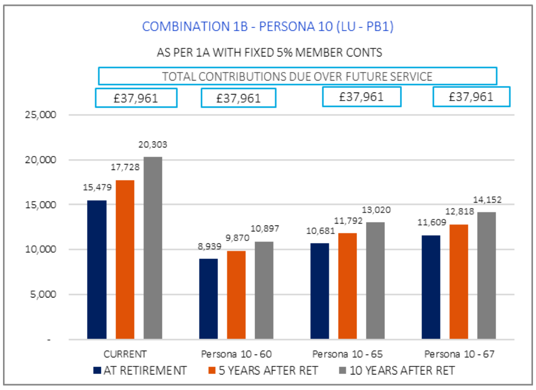

COMBINATION 1B - PERSONA 5 (LU - PB1)
AS PER 1A WITH FIXED 5% MEMBER CONTS
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£47,789
£47,789
£47,789
£47,789
19,473
22,302
25,542
11,246
12,416
13,708
13,436
14,835
16,379
14,605
16,125
17,803
CURRENT
Persona 5 - 60
Persona 5 - 65
Persona 5 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET

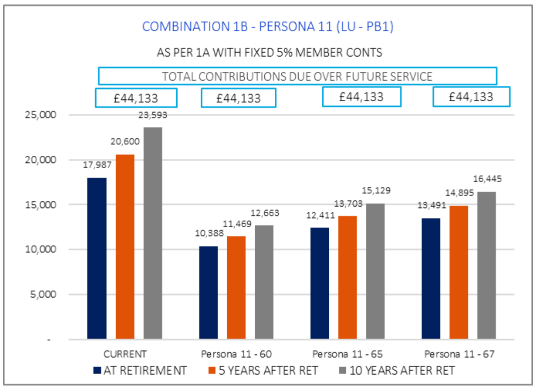

COMBINATION 1B - PERSONA 6 (LU - PB1)
AS PER 1A WITH FIXED 5% MEMBER CONTS
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£40,657
£40,657
£40,657
£40,657
16,575
18,982
21,740
9,572
10,568
11,668
11,436
12,627
13,941
12,431
13,725
15,153
CURRENT
Persona 6 - 60
Persona 6 - 65
Persona 6 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET

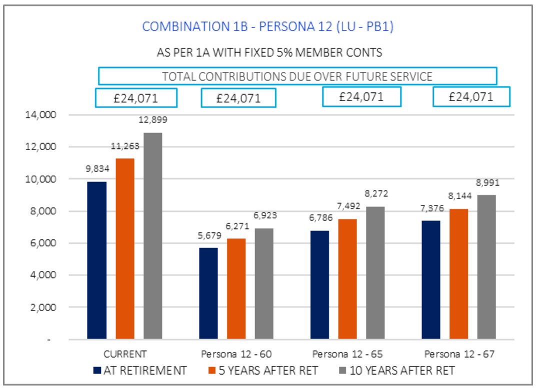

COMBINATION 1B - PERSONA 7 (LU - PB1)
AS PER 1A WITH FIXED 5% MEMBER CONTS
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£57,642
£57,642
£57,642
£57,642
23,477
26,887
30,793
13,558
14,969
16,527
16,199
17,885
19,747
17,608
19,440
21,464
CURRENT
Persona 7 - 60
Persona 7 - 65
Persona 7 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET

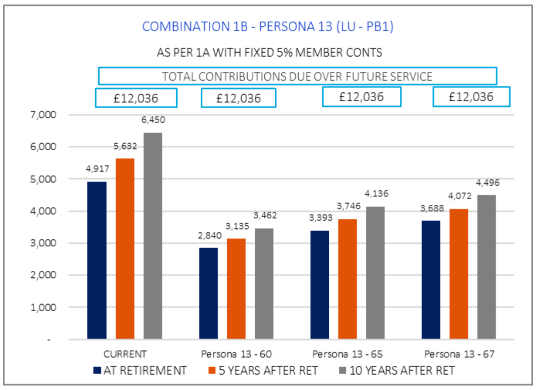

COMBINATION 1B - PERSONA 8 (LU - PB1)
AS PER 1A WITH FIXED 5% MEMBER CONTS
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£77,625
£77,625
£77,625
£77,625
31,598
36,188
41,445
18,248
20,147
22,244
21,802
24,072
26,577
23,698
26,165
28,888
CURRENT
Persona 8 - 60
Persona 8 - 65
Persona 8 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET

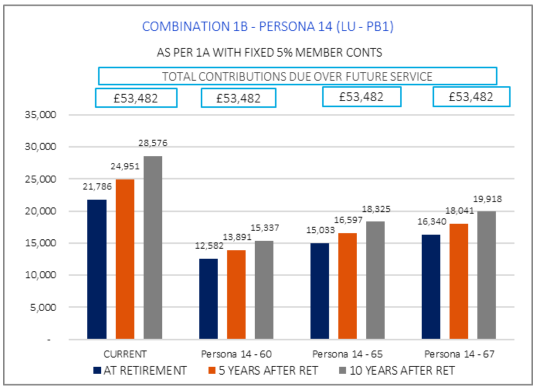

COMBINATION 1B - PERSONA 9 (LU - PB1)
AS PER 1A WITH FIXED 5% MEMBER CONTS
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£74,969
£74,969
£74,969
£74,969
34,129
39,087
44,766
19,710
21,761
24,026
23,549
26,000
28,706
25,597
28,261
31,202
CURRENT
Persona 9 - 60
Persona 9 - 65
Persona 9 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET

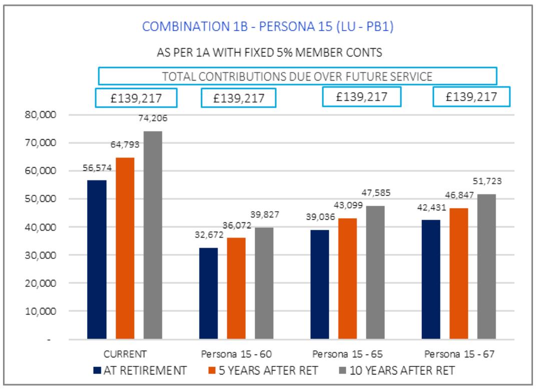

COMBINATION 1B - PERSONA 10 (LU - PB1)
AS PER 1A WITH FIXED 5% MEMBER CONTS
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£37,961
£37,961
£37,961
£37,961
15,479
17,728
20,303
8,939
9,870
10,897
10,681
11,792
13,020
11,609
12,818
14,152
CURRENT
Persona 10 - 60
Persona 10 - 65
Persona 10 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET

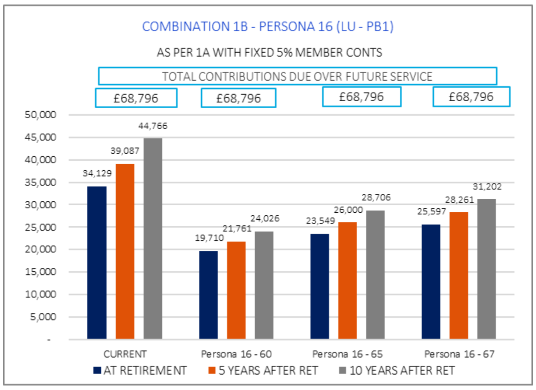

COMBINATION 1B - PERSONA 11 (LU - PB1)
AS PER 1A WITH FIXED 5% MEMBER CONTS
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£44,133
£44,133
£44,133
£44,133
17,987
20,600
23,593
10,388
11,469
12,663
12,411
13,703
15,129
13,491
14,895
16,445
CURRENT
Persona 11 - 60
Persona 11 - 65
Persona 11 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET

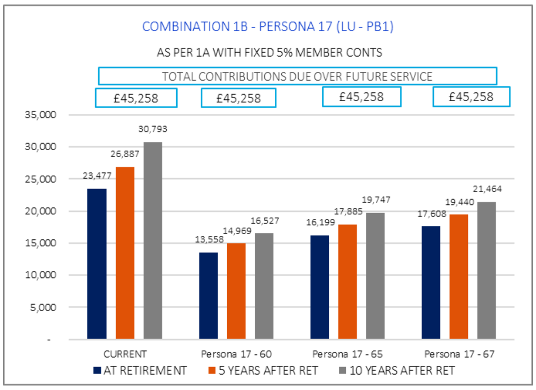

COMBINATION 1B - PERSONA 12 (LU - PB1)
AS PER 1A WITH FIXED 5% MEMBER CONTS
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£24,071
£24,071
£24,071
£24,071
9,834
11,263
12,899
5,679
6,271
6,923
6,786
7,492
8,272
7,376
8,144
8,991
CURRENT
Persona 12 - 60
Persona 12 - 65
Persona 12 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET

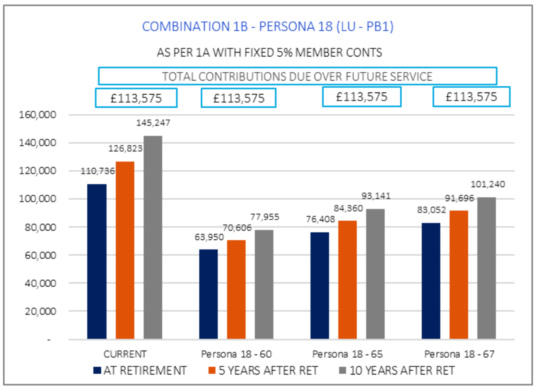

COMBINATION 1B - PERSONA 13 (LU - PB1)
AS PER 1A WITH FIXED 5% MEMBER CONTS
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£12,036
£12,036
£12,036
£12,036
4,917
5,632
6,450
2,840
3,135
3,462
3,393
3,746
4,136
3,688
4,072
4,496
CURRENT
Persona 13 - 60
Persona 13 - 65
Persona 13 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET

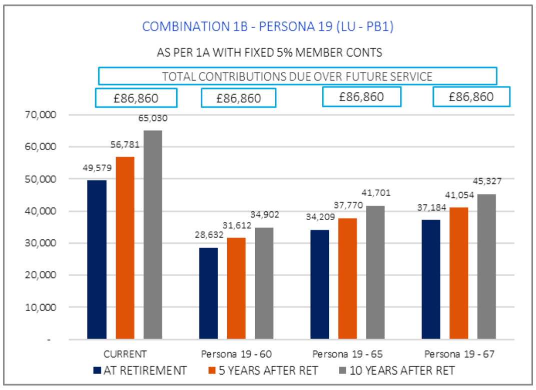

COMBINATION 1B - PERSONA 14 (LU - PB1)
AS PER 1A WITH FIXED 5% MEMBER CONTS
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£53,482
£53,482
£53,482
£53,482
21,786
24,951
28,576
12,582
13,891
15,337
15,033
16,597
18,325
16,340
18,041
19,918
CURRENT
Persona 14 - 60
Persona 14 - 65
Persona 14 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET

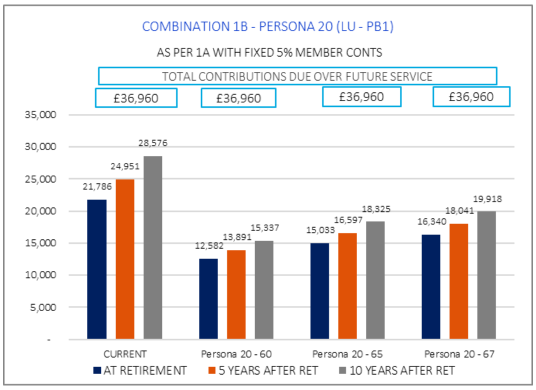

COMBINATION 1B - PERSONA 15 (LU - PB1)
AS PER 1A WITH FIXED 5% MEMBER CONTS
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£139,217
£139,217
£139,217
£139,217
56,574
64,793
74,206
32,672
36,072
39,827
39,036
43,099
47,585
42,431
46,847
51,723
CURRENT
Persona 15 - 60
Persona 15 - 65
Persona 15 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET


COMBINATION 1B - PERSONA 16 (LU - PB1)
AS PER 1A WITH FIXED 5% MEMBER CONTS
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£68,796
£68,796
£68,796
£68,796
34,129
39,087
44,766
19,710
21,761
24,026
23,549
26,000
28,706
25,597
28,261
31,202
CURRENT
Persona 16 - 60
Persona 16 - 65
Persona 16 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET

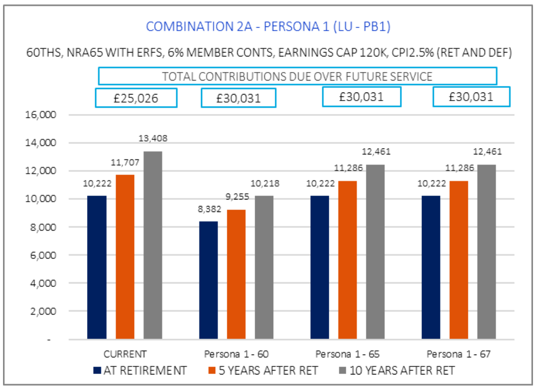

COMBINATION 1B - PERSONA 17 (LU - PB1)
AS PER 1A WITH FIXED 5% MEMBER CONTS
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£45,258
£45,258
£45,258
£45,258
23,477
26,887
30,793
13,558
14,969
16,527
16,199
17,885
19,747
17,608
19,440
21,464
CURRENT
Persona 17 - 60
Persona 17 - 65
Persona 17 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET

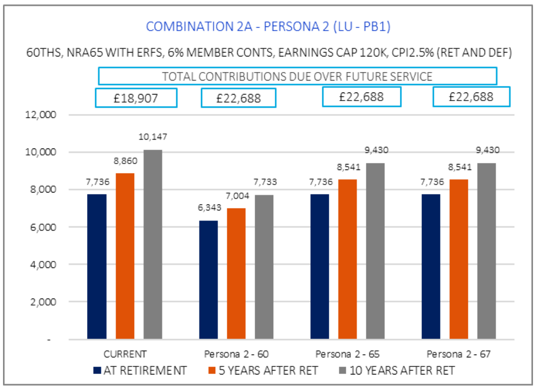

COMBINATION 1B - PERSONA 18 (LU - PB1)
AS PER 1A WITH FIXED 5% MEMBER CONTS
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£113,575
£113,575
£113,575
£113,575
110,736
126,823
145,247
63,950
70,606
77,955
76,408
84,360
93,141
83,052
91,696
101,240
CURRENT
Persona 18 - 60
Persona 18 - 65
Persona 18 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET

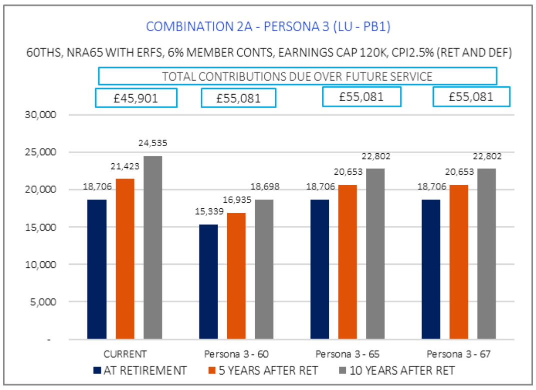

COMBINATION 1B - PERSONA 19 (LU - PB1)
AS PER 1A WITH FIXED 5% MEMBER CONTS
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£86,860
£86,860
£86,860
£86,860
49,579
56,781
65,030
28,632
31,612
34,902
34,209
37,770
41,701
37,184
41,054
45,327
CURRENT
Persona 19 - 60
Persona 19 - 65
Persona 19 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET

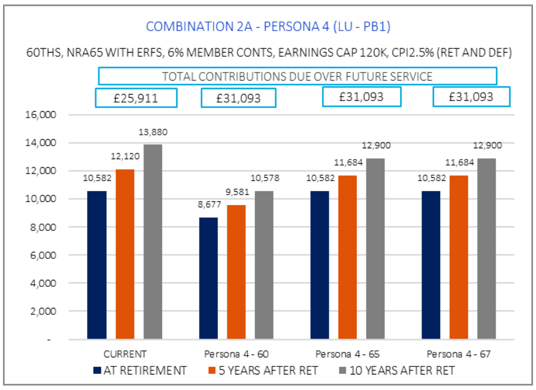

COMBINATION 1B - PERSONA 20 (LU - PB1)
AS PER 1A WITH FIXED 5% MEMBER CONTS
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£36,960
£36,960
£36,960
£36,960
21,786
24,951
28,576
12,582
13,891
15,337
15,033
16,597
18,325
16,340
18,041
19,918
CURRENT
Persona 20 - 60
Persona 20 - 65
Persona 20 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET

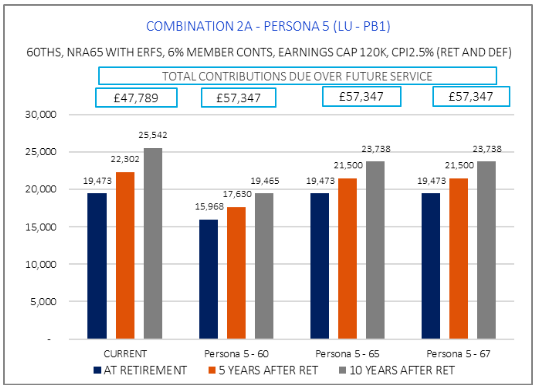
2A: 60ths; NRA 65 (no ERFs); 6% member contributions, CPI capped at 2.5% for pensions in retirement and in deferment; £120k earnings cap

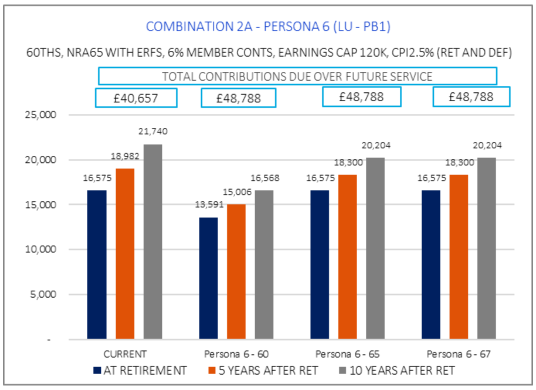


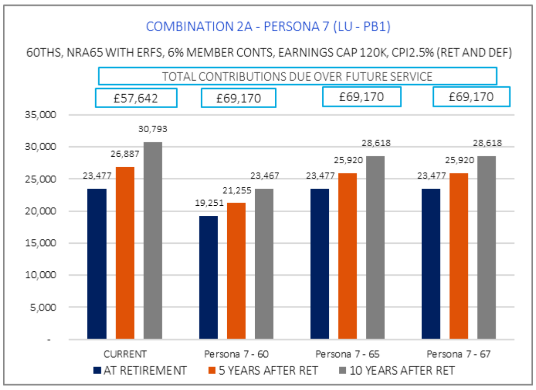


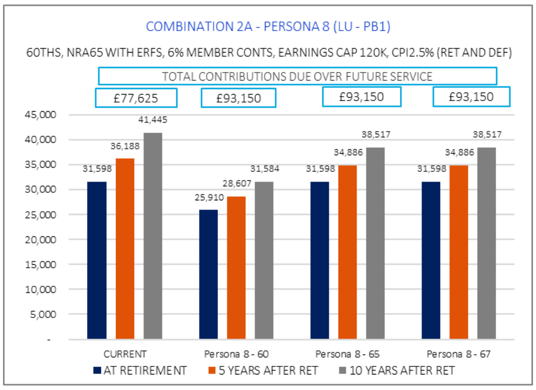


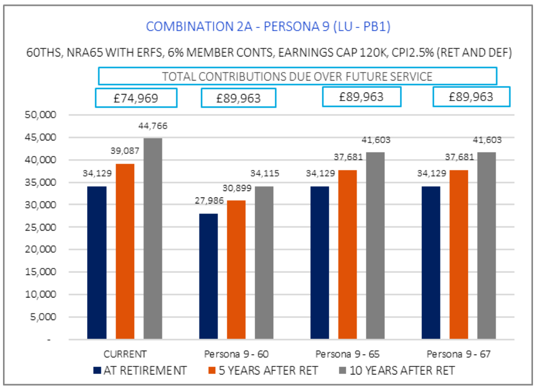


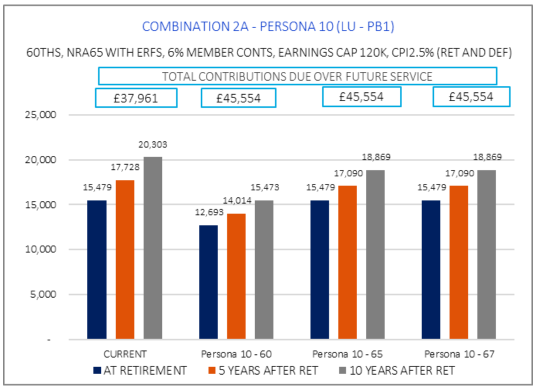


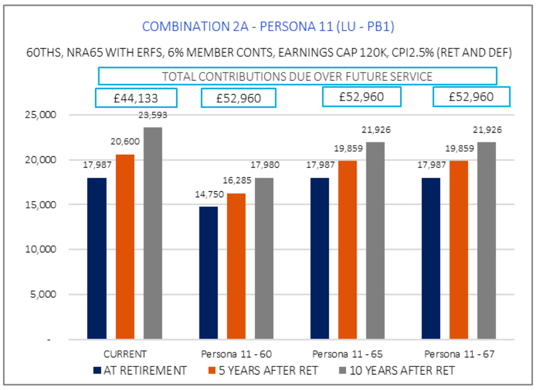


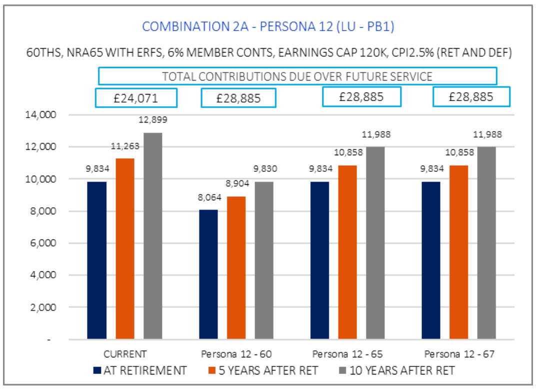


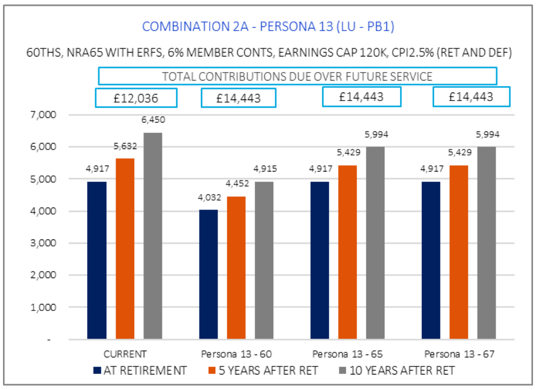


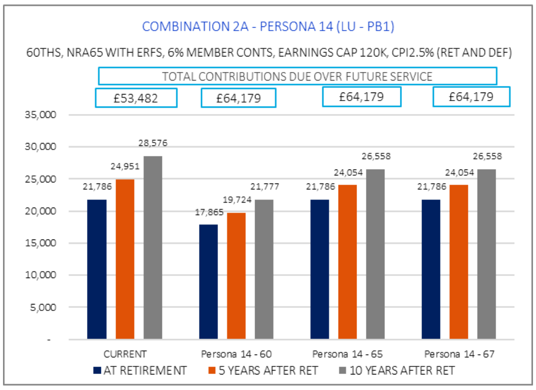

COMBINATION 2A - PERSONA 9 (LU - PB1)
60THS, NRA65 WITH ERFS, 6% MEMBER CONTS, EARNINGS CAP 120K, CPI2.5% (RET AND DEF)
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£74,969
£89,963
£89,963
£89,963
34,129
39,087
44,766
27,986
30,899
34,115
34,129
37,681
41,603
34,129
37,681
41,603
CURRENT
Persona 9 - 60
Persona 9 - 65
Persona 9 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET

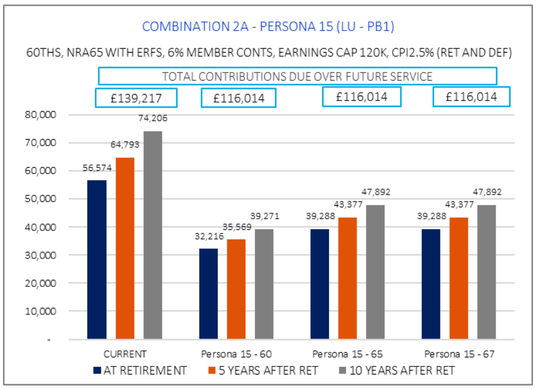

COMBINATION 2A - PERSONA 10 (LU - PB1)
60THS, NRA65 WITH ERFS, 6% MEMBER CONTS, EARNINGS CAP 120K, CPI2.5% (RET AND DEF)
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£37,961
£45,554
£45,554
£45,554
15,479
17,728
20,303
12,693
14,014
15,473
15,479
17,090
18,869
15,479
17,090
18,869
CURRENT
Persona 10 - 60
Persona 10 - 65
Persona 10 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET

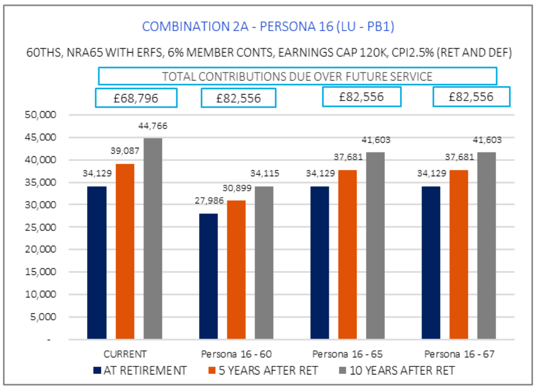

COMBINATION 2A - PERSONA 11 (LU - PB1)
60THS, NRA65 WITH ERFS, 6% MEMBER CONTS, EARNINGS CAP 120K, CPI2.5% (RET AND DEF)
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£44,133
£52,960
£52,960
£52,960
17,987
20,600
23,593
14,750
16,285
17,980
17,987
19,859
21,926
17,987
19,859
21,926
CURRENT
Persona 11 - 60
Persona 11 - 65
Persona 11 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET

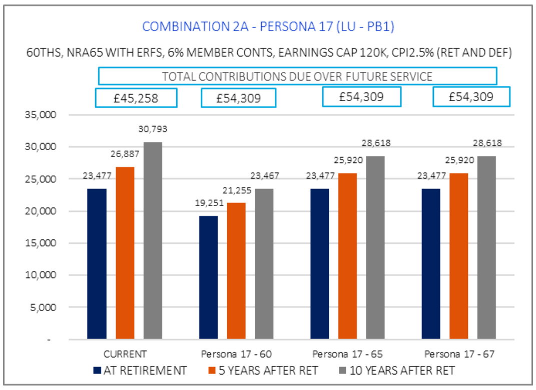

COMBINATION 2A - PERSONA 12 (LU - PB1)
60THS, NRA65 WITH ERFS, 6% MEMBER CONTS, EARNINGS CAP 120K, CPI2.5% (RET AND DEF)
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£24,071
£28,885
£28,885
£28,885
9,834
11,263
12,899
8,064
8,904
9,830
9,834
10,858
11,988
9,834
10,858
11,988
CURRENT
Persona 12 - 60
Persona 12 - 65
Persona 12 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET

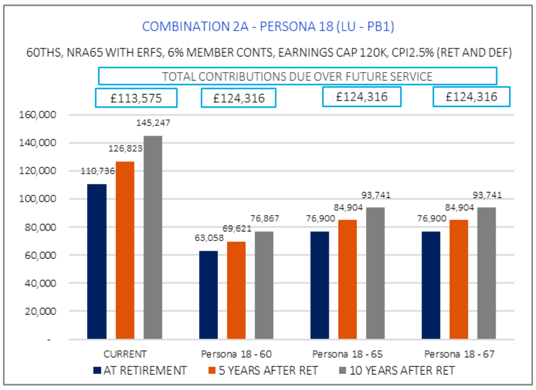

COMBINATION 2A - PERSONA 13 (LU - PB1)
60THS, NRA65 WITH ERFS, 6% MEMBER CONTS, EARNINGS CAP 120K, CPI2.5% (RET AND DEF)
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£12,036
£14,443
£14,443
£14,443
4,917
5,632
6,450
4,032
4,452
4,915
4,917
5,429
5,994
4,917
5,429
5,994
CURRENT
Persona 13 - 60
Persona 13 - 65
Persona 13 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET

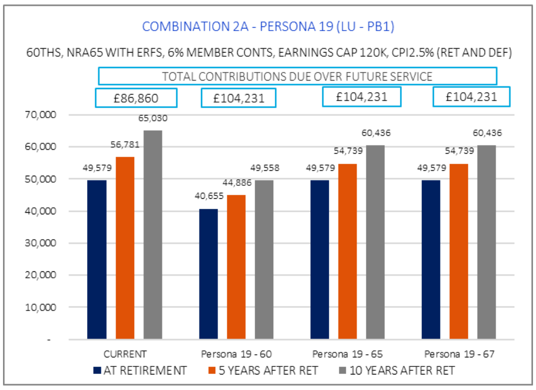

COMBINATION 2A - PERSONA 14 (LU - PB1)
60THS, NRA65 WITH ERFS, 6% MEMBER CONTS, EARNINGS CAP 120K, CPI2.5% (RET AND DEF)
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£53,482
£64,179
£64,179
£64,179
21,786
24,951
28,576
17,865
19,724
21,777
21,786
24,054
26,558
21,786
24,054
26,558
CURRENT
Persona 14 - 60
Persona 14 - 65
Persona 14 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET

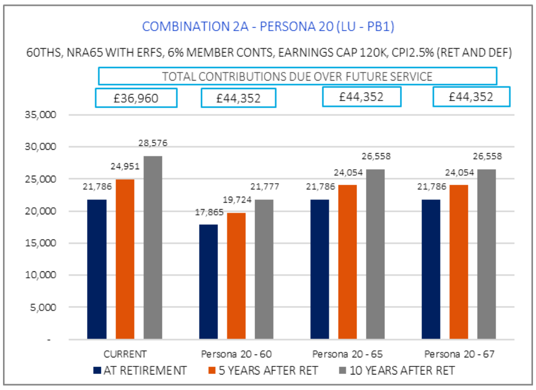

COMBINATION 2A - PERSONA 15 (LU - PB1)
60THS, NRA65 WITH ERFS, 6% MEMBER CONTS, EARNINGS CAP 120K, CPI2.5% (RET AND DEF)
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£139,217
£116,014
£116,014
£116,014
56,574
64,793
74,206
32,216
35,569
39,271
39,288
43,377
47,892
39,288
43,377
47,892
CURRENT
Persona 15 - 60
Persona 15 - 65
Persona 15 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET


COMBINATION 2A - PERSONA 16 (LU - PB1)
60THS, NRA65 WITH ERFS, 6% MEMBER CONTS, EARNINGS CAP 120K, CPI2.5% (RET AND DEF)
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£68,796
£82,556
£82,556
£82,556
34,129
39,087
44,766
27,986
30,899
34,115
34,129
37,681
41,603
34,129
37,681
41,603
CURRENT
Persona 16 - 60
Persona 16 - 65
Persona 16 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET

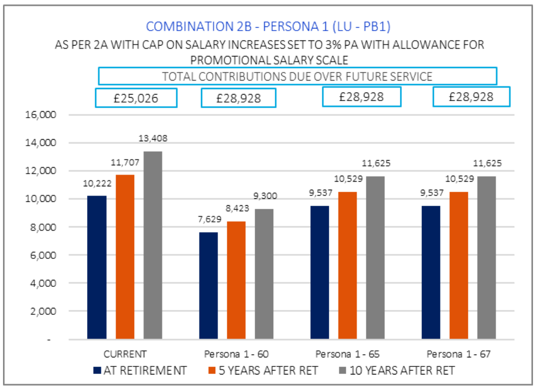


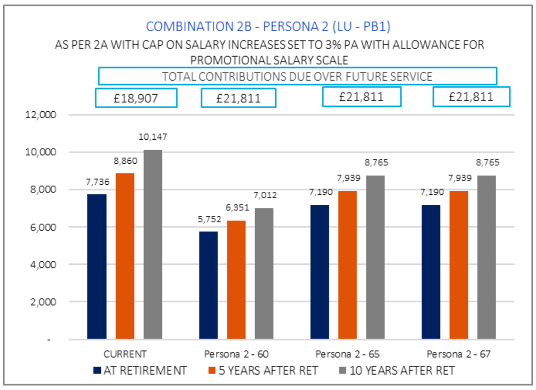


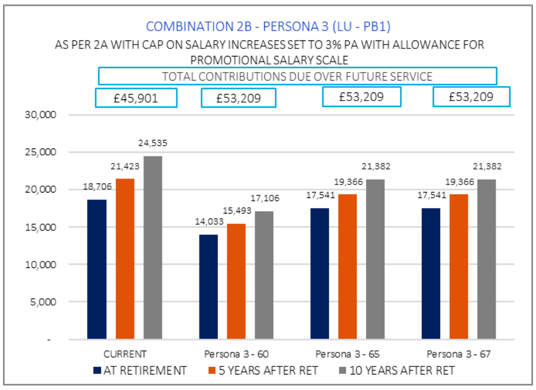


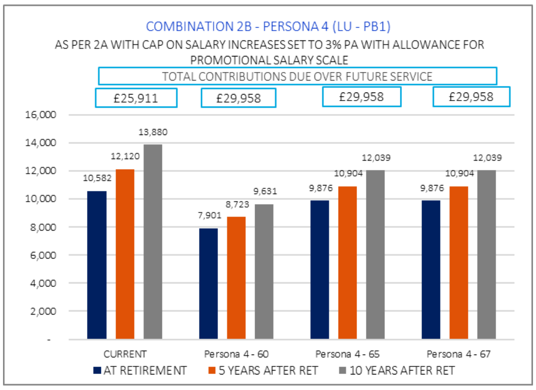


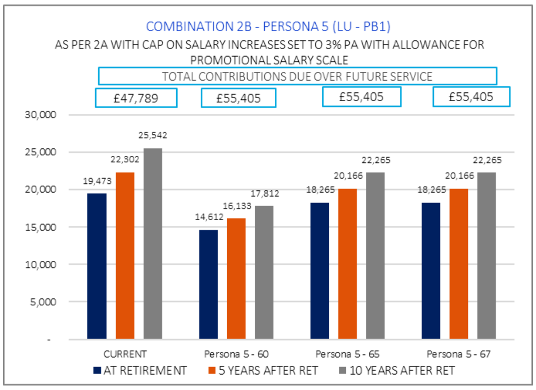
2B: 60ths; NRA 65 (no ERFs); 6% member contributions, CPI capped at 2.5% for pensions in retirement and in deferment; £120k earnings cap; cap on pensionable salary increases of 3% pa (with allowances for promotional salary scale)

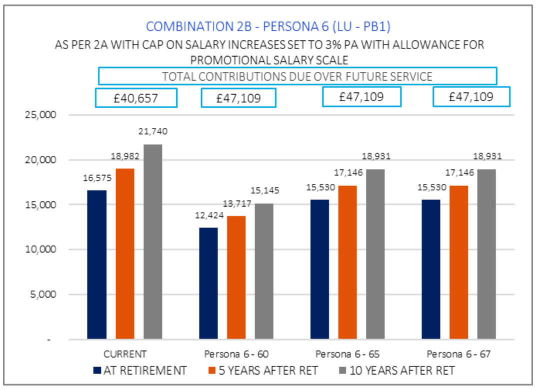


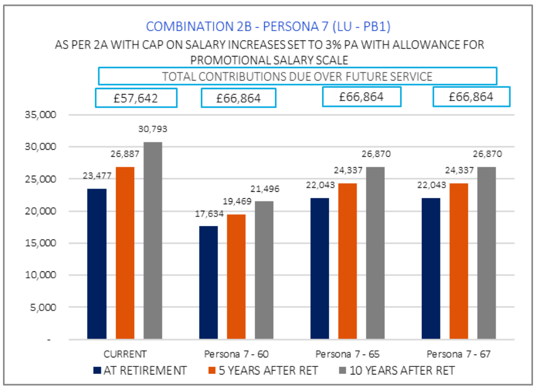


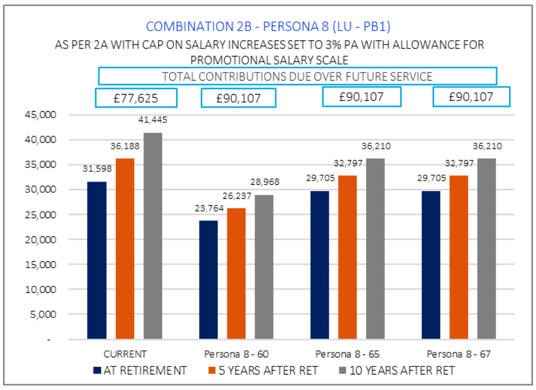


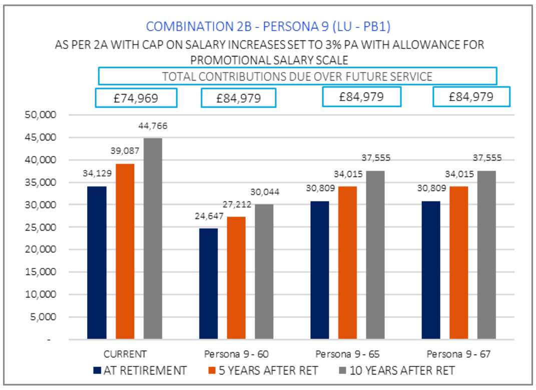


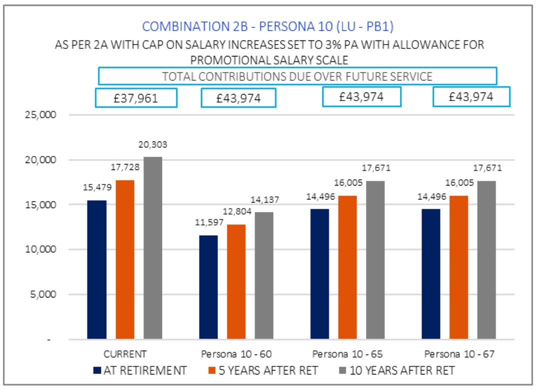

COMBINATION 2B - PERSONA 5 (LU - PB1)
AS PER 2A WITH CAP ON SALARY INCREASES SET TO 3% PA WITH ALLOWANCE FOR PROMOTIONAL SALARY SCALE
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£47,789
£55,405
£55,405
£55,405
19,473
22,302
25,542
14,612
16,133
17,812
18,265
20,166
22,265
18,265
20,166
22,265
CURRENT
Persona 5 - 60
Persona 5 - 65
Persona 5 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET

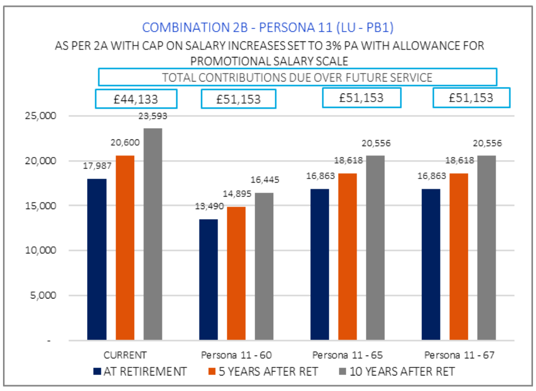

COMBINATION 2B - PERSONA 6 (LU - PB1)
AS PER 2A WITH CAP ON SALARY INCREASES SET TO 3% PA WITH ALLOWANCE FOR PROMOTIONAL SALARY SCALE
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£40,657
£47,109
£47,109
£47,109
16,575
18,982
21,740
12,424
13,717
15,145
15,530
17,146
18,931
15,530
17,146
18,931
CURRENT
Persona 6 - 60
Persona 6 - 65
Persona 6 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET

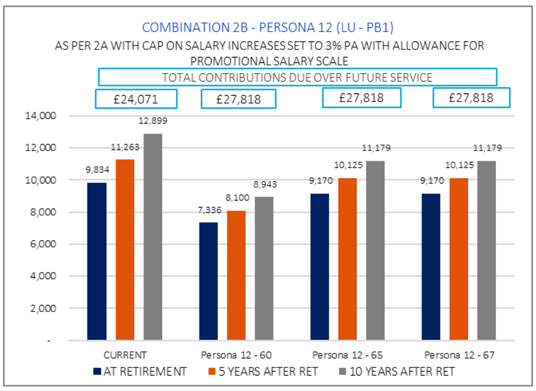

COMBINATION 2B - PERSONA 7 (LU - PB1)
AS PER 2A WITH CAP ON SALARY INCREASES SET TO 3% PA WITH ALLOWANCE FOR PROMOTIONAL SALARY SCALE
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£57,642
£66,864
£66,864
£66,864
23,477
26,887
30,793
17,634
19,469
21,496
22,043
24,337
26,870
22,043
24,337
26,870
CURRENT
Persona 7 - 60
Persona 7 - 65
Persona 7 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET

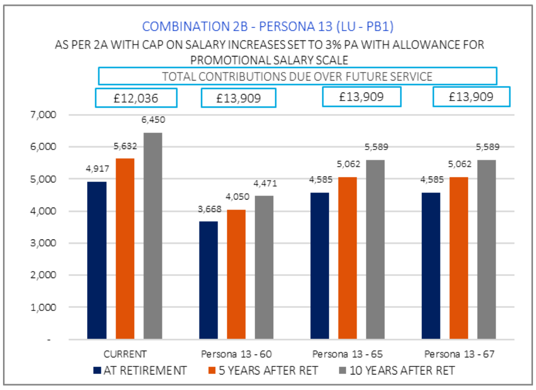

COMBINATION 2B - PERSONA 8 (LU - PB1)
AS PER 2A WITH CAP ON SALARY INCREASES SET TO 3% PA WITH ALLOWANCE FOR PROMOTIONAL SALARY SCALE
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£77,625
£90,107
£90,107
£90,107
31,598
36,188
41,445
23,764
26,237
28,968
29,705
32,797
36,210
29,705
32,797
36,210
CURRENT
Persona 8 - 60
Persona 8 - 65
Persona 8 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET

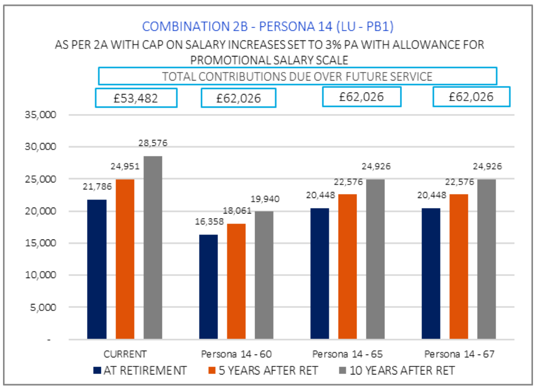

COMBINATION 2B - PERSONA 9 (LU - PB1)
AS PER 2A WITH CAP ON SALARY INCREASES SET TO 3% PA WITH ALLOWANCE FOR PROMOTIONAL SALARY SCALE
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£74,969
£84,979
£84,979
£84,979
34,129
39,087
44,766
24,647
27,212
30,044
30,809
34,015
37,555
30,809
34,015
37,555
CURRENT
Persona 9 - 60
Persona 9 - 65
Persona 9 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET

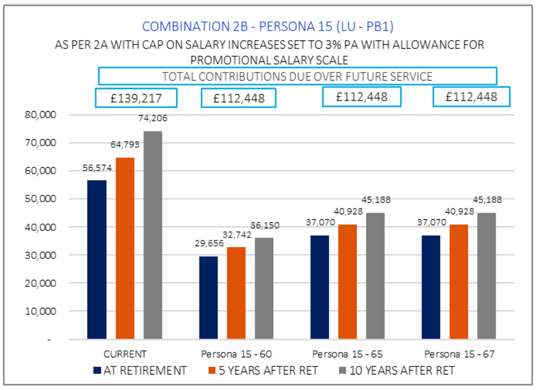

COMBINATION 2B - PERSONA 10 (LU - PB1)
AS PER 2A WITH CAP ON SALARY INCREASES SET TO 3% PA WITH ALLOWANCE FOR PROMOTIONAL SALARY SCALE
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£37,961
£43,974
£43,974
£43,974
15,479
17,728
20,303
11,597
12,804
14,137
14,496
16,005
17,671
14,496
16,005
17,671
CURRENT
Persona 10 - 60
Persona 10 - 65
Persona 10 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET

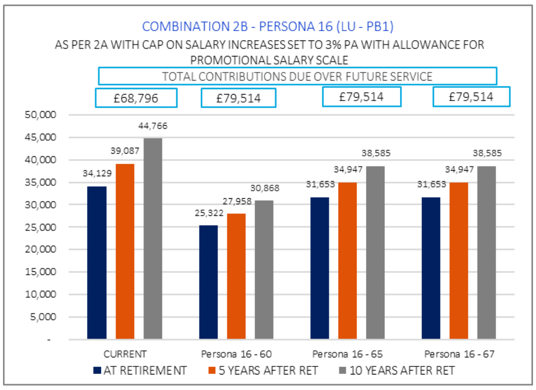

COMBINATION 2B - PERSONA 11 (LU - PB1)
AS PER 2A WITH CAP ON SALARY INCREASES SET TO 3% PA WITH ALLOWANCE FOR PROMOTIONAL SALARY SCALE
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£44,133
£51,153
£51,153
£51,153
17,987
20,600
23,593
13,490
14,895
16,445
16,863
18,618
20,556
16,863
18,618
20,556
CURRENT
Persona 11 - 60
Persona 11 - 65
Persona 11 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET

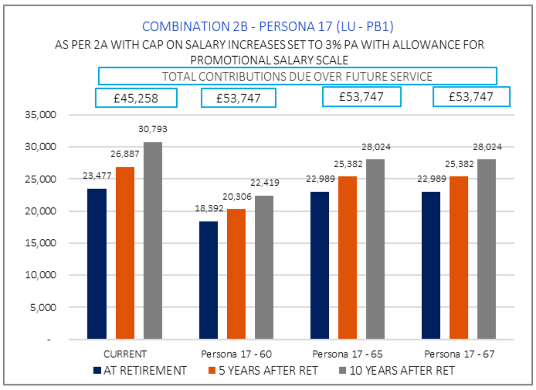

COMBINATION 2B - PERSONA 12 (LU - PB1)
AS PER 2A WITH CAP ON SALARY INCREASES SET TO 3% PA WITH ALLOWANCE FOR PROMOTIONAL SALARY SCALE
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£24,071
£27,818
£27,818
£27,818
9,834
11,263
12,899
7,336
8,100
8,943
9,170
10,125
11,179
9,170
10,125
11,179
CURRENT
Persona 12 - 60
Persona 12 - 65
Persona 12 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET

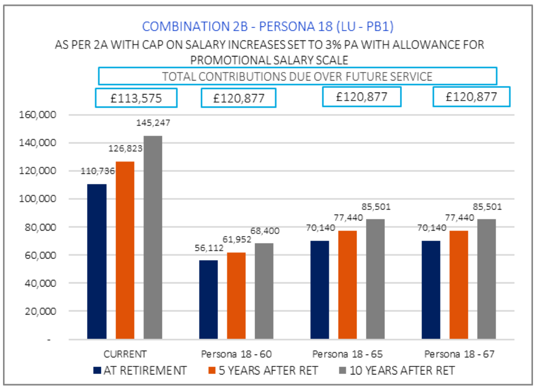

COMBINATION 2B - PERSONA 13 (LU - PB1)
AS PER 2A WITH CAP ON SALARY INCREASES SET TO 3% PA WITH ALLOWANCE FOR PROMOTIONAL SALARY SCALE
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£12,036
£13,909
£13,909
£13,909
4,917
5,632
6,450
3,668
4,050
4,471
4,585
5,062
5,589
4,585
5,062
5,589
CURRENT
Persona 13 - 60
Persona 13 - 65
Persona 13 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET

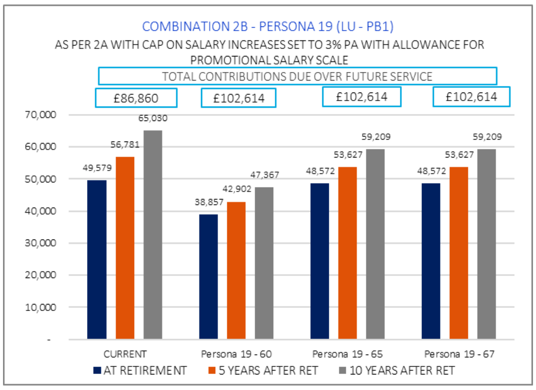

COMBINATION 2B - PERSONA 14 (LU - PB1)
AS PER 2A WITH CAP ON SALARY INCREASES SET TO 3% PA WITH ALLOWANCE FOR PROMOTIONAL SALARY SCALE
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£53,482
£62,026
£62,026
£62,026
21,786
24,951
28,576
16,358
18,061
19,940
20,448
22,576
24,926
20,448
22,576
24,926
CURRENT
Persona 14 - 60
Persona 14 - 65
Persona 14 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET

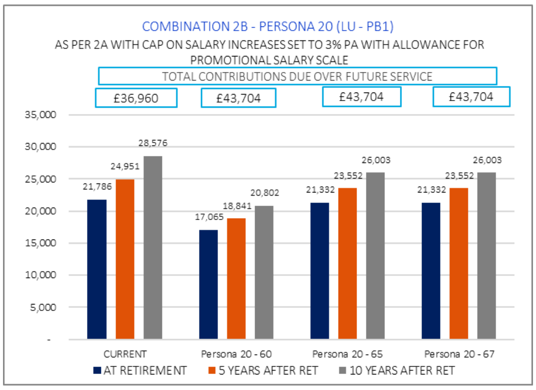

COMBINATION 2B - PERSONA 15 (LU - PB1)
AS PER 2A WITH CAP ON SALARY INCREASES SET TO 3% PA WITH ALLOWANCE FOR PROMOTIONAL SALARY SCALE
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£139,217
£112,448
£112,448
£112,448
56,574
64,793
74,206
29,656
32,742
36,150
37,070
40,928
45,188
37,070
40,928
45,188
CURRENT
Persona 15 - 60
Persona 15 - 65
Persona 15 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET


COMBINATION 2B - PERSONA 16 (LU - PB1)
AS PER 2A WITH CAP ON SALARY INCREASES SET TO 3% PA WITH ALLOWANCE FOR PROMOTIONAL SALARY SCALE
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£68,796
£79,514
£79,514
£79,514
34,129
39,087
44,766
25,322
27,958
30,868
31,653
34,947
38,585
31,653
34,947
38,585
CURRENT
Persona 16 - 60
Persona 16 - 65
Persona 16 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET

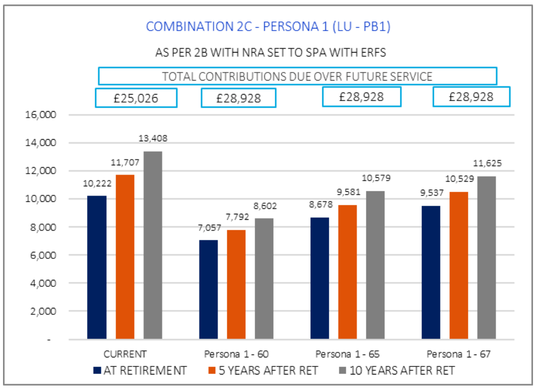

COMBINATION 2B - PERSONA 17 (LU - PB1)
AS PER 2A WITH CAP ON SALARY INCREASES SET TO 3% PA WITH ALLOWANCE FOR PROMOTIONAL SALARY SCALE
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£45,258
£53,747
£53,747
£53,747
23,477
26,887
30,793
18,392
20,306
22,419
22,989
25,382
28,024
22,989
25,382
28,024
CURRENT
Persona 17 - 60
Persona 17 - 65
Persona 17 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET

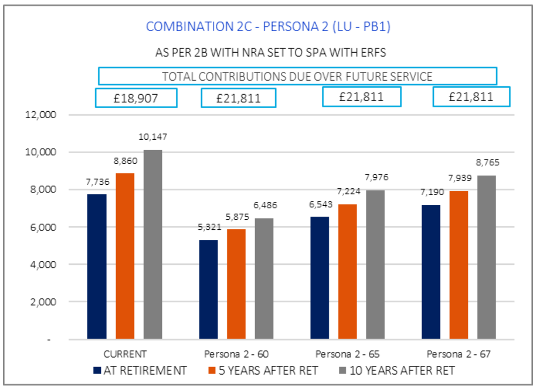

COMBINATION 2B - PERSONA 18 (LU - PB1)
AS PER 2A WITH CAP ON SALARY INCREASES SET TO 3% PA WITH ALLOWANCE FOR PROMOTIONAL SALARY SCALE
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£113,575
£120,877
£120,877
£120,877
110,736
126,823
145,247
56,112
61,952
68,400
70,140
77,440
85,501
70,140
77,440
85,501
CURRENT
Persona 18 - 60
Persona 18 - 65
Persona 18 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET

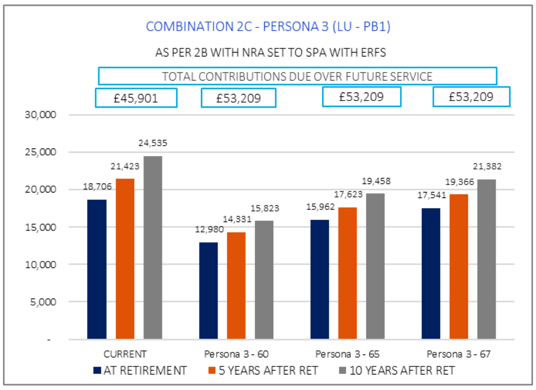

COMBINATION 2B - PERSONA 19 (LU - PB1)
AS PER 2A WITH CAP ON SALARY INCREASES SET TO 3% PA WITH ALLOWANCE FOR PROMOTIONAL SALARY SCALE
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£86,860
£102,614
£102,614
£102,614
49,579
56,781
65,030
38,857
42,902
47,367
48,572
53,627
59,209
48,572
53,627
59,209
CURRENT
Persona 19 - 60
Persona 19 - 65
Persona 19 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET

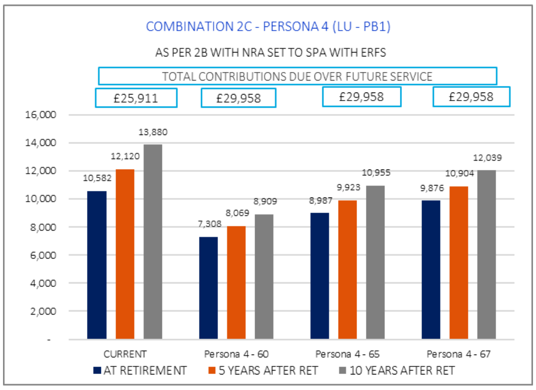

COMBINATION 2B - PERSONA 20 (LU - PB1)
AS PER 2A WITH CAP ON SALARY INCREASES SET TO 3% PA WITH ALLOWANCE FOR PROMOTIONAL SALARY SCALE
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£36,960
£43,704
£43,704
£43,704
21,786
24,951
28,576
17,065
18,841
20,802
21,332
23,552
26,003
21,332
23,552
26,003
CURRENT
Persona 20 - 60
Persona 20 - 65
Persona 20 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET

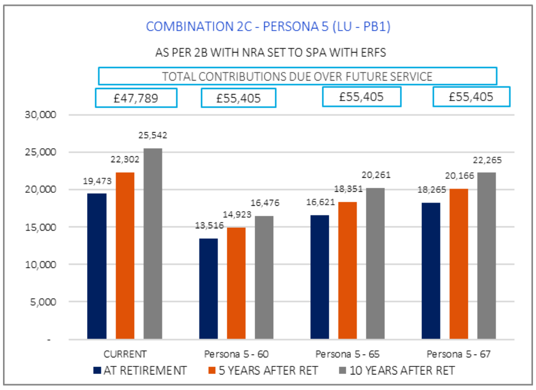
2C: 60ths; NRA set to SPA (no ERFs); 6% member contributions, CPI capped at 2.5% for pensions in retirement and in deferment; £120k earnings cap; cap on pensionable salary increases of 3% pa (+ allowances for promotional salary scale)

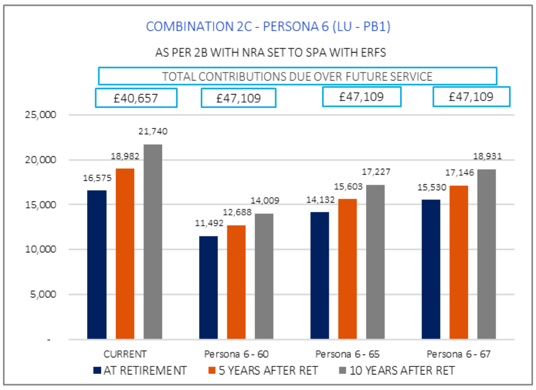


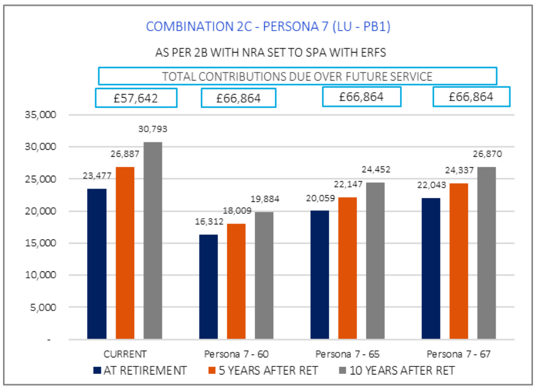


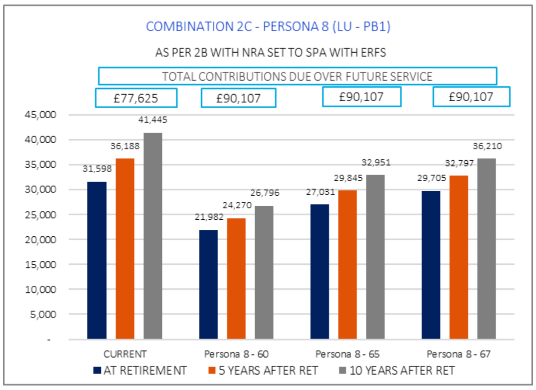


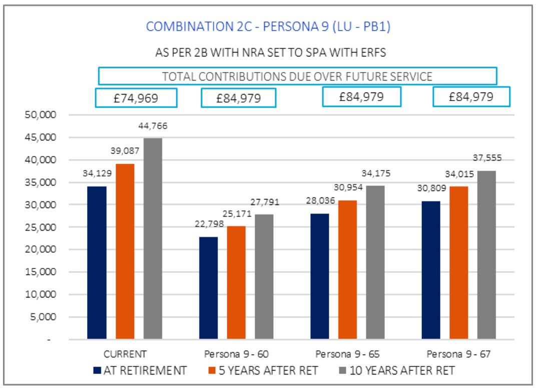


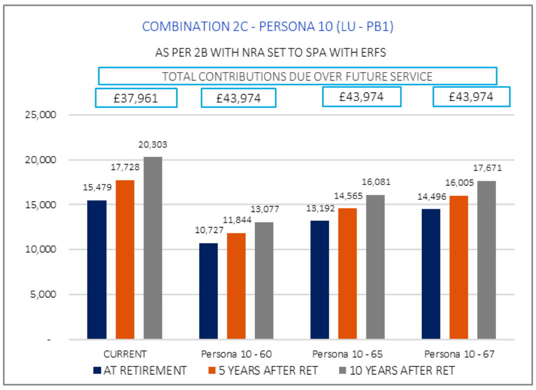


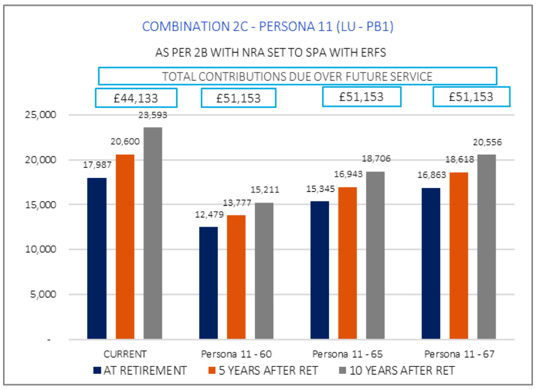


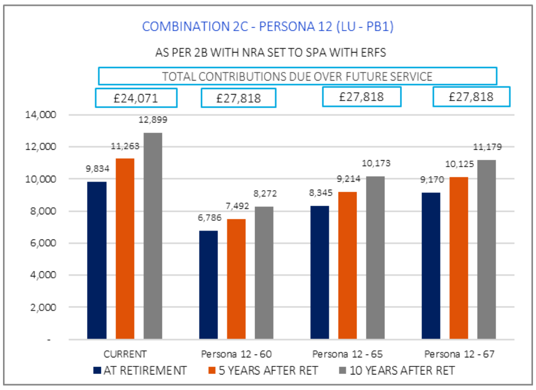


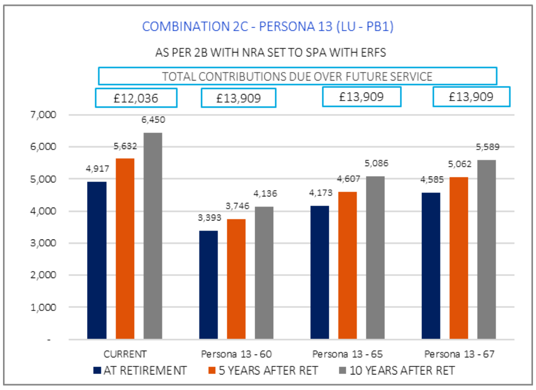


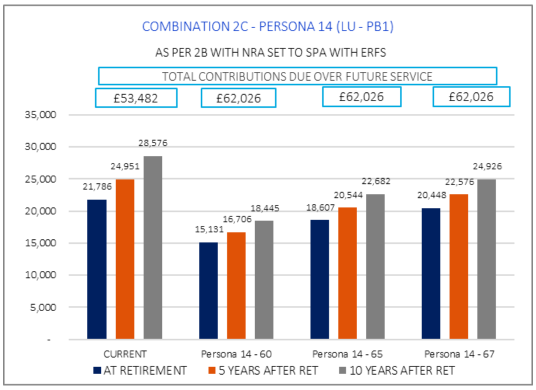

COMBINATION 2C - PERSONA 9 (LU - PB1)
AS PER 2B WITH NRA SET TO SPA WITH ERFS
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£74,969
£84,979
£84,979
£84,979
34,129
39,087
44,766
22,798
25,171
27,791
28,036
30,954
34,175
30,809
34,015
37,555
CURRENT
Persona 9 - 60
Persona 9 - 65
Persona 9 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET

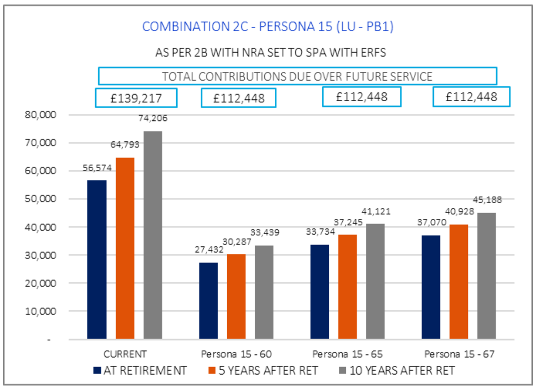

COMBINATION 2C - PERSONA 10 (LU - PB1)
AS PER 2B WITH NRA SET TO SPA WITH ERFS
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£37,961
£43,974
£43,974
£43,974
15,479
17,728
20,303
10,727
11,844
13,077
13,192
14,565
16,081
14,496
16,005
17,671
CURRENT
Persona 10 - 60
Persona 10 - 65
Persona 10 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET

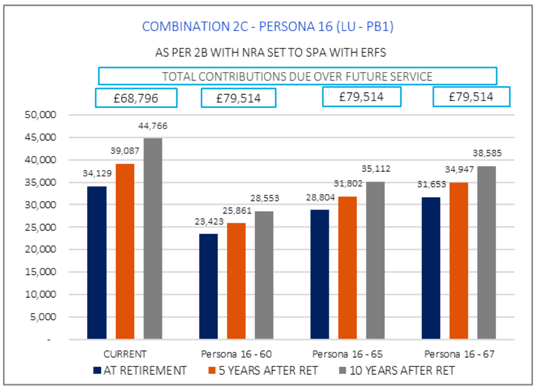

COMBINATION 2C - PERSONA 11 (LU - PB1)
AS PER 2B WITH NRA SET TO SPA WITH ERFS
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£44,133
£51,153
£51,153
£51,153
17,987
20,600
23,593
12,479
13,777
15,211
15,345
16,943
18,706
16,863
18,618
20,556
CURRENT
Persona 11 - 60
Persona 11 - 65
Persona 11 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET

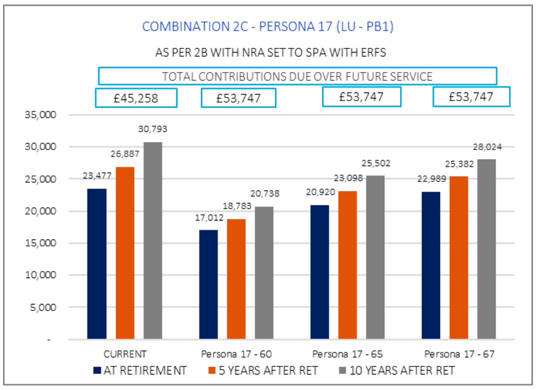

COMBINATION 2C - PERSONA 12 (LU - PB1)
AS PER 2B WITH NRA SET TO SPA WITH ERFS
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£24,071
£27,818
£27,818
£27,818
9,834
11,263
12,899
6,786
7,492
8,272
8,345
9,214
10,173
9,170
10,125
11,179
CURRENT
Persona 12 - 60
Persona 12 - 65
Persona 12 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET

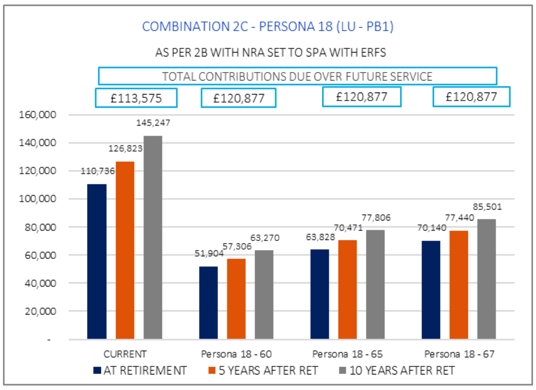

COMBINATION 2C - PERSONA 13 (LU - PB1)
AS PER 2B WITH NRA SET TO SPA WITH ERFS
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£12,036
£13,909
£13,909
£13,909
4,917
5,632
6,450
3,393
3,746
4,136
4,173
4,607
5,086
4,585
5,062
5,589
CURRENT
Persona 13 - 60
Persona 13 - 65
Persona 13 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET

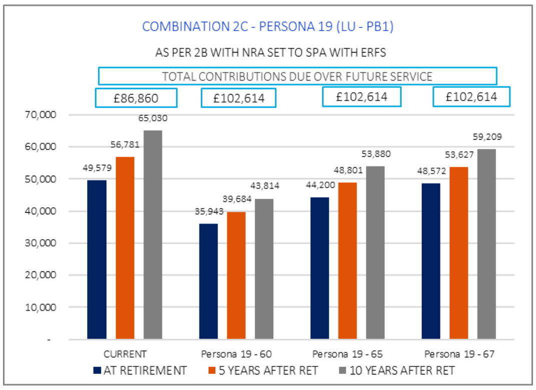

COMBINATION 2C - PERSONA 14 (LU - PB1)
AS PER 2B WITH NRA SET TO SPA WITH ERFS
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£53,482
£62,026
£62,026
£62,026
21,786
24,951
28,576
15,131
16,706
18,445
18,607
20,544
22,682
20,448
22,576
24,926
CURRENT
Persona 14 - 60
Persona 14 - 65
Persona 14 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET

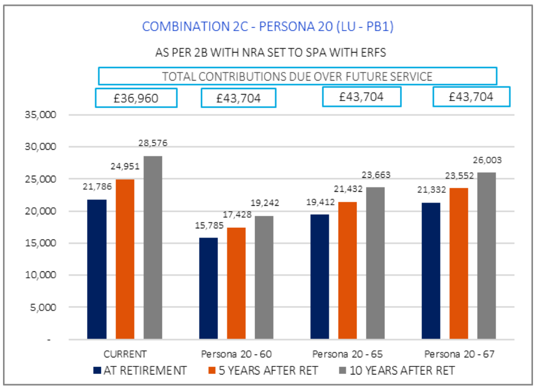

COMBINATION 2C - PERSONA 15 (LU - PB1)
AS PER 2B WITH NRA SET TO SPA WITH ERFS
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£139,217
£112,448
£112,448
£112,448
56,574
64,793
74,206
27,432
30,287
33,439
33,734
37,245
41,121
37,070
40,928
45,188
CURRENT
Persona 15 - 60
Persona 15 - 65
Persona 15 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET


COMBINATION 2C - PERSONA 16 (LU - PB1)
AS PER 2B WITH NRA SET TO SPA WITH ERFS
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£68,796
£79,514
£79,514
£79,514
34,129
39,087
44,766
23,423
25,861
28,553
28,804
31,802
35,112
31,653
34,947
38,585
CURRENT
Persona 16 - 60
Persona 16 - 65
Persona 16 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET

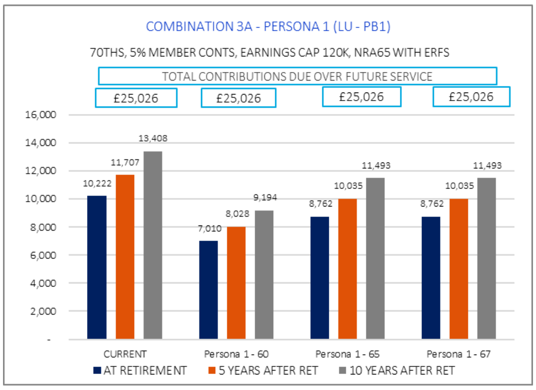


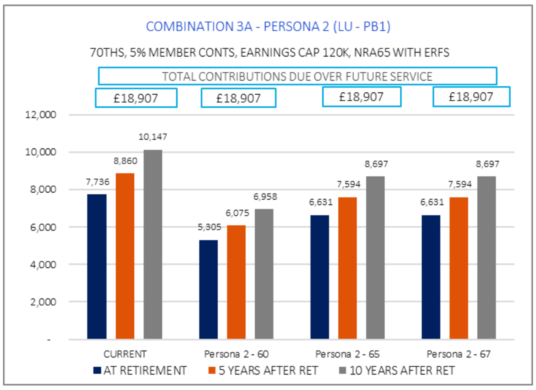


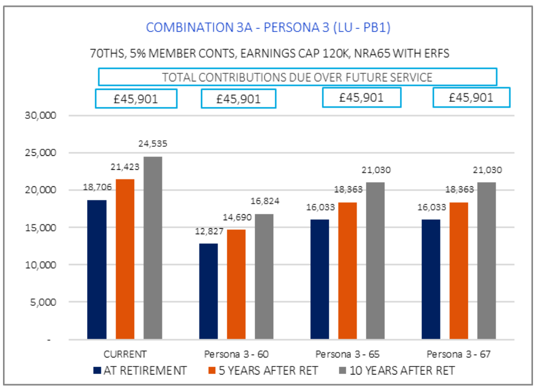


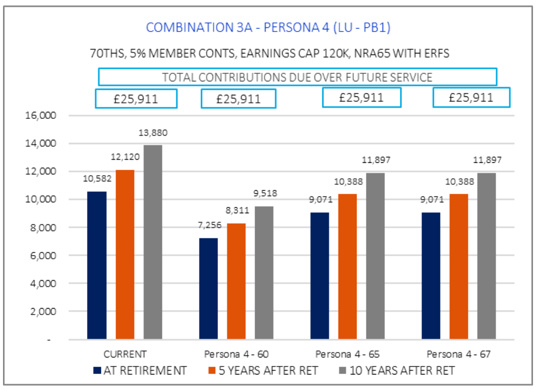


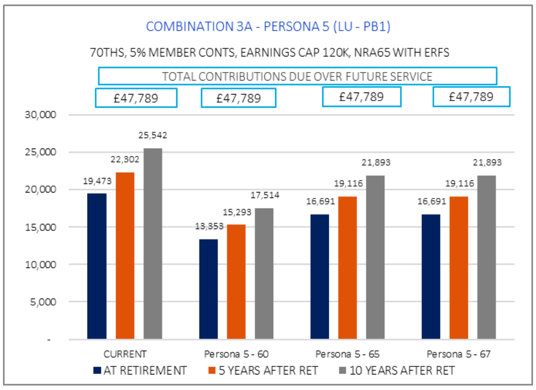
3A: 70ths ; 5% member contributions; earnings cap at £120k; NRA 65 (no ERFs applied)

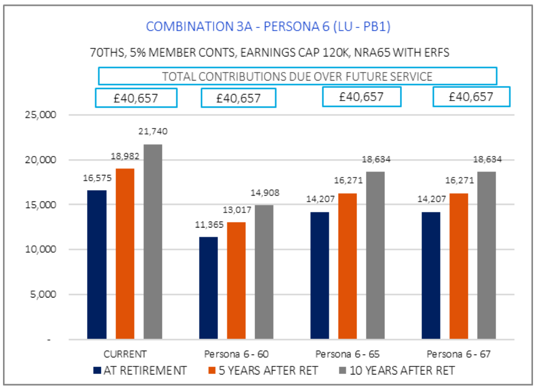


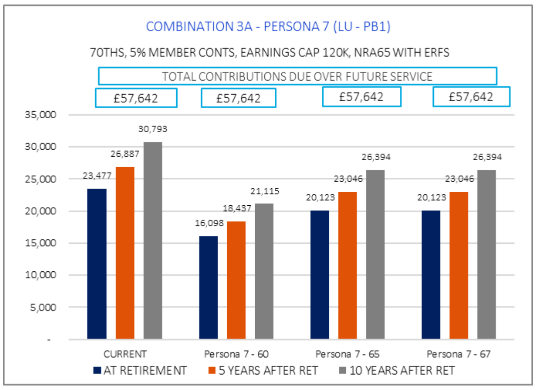


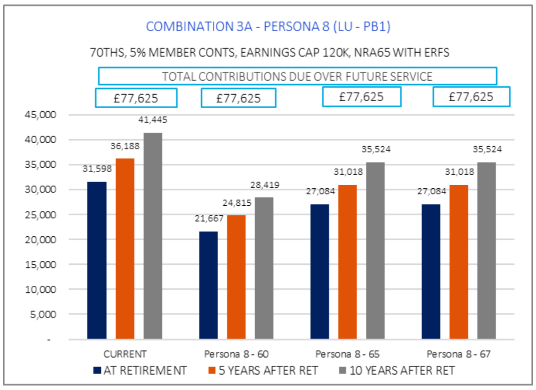


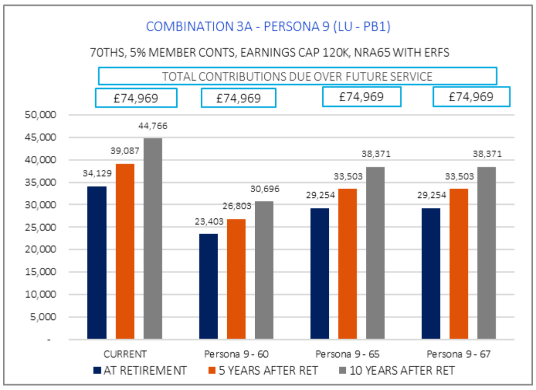


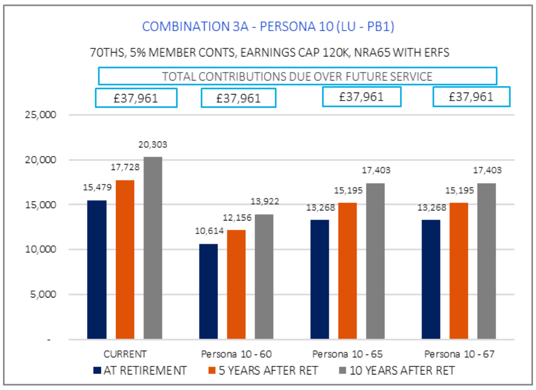

COMBINATION 3A - PERSONA 5 (LU - PB1)
70THS, 5% MEMBER CONTS, EARNINGS CAP 120K, NRA65 WITH ERFS
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£47,789
£47,789
£47,789
£47,789
30,000
25,000
20,000
15,000
10,000
5,000
-
19,473
22,302
25,542
13,353
15,293
17,514
16,691
19,116
21,893
16,691
19,116
21,893
CURRENT
Persona 5 - 60
Persona 5 - 65
Persona 5 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET

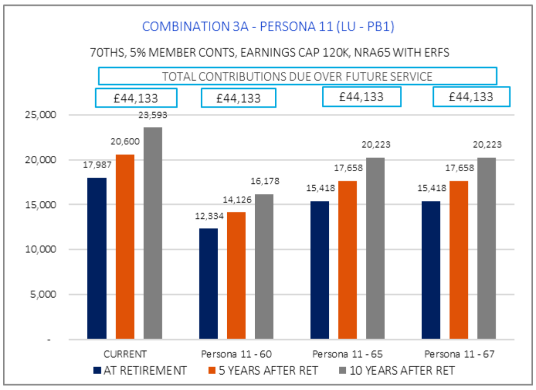

COMBINATION 3A - PERSONA 6 (LU - PB1)
70THS, 5% MEMBER CONTS, EARNINGS CAP 120K, NRA65 WITH ERFS
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£40,657
£40,657
£40,657
£40,657
25,000
20,000
15,000
10,000
5,000
-
16,575
18,982
21,740
11,365
13,017
14,908
14,207
16,271
18,634
14,207
16,271
18,634
CURRENT
Persona 6 - 60
Persona 6 - 65
Persona 6 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET

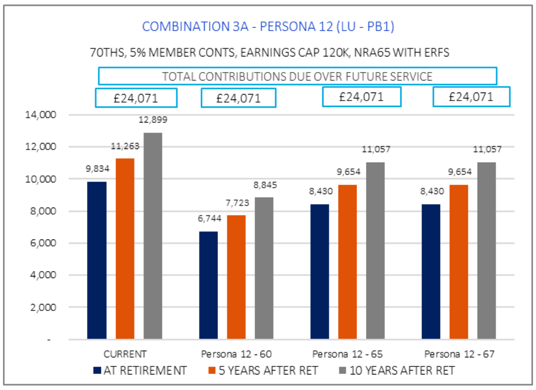

COMBINATION 3A - PERSONA 7 (LU - PB1)
70THS, 5% MEMBER CONTS, EARNINGS CAP 120K, NRA65 WITH ERFS
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£57,642
£57,642
£57,642
£57,642
35,000
30,000
25,000
20,000
15,000
10,000
5,000
-
23,477
26,887
30,793
16,098
18,437
21,115
20,123
23,046
26,394
20,123
23,046
26,394
CURRENT
Persona 7 - 60
Persona 7 - 65
Persona 7 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET

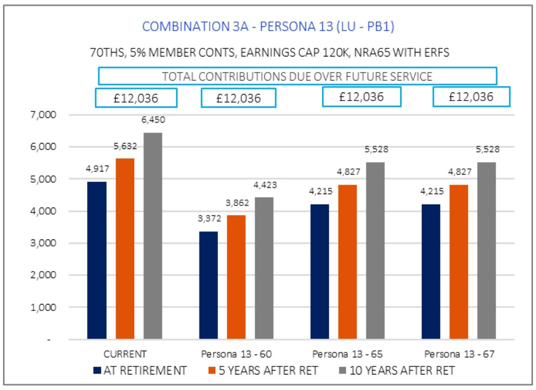

COMBINATION 3A - PERSONA 8 (LU - PB1)
70THS, 5% MEMBER CONTS, EARNINGS CAP 120K, NRA65 WITH ERFS
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£77,625
£77,625
£77,625
£77,625
45,000
40,000
35,000
30,000
25,000
20,000
15,000
10,000
5,000
-
31,598
36,188
41,445
21,667
24,815
28,419
27,084
31,018
35,524
27,084
31,018
35,524
CURRENT
Persona 8 - 60
Persona 8 - 65
Persona 8 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET

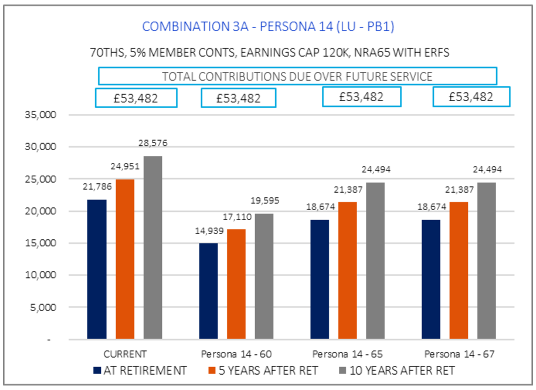

COMBINATION 3A - PERSONA 9 (LU - PB1)
70THS, 5% MEMBER CONTS, EARNINGS CAP 120K, NRA65 WITH ERFS
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£74,969
£74,969
£74,969
£74,969
50,000
45,000
40,000
35,000
30,000
25,000
20,000
15,000
10,000
5,000
-
34,129
39,087
44,766
23,403
26,803
30,696
29,254
33,503
38,371
29,254
33,503
38,371
CURRENT
Persona 9 - 60
Persona 9 - 65
Persona 9 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET

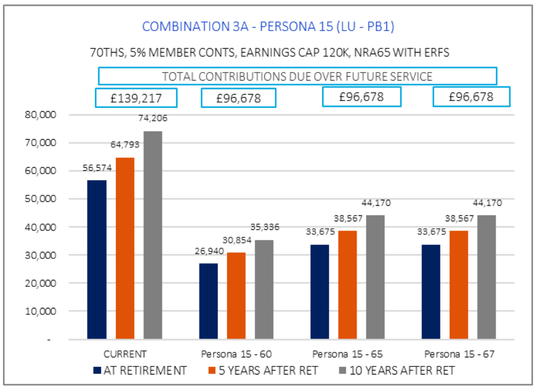

COMBINATION 3A - PERSONA 10 (LU - PB1)
70THS, 5% MEMBER CONTS, EARNINGS CAP 120K, NRA65 WITH ERFS
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£37,961
£37,961
£37,961
£37,961
25,000
20,000
15,000
10,000
5,000
-
15,479
17,728
20,303
10,614
12,156
13,922
13,268
15,195
17,403
13,268
15,195
17,403
CURRENT
Persona 10 - 60
Persona 10 - 65
Persona 10 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET

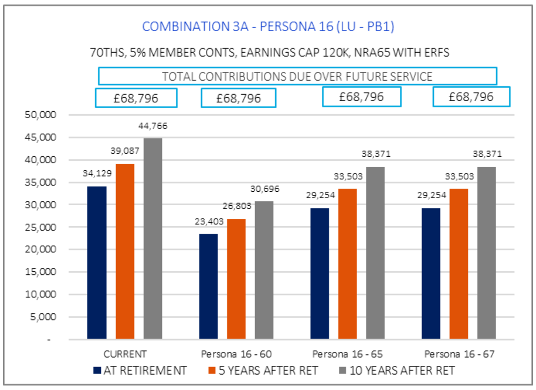

COMBINATION 3A - PERSONA 11 (LU - PB1)
70THS, 5% MEMBER CONTS, EARNINGS CAP 120K, NRA65 WITH ERFS
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£44,133
£44,133
£44,133
£44,133
25,000
20,000
15,000
10,000
5,000
-
17,987
20,600
23,593
12,334
14,126
16,178
15,418
17,658
20,223
15,418
17,658
20,223
CURRENT
Persona 11 - 60
Persona 11 - 65
Persona 11 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET

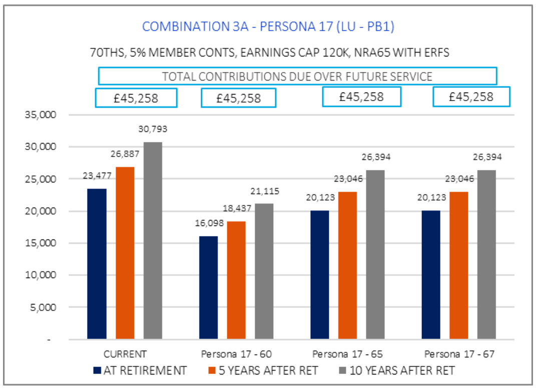

COMBINATION 3A - PERSONA 12 (LU - PB1)
70THS, 5% MEMBER CONTS, EARNINGS CAP 120K, NRA65 WITH ERFS
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£24,071
£24,071
£24,071
£24,071
14,000
12,000
10,000
8,000
6,000
4,000
2,000
-
9,834
11,263
12,899
6,744
7,723
8,845
8,430
9,654
11,057
8,430
9,654
11,057
CURRENT
Persona 12 - 60
Persona 12 - 65
Persona 12 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET

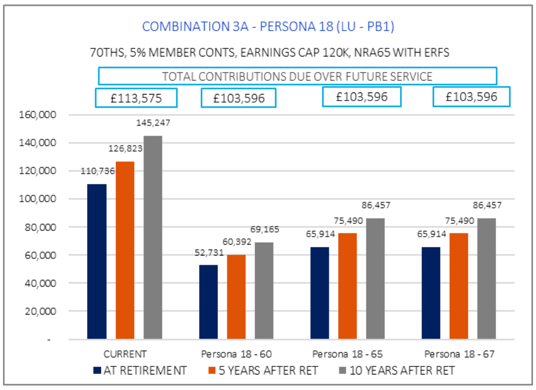

COMBINATION 3A - PERSONA 13 (LU - PB1)
70THS, 5% MEMBER CONTS, EARNINGS CAP 120K, NRA65 WITH ERFS
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£12,036
£12,036
£12,036
£12,036
7,000
6,000
5,000
4,000
3,000
2,000
1,000
-
4,917
5,632
6,450
3,372
3,862
4,423
4,215
4,827
5,528
4,215
4,827
5,528
CURRENT
Persona 13 - 60
Persona 13 - 65
Persona 13 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET

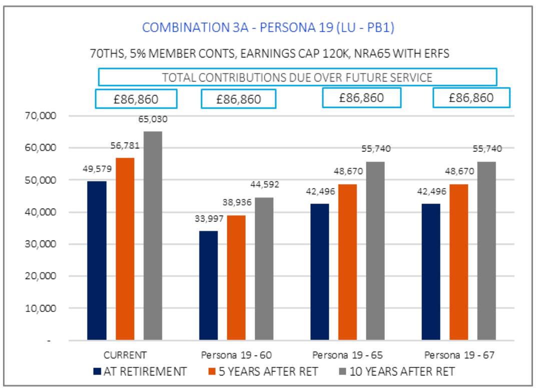

COMBINATION 3A - PERSONA 14 (LU - PB1)
70THS, 5% MEMBER CONTS, EARNINGS CAP 120K, NRA65 WITH ERFS
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£53,482
£53,482
£53,482
£53,482
35,000
30,000
25,000
20,000
15,000
10,000
5,000
-
21,786
24,951
28,576
14,939
17,110
19,595
18,674
21,387
24,494
18,674
21,387
24,494
CURRENT
Persona 14 - 60
Persona 14 - 65
Persona 14 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET

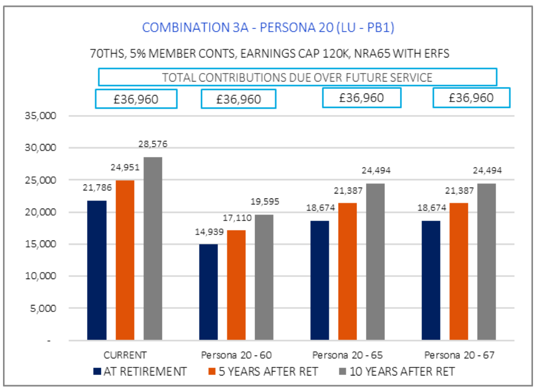

COMBINATION 3A - PERSONA 15 (LU - PB1)
70THS, 5% MEMBER CONTS, EARNINGS CAP 120K, NRA65 WITH ERFS
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£139,217
£96,678
£96,678
£96,678
80,000
70,000
60,000
50,000
40,000
30,000
20,000
10,000
-
56,574
64,793
74,206
26,940
30,854
35,336
33,675
38,567
44,170
33,675
38,567
44,170
CURRENT
Persona 15 - 60
Persona 15 - 65
Persona 15 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET


COMBINATION 3A - PERSONA 16 (LU - PB1)
70THS, 5% MEMBER CONTS, EARNINGS CAP 120K, NRA65 WITH ERFS
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£68,796
£68,796
£68,796
£68,796
50,000
45,000
40,000
35,000
30,000
25,000
20,000
15,000
10,000
5,000
-
34,129
39,087
44,766
23,403
26,803
30,696
29,254
33,503
38,371
29,254
33,503
38,371
CURRENT
Persona 16 - 60
Persona 16 - 65
Persona 16 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET

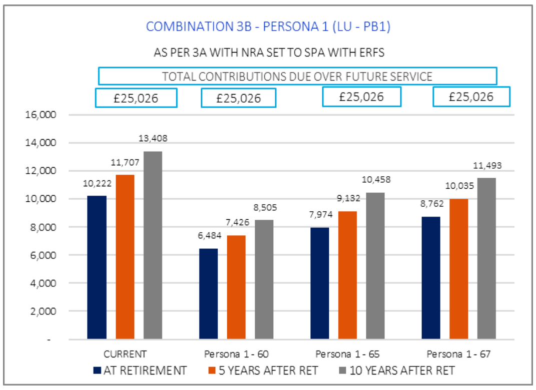

COMBINATION 3A - PERSONA 17 (LU - PB1)
70THS, 5% MEMBER CONTS, EARNINGS CAP 120K, NRA65 WITH ERFS
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£45,258
£45,258
£45,258
£45,258
35,000
30,000
25,000
20,000
15,000
10,000
5,000
-
23,477
26,887
30,793
16,098
18,437
21,115
20,123
23,046
26,394
20,123
23,046
26,394
CURRENT
Persona 17 - 60
Persona 17 - 65
Persona 17 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET

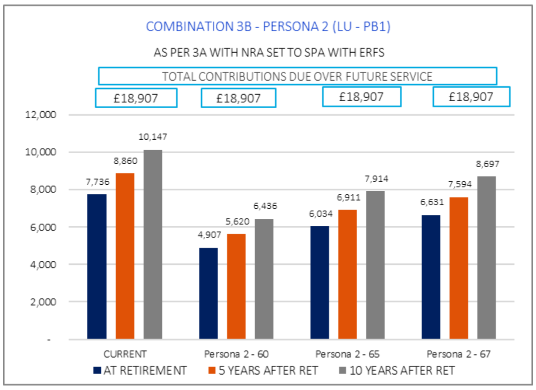

COMBINATION 3A - PERSONA 18 (LU - PB1)
70THS, 5% MEMBER CONTS, EARNINGS CAP 120K, NRA65 WITH ERFS
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£113,575
£103,596
£103,596
£103,596
160,000
140,000
120,000
100,000
80,000
60,000
40,000
20,000
-
110,736
126,823
145,247
52,731
60,392
69,165
65,914
75,490
86,457
65,914
75,490
86,457
CURRENT
Persona 18 - 60
Persona 18 - 65
Persona 18 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET

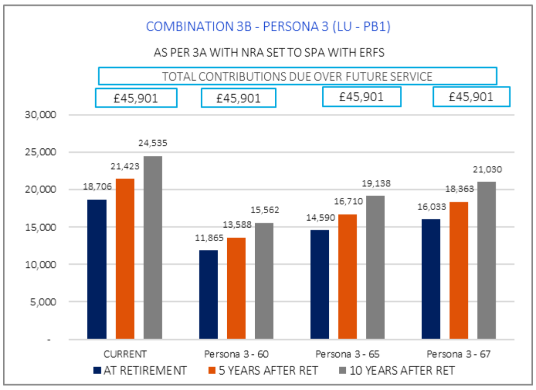

COMBINATION 3A - PERSONA 19 (LU - PB1)
70THS, 5% MEMBER CONTS, EARNINGS CAP 120K, NRA65 WITH ERFS
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£86,860
£86,860
£86,860
£86,860
70,000
60,000
50,000
40,000
30,000
20,000
10,000
-
49,579
56,781
65,030
33,997
38,936
44,592
42,496
48,670
55,740
42,496
48,670
55,740
CURRENT
Persona 19 - 60
Persona 19 - 65
Persona 19 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET

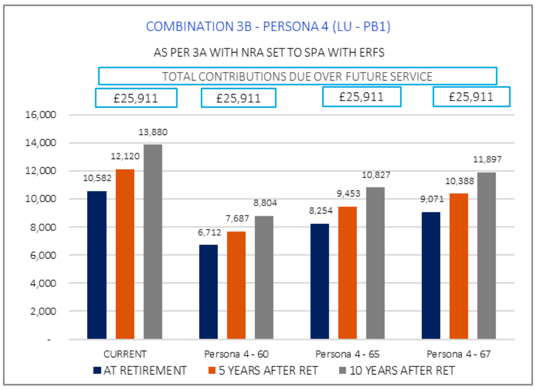

COMBINATION 3A - PERSONA 20 (LU - PB1)
70THS, 5% MEMBER CONTS, EARNINGS CAP 120K, NRA65 WITH ERFS
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£36,960
£36,960
£36,960
£36,960
35,000
30,000
25,000
20,000
15,000
10,000
5,000
-
21,786
24,951
28,576
14,939
17,110
19,595
18,674
21,387
24,494
18,674
21,387
24,494
CURRENT
Persona 20 - 60
Persona 20 - 65
Persona 20 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET

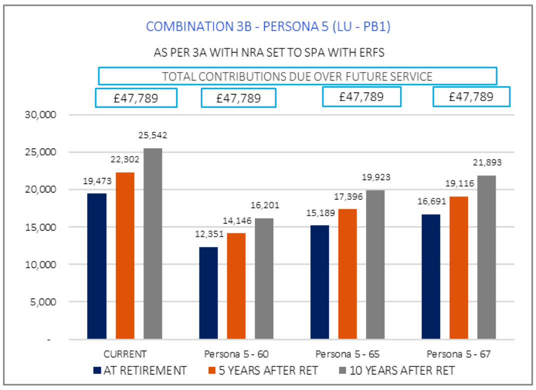
3B: 70ths ; 5% member contributions; earnings cap at £120k; NRA set to SPA (no ERFs applied)

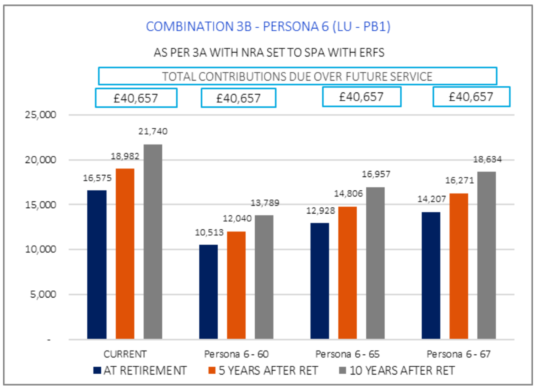


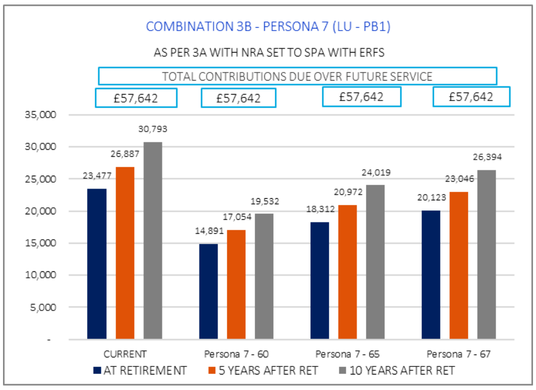


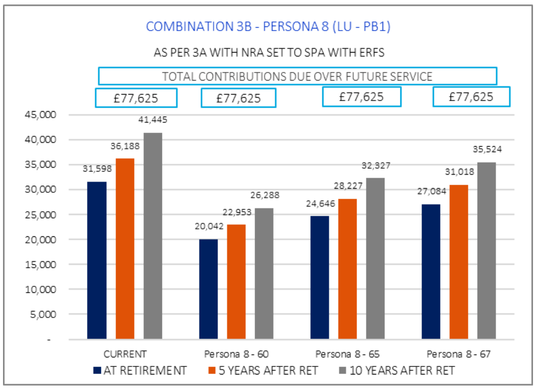


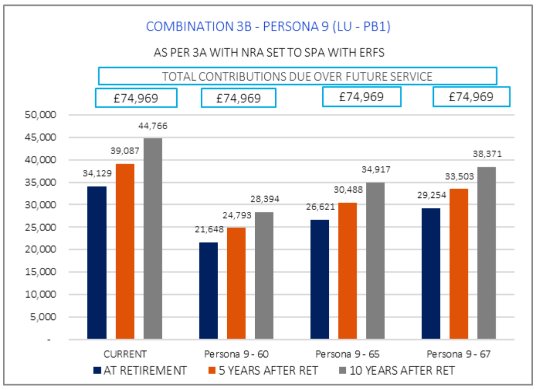


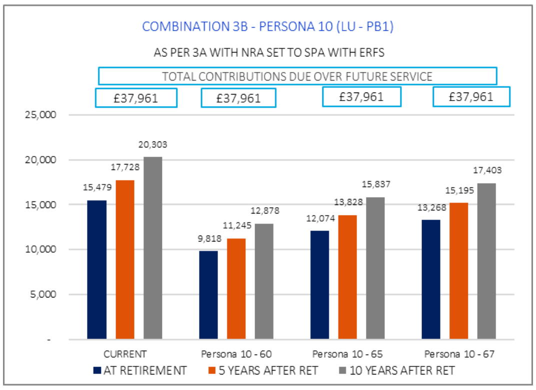


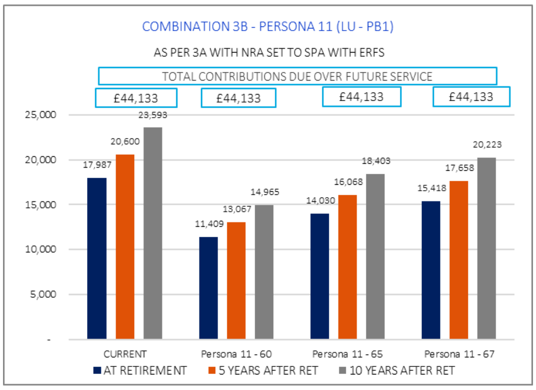


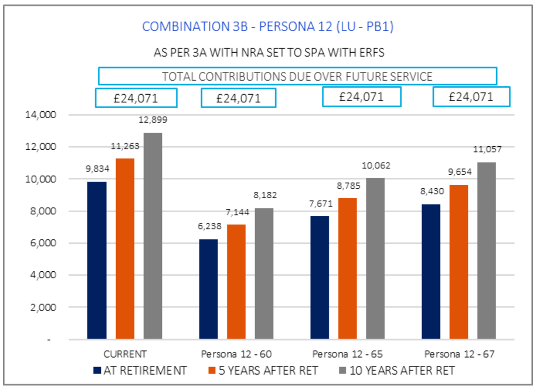


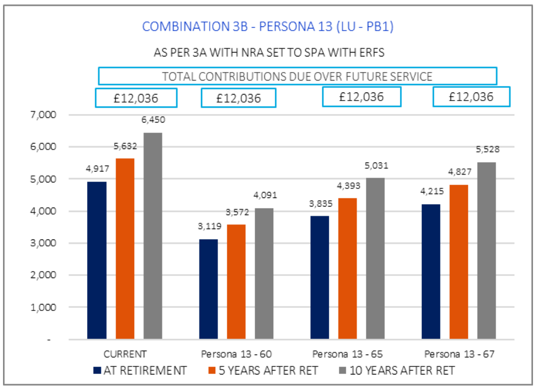


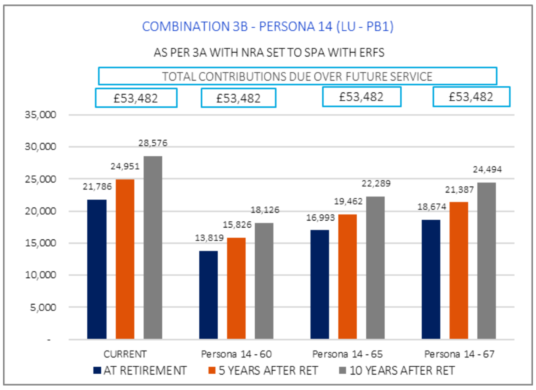

COMBINATION 3B - PERSONA 9 (LU - PB1)
AS PER 3A WITH NRA SET TO SPA WITH ERFS
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£74,969
£74,969
£74,969
£74,969
34,129
39,087
44,766
21,648
24,793
28,394
26,621
30,488
34,917
29,254
33,503
38,371
CURRENT
Persona 9 - 60
Persona 9 - 65
Persona 9 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET

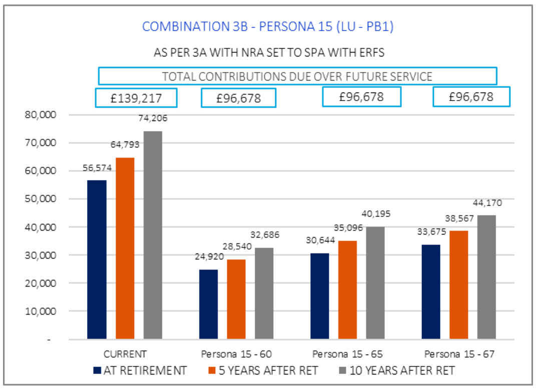

COMBINATION 3B - PERSONA 10 (LU - PB1)
AS PER 3A WITH NRA SET TO SPA WITH ERFS
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£37,961
£37,961
£37,961
£37,961
15,479
17,728
20,303
9,818
11,245
12,878
12,074
13,828
15,837
13,268
15,195
17,403
CURRENT
Persona 10 - 60
Persona 10 - 65
Persona 10 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET

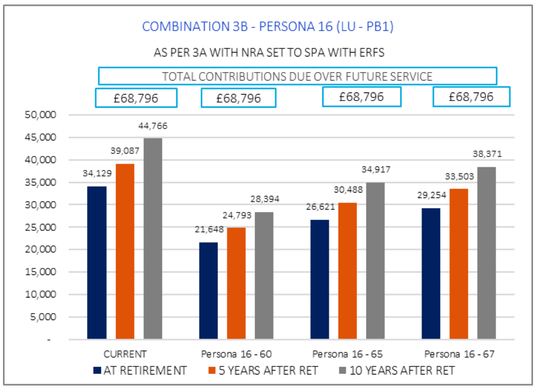

COMBINATION 3B - PERSONA 11 (LU - PB1)
AS PER 3A WITH NRA SET TO SPA WITH ERFS
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£44,133
£44,133
£44,133
£44,133
17,987
20,600
23,593
11,409
13,067
14,965
14,030
16,068
18,403
15,418
17,658
20,223
CURRENT
Persona 11 - 60
Persona 11 - 65
Persona 11 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET

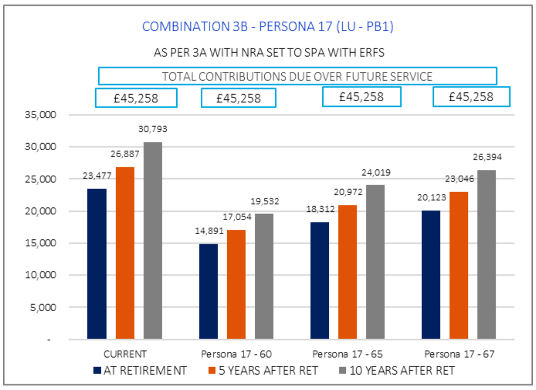

COMBINATION 3B - PERSONA 12 (LU - PB1)
AS PER 3A WITH NRA SET TO SPA WITH ERFS
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£24,071
£24,071
£24,071
£24,071
9,834
11,263
12,899
6,238
7,144
8,182
7,671
8,785
10,062
8,430
9,654
11,057
CURRENT
Persona 12 - 60
Persona 12 - 65
Persona 12 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET

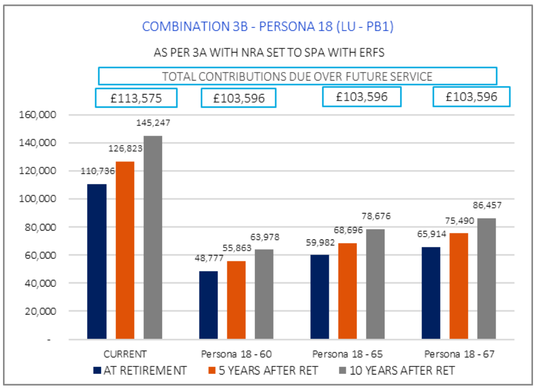

COMBINATION 3B - PERSONA 13 (LU - PB1)
AS PER 3A WITH NRA SET TO SPA WITH ERFS
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£12,036
£12,036
£12,036
£12,036
4,917
5,632
6,450
3,119
3,572
4,091
3,835
4,393
5,031
4,215
4,827
5,528
CURRENT
Persona 13 - 60
Persona 13 - 65
Persona 13 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET

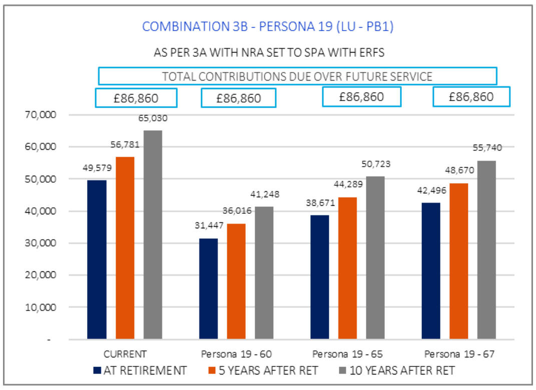

COMBINATION 3B - PERSONA 14 (LU - PB1)
AS PER 3A WITH NRA SET TO SPA WITH ERFS
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£53,482
£53,482
£53,482
£53,482
21,786
24,951
28,576
13,819
15,826
18,126
16,993
19,462
22,289
18,674
21,387
24,494
CURRENT
Persona 14 - 60
Persona 14 - 65
Persona 14 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET

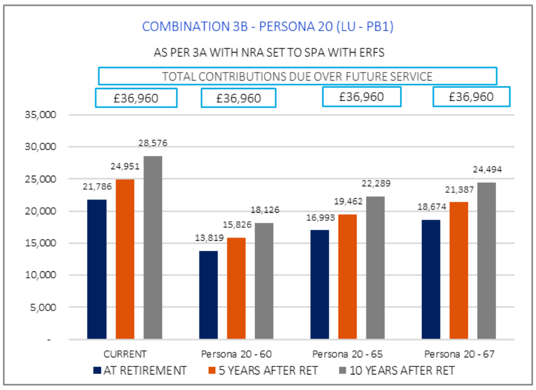

COMBINATION 3B - PERSONA 15 (LU - PB1)
AS PER 3A WITH NRA SET TO SPA WITH ERFS
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£139,217
£96,678
£96,678
£96,678
56,574
64,793
74,206
24,920
28,540
32,686
30,644
35,096
40,195
33,675
38,567
44,170
CURRENT
Persona 15 - 60
Persona 15 - 65
Persona 15 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET


COMBINATION 3B - PERSONA 16 (LU - PB1)
AS PER 3A WITH NRA SET TO SPA WITH ERFS
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£68,796
£68,796
£68,796
£68,796
34,129
39,087
44,766
21,648
24,793
28,394
26,621
30,488
34,917
29,254
33,503
38,371
CURRENT
Persona 16 - 60
Persona 16 - 65
Persona 16 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET

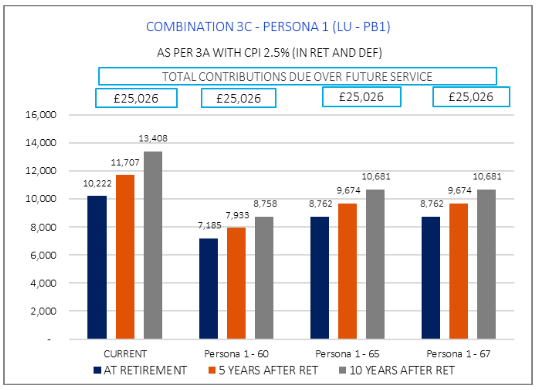


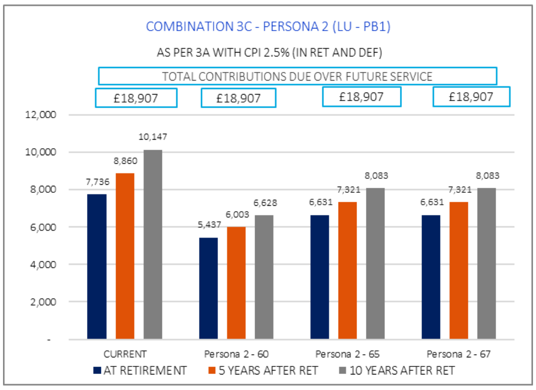


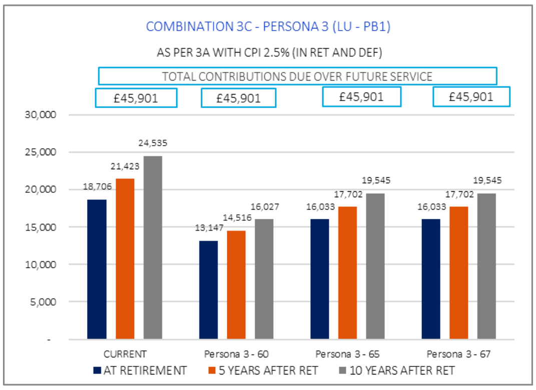


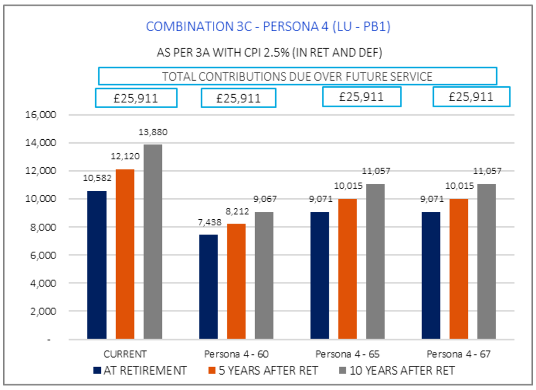


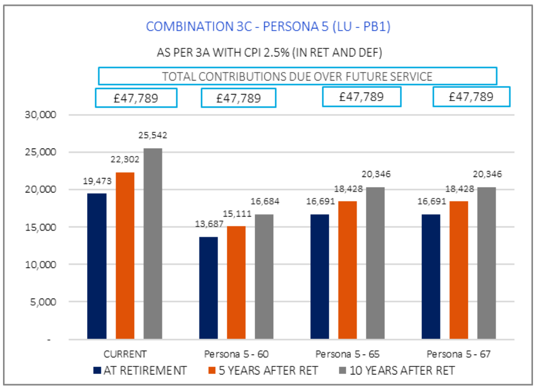
3C: 70ths; 5% member contributions; earnings cap at £120k; NRA 65 (no ERFs applied); CPI capped at 2.5% for pensions in retirement and in deferment

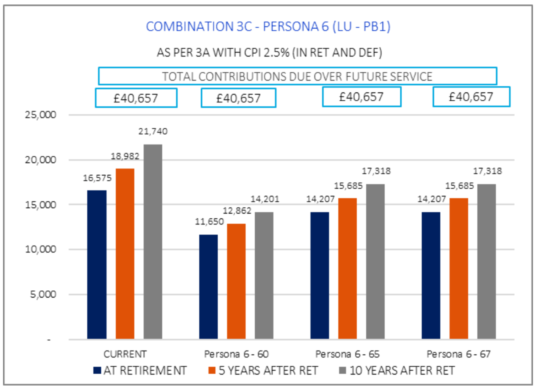


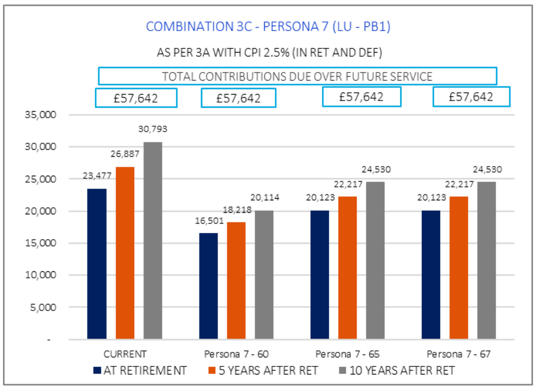


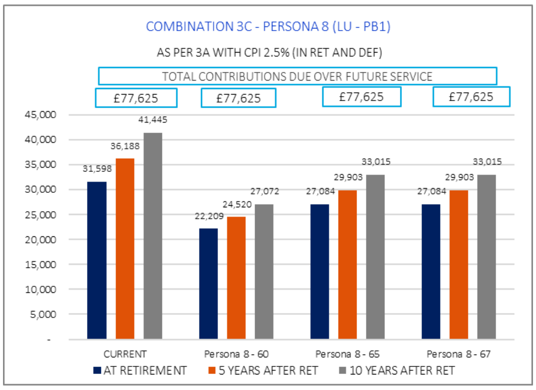


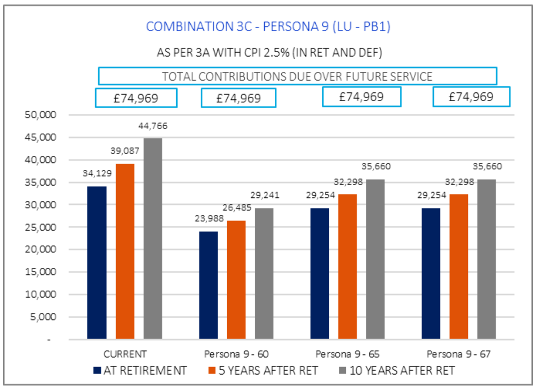


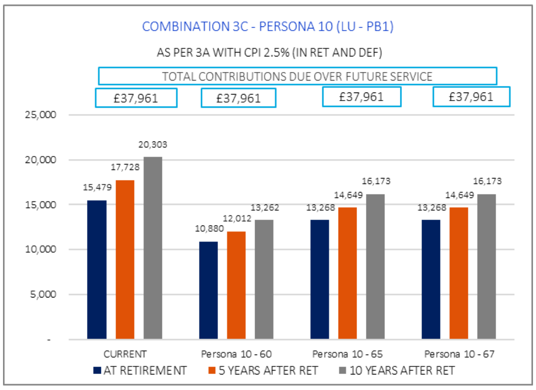

COMBINATION 3C - PERSONA 5 (LU - PB1)
AS PER 3A WITH CPI 2.5% (IN RET AND DEF)
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£47,789
£47,789
£47,789
£47,789
30,000
25,000
20,000
15,000
10,000
5,000
-
19,473
22,302
25,542
13,687
15,111
16,684
16,691
18,428
20,346
16,691
18,428
20,346
CURRENT
Persona 5 - 60
Persona 5 - 65
Persona 5 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET

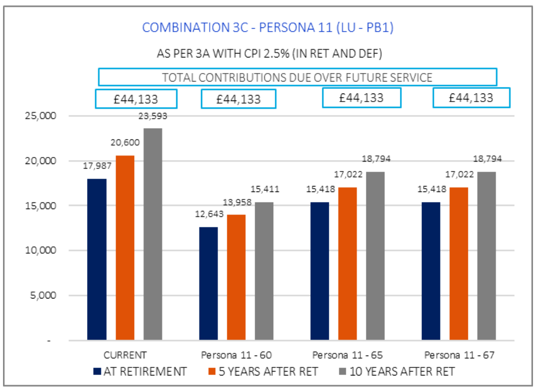

COMBINATION 3C - PERSONA 6 (LU - PB1)
AS PER 3A WITH CPI 2.5% (IN RET AND DEF)
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£40,657
£40,657
£40,657
£40,657
25,000
20,000
15,000
10,000
5,000
-
16,575
18,982
21,740
11,650
12,862
14,201
14,207
15,685
17,318
14,207
15,685
17,318
CURRENT
Persona 6 - 60
Persona 6 - 65
Persona 6 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET

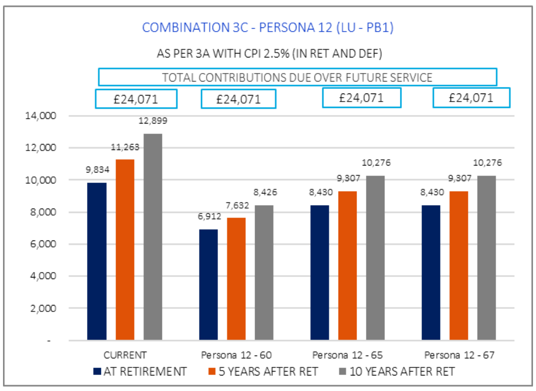

COMBINATION 3C - PERSONA 7 (LU - PB1)
AS PER 3A WITH CPI 2.5% (IN RET AND DEF)
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£57,642
£57,642
£57,642
£57,642
35,000
30,000
25,000
20,000
15,000
10,000
5,000
-
23,477
26,887
30,793
16,501
18,218
20,114
20,123
22,217
24,530
20,123
22,217
24,530
CURRENT
Persona 7 - 60
Persona 7 - 65
Persona 7 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET

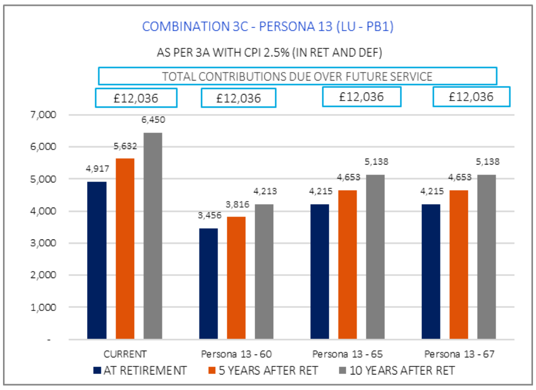

COMBINATION 3C - PERSONA 8 (LU - PB1)
AS PER 3A WITH CPI 2.5% (IN RET AND DEF)
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£77,625
£77,625
£77,625
£77,625
45,000
40,000
35,000
30,000
25,000
20,000
15,000
10,000
5,000
-
31,598
36,188
41,445
22,209
24,520
27,072
27,084
29,903
33,015
27,084
29,903
33,015
CURRENT
Persona 8 - 60
Persona 8 - 65
Persona 8 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET

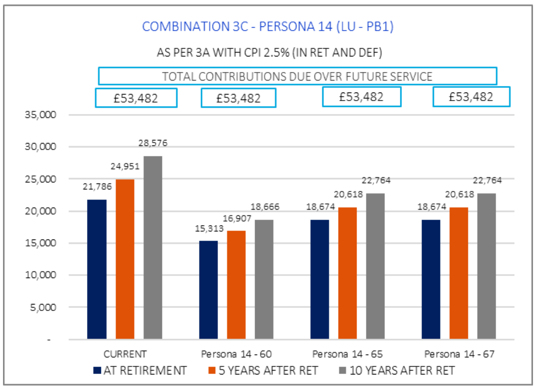

COMBINATION 3C - PERSONA 9 (LU - PB1)
AS PER 3A WITH CPI 2.5% (IN RET AND DEF)
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£74,969
£74,969
£74,969
£74,969
50,000
45,000
40,000
35,000
30,000
25,000
20,000
15,000
10,000
5,000
-
34,129
39,087
44,766
23,988
26,485
29,241
29,254
32,298
35,660
29,254
32,298
35,660
CURRENT
Persona 9 - 60
Persona 9 - 65
Persona 9 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET

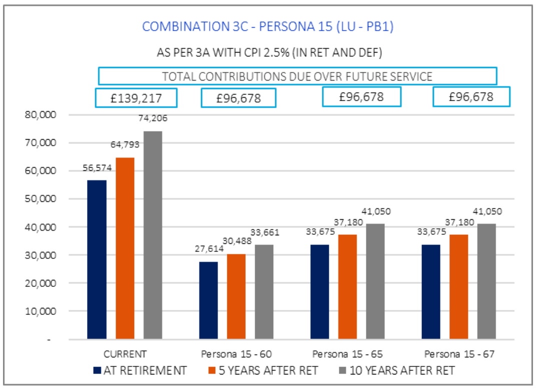

COMBINATION 3C - PERSONA 10 (LU - PB1)
AS PER 3A WITH CPI 2.5% (IN RET AND DEF)
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£37,961
£37,961
£37,961
£37,961
25,000
20,000
15,000
10,000
5,000
-
15,479
17,728
20,303
10,880
12,012
13,262
13,268
14,649
16,173
13,268
14,649
16,173
CURRENT
Persona 10 - 60
Persona 10 - 65
Persona 10 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET

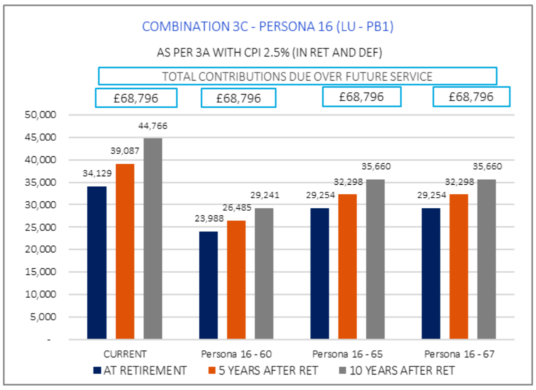

COMBINATION 3C - PERSONA 11 (LU - PB1)
AS PER 3A WITH CPI 2.5% (IN RET AND DEF)
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£44,133
£44,133
£44,133
£44,133
25,000
20,000
15,000
10,000
5,000
-
17,987
20,600
23,593
12,643
13,958
15,411
15,418
17,022
18,794
15,418
17,022
18,794
CURRENT
Persona 11 - 60
Persona 11 - 65
Persona 11 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET

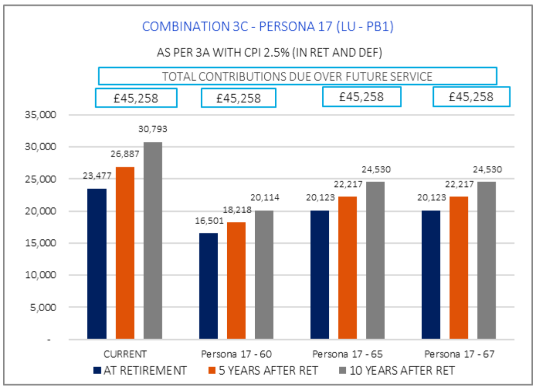

COMBINATION 3C - PERSONA 12 (LU - PB1)
AS PER 3A WITH CPI 2.5% (IN RET AND DEF)
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£24,071
£24,071
£24,071
£24,071
14,000
12,000
10,000
8,000
6,000
4,000
2,000
-
9,834
11,263
12,899
6,912
7,632
8,426
8,430
9,307
10,276
8,430
9,307
10,276
CURRENT
Persona 12 - 60
Persona 12 - 65
Persona 12 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET

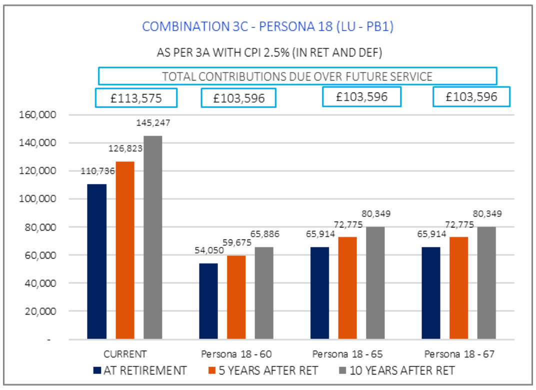

COMBINATION 3C - PERSONA 13 (LU - PB1)
AS PER 3A WITH CPI 2.5% (IN RET AND DEF)
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£12,036
£12,036
£12,036
£12,036
4,917
5,632
6,450
3,456
3,816
4,213
4,215
4,653
5,138
4,215
4,653
5,138
CURRENT
Persona 13 - 60
Persona 13 - 65
Persona 13 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET

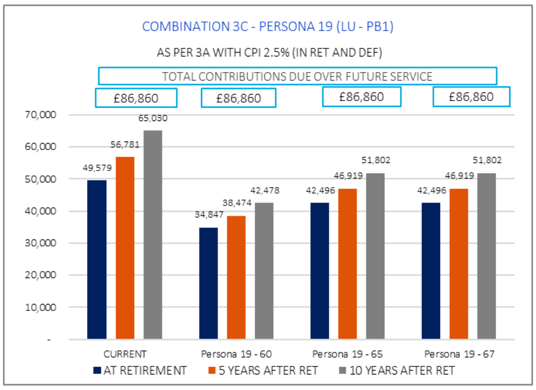

COMBINATION 3C - PERSONA 14 (LU - PB1)
AS PER 3A WITH CPI 2.5% (IN RET AND DEF)
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£53,482
£53,482
£53,482
£53,482
21,786
24,951
28,576
15,313
16,907
18,666
18,674
20,618
22,764
18,674
20,618
22,764
CURRENT
Persona 14 - 60
Persona 14 - 65
Persona 14 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET

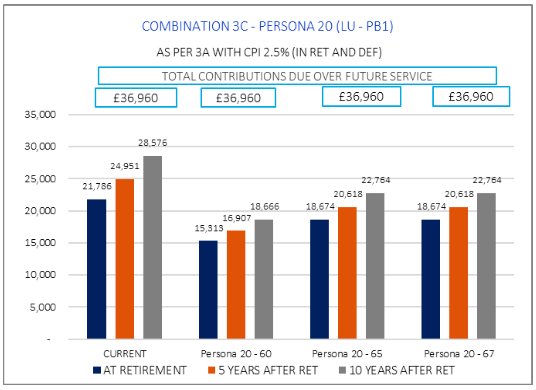

COMBINATION 3C - PERSONA 15 (LU - PB1)
AS PER 3A WITH CPI 2.5% (IN RET AND DEF)
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£139,217
£96,678
£96,678
£96,678
56,574
64,793
74,206
27,614
30,488
33,661
33,675
37,180
41,050
33,675
37,180
41,050
CURRENT
Persona 15 - 60
Persona 15 - 65
Persona 15 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET


COMBINATION 3C - PERSONA 16 (LU - PB1)
AS PER 3A WITH CPI 2.5% (IN RET AND DEF)
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£68,796
£68,796
£68,796
£68,796
34,129
39,087
44,766
23,988
26,485
29,241
29,254
32,298
35,660
29,254
32,298
35,660
CURRENT
Persona 16 - 60
Persona 16 - 65
Persona 16 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET

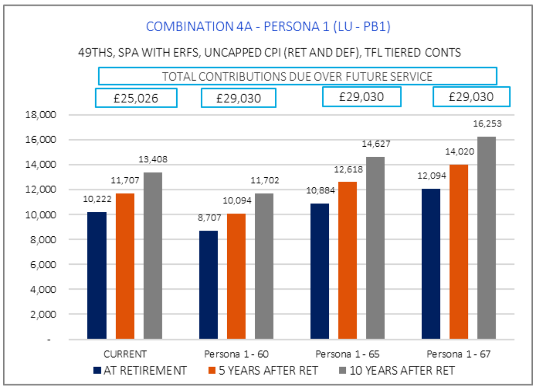

COMBINATION 3C - PERSONA 17 (LU - PB1)
AS PER 3A WITH CPI 2.5% (IN RET AND DEF)
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£45,258
£45,258
£45,258
£45,258
23,477
26,887
30,793
16,501
18,218
20,114
20,123
22,217
24,530
20,123
22,217
24,530
CURRENT
Persona 17 - 60
Persona 17 - 65
Persona 17 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET

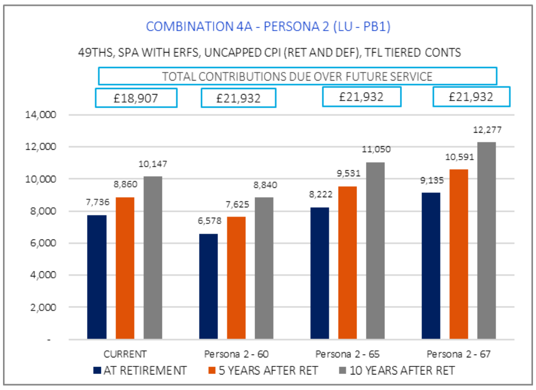

COMBINATION 3C - PERSONA 18 (LU - PB1)
AS PER 3A WITH CPI 2.5% (IN RET AND DEF)
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£113,575
£103,596
£103,596
£103,596
110,736
126,823
145,247
54,050
59,675
65,886
65,914
72,775
80,349
65,914
72,775
80,349
CURRENT
Persona 18 - 60
Persona 18 - 65
Persona 18 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET

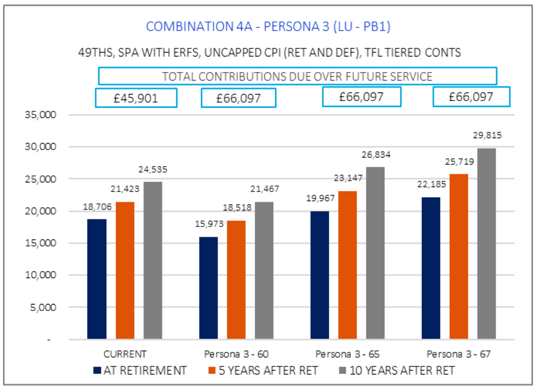

COMBINATION 3C - PERSONA 19 (LU - PB1)
AS PER 3A WITH CPI 2.5% (IN RET AND DEF)
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£86,860
£86,860
£86,860
£86,860
49,579
56,781
65,030
34,847
38,474
42,478
42,496
46,919
51,802
42,496
46,919
51,802
CURRENT
Persona 19 - 60
Persona 19 - 65
Persona 19 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET

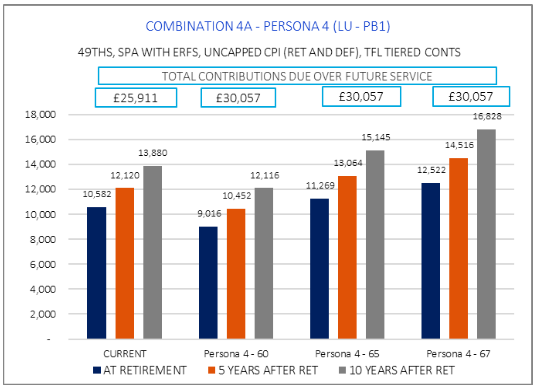

COMBINATION 3C - PERSONA 20 (LU - PB1)
AS PER 3A WITH CPI 2.5% (IN RET AND DEF)
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£36,960
£36,960
£36,960
£36,960
21,786
24,951
28,576
15,313
16,907
18,666
18,674
20,618
22,764
18,674
20,618
22,764
CURRENT
Persona 20 - 60
Persona 20 - 65
Persona 20 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET

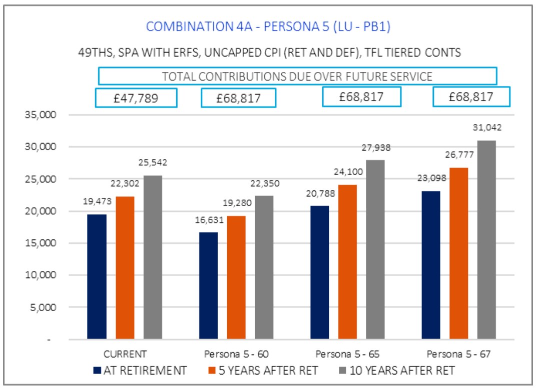
4A: 49ths; SPA (no ERFs), uncapped CPI (retirement and deferment); TfL tiered contributions

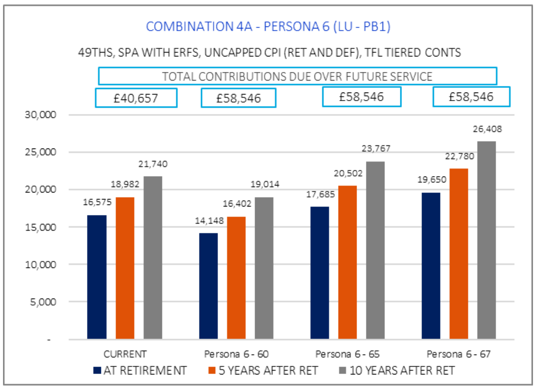


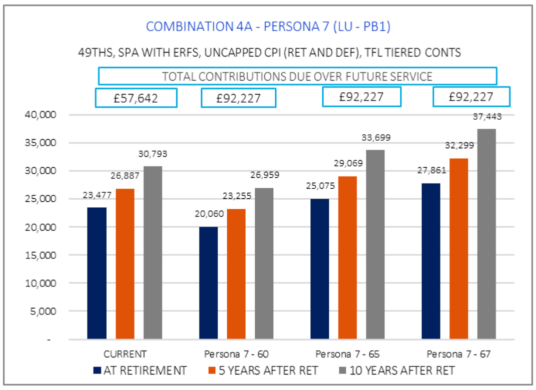


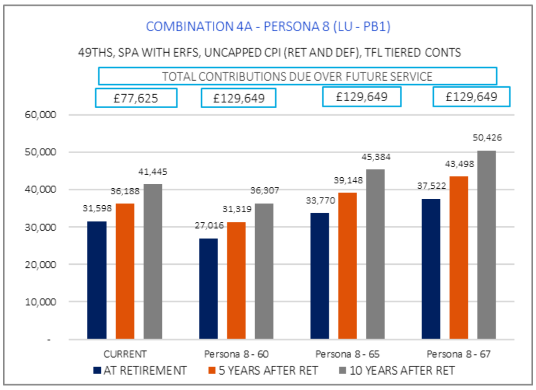


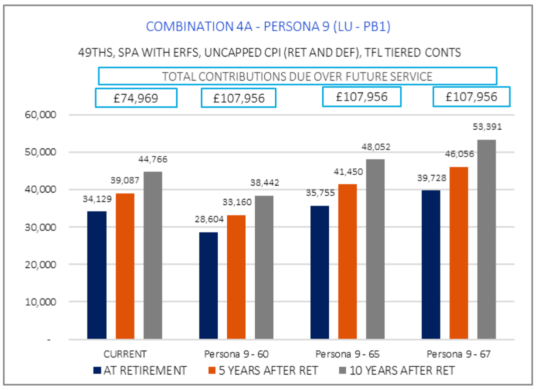


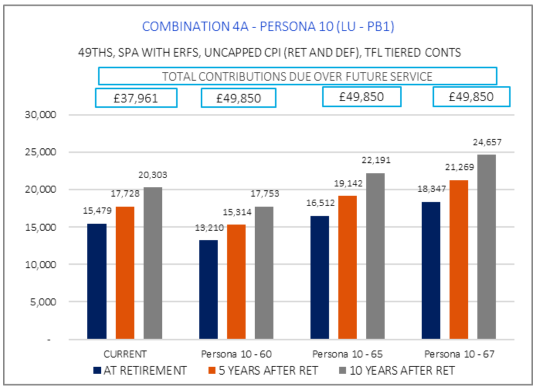


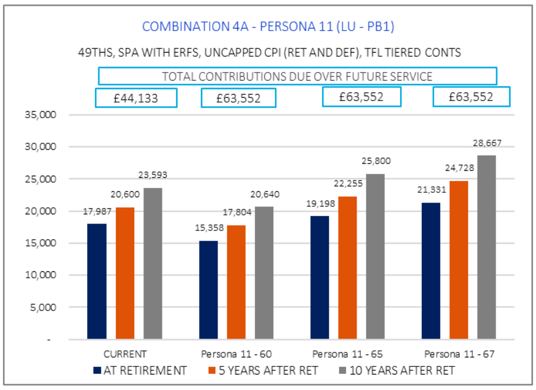


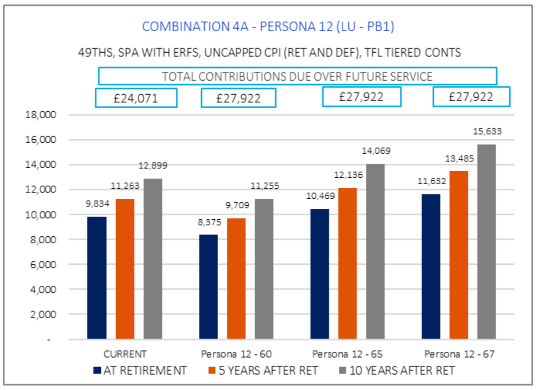


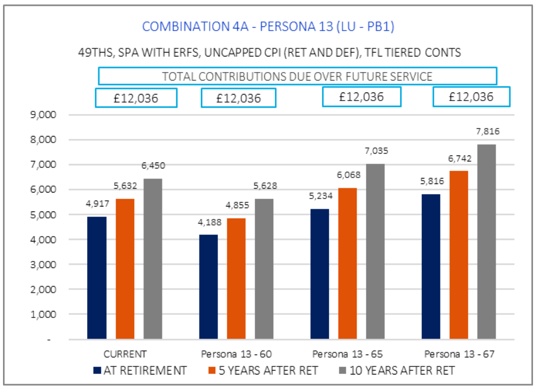


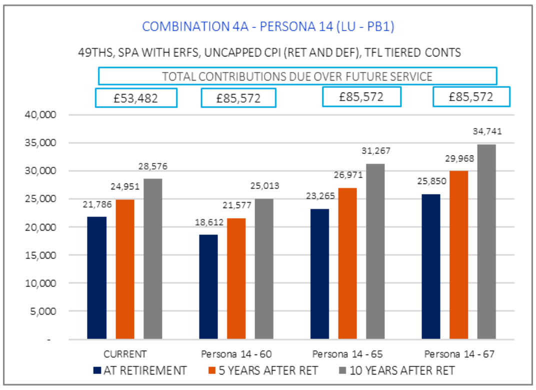

COMBINATION 4A - PERSONA 9 (LU - PB1)
49THS, SPA WITH ERFS, UNCAPPED CPI (RET AND DEF), TFL TIERED CONTS
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£74,969
£107,956
£107,956
£107,956
34,129
39,087
44,766
28,604
33,160
38,442
35,755
41,450
48,052
39,728
46,056
53,391
CURRENT
Persona 9 - 60
Persona 9 - 65
Persona 9 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET

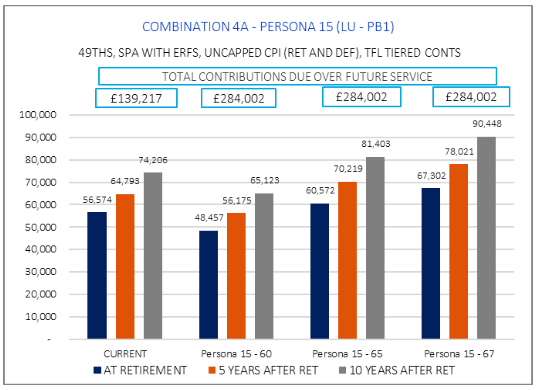

COMBINATION 4A - PERSONA 10 (LU - PB1)
49THS, SPA WITH ERFS, UNCAPPED CPI (RET AND DEF), TFL TIERED CONTS
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£37,961
£49,850
£49,850
£49,850
15,479
17,728
20,303
13,210
15,314
17,753
16,512
19,142
22,191
18,847
21,269
24,657
CURRENT
Persona 10 - 60
Persona 10 - 65
Persona 10 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET

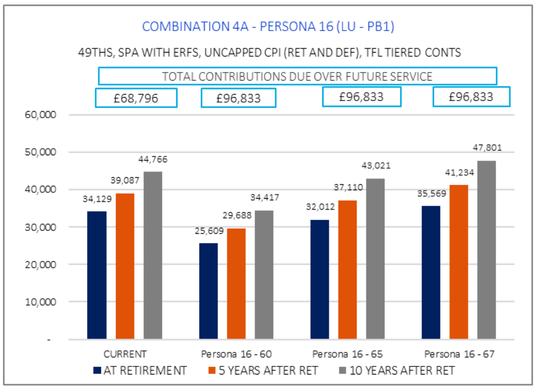

COMBINATION 4A - PERSONA 11 (LU - PB1)
49THS, SPA WITH ERFS, UNCAPPED CPI (RET AND DEF), TFL TIERED CONTS
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£44,133
£63,552
£63,552
£63,552
17,987
20,600
23,593
15,358
17,804
20,640
19,198
22,255
25,800
21,331
24,728
28,667
CURRENT
Persona 11 - 60
Persona 11 - 65
Persona 11 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET

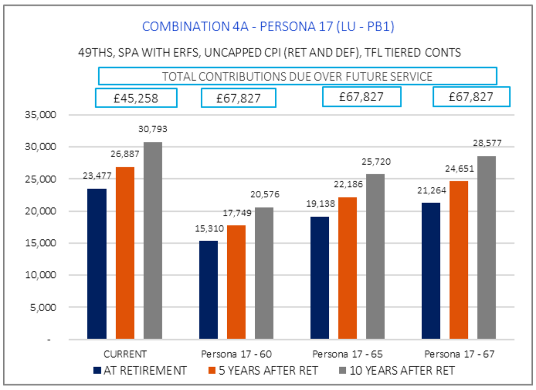

COMBINATION 4A - PERSONA 12 (LU - PB1)
49THS, SPA WITH ERFS, UNCAPPED CPI (RET AND DEF), TFL TIERED CONTS
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£24,071
£27,922
£27,922
£27,922
9,834
11,263
12,899
8,375
9,709
11,255
10,469
12,136
14,069
11,632
13,485
15,633
CURRENT
Persona 12 - 60
Persona 12 - 65
Persona 12 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET

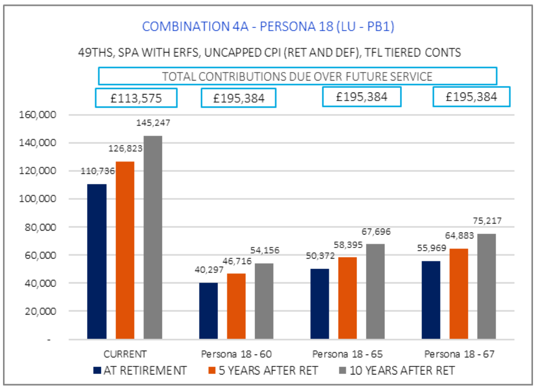

COMBINATION 4A - PERSONA 13 (LU - PB1)
49THS, SPA WITH ERFS, UNCAPPED CPI (RET AND DEF), TFL TIERED CONTS
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£12,036
£12,036
£12,036
£12,036
4,917
5,632
6,450
4,188
4,855
5,628
5,234
6,068
7,035
5,816
6,742
7,816
CURRENT
Persona 13 - 60
Persona 13 - 65
Persona 13 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET

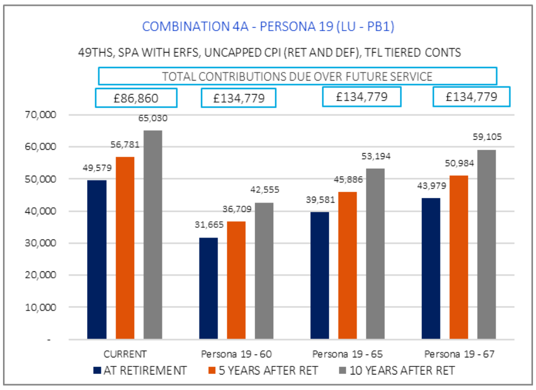

COMBINATION 4A - PERSONA 14 (LU - PB1)
49THS, SPA WITH ERFS, UNCAPPED CPI (RET AND DEF), TFL TIERED CONTS
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£53,482
£85,572
£85,572
£85,572
21,786
24,951
28,576
18,612
21,577
25,013
23,265
26,971
31,267
25,850
29,968
34,741
CURRENT
Persona 14 - 60
Persona 14 - 65
Persona 14 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET

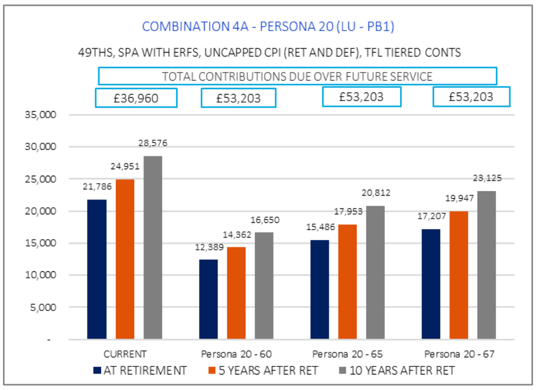

COMBINATION 4A - PERSONA 15 (LU - PB1)
49THS, SPA WITH ERFS, UNCAPPED CPI (RET AND DEF), TFL TIERED CONTS
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£139,217
£284,002
£284,002
£284,002
56,574
64,793
74,206
48,457
56,175
65,123
60,572
70,219
81,403
67,302
78,021
90,448
CURRENT
Persona 15 - 60
Persona 15 - 65
Persona 15 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET


COMBINATION 4A - PERSONA 16 (LU - PB1)
49THS, SPA WITH ERFS, UNCAPPED CPI (RET AND DEF), TFL TIERED CONTS
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£68,796
£96,833
£96,833
£96,833
34,129
39,087
44,766
25,609
29,688
34,417
32,012
37,110
43,021
35,569
41,234
47,801
CURRENT
Persona 16 - 60
Persona 16 - 65
Persona 16 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET

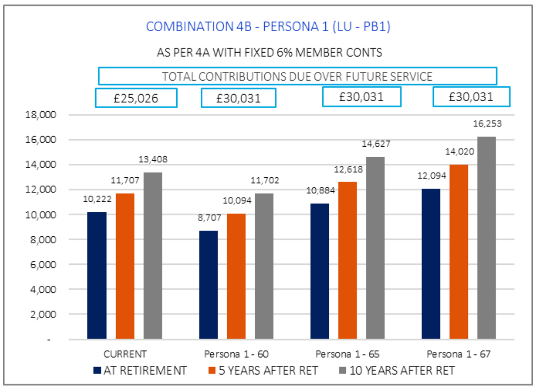


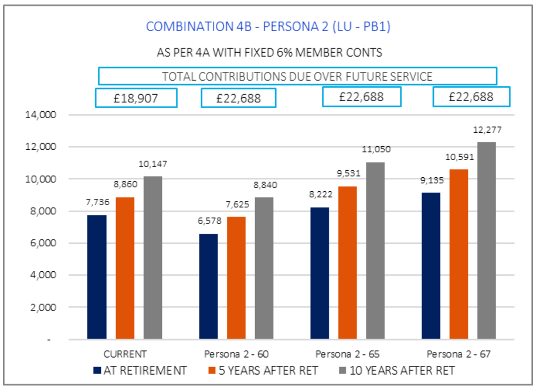


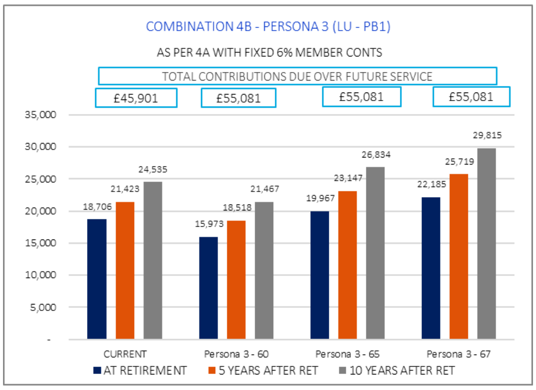


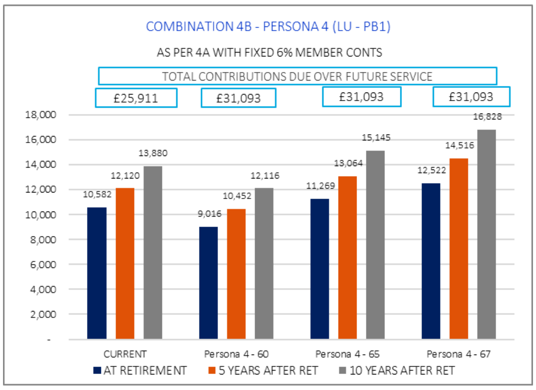


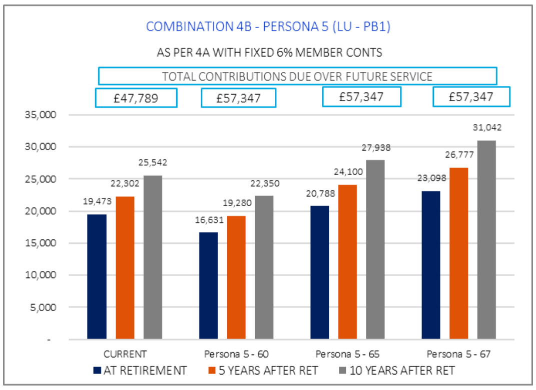
4B: 49ths; SPA (no ERFs), uncapped CPI (retirement and deferment); 6% fixed member contributions

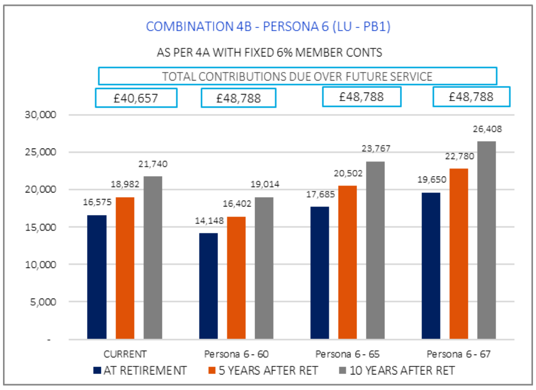


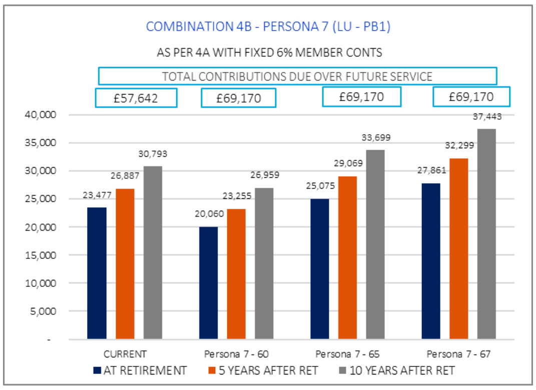


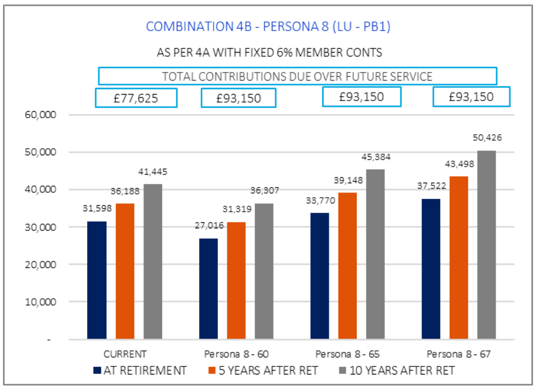


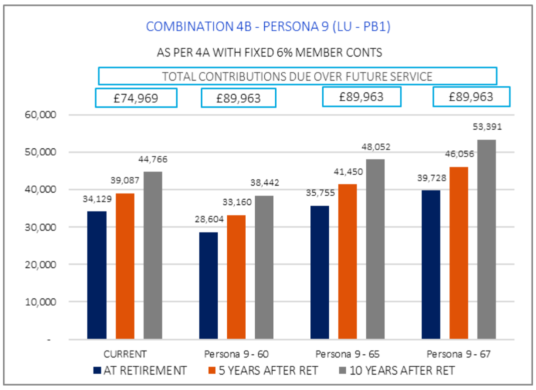


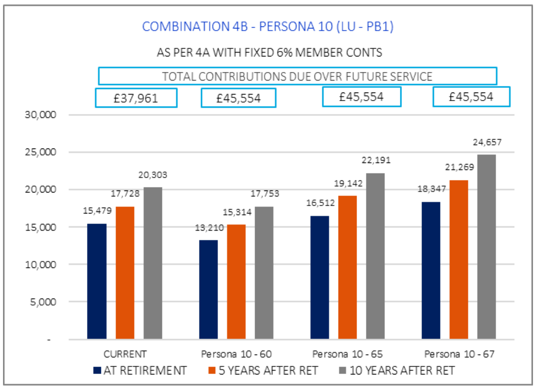

COMBINATION 4B - PERSONA 5 (LU - PB1)
AS PER 4A WITH FIXED 6% MEMBER CONTS
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£47,789
£57,347
£57,347
£57,347
35,000
30,000
25,000
20,000
15,000
10,000
5,000
-
19,473
22,302
25,542
16,631
19,280
22,350
20,788
24,100
27,938
23,098
26,777
31,042
CURRENT
Persona 5 - 60
Persona 5 - 65
Persona 5 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET

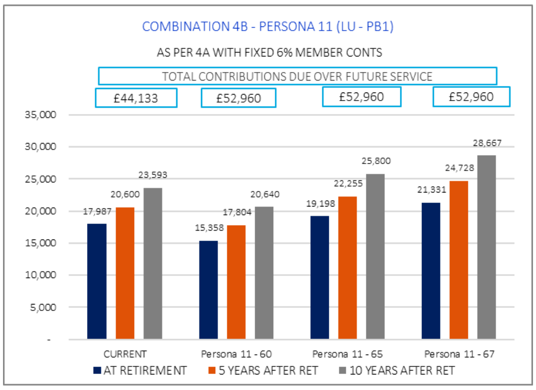

COMBINATION 4B - PERSONA 6 (LU - PB1)
AS PER 4A WITH FIXED 6% MEMBER CONTS
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£40,657
£48,788
£48,788
£48,788
30,000
25,000
20,000
15,000
10,000
5,000
-
16,575
18,982
21,740
14,148
16,402
19,014
17,685
20,502
23,767
19,650
22,780
26,408
CURRENT
Persona 6 - 60
Persona 6 - 65
Persona 6 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET

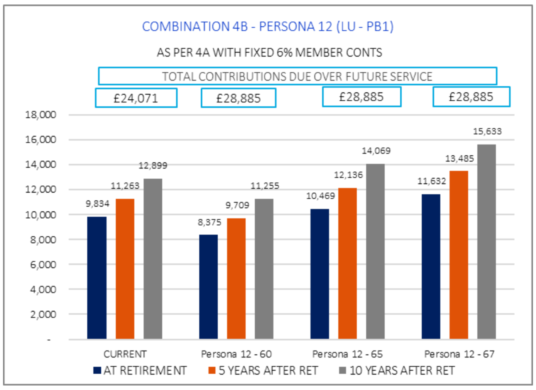

COMBINATION 4B - PERSONA 7 (LU - PB1)
AS PER 4A WITH FIXED 6% MEMBER CONTS
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£57,642
£69,170
£69,170
£69,170
40,000
35,000
30,000
25,000
20,000
15,000
10,000
5,000
-
23,477
26,887
30,793
20,060
23,255
26,959
25,075
29,069
33,699
27,861
32,299
37,443
CURRENT
Persona 7 - 60
Persona 7 - 65
Persona 7 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET

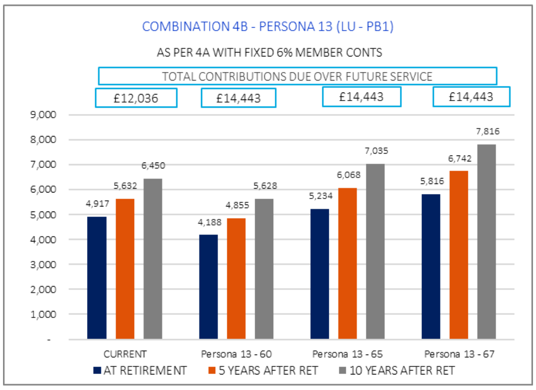

COMBINATION 4B - PERSONA 8 (LU - PB1)
AS PER 4A WITH FIXED 6% MEMBER CONTS
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£77,625
£93,150
£93,150
£93,150
60,000
50,000
40,000
30,000
20,000
10,000
-
31,598
36,188
41,445
27,016
31,319
36,307
33,770
39,148
45,384
37,522
43,498
50,426
CURRENT
Persona 8 - 60
Persona 8 - 65
Persona 8 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET

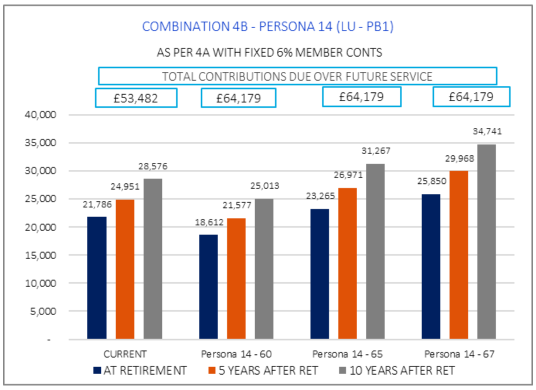

COMBINATION 4B - PERSONA 9 (LU - PB1)
AS PER 4A WITH FIXED 6% MEMBER CONTS
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£74,969
£89,963
£89,963
£89,963
60,000
50,000
40,000
30,000
20,000
10,000
-
34,129
39,087
44,766
28,604
33,160
38,442
35,755
41,450
48,052
39,728
46,056
53,391
CURRENT
Persona 9 - 60
Persona 9 - 65
Persona 9 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET

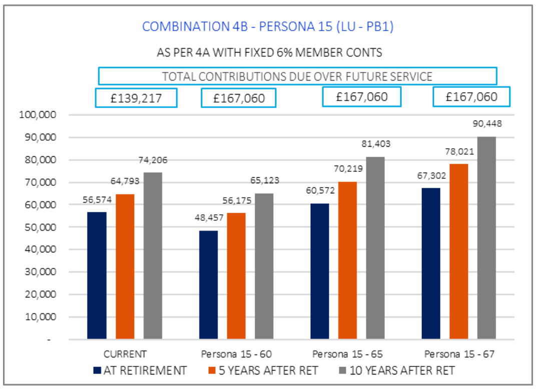

COMBINATION 4B - PERSONA 10 (LU - PB1)
AS PER 4A WITH FIXED 6% MEMBER CONTS
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£37,961
£45,554
£45,554
£45,554
30,000
25,000
20,000
15,000
10,000
5,000
-
15,479
17,728
20,303
13,210
15,314
17,753
16,512
19,142
22,191
18,347
21,269
24,657
CURRENT
Persona 10 - 60
Persona 10 - 65
Persona 10 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET

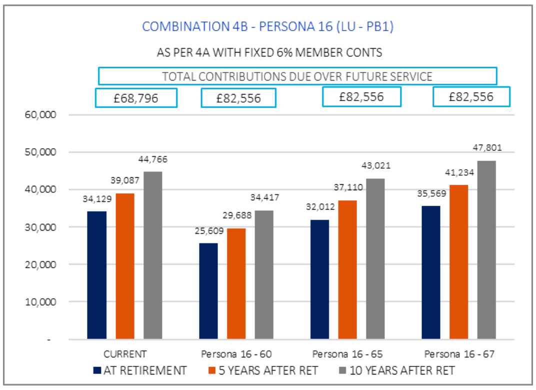

COMBINATION 4B - PERSONA 11 (LU - PB1)
AS PER 4A WITH FIXED 6% MEMBER CONTS
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£44,133
£52,960
£52,960
£52,960
35,000
30,000
25,000
20,000
15,000
10,000
5,000
-
17,987
20,600
23,593
15,358
17,804
20,640
19,198
22,255
25,800
21,331
24,728
28,667
CURRENT
Persona 11 - 60
Persona 11 - 65
Persona 11 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET

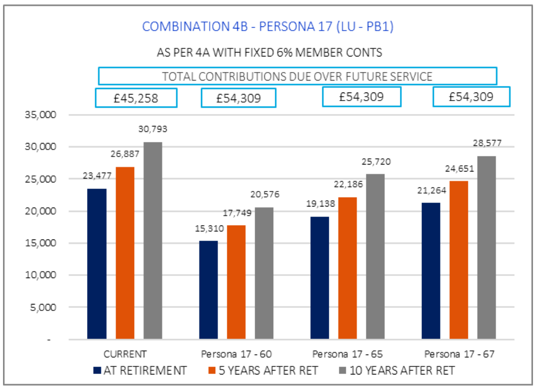

COMBINATION 4B - PERSONA 12 (LU - PB1)
AS PER 4A WITH FIXED 6% MEMBER CONTS
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£24,071
£28,885
£28,885
£28,885
18,000
16,000
14,000
12,000
10,000
8,000
6,000
4,000
2,000
-
9,834
11,263
12,899
8,375
9,709
11,255
10,469
12,136
14,069
11,632
13,485
15,633
CURRENT
Persona 12 - 60
Persona 12 - 65
Persona 12 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET

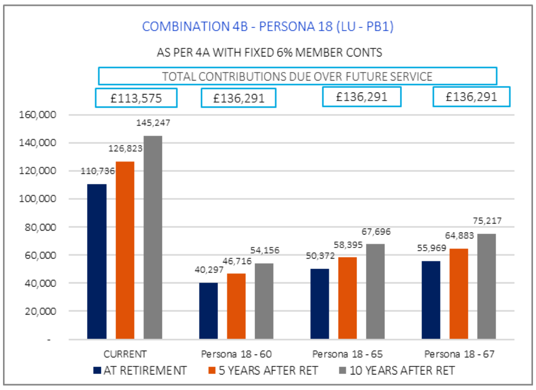

COMBINATION 4B - PERSONA 13 (LU - PB1)
AS PER 4A WITH FIXED 6% MEMBER CONTS
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£12,036
£14,443
£14,443
£14,443
9,000
8,000
7,000
6,000
5,000
4,000
3,000
2,000
1,000
-
4,917
5,632
6,450
4,188
4,855
5,628
5,234
6,068
7,035
5,816
6,742
7,816
CURRENT
Persona 13 - 60
Persona 13 - 65
Persona 13 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET

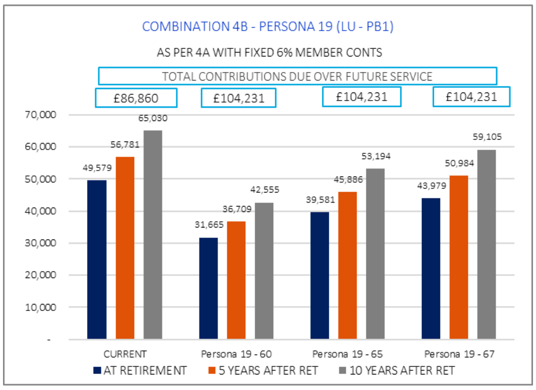

COMBINATION 4B - PERSONA 14 (LU - PB1)
AS PER 4A WITH FIXED 6% MEMBER CONTS
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£53,482
£64,179
£64,179
£64,179
40,000
35,000
30,000
25,000
20,000
15,000
10,000
5,000
-
21,786
24,951
28,576
18,612
21,577
25,013
23,265
26,971
31,267
25,850
29,968
34,741
CURRENT
Persona 14 - 60
Persona 14 - 65
Persona 14 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET

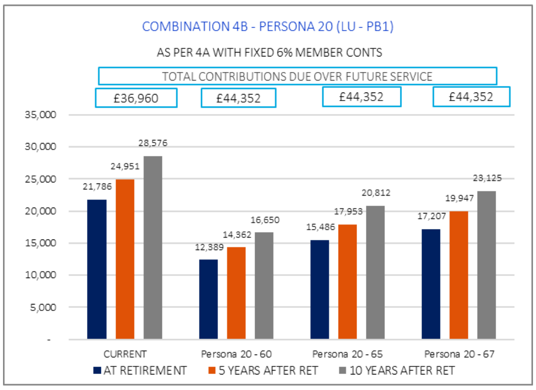

COMBINATION 4B - PERSONA 15 (LU - PB1)
AS PER 4A WITH FIXED 6% MEMBER CONTS
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£139,217
£167,060
£167,060
£167,060
100,000
90,000
80,000
70,000
60,000
50,000
40,000
30,000
20,000
10,000
-
56,574
64,793
74,206
48,457
56,175
65,123
60,572
70,219
81,403
67,302
78,021
90,448
CURRENT
Persona 15 - 60
Persona 15 - 65
Persona 15 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET


COMBINATION 4B - PERSONA 16 (LU - PB1)
AS PER 4A WITH FIXED 6% MEMBER CONTS
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£68,796
£82,556
£82,556
£82,556
60,000
50,000
40,000
30,000
20,000
10,000
-
34,129
39,087
44,766
25,609
29,688
34,417
32,012
37,110
43,021
35,569
41,234
47,801
CURRENT
Persona 16 - 60
Persona 16 - 65
Persona 16 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET

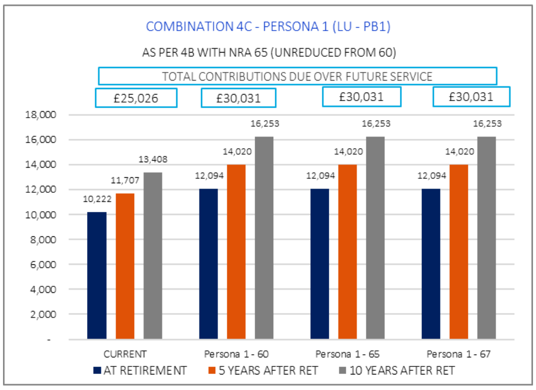

COMBINATION 4B - PERSONA 17 (LU - PB1)
AS PER 4A WITH FIXED 6% MEMBER CONTS
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£45,258
£54,309
£54,309
£54,309
35,000
30,000
25,000
20,000
15,000
10,000
5,000
-
23,477
26,887
30,793
15,310
17,749
20,576
19,138
22,186
25,720
21,264
24,651
28,577
CURRENT
Persona 17 - 60
Persona 17 - 65
Persona 17 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET

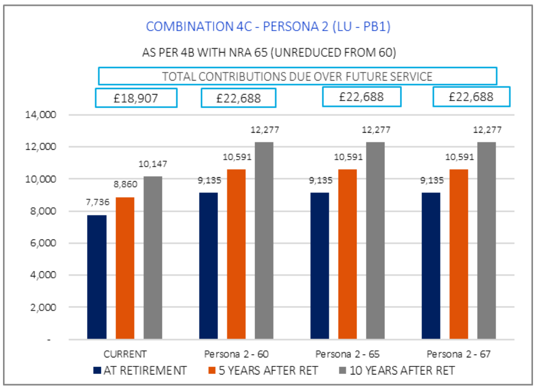

COMBINATION 4B - PERSONA 18 (LU - PB1)
AS PER 4A WITH FIXED 6% MEMBER CONTS
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£113,575
£136,291
£136,291
£136,291
160,000
140,000
120,000
100,000
80,000
60,000
40,000
20,000
-
110,736
126,823
145,247
40,297
46,716
54,156
50,372
58,395
67,696
55,969
64,883
75,217
CURRENT
Persona 18 - 60
Persona 18 - 65
Persona 18 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET

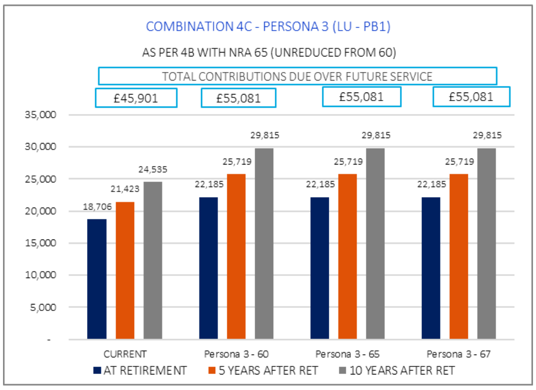

COMBINATION 4B - PERSONA 19 (LU - PB1)
AS PER 4A WITH FIXED 6% MEMBER CONTS
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£86,860
£104,231
£104,231
£104,231
70,000
60,000
50,000
40,000
30,000
20,000
10,000
-
49,579
56,781
65,030
31,665
36,709
42,555
39,581
45,886
53,194
43,979
50,984
59,105
CURRENT
Persona 19 - 60
Persona 19 - 65
Persona 19 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET

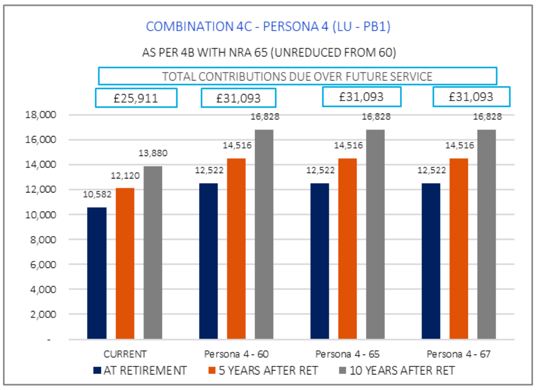

COMBINATION 4B - PERSONA 20 (LU - PB1)
AS PER 4A WITH FIXED 6% MEMBER CONTS
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£36,960
£44,352
£44,352
£44,352
35,000
30,000
25,000
20,000
15,000
10,000
5,000
-
21,786
24,951
28,576
12,389
14,362
16,650
15,486
17,953
20,812
17,207
19,947
23,125
CURRENT
Persona 20 - 60
Persona 20 - 65
Persona 20 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET

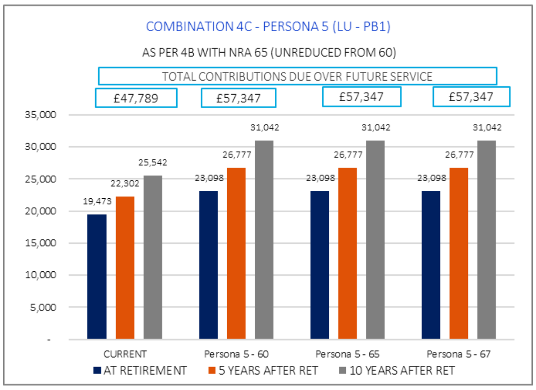
4C: 49ths; NRA at 65 (unreduced from age 60), uncapped CPI (retirement and deferment); 6% fixed member contributions

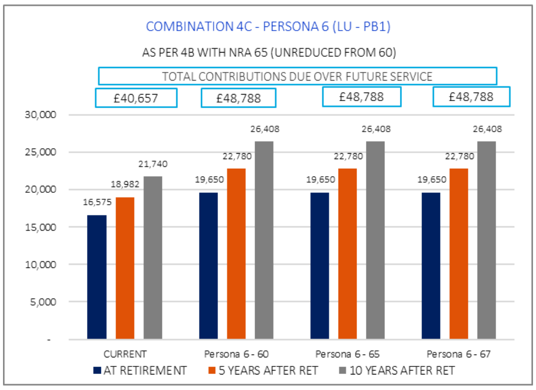


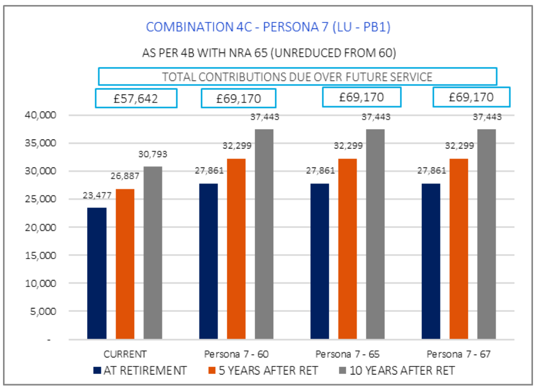


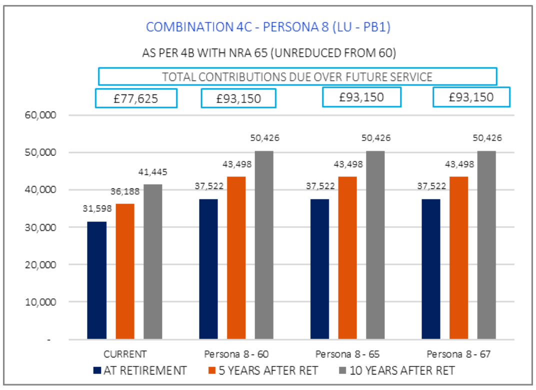


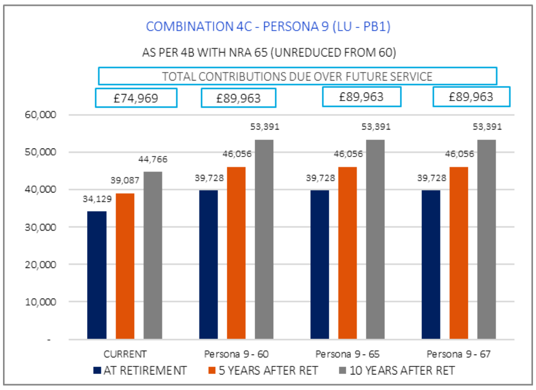


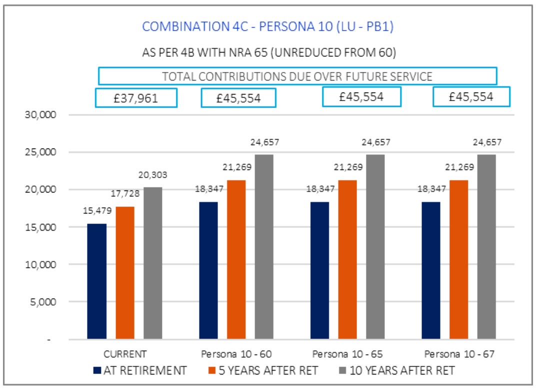


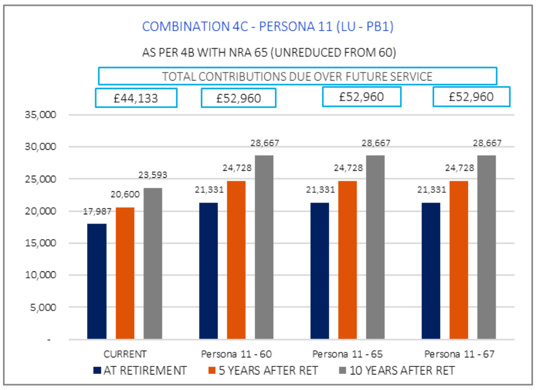


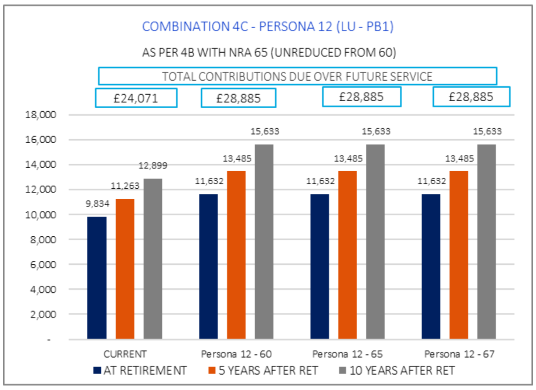


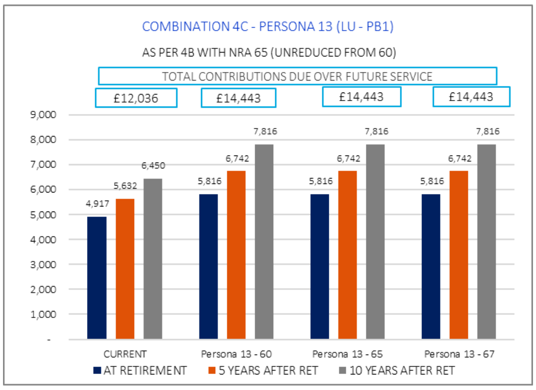


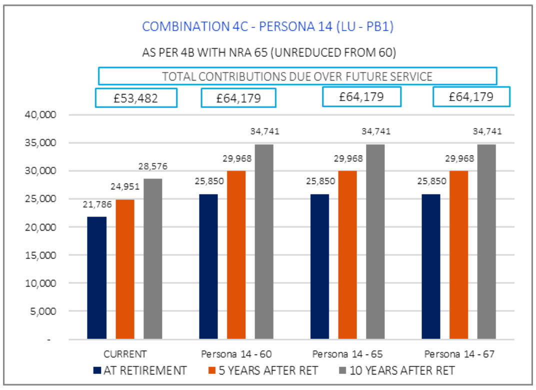

COMBINATION 4C - PERSONA 9 (LU - PB1)
AS PER 4B WITH NRA 65 (UNREDUCED FROM 60)
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£74,969
£89,963
£89,963
£89,963
34,129
39,087
44,766
39,728
46,056
53,391
39,728
46,056
53,391
39,728
46,056
53,391
CURRENT
Persona 9 - 60
Persona 9 - 65
Persona 9 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET

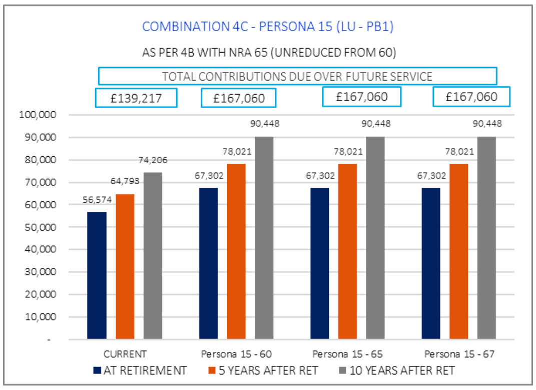

COMBINATION 4C - PERSONA 10 (LU - PB1)
AS PER 4B WITH NRA 65 (UNREDUCED FROM 60)
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£37,961
£45,554
£45,554
£45,554
15,479
17,728
20,303
18,847
21,269
24,657
18,847
21,269
24,657
18,847
21,269
24,657
CURRENT
Persona 10 - 60
Persona 10 - 65
Persona 10 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET

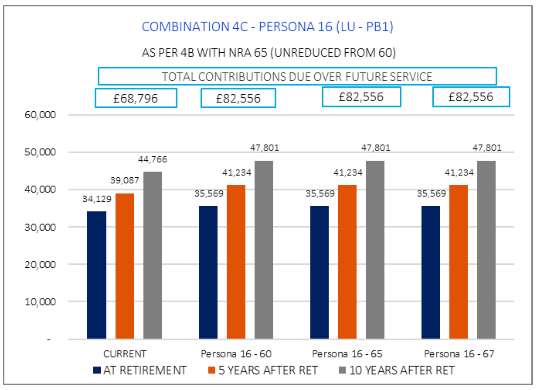

COMBINATION 4C - PERSONA 11 (LU - PB1)
AS PER 4B WITH NRA 65 (UNREDUCED FROM 60)
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£44,133
£52,960
£52,960
£52,960
17,987
20,600
23,593
21,331
24,728
28,667
21,331
24,728
28,667
21,331
24,728
28,667
CURRENT
Persona 11 - 60
Persona 11 - 65
Persona 11 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET

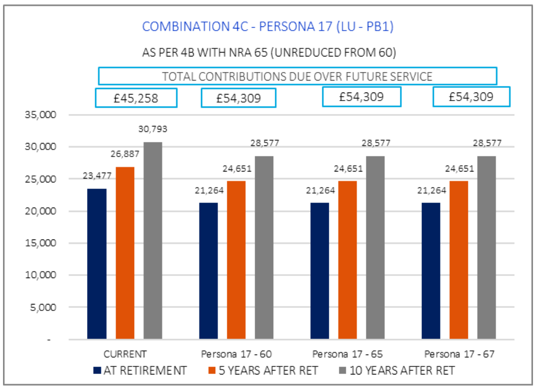

COMBINATION 4C - PERSONA 12 (LU - PB1)
AS PER 4B WITH NRA 65 (UNREDUCED FROM 60)
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£24,071
£28,885
£28,885
£28,885
9,834
11,263
12,899
11,632
13,485
15,633
11,632
13,485
15,633
11,632
13,485
15,633
CURRENT
Persona 12 - 60
Persona 12 - 65
Persona 12 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET

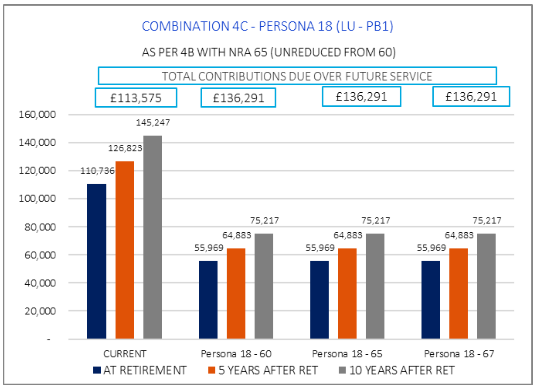

COMBINATION 4C - PERSONA 13 (LU - PB1)
AS PER 4B WITH NRA 65 (UNREDUCED FROM 60)
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£12,036
£14,443
£14,443
£14,443
4,917
5,632
6,450
5,816
6,742
7,816
5,816
6,742
7,816
5,816
6,742
7,816
CURRENT
Persona 13 - 60
Persona 13 - 65
Persona 13 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET

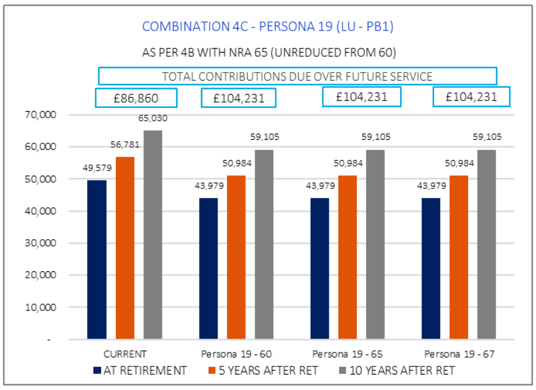

COMBINATION 4C - PERSONA 14 (LU - PB1)
AS PER 4B WITH NRA 65 (UNREDUCED FROM 60)
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£53,482
£64,179
£64,179
£64,179
21,786
24,951
28,576
25,850
29,968
34,741
25,850
29,968
34,741
25,850
29,968
34,741
CURRENT
Persona 14 - 60
Persona 14 - 65
Persona 14 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET

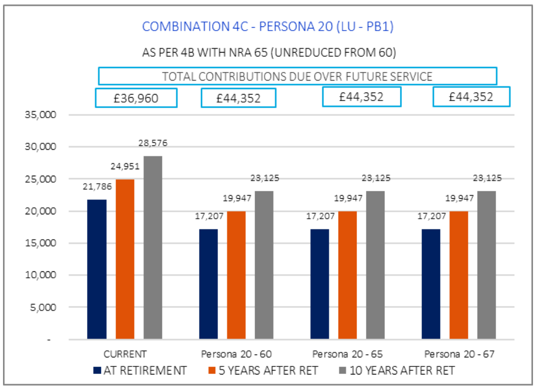

COMBINATION 4C - PERSONA 15 (LU - PB1)
AS PER 4B WITH NRA 65 (UNREDUCED FROM 60)
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£139,217
£167,060
£167,060
£167,060
56,574
64,793
74,206
67,302
78,021
90,448
67,302
78,021
90,448
67,302
78,021
90,448
CURRENT
Persona 15 - 60
Persona 15 - 65
Persona 15 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET


COMBINATION 4C - PERSONA 16 (LU - PB1)
AS PER 4B WITH NRA 65 (UNREDUCED FROM 60)
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£68,796
£82,556
£82,556
£82,556
34,129
39,087
44,766
35,569
41,234
47,801
35,569
41,234
47,801
35,569
41,234
47,801
CURRENT
Persona 16 - 60
Persona 16 - 65
Persona 16 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET

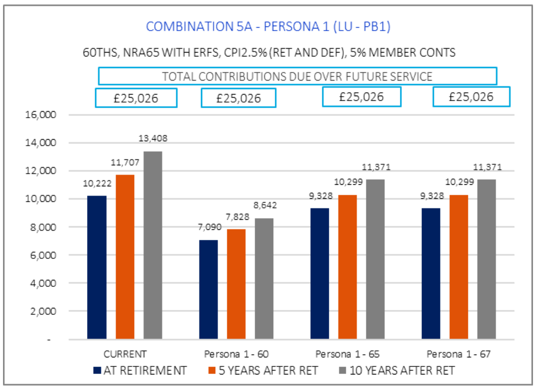


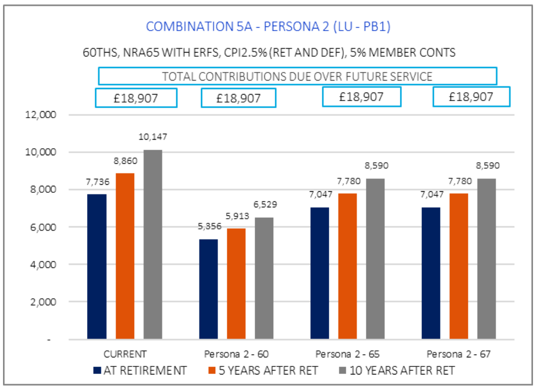


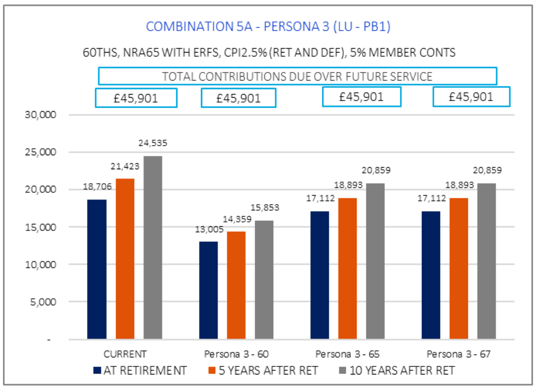


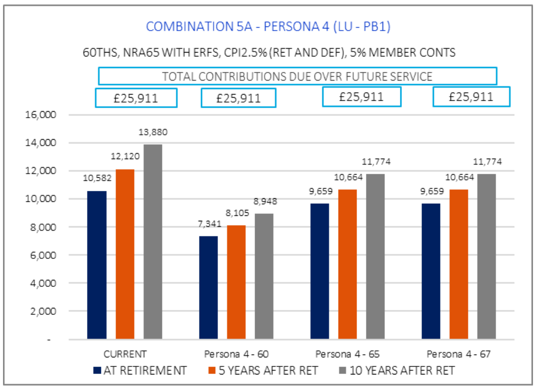


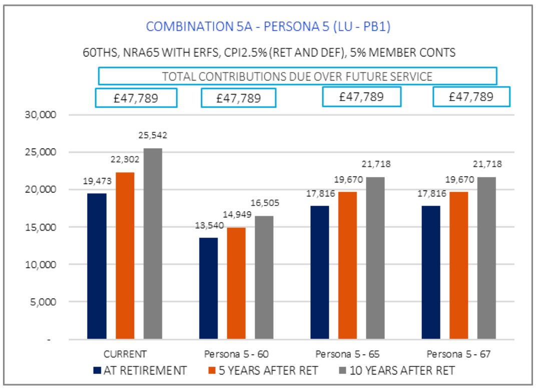
5A: 60ths, NRA 65 (no ERFs applied); CPI capped at 2.5% for pensions in retirement and in deferment; 5% member contributions

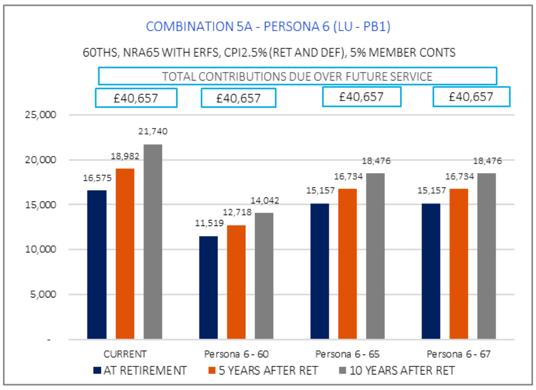


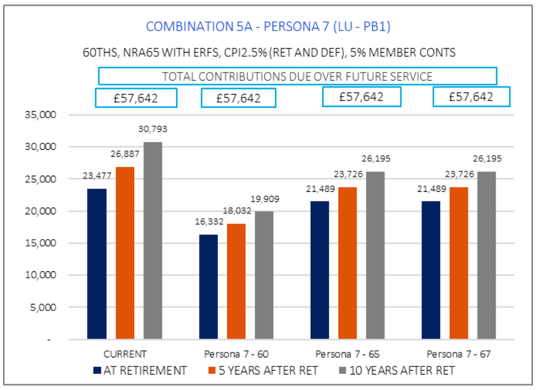


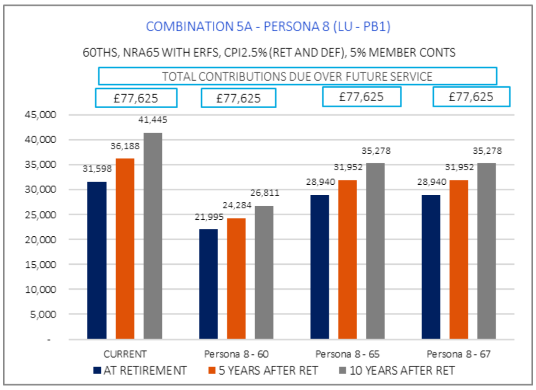


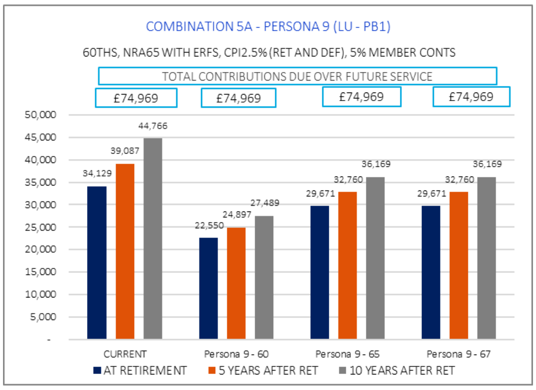


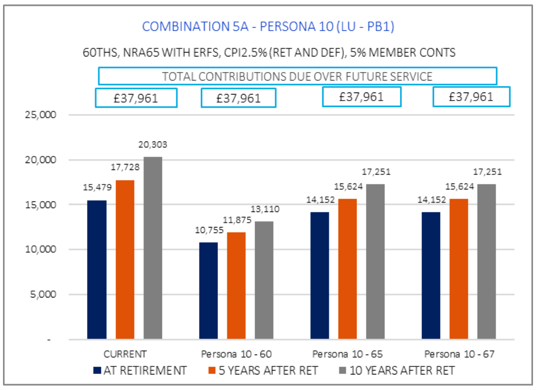

COMBINATION 5A - PERSONA 5 (LU - PB1)
60THS, NRA65 WITH ERFS, CPI2.5% (RET AND DEF), 5% MEMBER CONTS
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£47,789
£47,789
£47,789
£47,789
19,473
22,302
25,542
13,540
14,949
16,505
17,816
19,670
21,718
17,816
19,670
21,718
CURRENT
Persona 5 - 60
Persona 5 - 65
Persona 5 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET

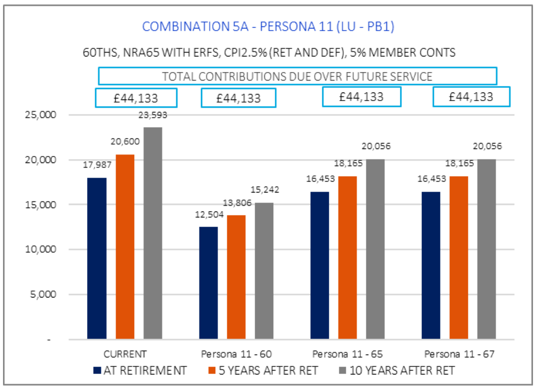

COMBINATION 5A - PERSONA 6 (LU - PB1)
60THS, NRA65 WITH ERFS, CPI2.5% (RET AND DEF), 5% MEMBER CONTS
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£40,657
£40,657
£40,657
£40,657
16,575
18,982
21,740
11,519
12,718
14,042
15,157
16,734
18,476
15,157
16,734
18,476
CURRENT
Persona 6 - 60
Persona 6 - 65
Persona 6 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET

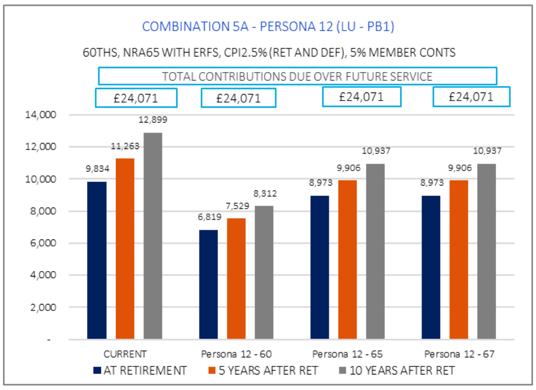

COMBINATION 5A - PERSONA 7 (LU - PB1)
60THS, NRA65 WITH ERFS, CPI2.5% (RET AND DEF), 5% MEMBER CONTS
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£57,642
£57,642
£57,642
£57,642
23,477
26,887
30,793
16,332
18,032
19,909
21,489
23,726
26,195
21,489
23,726
26,195
CURRENT
Persona 7 - 60
Persona 7 - 65
Persona 7 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET

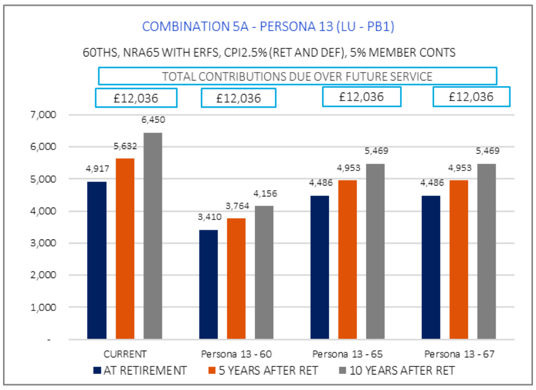

COMBINATION 5A - PERSONA 8 (LU - PB1)
60THS, NRA65 WITH ERFS, CPI2.5% (RET AND DEF), 5% MEMBER CONTS
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£77,625
£77,625
£77,625
£77,625
31,598
36,188
41,445
21,995
24,284
26,811
28,940
31,952
35,278
28,940
31,952
35,278
CURRENT
Persona 8 - 60
Persona 8 - 65
Persona 8 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET

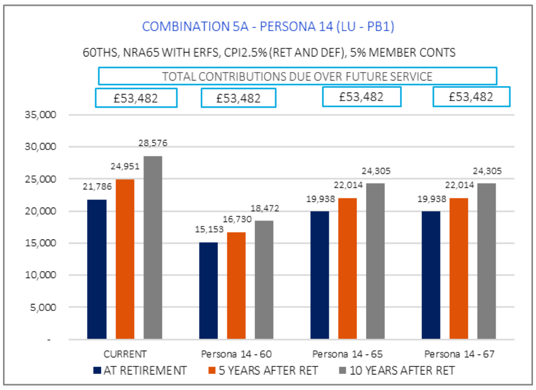

COMBINATION 5A - PERSONA 9 (LU - PB1)
60THS, NRA65 WITH ERFS, CPI2.5% (RET AND DEF), 5% MEMBER CONTS
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£74,969
£74,969
£74,969
£74,969
34,129
39,087
44,766
22,550
24,897
27,489
29,671
32,760
36,169
29,671
32,760
36,169
CURRENT
Persona 9 - 60
Persona 9 - 65
Persona 9 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET

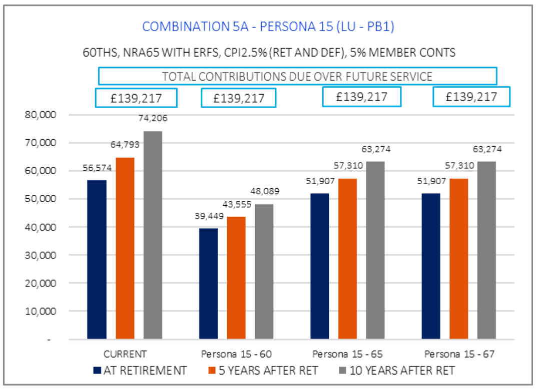

COMBINATION 5A - PERSONA 10 (LU - PB1)
60THS, NRA65 WITH ERFS, CPI2.5% (RET AND DEF), 5% MEMBER CONTS
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£37,961
£37,961
£37,961
£37,961
15,479
17,728
20,303
10,755
11,875
13,110
14,152
15,624
17,251
14,152
15,624
17,251
CURRENT
Persona 10 - 60
Persona 10 - 65
Persona 10 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET

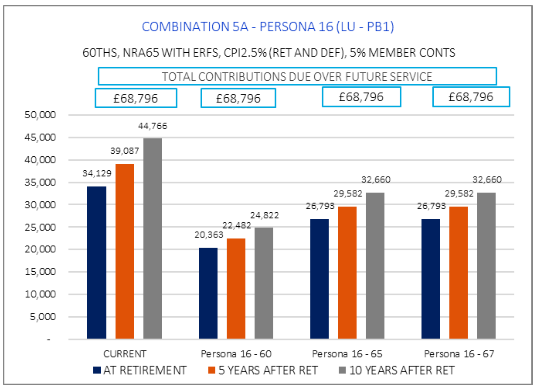

COMBINATION 5A - PERSONA 11 (LU - PB1)
60THS, NRA65 WITH ERFS, CPI2.5% (RET AND DEF), 5% MEMBER CONTS
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£44,133
£44,133
£44,133
£44,133
17,987
20,600
23,593
12,504
13,806
15,242
16,453
18,165
20,056
16,453
18,165
20,056
CURRENT
Persona 11 - 60
Persona 11 - 65
Persona 11 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET

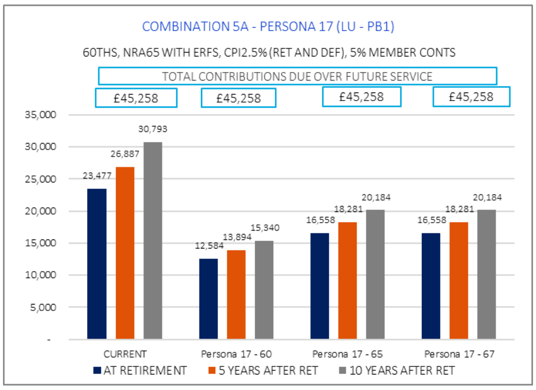

COMBINATION 5A - PERSONA 12 (LU - PB1)
60THS, NRA65 WITH ERFS, CPI2.5% (RET AND DEF), 5% MEMBER CONTS
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£24,071
£24,071
£24,071
£24,071
9,834
11,263
12,899
6,819
7,529
8,312
8,973
9,906
10,937
8,973
9,906
10,937
CURRENT
Persona 12 - 60
Persona 12 - 65
Persona 12 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET

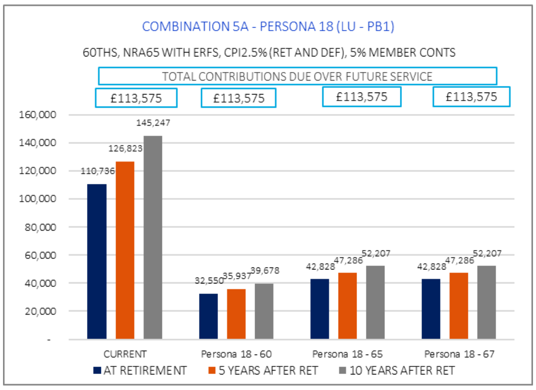

COMBINATION 5A - PERSONA 13 (LU - PB1)
60THS, NRA65 WITH ERFS, CPI2.5% (RET AND DEF), 5% MEMBER CONTS
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£12,036
£12,036
£12,036
£12,036
4,917
5,632
6,450
3,410
3,764
4,156
4,486
4,953
5,469
4,486
4,953
5,469
CURRENT
Persona 13 - 60
Persona 13 - 65
Persona 13 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET

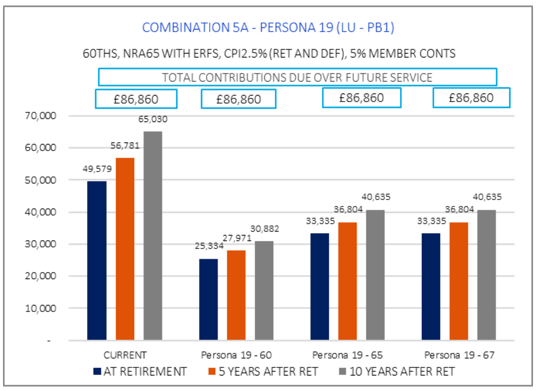

COMBINATION 5A - PERSONA 14 (LU - PB1)
60THS, NRA65 WITH ERFS, CPI2.5% (RET AND DEF), 5% MEMBER CONTS
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£53,482
£53,482
£53,482
£53,482
21,786
24,951
28,576
15,153
16,730
18,472
19,938
22,014
24,305
19,938
22,014
24,305
CURRENT
Persona 14 - 60
Persona 14 - 65
Persona 14 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET

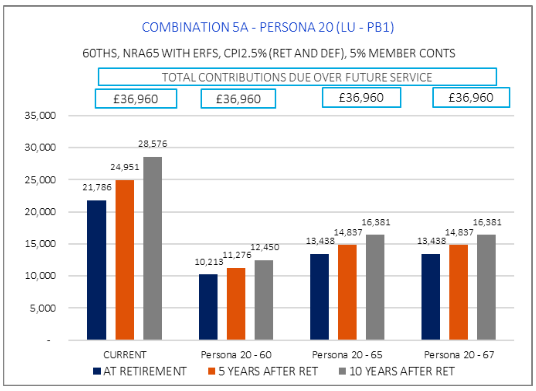

COMBINATION 5A - PERSONA 15 (LU - PB1)
60THS, NRA65 WITH ERFS, CPI2.5% (RET AND DEF), 5% MEMBER CONTS
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£139,217
£139,217
£139,217
£139,217
56,574
64,793
74,206
39,449
43,555
48,089
51,907
57,310
63,274
51,907
57,310
63,274
CURRENT
Persona 15 - 60
Persona 15 - 65
Persona 15 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET


COMBINATION 5A - PERSONA 16 (LU - PB1)
60THS, NRA65 WITH ERFS, CPI2.5% (RET AND DEF), 5% MEMBER CONTS
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£68,796
£68,796
£68,796
£68,796
34,129
39,087
44,766
20,363
22,482
24,822
26,793
29,582
32,660
26,793
29,582
32,660
CURRENT
Persona 16 - 60
Persona 16 - 65
Persona 16 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET

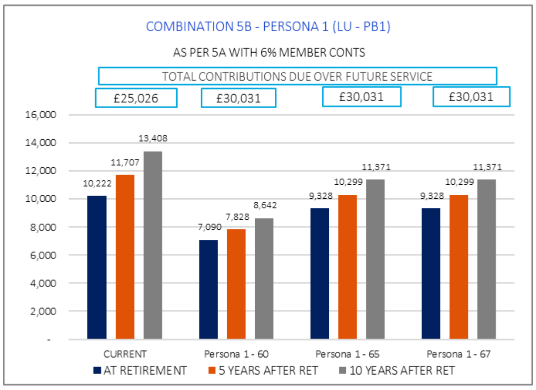

COMBINATION 5A - PERSONA 17 (LU - PB1)
60THS, NRA65 WITH ERFS, CPI2.5% (RET AND DEF), 5% MEMBER CONTS
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£45,258
£45,258
£45,258
£45,258
23,477
26,887
30,793
12,584
13,894
15,340
16,558
18,281
20,184
16,558
18,281
20,184
CURRENT
Persona 17 - 60
Persona 17 - 65
Persona 17 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET

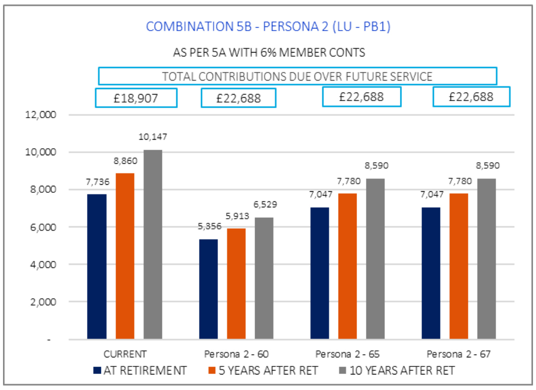

COMBINATION 5A - PERSONA 18 (LU - PB1)
60THS, NRA65 WITH ERFS, CPI2.5% (RET AND DEF), 5% MEMBER CONTS
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£113,575
£113,575
£113,575
£113,575
110,736
126,823
145,247
32,550
35,937
39,678
42,828
47,286
52,207
42,828
47,286
52,207
CURRENT
Persona 18 - 60
Persona 18 - 65
Persona 18 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET

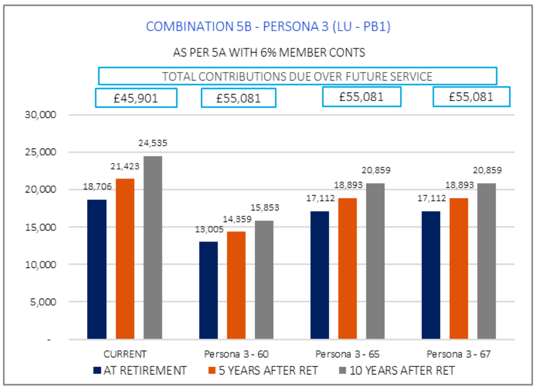

COMBINATION 5A - PERSONA 19 (LU - PB1)
60THS, NRA65 WITH ERFS, CPI2.5% (RET AND DEF), 5% MEMBER CONTS
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£86,860
£86,860
£86,860
£86,860
49,579
56,781
65,030
25,334
27,971
30,882
33,335
36,804
40,635
33,335
36,804
40,635
CURRENT
Persona 19 - 60
Persona 19 - 65
Persona 19 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET

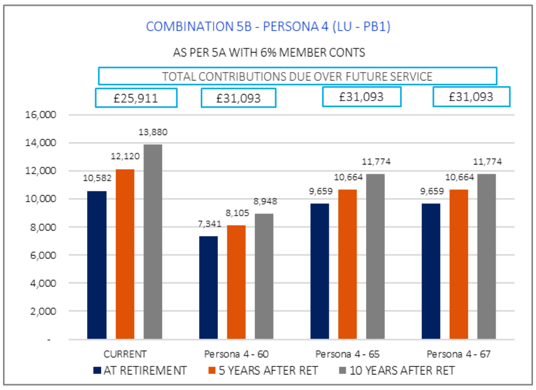

COMBINATION 5A - PERSONA 20 (LU - PB1)
60THS, NRA65 WITH ERFS, CPI2.5% (RET AND DEF), 5% MEMBER CONTS
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£36,960
£36,960
£36,960
£36,960
21,786
24,951
28,576
10,213
11,276
12,450
13,438
14,837
16,381
13,438
14,837
16,381
CURRENT
Persona 20 - 60
Persona 20 - 65
Persona 20 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET

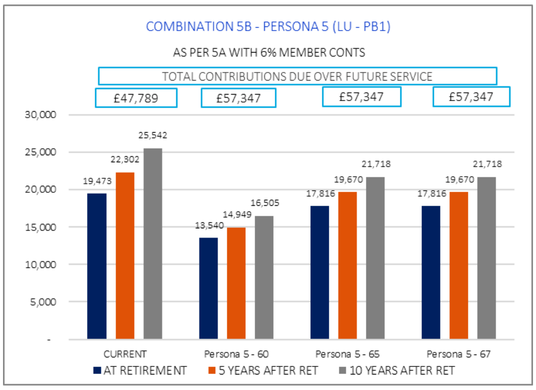
5B: 60ths, NRA 65 (no ERFs applied); CPI capped at 2.5% for pensions in retirement and in deferment; 6% member contributions

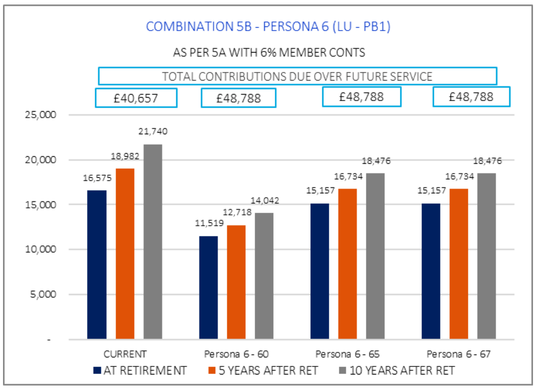


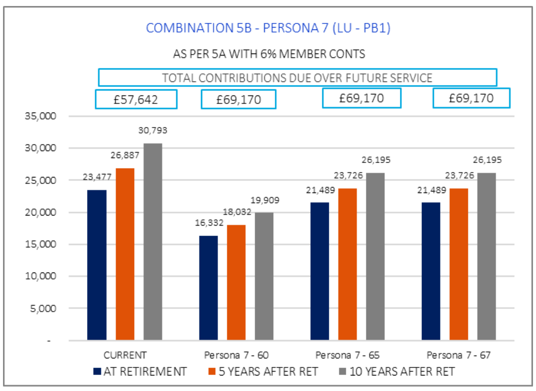


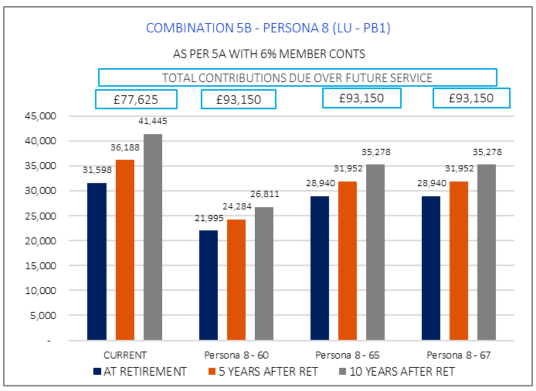


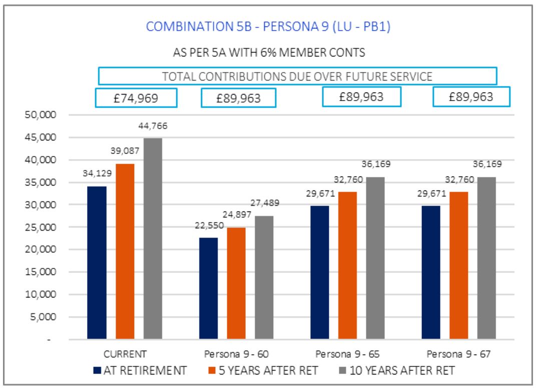


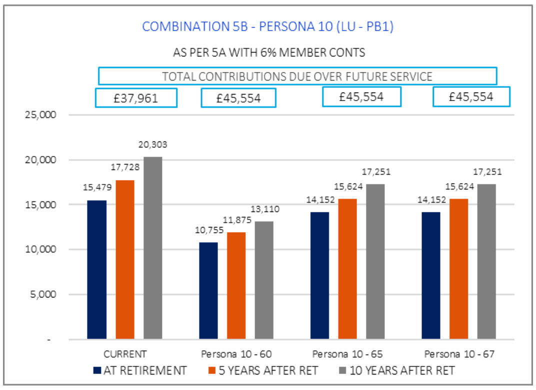


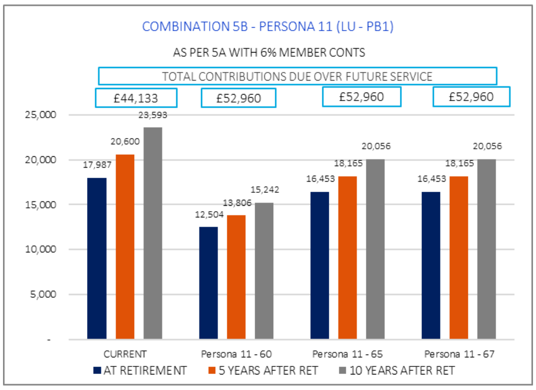


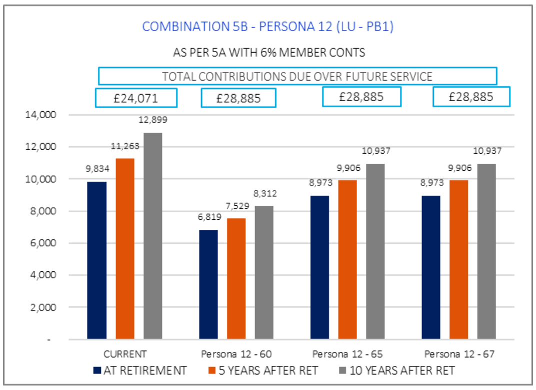


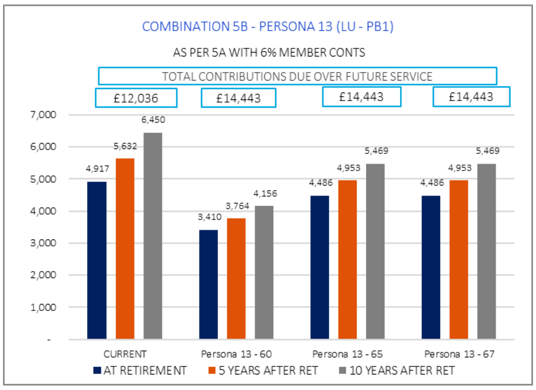


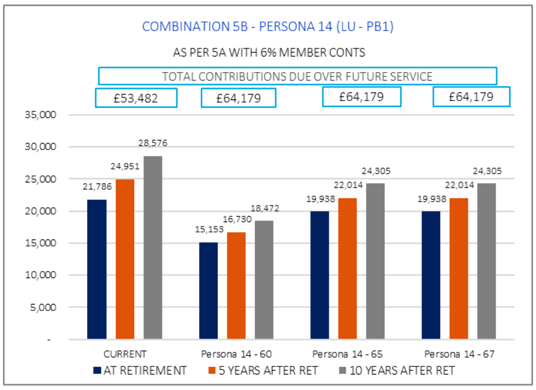

COMBINATION 5B - PERSONA 9 (LU - PB1)
AS PER 5A WITH 6% MEMBER CONTS
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£74,969
£89,963
£89,963
£89,963
34,129
39,087
44,766
22,550
24,897
27,489
29,671
32,760
36,169
29,671
32,760
36,169
CURRENT
Persona 9 - 60
Persona 9 - 65
Persona 9 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET

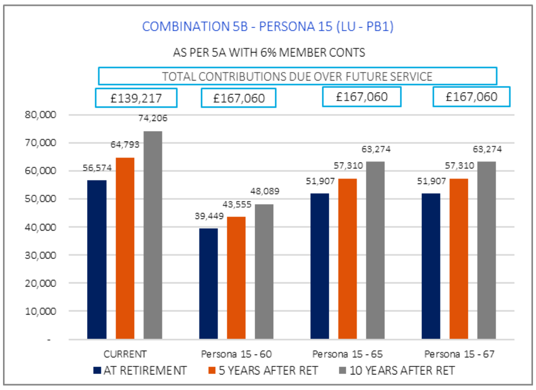

COMBINATION 5B - PERSONA 10 (LU - PB1)
AS PER 5A WITH 6% MEMBER CONTS
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£37,961
£45,554
£45,554
£45,554
15,479
17,728
20,303
10,755
11,875
13,110
14,152
15,624
17,251
14,152
15,624
17,251
CURRENT
Persona 10 - 60
Persona 10 - 65
Persona 10 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET

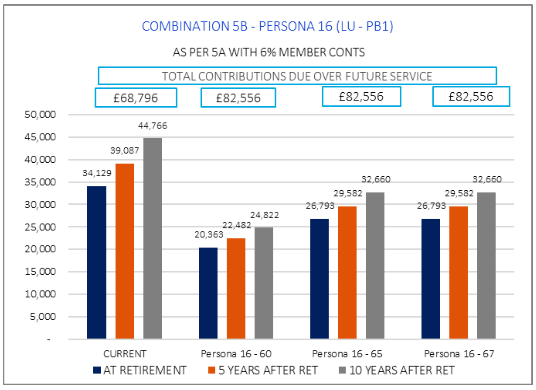

COMBINATION 5B - PERSONA 11 (LU - PB1)
AS PER 5A WITH 6% MEMBER CONTS
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£44,133
£52,960
£52,960
£52,960
17,987
20,600
23,593
12,504
13,806
15,242
16,453
18,165
20,056
16,453
18,165
20,056
CURRENT
Persona 11 - 60
Persona 11 - 65
Persona 11 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET

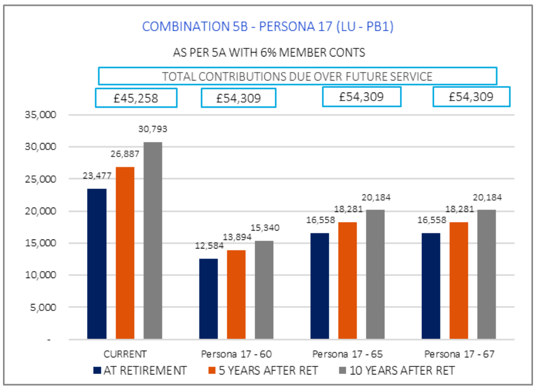

COMBINATION 5B - PERSONA 12 (LU - PB1)
AS PER 5A WITH 6% MEMBER CONTS
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£24,071
£28,885
£28,885
£28,885
9,834
11,263
12,899
6,819
7,529
8,312
8,973
9,906
10,937
8,973
9,906
10,937
CURRENT
Persona 12 - 60
Persona 12 - 65
Persona 12 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET

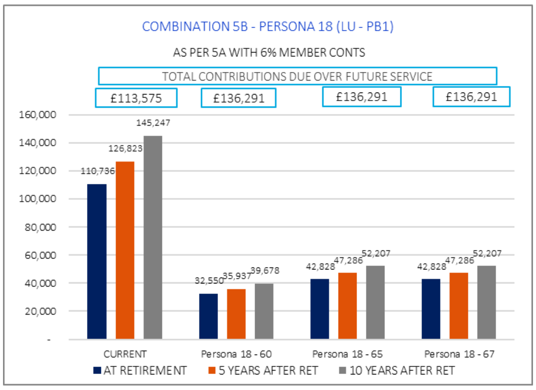

COMBINATION 5B - PERSONA 13 (LU - PB1)
AS PER 5A WITH 6% MEMBER CONTS
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£12,036
£14,443
£14,443
£14,443
4,917
5,632
6,450
3,410
3,764
4,156
4,486
4,953
5,469
4,486
4,953
5,469
CURRENT
Persona 13 - 60
Persona 13 - 65
Persona 13 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET

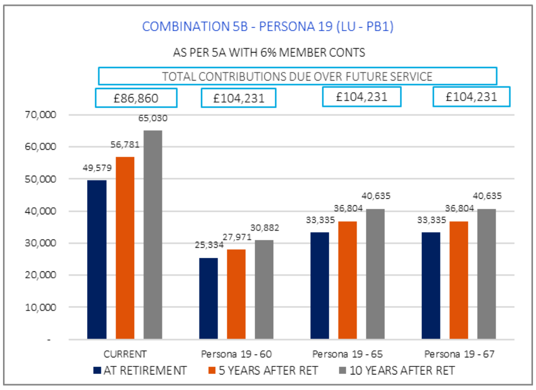

COMBINATION 5B - PERSONA 14 (LU - PB1)
AS PER 5A WITH 6% MEMBER CONTS
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£53,482
£64,179
£64,179
£64,179
21,786
24,951
28,576
15,153
16,730
18,472
19,938
22,014
24,305
19,938
22,014
24,305
CURRENT
Persona 14 - 60
Persona 14 - 65
Persona 14 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET

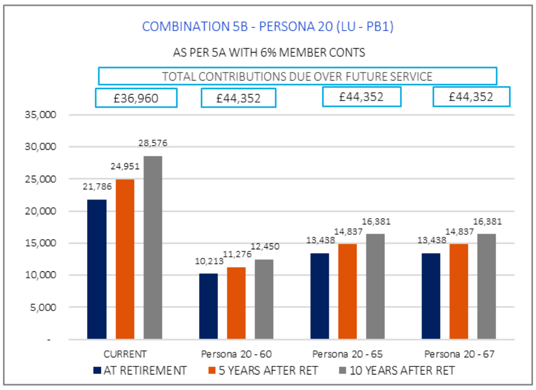

COMBINATION 5B - PERSONA 15 (LU - PB1)
AS PER 5A WITH 6% MEMBER CONTS
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£139,217
£167,060
£167,060
£167,060
56,574
64,793
74,206
39,449
43,555
48,089
51,907
57,310
63,274
51,907
57,310
63,274
CURRENT
Persona 15 - 60
Persona 15 - 65
Persona 15 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET


COMBINATION 5B - PERSONA 16 (LU - PB1)
AS PER 5A WITH 6% MEMBER CONTS
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£68,796
£82,556
£82,556
£82,556
34,129
39,087
44,766
20,363
22,482
24,822
26,793
29,582
32,660
26,793
29,582
32,660
CURRENT
Persona 16 - 60
Persona 16 - 65
Persona 16 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET

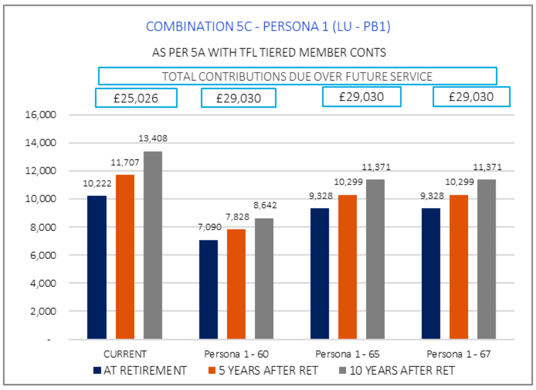


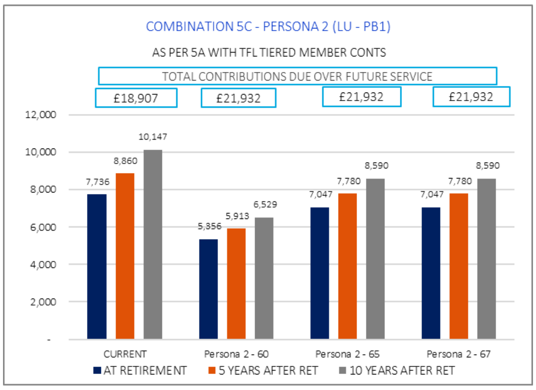


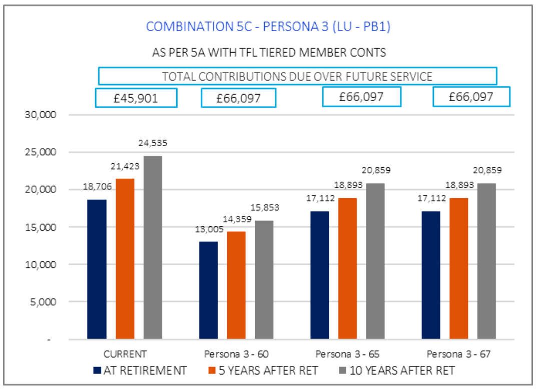


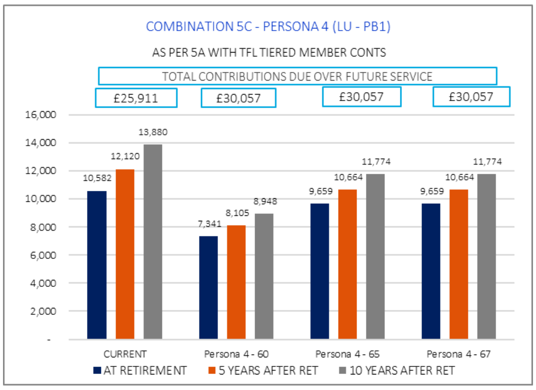


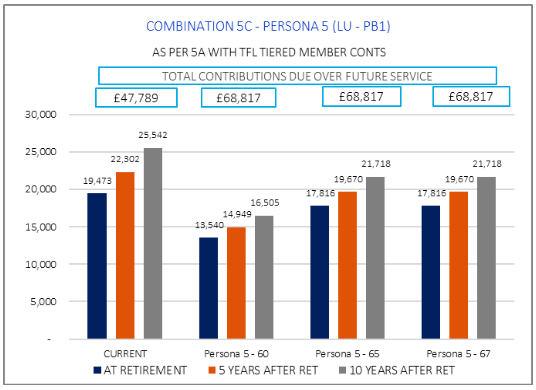
5C: 60ths, NRA 65 (no ERFs applied); CPI capped at 2.5% for pensions in retirement and in deferment; TfL tiered member contributions

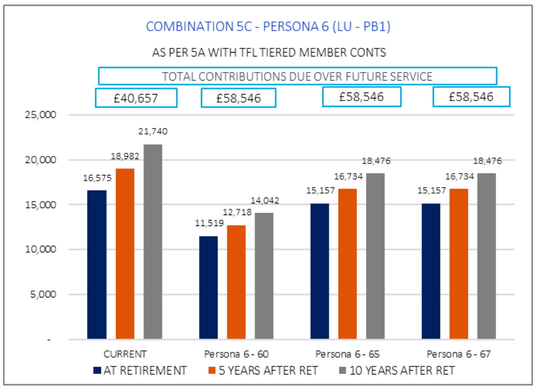


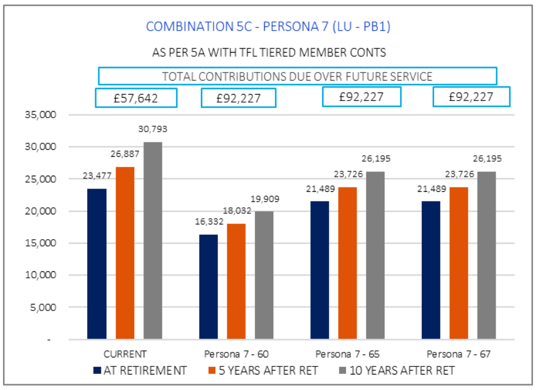


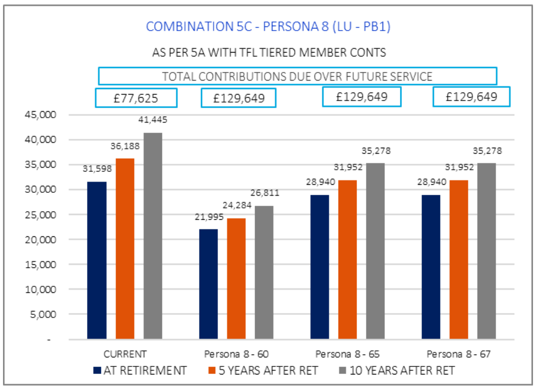


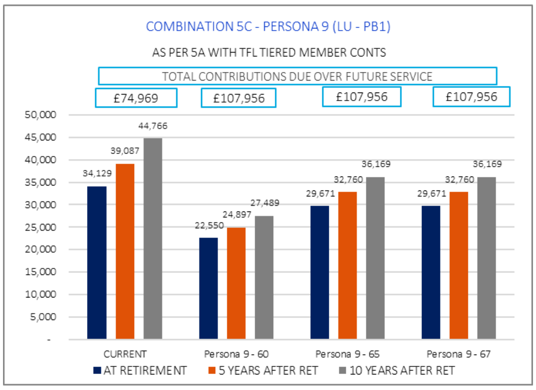


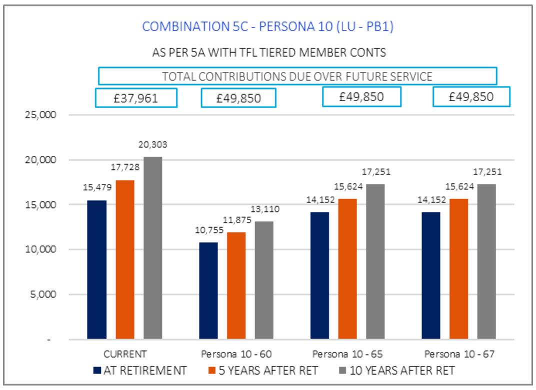

COMBINATION 5C - PERSONA 5 (LU - PB1)
AS PER 5A WITH TFL TIERED MEMBER CONTS
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£47,789
£68,817
£68,817
£68,817
19,473
22,302
25,542
13,540
14,949
16,505
17,816
19,670
21,718
17,816
19,670
21,718
CURRENT
Persona 5 - 60
Persona 5 - 65
Persona 5 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET

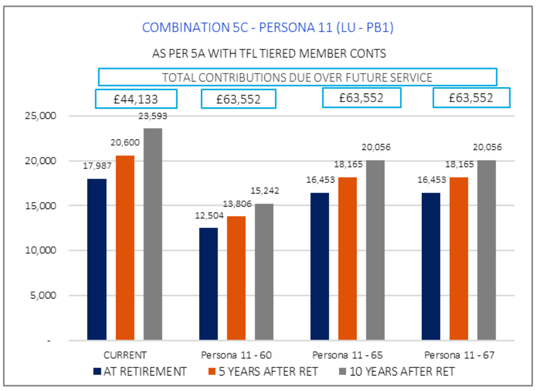

COMBINATION 5C - PERSONA 6 (LU - PB1)
AS PER 5A WITH TFL TIERED MEMBER CONTS
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£40,657
£58,546
£58,546
£58,546
16,575
18,982
21,740
11,519
12,718
14,042
15,157
16,734
18,476
15,157
16,734
18,476
CURRENT
Persona 6 - 60
Persona 6 - 65
Persona 6 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET

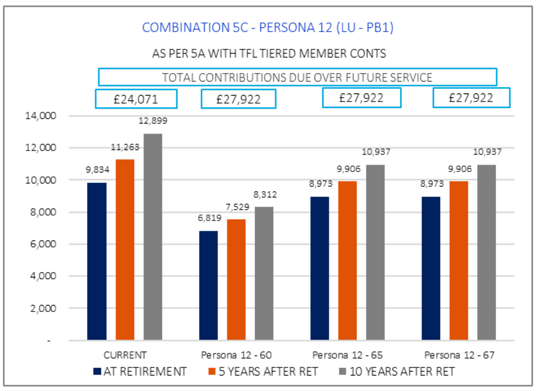

COMBINATION 5C - PERSONA 7 (LU - PB1)
AS PER 5A WITH TFL TIERED MEMBER CONTS
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£57,642
£92,227
£92,227
£92,227
23,477
26,887
30,793
16,332
18,032
19,909
21,489
23,726
26,195
21,489
23,726
26,195
CURRENT
Persona 7 - 60
Persona 7 - 65
Persona 7 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET

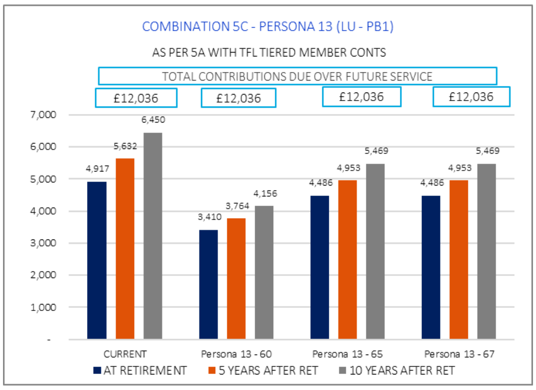

COMBINATION 5C - PERSONA 8 (LU - PB1)
AS PER 5A WITH TFL TIERED MEMBER CONTS
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£77,625
£129,649
£129,649
£129,649
31,598
36,188
41,445
21,995
24,284
26,811
28,940
31,952
35,278
28,940
31,952
35,278
CURRENT
Persona 8 - 60
Persona 8 - 65
Persona 8 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET

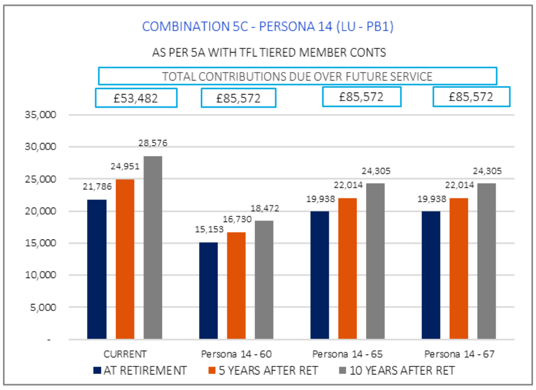

COMBINATION 5C - PERSONA 9 (LU - PB1)
AS PER 5A WITH TFL TIERED MEMBER CONTS
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£74,969
£107,956
£107,956
£107,956
34,129
39,087
44,766
22,550
24,897
27,489
29,671
32,760
36,169
29,671
32,760
36,169
CURRENT
Persona 9 - 60
Persona 9 - 65
Persona 9 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET

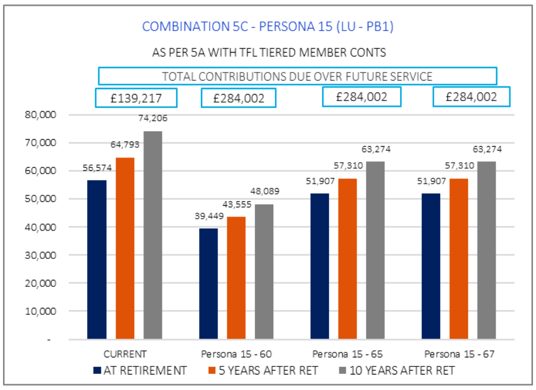

COMBINATION 5C - PERSONA 10 (LU - PB1)
AS PER 5A WITH TFL TIERED MEMBER CONTS
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£37,961
£49,850
£49,850
£49,850
15,479
17,728
20,303
10,755
11,875
13,110
14,152
15,624
17,251
14,152
15,624
17,251
CURRENT
Persona 10 - 60
Persona 10 - 65
Persona 10 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET

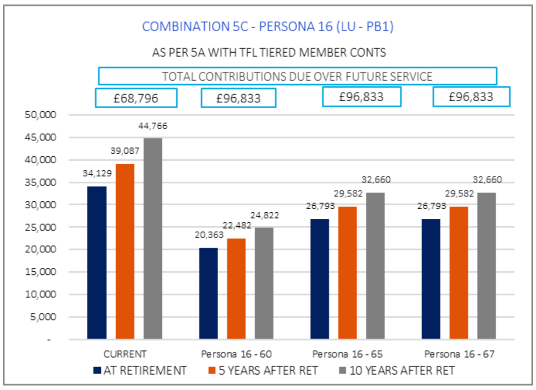

COMBINATION 5C - PERSONA 11 (LU - PB1)
AS PER 5A WITH TFL TIERED MEMBER CONTS
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£44,133
£63,552
£63,552
£63,552
17,987
20,600
23,593
12,504
13,806
15,242
16,453
18,165
20,056
16,453
18,165
20,056
CURRENT
Persona 11 - 60
Persona 11 - 65
Persona 11 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET

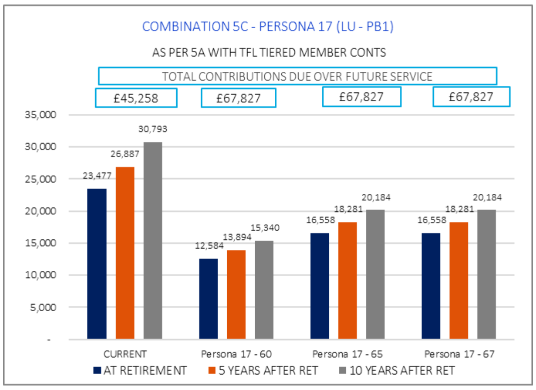

COMBINATION 5C - PERSONA 12 (LU - PB1)
AS PER 5A WITH TFL TIERED MEMBER CONTS
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£24,071
£27,922
£27,922
£27,922
9,834
11,263
12,899
6,819
7,529
8,312
8,973
9,906
10,937
8,973
9,906
10,937
CURRENT
Persona 12 - 60
Persona 12 - 65
Persona 12 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET

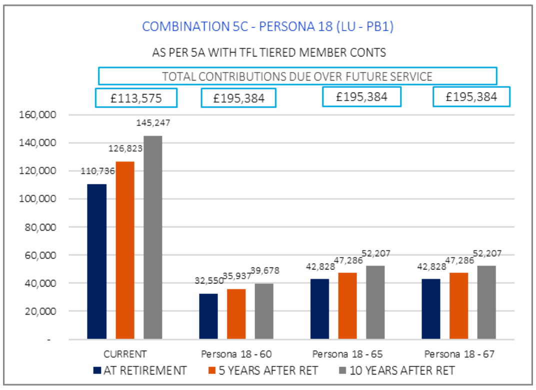

COMBINATION 5C - PERSONA 13 (LU - PB1)
AS PER 5A WITH TFL TIERED MEMBER CONTS
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£12,036
£12,036
£12,036
£12,036
4,917
5,632
6,450
3,410
3,764
4,156
4,486
4,953
5,469
4,486
4,953
5,469
CURRENT
Persona 13 - 60
Persona 13 - 65
Persona 13 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET

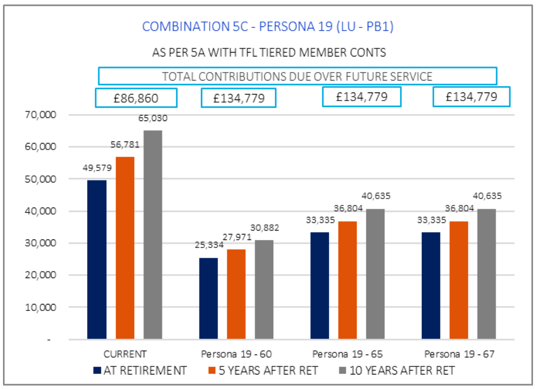

COMBINATION 5C - PERSONA 14 (LU - PB1)
AS PER 5A WITH TFL TIERED MEMBER CONTS
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£53,482
£85,572
£85,572
£85,572
21,786
24,951
28,576
15,153
16,730
18,472
19,938
22,014
24,305
19,938
22,014
24,305
CURRENT
Persona 14 - 60
Persona 14 - 65
Persona 14 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET

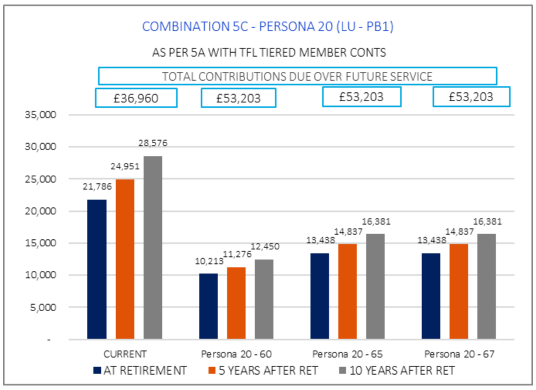

COMBINATION 5C - PERSONA 15 (LU - PB1)
AS PER 5A WITH TFL TIERED MEMBER CONTS
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£139,217
£284,002
£284,002
£284,002
56,574
64,793
74,206
39,449
43,555
48,089
51,907
57,310
63,274
51,907
57,310
63,274
CURRENT
Persona 15 - 60
Persona 15 - 65
Persona 15 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET


COMBINATION 5C - PERSONA 16 (LU - PB1)
AS PER 5A WITH TFL TIERED MEMBER CONTS
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£68,796
£96,833
£96,833
£96,833
34,129
39,087
44,766
20,363
22,482
24,822
26,793
29,582
32,660
26,793
29,582
32,660
CURRENT
Persona 16 - 60
Persona 16 - 65
Persona 16 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET

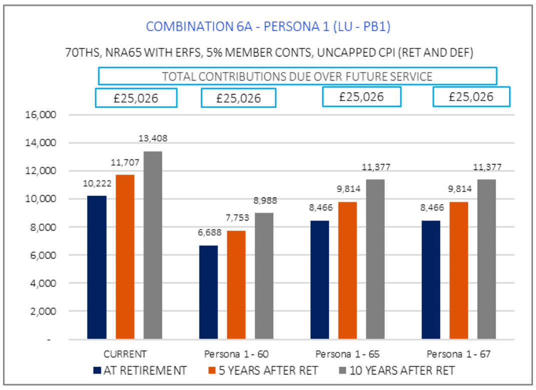

COMBINATION 5C - PERSONA 17 (LU - PB1)
AS PER 5A WITH TFL TIERED MEMBER CONTS
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£45,258
£67,827
£67,827
£67,827
23,477
26,887
30,793
12,584
13,894
15,340
16,558
18,281
20,184
16,558
18,281
20,184
CURRENT
Persona 17 - 60
Persona 17 - 65
Persona 17 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET

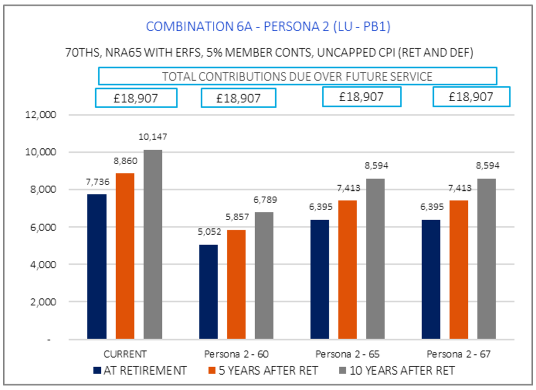

COMBINATION 5C - PERSONA 18 (LU - PB1)
AS PER 5A WITH TFL TIERED MEMBER CONTS
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£113,575
£195,384
£195,384
£195,384
110,736
126,823
145,247
32,550
35,937
39,678
42,828
47,286
52,207
42,828
47,286
52,207
CURRENT
Persona 18 - 60
Persona 18 - 65
Persona 18 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET

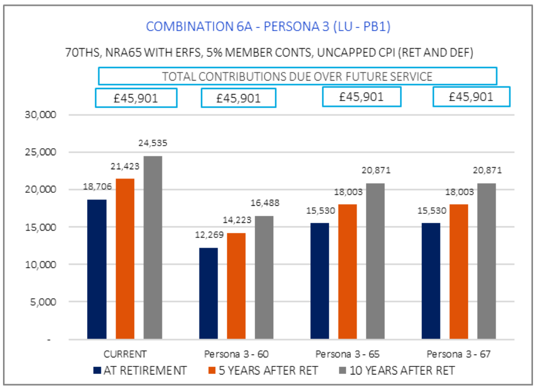

COMBINATION 5C - PERSONA 19 (LU - PB1)
AS PER 5A WITH TFL TIERED MEMBER CONTS
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£86,860
£134,779
£134,779
£134,779
49,579
56,781
65,030
25,334
27,971
30,882
33,335
36,804
40,635
33,335
36,804
40,635
CURRENT
Persona 19 - 60
Persona 19 - 65
Persona 19 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET

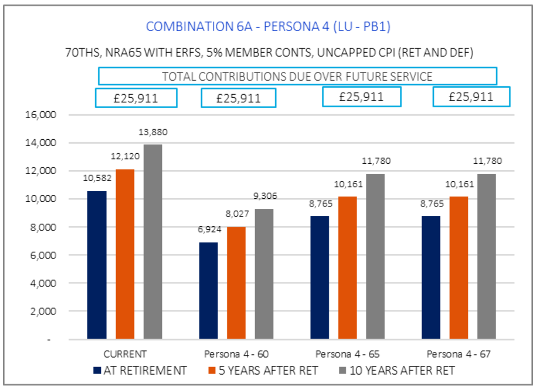

COMBINATION 5C - PERSONA 20 (LU - PB1)
AS PER 5A WITH TFL TIERED MEMBER CONTS
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£36,960
£53,203
£53,203
£53,203
21,786
24,951
28,576
10,213
11,276
12,450
13,438
14,837
16,381
13,438
14,837
16,381
CURRENT
Persona 20 - 60
Persona 20 - 65
Persona 20 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET

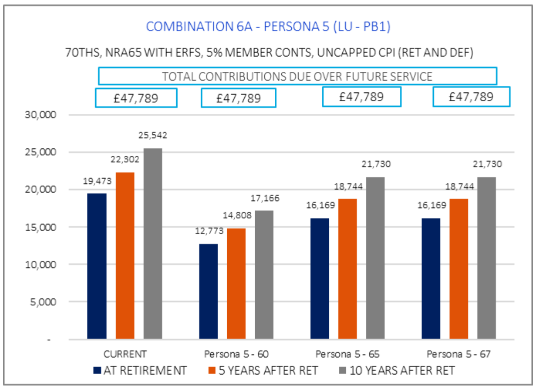
6A: 70ths; NRA 65 (no ERFs); member contributions 5%; uncapped CPI for pensions in retirement and deferment

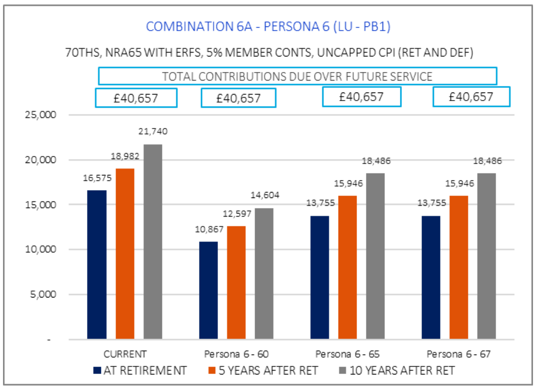


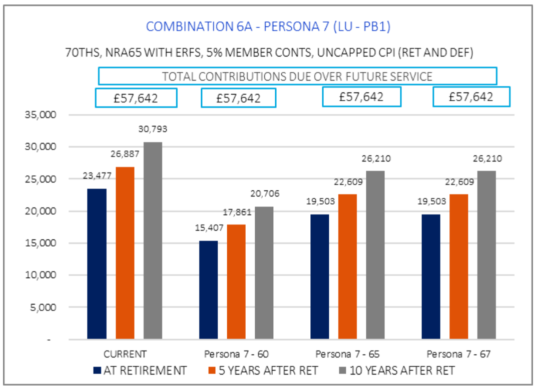


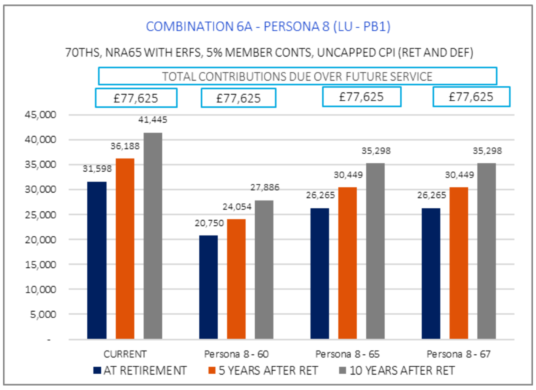


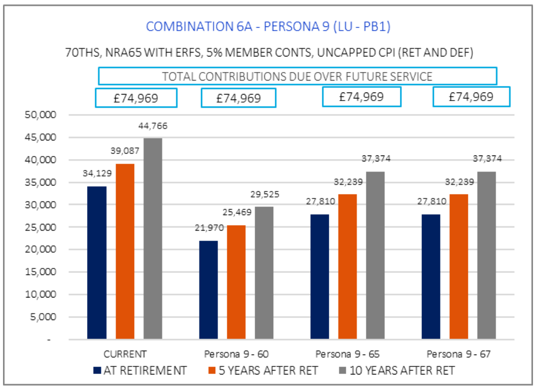


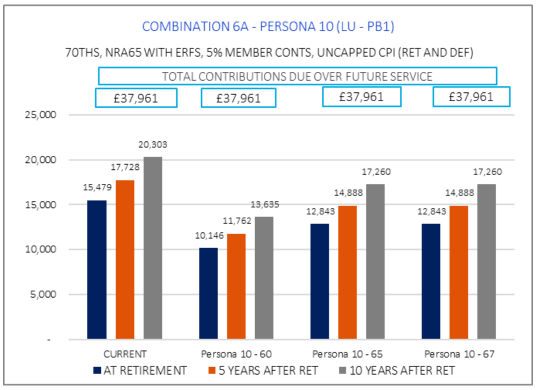


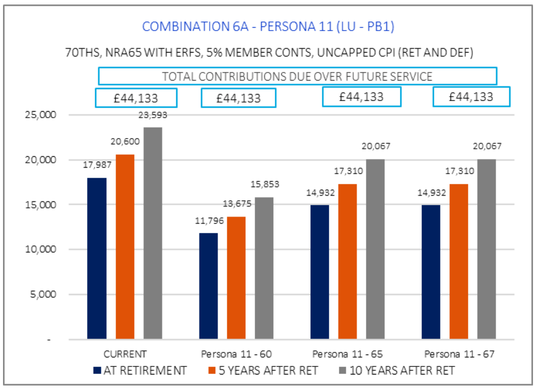


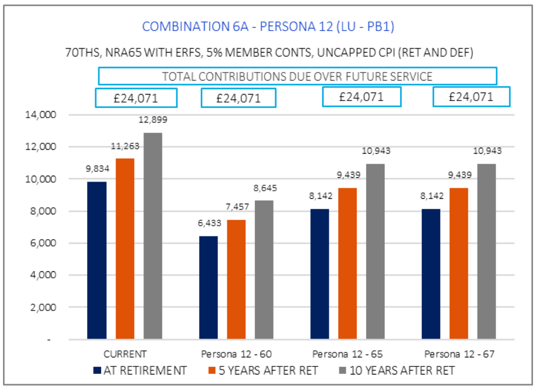


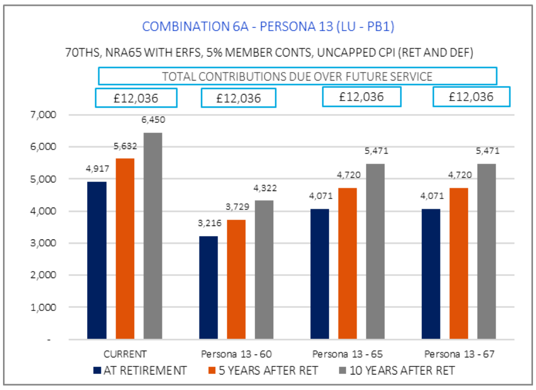


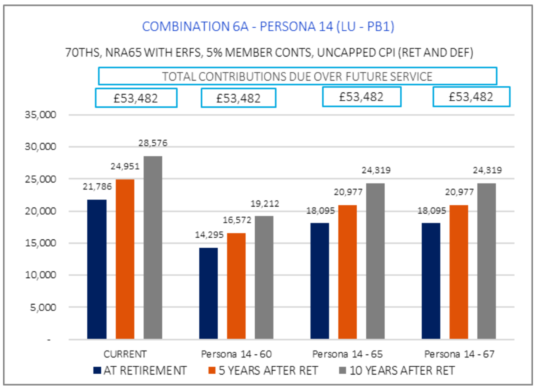

COMBINATION 6A - PERSONA 9 (LU - PB1)
70THS, NRA65 WITH ERFS, 5% MEMBER CONTS, UNCAPPED CPI (RET AND DEF)
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£74,969
£74,969
£74,969
£74,969
34,129
39,087
44,766
21,970
25,469
29,525
27,810
32,239
37,374
27,810
32,239
37,374
CURRENT
Persona 9 - 60
Persona 9 - 65
Persona 9 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET

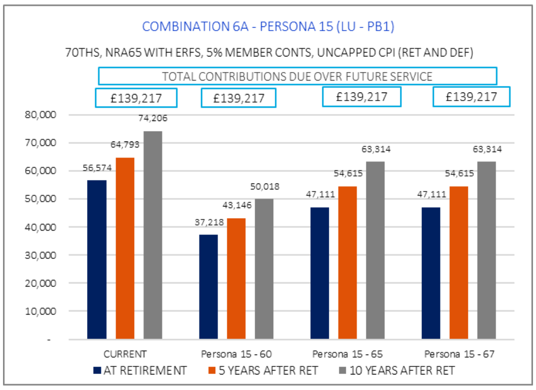

COMBINATION 6A - PERSONA 10 (LU - PB1)
70THS, NRA65 WITH ERFS, 5% MEMBER CONTS, UNCAPPED CPI (RET AND DEF)
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£37,961
£37,961
£37,961
£37,961
15,479
17,728
20,303
10,146
11,762
13,635
12,843
14,888
17,260
12,843
14,888
17,260
CURRENT
Persona 10 - 60
Persona 10 - 65
Persona 10 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET

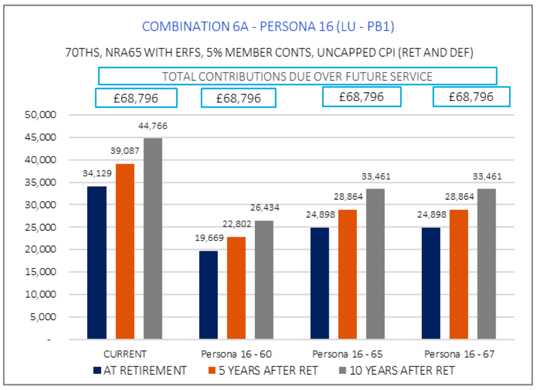

COMBINATION 6A - PERSONA 11 (LU - PB1)
70THS, NRA65 WITH ERFS, 5% MEMBER CONTS, UNCAPPED CPI (RET AND DEF)
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£44,133
£44,133
£44,133
£44,133
17,987
20,600
23,593
11,796
13,675
15,853
14,932
17,310
20,067
14,932
17,310
20,067
CURRENT
Persona 11 - 60
Persona 11 - 65
Persona 11 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET

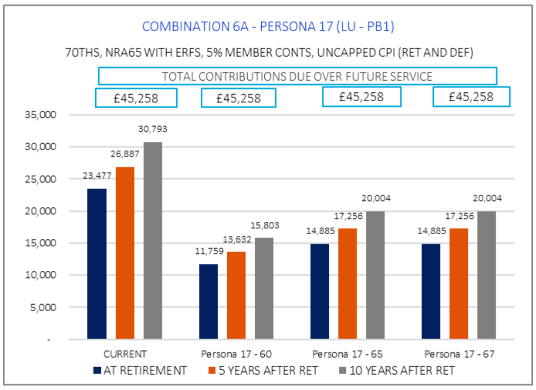

COMBINATION 6A - PERSONA 12 (LU - PB1)
70THS, NRA65 WITH ERFS, 5% MEMBER CONTS, UNCAPPED CPI (RET AND DEF)
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£24,071
£24,071
£24,071
£24,071
9,834
11,263
12,899
6,433
7,457
8,645
8,142
9,439
10,943
8,142
9,439
10,943
CURRENT
Persona 12 - 60
Persona 12 - 65
Persona 12 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET

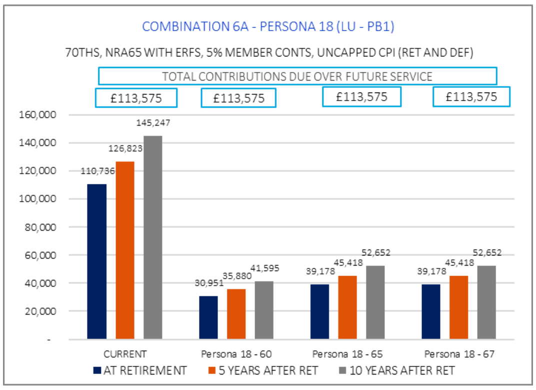

COMBINATION 6A - PERSONA 13 (LU - PB1)
70THS, NRA65 WITH ERFS, 5% MEMBER CONTS, UNCAPPED CPI (RET AND DEF)
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£12,036
£12,036
£12,036
£12,036
4,917
5,632
6,450
3,216
3,729
4,322
4,071
4,720
5,471
4,071
4,720
5,471
CURRENT
Persona 13 - 60
Persona 13 - 65
Persona 13 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET

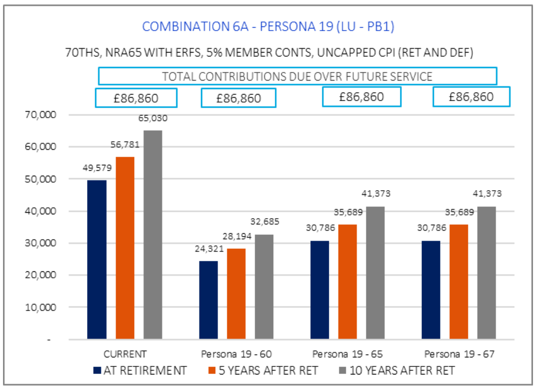

COMBINATION 6A - PERSONA 14 (LU - PB1)
70THS, NRA65 WITH ERFS, 5% MEMBER CONTS, UNCAPPED CPI (RET AND DEF)
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£53,482
£53,482
£53,482
£53,482
21,786
24,951
28,576
14,295
16,572
19,212
18,095
20,977
24,319
18,095
20,977
24,319
CURRENT
Persona 14 - 60
Persona 14 - 65
Persona 14 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET

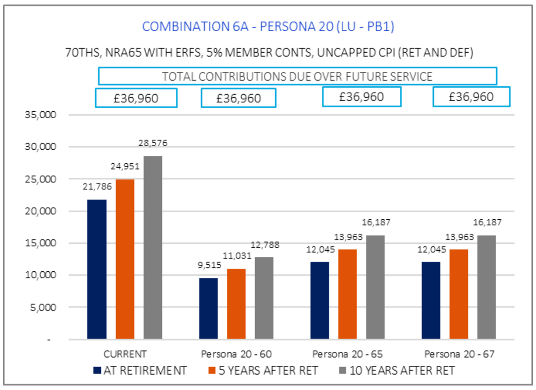

COMBINATION 6A - PERSONA 15 (LU - PB1)
70THS, NRA65 WITH ERFS, 5% MEMBER CONTS, UNCAPPED CPI (RET AND DEF)
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£139,217
£139,217
£139,217
£139,217
56,574
64,793
74,206
37,218
43,146
50,018
47,111
54,615
63,314
47,111
54,615
63,314
CURRENT
Persona 15 - 60
Persona 15 - 65
Persona 15 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET


COMBINATION 6A - PERSONA 16 (LU - PB1)
70THS, NRA65 WITH ERFS, 5% MEMBER CONTS, UNCAPPED CPI (RET AND DEF)
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£68,796
£68,796
£68,796
£68,796
34,129
39,087
44,766
19,669
22,802
26,434
24,898
28,864
33,461
24,898
28,864
33,461
CURRENT
Persona 16 - 60
Persona 16 - 65
Persona 16 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET

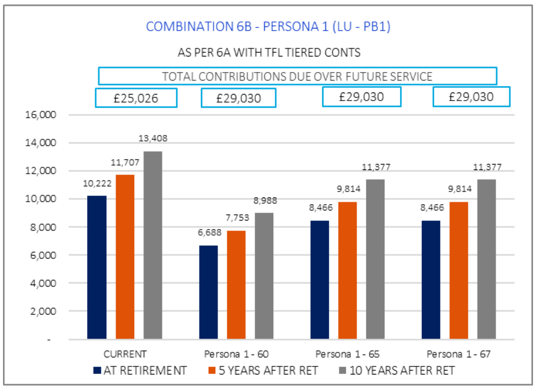


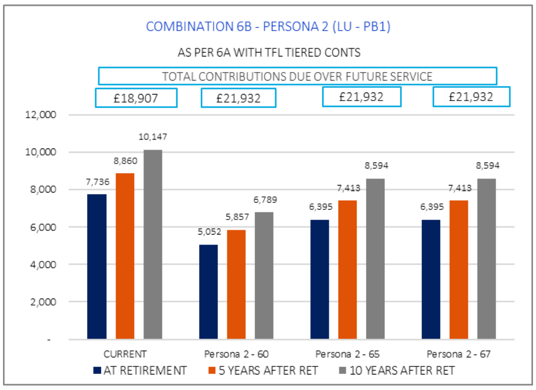


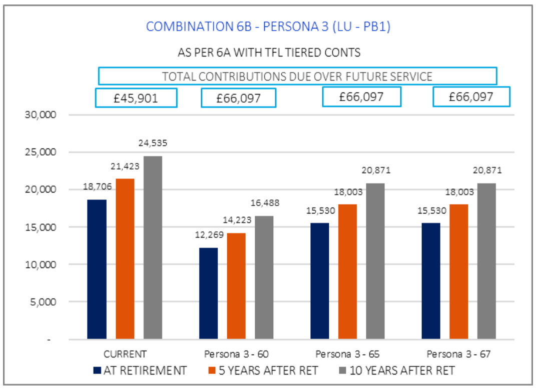


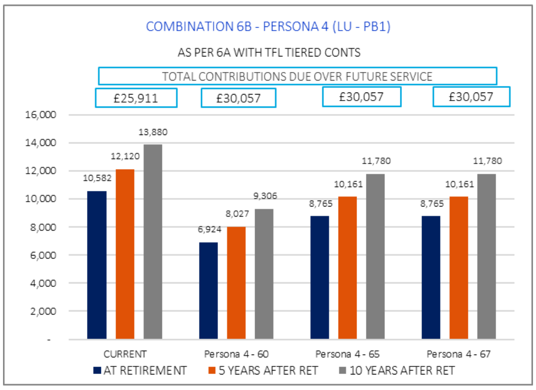


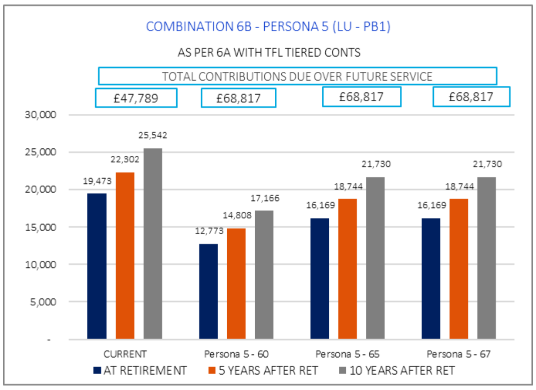
6B: 70ths; NRA 65 (no ERFs); TfL tiered member contributions uncapped CPI for pensions in retirement and deferment

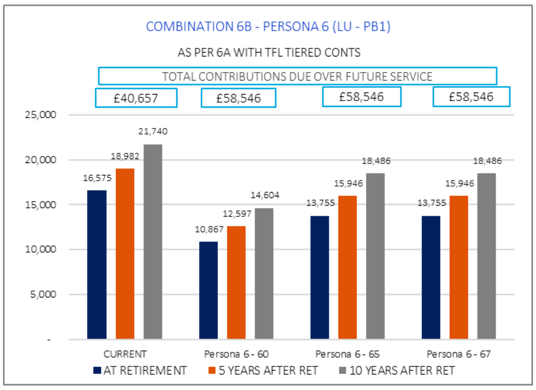


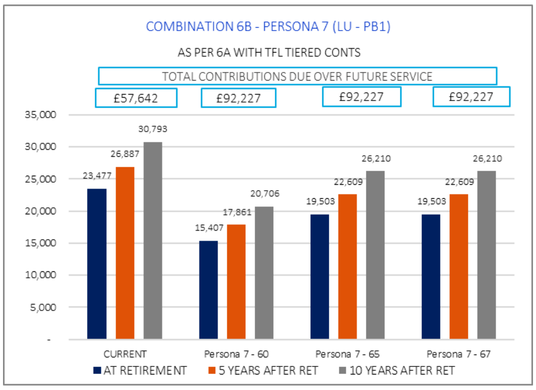


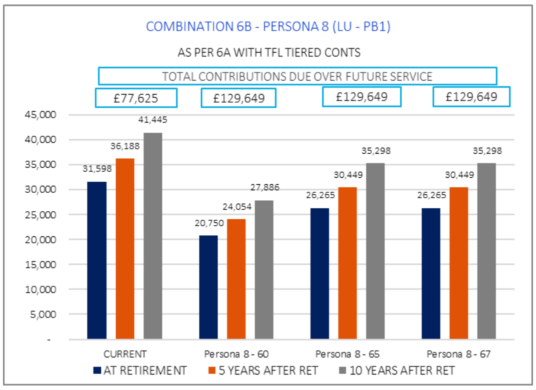


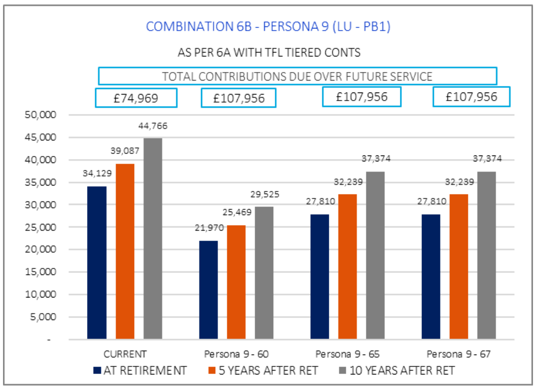


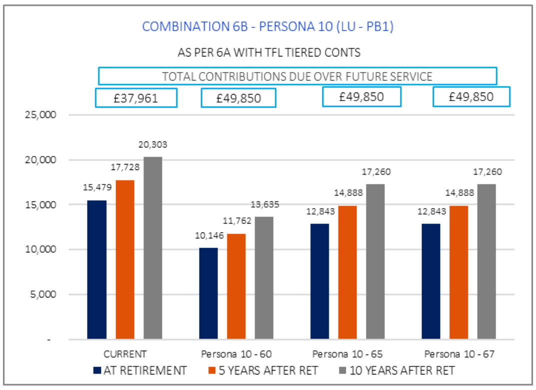

COMBINATION 6B - PERSONA 5 (LU - PB1)
AS PER 6A WITH TFL TIERED CONTS
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£47,789
£68,817
£68,817
£68,817
30,000
25,000
20,000
15,000
10,000
5,000
-
19,473
22,302
25,542
12,773
14,808
17,166
16,169
18,744
21,730
16,169
18,744
21,730
CURRENT
Persona 5 - 60
Persona 5 - 65
Persona 5 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET

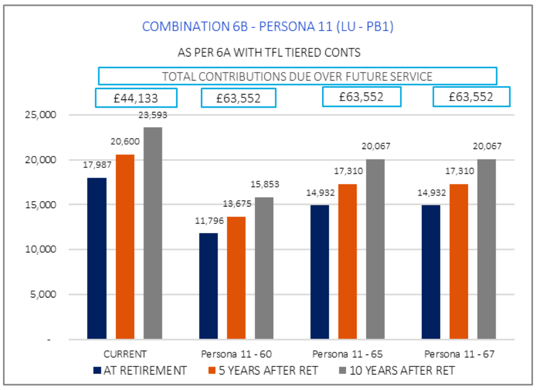

COMBINATION 6B - PERSONA 6 (LU - PB1)
AS PER 6A WITH TFL TIERED CONTS
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£40,657
£58,546
£58,546
£58,546
25,000
20,000
15,000
10,000
5,000
-
16,575
18,982
21,740
10,867
12,597
14,604
13,755
15,946
18,486
13,755
15,946
18,486
CURRENT
Persona 6 - 60
Persona 6 - 65
Persona 6 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET

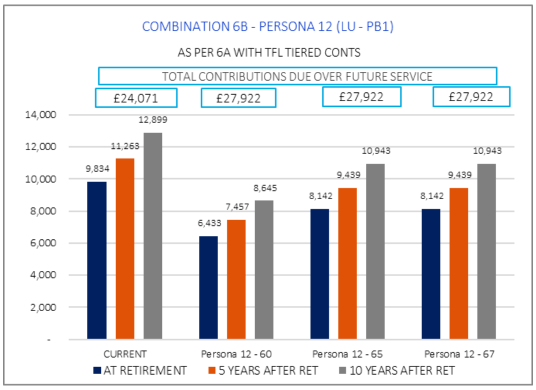

COMBINATION 6B - PERSONA 7 (LU - PB1)
AS PER 6A WITH TFL TIERED CONTS
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£57,642
£92,227
£92,227
£92,227
35,000
30,000
25,000
20,000
15,000
10,000
5,000
-
23,477
26,887
30,793
15,407
17,861
20,706
19,503
22,609
26,210
19,503
22,609
26,210
CURRENT
Persona 7 - 60
Persona 7 - 65
Persona 7 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET

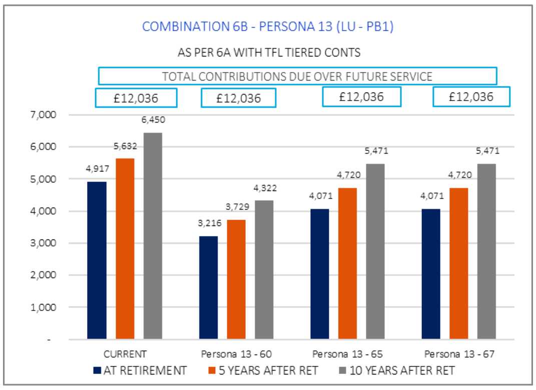

COMBINATION 6B - PERSONA 8 (LU - PB1)
AS PER 6A WITH TFL TIERED CONTS
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£77,625
£129,649
£129,649
£129,649
45,000
40,000
35,000
30,000
25,000
20,000
15,000
10,000
5,000
-
31,598
36,188
41,445
20,750
24,054
27,886
26,265
30,449
35,298
26,265
30,449
35,298
CURRENT
Persona 8 - 60
Persona 8 - 65
Persona 8 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET

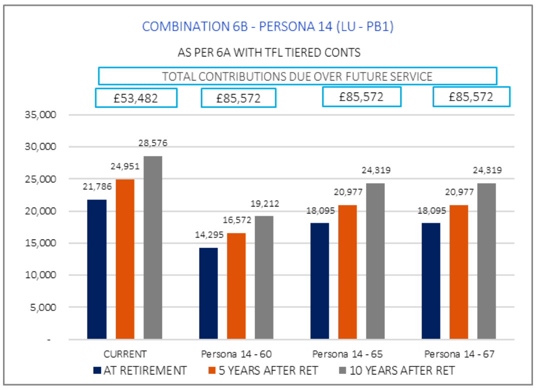

COMBINATION 6B - PERSONA 9 (LU - PB1)
AS PER 6A WITH TFL TIERED CONTS
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£74,969
£107,956
£107,956
£107,956
50,000
45,000
40,000
35,000
30,000
25,000
20,000
15,000
10,000
5,000
-
34,129
39,087
44,766
21,970
25,469
29,525
27,810
32,239
37,374
27,810
32,239
37,374
CURRENT
Persona 9 - 60
Persona 9 - 65
Persona 9 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET

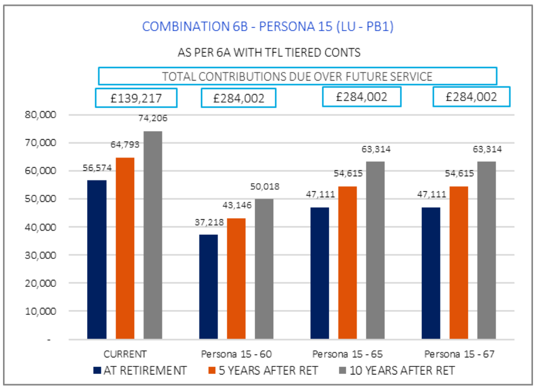

COMBINATION 6B - PERSONA 10 (LU - PB1)
AS PER 6A WITH TFL TIERED CONTS
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£37,961
£49,850
£49,850
£49,850
25,000
20,000
15,000
10,000
5,000
-
15,479
17,728
20,303
10,146
11,762
13,635
12,843
14,888
17,260
12,843
14,888
17,260
CURRENT
Persona 10 - 60
Persona 10 - 65
Persona 10 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET

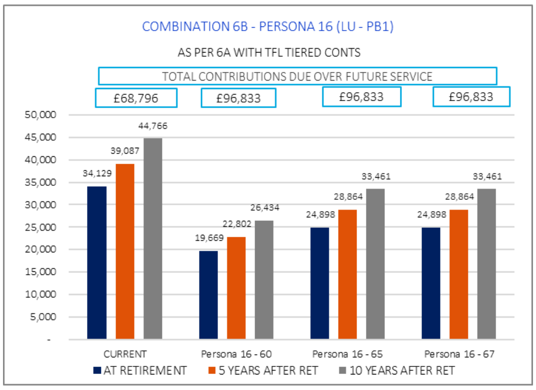

COMBINATION 6B - PERSONA 11 (LU - PB1)
AS PER 6A WITH TFL TIERED CONTS
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£44,133
£63,552
£63,552
£63,552
25,000
20,000
15,000
10,000
5,000
-
17,987
20,600
23,593
11,796
13,675
15,853
14,932
17,310
20,067
14,932
17,310
20,067
CURRENT
Persona 11 - 60
Persona 11 - 65
Persona 11 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET

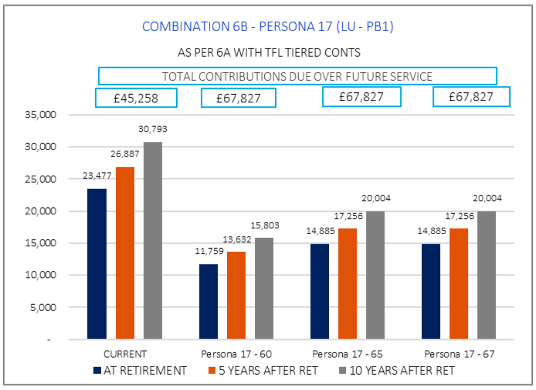

COMBINATION 6B - PERSONA 12 (LU - PB1)
AS PER 6A WITH TFL TIERED CONTS
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£24,071
£27,922
£27,922
£27,922
14,000
12,000
10,000
8,000
6,000
4,000
2,000
-
9,834
11,263
12,899
6,433
7,457
8,645
8,142
9,439
10,943
8,142
9,439
10,943
CURRENT
Persona 12 - 60
Persona 12 - 65
Persona 12 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET

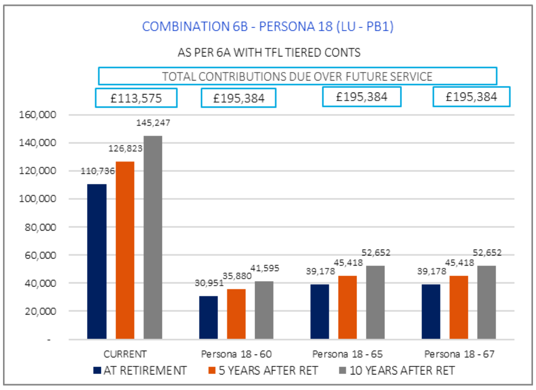

COMBINATION 6B - PERSONA 13 (LU - PB1)
AS PER 6A WITH TFL TIERED CONTS
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£12,036
£12,036
£12,036
£12,036
4,917
5,632
6,450
3,216
3,729
4,322
4,071
4,720
5,471
4,071
4,720
5,471
CURRENT
Persona 13 - 60
Persona 13 - 65
Persona 13 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET

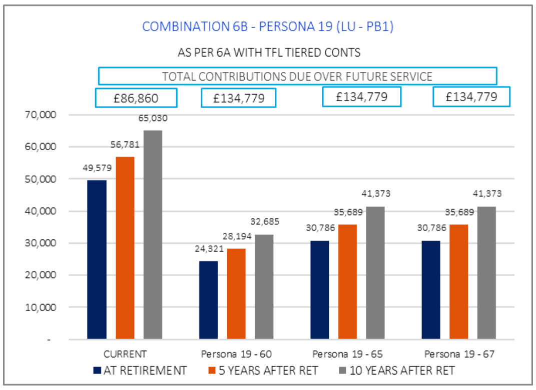

COMBINATION 6B - PERSONA 14 (LU - PB1)
AS PER 6A WITH TFL TIERED CONTS
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£53,482
£85,572
£85,572
£85,572
21,786
24,951
28,576
14,295
16,572
19,212
18,095
20,977
24,319
18,095
20,977
24,319
CURRENT
Persona 14 - 60
Persona 14 - 65
Persona 14 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET

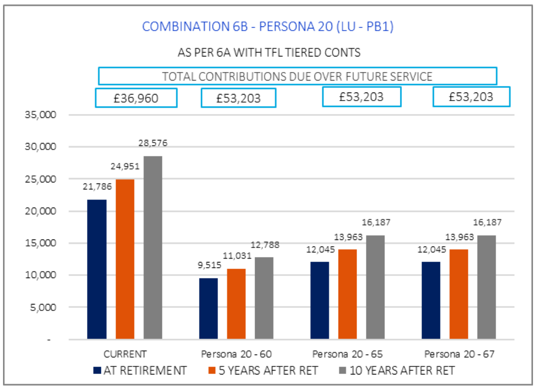

COMBINATION 6B - PERSONA 15 (LU - PB1)
AS PER 6A WITH TFL TIERED CONTS
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£139,217
£284,002
£284,002
£284,002
56,574
64,793
74,206
37,218
43,146
50,018
47,111
54,615
63,314
47,111
54,615
63,314
CURRENT
Persona 15 - 60
Persona 15 - 65
Persona 15 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET


COMBINATION 6B - PERSONA 16 (LU - PB1)
AS PER 6A WITH TFL TIERED CONTS
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£68,796
£96,833
£96,833
£96,833
34,129
39,087
44,766
19,669
22,802
26,434
24,898
28,864
33,461
24,898
28,864
33,461
CURRENT
Persona 16 - 60
Persona 16 - 65
Persona 16 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET


COMBINATION 6B - PERSONA 17 (LU - PB1)
AS PER 6A WITH TFL TIERED CONTS
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£45,258
£67,827
£67,827
£67,827
23,477
26,887
30,793
11,759
13,632
15,803
14,885
17,256
20,004
14,885
17,256
20,004
CURRENT
Persona 17 - 60
Persona 17 - 65
Persona 17 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET


COMBINATION 6B - PERSONA 18 (LU - PB1)
AS PER 6A WITH TFL TIERED CONTS
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£113,575
£195,384
£195,384
£195,384
110,736
126,823
145,247
30,951
35,880
41,595
39,178
45,418
52,652
39,178
45,418
52,652
CURRENT
Persona 18 - 60
Persona 18 - 65
Persona 18 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET


COMBINATION 6B - PERSONA 19 (LU - PB1)
AS PER 6A WITH TFL TIERED CONTS
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£86,860
£134,779
£134,779
£134,779
49,579
56,781
65,030
24,321
28,194
32,685
30,786
35,689
41,373
30,786
35,689
41,373
CURRENT
Persona 19 - 60
Persona 19 - 65
Persona 19 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET


COMBINATION 6B - PERSONA 20 (LU - PB1)
AS PER 6A WITH TFL TIERED CONTS
TOTAL CONTRIBUTIONS DUE OVER FUTURE SERVICE
£36,960
£53,203
£53,203
£53,203
21,786
24,951
28,576
9,515
11,031
12,788
12,045
13,963
16,187
12,045
13,963
16,187
CURRENT
Persona 20 - 60
Persona 20 - 65
Persona 20 - 67
AT RETIREMENT
5 YEARS AFTER RET
10 YEARS AFTER RET

APPENDIX 5: GLOSSARY OF TERMS

ACTUARIAL VALUATION	A process which assesses the value of the Scheme's assets and liabilities at the assessment date (known as the effective valuation date) and to review and revise (if necessary) the level of contributions paid by the employer, both in relation to any deficit arising in the Scheme and those contributions required to meet the cost of new benefits that will be earned by contributing members in future. The method and assumptions used in the valuation to calculate the value of the Scheme's liabilities (the Technical Provisions), as well as the required level of contributions over an agreed time period must be agreed between the employer and the Trustee and set out in a number of key compliance documents which are ultimately submitted to The Pensions Regulator.
ANNUITY	A pension annuity is a financial product that pays you a guaranteed income for a fixed period or for the rest of your life. When you retire, you can choose to use some or all of your pension savings to buy an annuity.
AUTO-ENROLMENT	Auto-enrolment schemes are the legally required minimum level of pension provision in the UK. These are DC schemes into which the employer must contribute 3% of "band earnings" (currently £10,000-£50,270 for 2021/22) and the member 5%. (bringing the statutory minimum level of contribution to 8% of band earnings).
BALANCE OF COST SCHEME	This is a type of defined benefit scheme where the cost to the member is fixed and the employer must pay the balance of cost in order to meet guaranteed pension benefits. The TfL Pension Fund is an example of a balance of cost scheme.
CARE SCHEME	A Career Average Revalued Earnings (CARE) scheme is a defined benefit scheme. The guaranteed pension income a member will receive is based not on the member's final salary at retirement but on their average earnings over their period of pensionable service, increased with inflation. The benefits will also be calculated by reference to an accrual rate.
CASH BALANCE SCHEME	In a cash balance arrangement, a member is guaranteed a minimum cash value on retirement or, in some cases, a member is guaranteed a minimum level of investment return on their contributions. It is then up to the member how they choose to take their pension on retirement – for example, to buy a retirement income (annuity) or to take a lump sum or a combination of both.
COLLECTIVE DC SCHEME (CDC)	Collective Defined Contribution schemes (CDC, also known as Collective Money Purchase Schemes) are a hybrid of a DB and a DC arrangement whereby the employer's contributions are fixed as a

	percentage of salary and the member is offered a target level of benefit at retirement rather than a guaranteed income (as in a DB scheme). If a CDC scheme is under (or over) funded, benefits may be adjusted down (or up).
DEFICIT RECOVERY CONTRIBUTIONS (DRCs)	The level of contributions paid by the employer, in relation to any deficit arising in the scheme.
DEFINED BENEFIT SCHEME (DB)	This is a pension arrangement where members have a known benefit at retirement based on how much they earn and how long they have worked in an organisation.
DEFINED CONTRIBUTION SCHEMES (DC)	Defined Contribution (DC) pensions are arrangements where members do not receive a guaranteed level of income at retirement. Instead, members receive an income at retirement that depends upon the levels of contributions paid by the member and the employer during the period of membership, investment returns achieved on those contributions, charges and taxes and the cost of purchasing (or otherwise drawing down) the chosen benefits at retirement. The pension pot may also be taken as cash.
DE-RISKING	Means actively seeking to reduce the level if risk in the investment strategy in order to reduce volatility and match assets to liabilities.
DISCOUNT RATES	Assumptions used to place a capital value at the valuation date on projected future benefit cash flows from the Section. The lower the discount rate the higher the resulting capital value.
EMPLOYER COVENANT	This represents an employer's legal obligation and its ability to provide the financial support to a scheme that may be required now and in the future. The trustees' assessment of the sponsor's covenant will inform both investment and funding decisions.
EXISTING MEMBERS	These are members who joined the Scheme before 1 April 1989.
FINAL SALARY SCHEME	Under a final salary scheme, the member is guaranteed a certain level of income each year (usually increased with inflation) at retirement and/ or a guaranteed lump sum. The amount a member is guaranteed to receive is determined by a formula set out in the scheme's rules and is usually based on the period of a member's service and their final salary at retirement.
FUTURE SERVICE ACCRUAL (FSA)	The contributions required to meet the cost of new benefits that will be earned by contributing members in future.
INVESTMENT STRATEGY	A strategy developed by the Trustee that aims to ensure the Scheme's assets are carefully managed. It specifies matters such as the kind of investments to be held, expected returns on investments, the balance between investments and the level of risk undertaken.

NEW MEMBERS	These are members of the current Scheme who joined after 1 April 1989.
PAY FOR PERFORMANCE (PFP)	PfP is a remuneration reward system that operates in TfL and applies to pay bands (PB) 1, 2 and 3 (and equivalent grades) for non-operational staff employed in TfL. PfP does not operate in London Underground. It has been in operation since 2015.
PENSIONS FUNDING AGREEMENT (PFA)	An agreement related to contingent funding for the Scheme, entered into by TfL and the Trustee as part of the 2018 valuation.
PENSION PROTECTION FUND (PPF)	The Pension Protection Fund (PPF) protects people with a private defined benefit pension when an employer becomes insolvent. If the employer doesn't have enough funds to pay you the pension they promised, the PPF will provide compensation instead.
PENSIONABLE SALARY	This is your basic (or contractual) salary, inclusive of any permanent allowances but excluding overtime earnings. Depending on when you joined the Scheme, there may be deductions or adjustments applied.
PENSIONABLE SERVICE	This is the period you have been contributing to the TfL Pension Fund, beginning when you joined the Scheme and ending when you stopped making contributions.
RECOVERY PLAN	A document required where an actuarial valuation discloses that the statutory funding objective is not met (ie the assets held are less than the technical provisions). It is a formal agreement between the trustees and the employer that sets out the steps to be taken to achieve the statutory funding objective by the end of an agreed period (the "recovery period").
SCHEME MATURITY	A Scheme that is open is relatively immature – that is, the end date of the Scheme, when the last pensioner is forecast to be paid their last payment, is not known. A Scheme that is closed crystallises its maturity – that is, in a closed scheme it is possible to forecast when the last pensioner may receive their last payment. A plan's level of maturity affects its ability to recover from a negative shock, so different levels of funding and investment risk are likely to be appropriate.
SENIOR MANAGERS REWARD FRAMEWORK (SMRF)	Staff in TfL PBs 4 and 5 are covered by the Senior Managers' Reward Framework (SMRF) which covers pay and bonuses for employees in these grades.
SHARED COST DB SCHEME	This is a type of DB scheme where the cost of providing benefits is shared between the employer and the member, typically by a fixed proportion (for example one-third member and two-thirds employer). Depending on the funding position of the scheme, the members' and employer contributions may be adjusted up or down in line with these proportions.

STATE PENSION	The State Pension is a regular payment you can get from the Government once you reach State Pension age. To qualify you must have paid National Insurance contributions during your working life.
TECHNICAL PROVISIONS	The amount of assets required to make provision for the accrued liabilities of the scheme. The technical provisions are calculated using the method and assumptions set out in the Statement of Funding Principles.
TIERED CONTRIBUTIONS	In some pension schemes, the members' contributions are scaled depending on, for example, salary with those on lower salaries paying lower contributions compared to those on higher salaries who pay higher contributions.
THE PENSIONS REGULATOR (TPR)	The regulatory supervisor for occupational pension schemes with statutory objectives to protect members' benefits and the Pension Protection Fund, and statutory powers to take interventionist action.
VALUE AT RISK (VAR)	A measure of market risk within an investment portfolio, it is often expressed as an amount of financial loss that might be suffered at various levels of probability within a given timeframe.