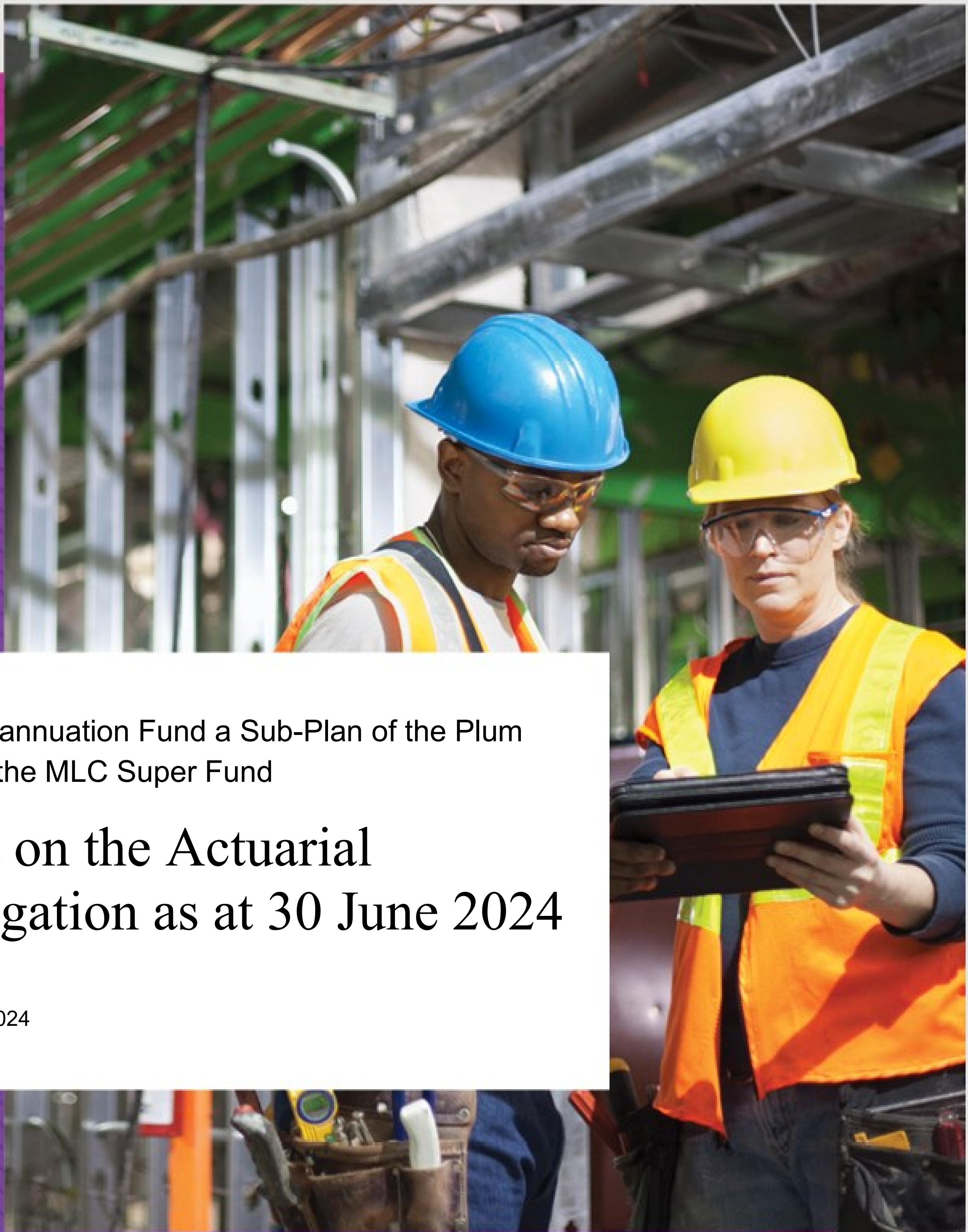

BHP Superannuation Fund a Sub-Plan of the Plum Division of the MLC Super Fund

Report on the Actuarial Investigation as at 30 June 2024

18 December 2024

Towers Watson Australia Pty Ltd
ABN 45 002 415 349 AFSL 229921

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Section 1: Purpose and summary

This report has been prepared for the Trustee of the MLC Super Fund, NULIS Nominees (Australia) Limited (the "Trustee"), on the actuarial investigation of the BHP Superannuation Fund (the "Fund"), which is a sub-plan of the MLC Super Fund, as at 30 June 2024.

Purpose of Review

This report sets out the results of the actuarial review of the BHP Superannuation Fund (the Fund), a sub-plan of the MLC Super Fund, as at 30 June 2024 requested by the Trustee.

The Participation Agreement of the BHP Superannuation Fund (the Fund) requires the Trustee to request that the actuary undertakes an actuarial investigation of the Fund at least every three years, or more frequently if required by Superannuation Law. The actuary is required to report on the results of the investigation within such periods and in such manner as required by Superannuation Law having regard to the state and sufficiency of the Fund with respect to the present and future liabilities and to make any recommendations as the actuary sees fit. The report of the actuary is provided to the Trustee who in turn is required to provide a copy to the Employer.

The purpose of this actuarial investigation is to meet the requirements of the Trust Deed and the relevant superannuation legislation, in particular:

- to examine the current financial position of the Fund (Section 8);
- examine the long-term funding of the Fund (Section 9);
- examine the financial position of the Fund during the ensuing three years (Section 9);
- recommend a rate at which the Employer should contribute to the Fund (Section 9);
- provide the annual certification required under SPS 160 that there is a high probability that Fund will be able to pay defined benefit pensions in accordance with the Trust Deed (Section 9); and
- meet the reporting requirements of Prudential Standard SPS 160 "Defined Benefit Matters" (Appendix C).

This actuarial investigation has been carried out in accordance with Practice Guideline 1, Professional Standard 400, 402 and 404 and Guidance Note 465 issued by the Institute of Actuaries of Australia.

The previous triennial actuarial investigation was carried out as at 30 June 2021 by Tracy Polldore, with the results set out in a report dated 22 December 2021. Annual actuarial investigations were also carried out by Tracy Polldore at 30 June 2022 and 30 June 2023 to provide annual pension certification required under Prudential Standard SPS 160.

I confirm that I have not been subject to any restrictions or limitations in the preparation of this report.

Summary of Results

Financial Position as at 30 June 2024

The Vested Benefit Index and Accrued Benefit Index of the Fund as at 30 June 2024 are set out below. The values as at the previous triennial investigation date are also shown for comparison.

Date	30 June 2021	30 June 2024
Vested Benefit Index (VBI)	102.6%	107.2%
Accrued Benefit Index (ABI)	94.2%	104.0%

The above results reveal that the Fund was not in an unsatisfactory financial position at the investigation date.

I confirm that the Fund was not technically insolvent at the investigation date.

Projection of Financial Position

The projection of the Fund's financial position, based on the contribution recommendations and assumptions set out in this report, shows that the VBI will remain above 100% until at least 30 June 2027 (i.e. three years from the investigation date).

Conclusions

Defined Benefit Pensions

The Fund pays defined benefit pensions. As at the investigation date, in my view there was a high probability that the Fund will be able to pay these pensions as required under the Fund's governing rules.

Investments

I consider that the investment strategy adopted by the Trustee continues to be appropriate for a fund of this size and with the benefit design of the Fund. In reaching this conclusion we have noted that in the first instance the Employer assumes responsibility for making up any funding shortfall.

Crediting Rate Policy

In my view the crediting rate policy currently adopted by the Trustee is appropriate.

Insurance arrangements

The use of external insurance and the formula for calculating the insured benefit is consistent with other funds of similar size.

I recommend the self-insurance reserve which has been established within the Fund be moved into the DB asset pool.

Shortfall limit

The Fund's current shortfall limit continues to be appropriate and should remain at 99%.

Reporting Requirements of Prudential Standard SPS 160 "Defined Benefit Matters"

SPS 160 requires trustees and actuaries to take certain actions when a superannuation fund or sub-fund is in an unsatisfactory financial position. In particular, SPS 160 requires the Trustee to put in place a funding plan (or Restoration Plan) to restore the Fund from an unsatisfactory financial position within a period of three years or less. A Restoration Plan is not currently required to be put in place because the Fund was not in an unsatisfactory financial position as at 30 June 2024, or at the date of signing this report.

The statements required under paragraph 23(a) to (i) of SPS 160 are set out in Appendix C.

Recommendations

We have used the term 'Defined Benefit Superannuation Salaries' to be the Member's Salary field provided in the administration data for all active members.

Contributions

The primary funding objective of the Fund is that the long-term contribution rate be considered sufficient on the basis of the selected actuarial assumptions, to keep the Fund from falling into an unsatisfactory financial position over the next three years. On this basis, we recommend that the Employer contribute to the Fund at the following rates until 30 June 2027, or until the results of the next actuarial investigation have been made available:

For the period to 31 January 2025:

- For members in Part 1 of the Fund: 52.0% of Defined Benefit Superannuation Salaries.
- For members in Part 2 of the Fund: 17.0% of Defined Benefit Superannuation Salaries.

For the period from 1 February 2025:

- For members in Part 1 of the Fund: 19.0% of Defined Benefit Superannuation Salaries.
- For members in Part 2 of the Fund: 17.0% of Defined Benefit Superannuation Salaries.

In making the above recommendation I understand that the Employer, at its discretion, may wish to make additional top-up contributions by respective Reporting Entities following the end of each financial year if the salary increases experienced by members of the Reporting Entity during the year exceed the assumed rate used for Employer accounting reporting purposes. The additional contributions would be the amount advised by the Fund's actuary as the increase in Fund liabilities arising in respect of the higher than assumed rates of salary increase, adjusted for contribution tax.

Based on the above Employer Contribution Rates the VBI of the Fund is expected to remain above 100% until 30 June 2027. While the position is expected to remain satisfactory, as shown in the projections of the Vested Benefit Index in section 9 of this report, there is a risk that if experience is more adverse than expected then the VBI could fall below 100%. The financial position of the Plan is monitored quarterly. If the position is determined to be unsatisfactory or the actuary believes the position is about to become unsatisfactory, additional contributions will be requested from the company. The actuary will determine the amount and timing of the additional contributions and a fair apportionment of these contributions between employers.

The rate of contributions will be next reviewed as part of the annual actuarial investigation as at 30 June 2025.

Monitoring of the Financial Position of the Fund

I recommend that the Trustee continue to monitor the financial position of the Fund on a quarterly basis. If the Fund's experience is significantly different from our assumptions, it may be necessary to review the recommended level of contributions. The Trustee or Employer can initiate an interim actuarial review and new contribution recommendation at any time if there is concern that the Fund is approaching a level where the VBI may be less than 100%. Should the VBI fall below the Fund's Shortfall Limit of 99%, an interim investigation may be required as set out in Superannuation Prudential Standard SPS 160.

Next Actuarial Investigation

The Trustee is required to carry out annual actuarial investigations of the Fund. The next investigation will be an annual actuarial investigation with an effective date of 30 June 2025 with the next triennial actuarial valuation being effective 30 June 2027.

J. Downham

Jackie Downham
Fellow of the Institute of Actuaries of Australia

18 December 2024

DO: BH | TR: AB | CR, ER: JD

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Section 2: Background

Structure of the Fund

Prior to 30 June 2016, the operations of the Fund were governed by a Trust Deed dated 1 July 1926, as amended. From 1 July 2016, the Fund became a sub-plan of the Plum Division of the MLC Super Fund and the operations of the sub-plan are governed by the Trust Deed of the MLC Super Fund, as amended and the Participation Agreement of the Fund dated 27 June 2016. The Fund is a complying superannuation fund under the Superannuation Industry (Supervision) Act and therefore qualifies for concessional tax treatment.

The Trustee of the MLC Super Fund is NULIS Nominees (Australia) Limited, a company licensed by APRA to operate as a superannuation fund trustee.

BHP Group Ltd ("BHP" or the "Employer") is the Principal Employer of the Fund (as defined in the Participation Agreement). There are also several Associated Employers set out in Appendix C of the Participation Agreement.

There are two categories of membership of the Fund. Parts 1, 2 and 9 provide lump sum and pension defined benefits i.e. benefits related to a member's period of membership and salary over the last few years of membership. These Parts are closed to new members. As of 30 June 2024, there are no more members remaining in Part 9.

Prior to 1 November 2016, the Fund provided lump sum defined contribution benefits for Parts 10, 17, 18 and 19. These Parts were transferred to another sub-plan of the MLC Super Fund on 1 November 2016.

The name of the Fund changed from 'BHP Billiton Superannuation Fund' to 'BHP Superannuation Fund' effective 30 June 2019.

As at 30 June 2024, there were 10 Queensland-based members for whom the Employer has made contributions into AUSCOAL (which was formed by a merger of the Queensland Coal Superannuation Fund and the New South Wales Coal Superannuation Fund). The benefits ultimately payable out of the Fund to these members will be reduced to reflect the accumulated value of those contributions. The AUSCOAL offsets applicable as at 30 June 2024 were estimated to be $1.0 million and have been reflected in the calculations.

A detailed description of the benefits valued in this investigation is included in Appendix A to this report.

Previous Actuarial Investigation

Tracy Polldore carried out the previous triennial actuarial investigation of the Fund as at 30 June 2021 and the results were presented in a report dated 22 December 2021. I understand that the recommendations in the report have been adopted by the Trustee.

The previous triennial actuarial investigation report recommended that the Employer contribute to the Fund in respect of defined benefit members of the Fund:

For the period to 30 September 2022:

- For members in Part 1of the Fund: 45.0% of Defined Benefit Superannuation Salaries; and
- For members in Part 2 of the Fund: 11.6% of Defined Benefit Superannuation Salaries

For the period from 1 October 2022:

- For members in Part 1of the Fund: 52.0% of Defined Benefit Superannuation Salaries; and
- For members in Part 2 of the Fund: 17.0% of Defined Benefit Superannuation Salaries

Additionally, contributions were required if the Vested benefit Index fell below 100% or if salary increases were greater than expectations.

These contribution recommendations were confirmed in the annual actuarial investigations as at 30 June 2022 and 30 June 2023.

Events since the Previous Actuarial Investigation

Employer Contributions

I understand that the Employer has paid regular contributions in line with the recommendation made in the previous investigation report.

Legislative Changes

There have been no legislative changes or changes to benefits during the year that have materially impacted the funding of the Fund.

Key events since 30 June 2024

The returns on the Fund assets for the 4 months from 1 July 2024 to 31 October 2024 are shown below. Assets supporting active member liabilities and pensioner liabilities have been segregated into the Defined Benefit Reserve and Pension Reserve. The investment return assumptions used for this actuarial investigation are also shown for comparison.

Investment Returns	1 July 2024 to 31 October 2024	Pro-rata assumption as at 30 June 2024
Defined Benefit Reserve	1.3%	1.3% (3.9% pa)
Pension Reserve	-0.3%	1.6% (4.8% pa)

The return on the defined benefit reserve was similar to the assumed investment return. The return on the pension reserve is expected to have had a neutral impact on the financial position of the Fund due to the pension assets being matched to the liabilities. The latest Financial Position Update showed the fund to be in a satisfactory financial position at 30 September 2024.

We have made allowance for the investment returns on the Defined Benefit Reserve up to 31 October 2024 when projecting the financial position of the Fund in Section 9.

Salaries increased at 1 September 2024, we have incorporated an estimated allowance for these increases in our valuation of future liabilities.

Based on the experience since 30 June 2024 we expect the Fund to be in a satisfactory financial position at the date of signing this report. I am not aware of any events subsequent to the investigation date which would have a material impact on the conclusions or recommendations in this report.

Section 3: Membership

Membership Data

Membership data for this investigation was provided by MLC Wealth Limited ('the administrator') in respect of members of the Fund as at 30 June 2024.

We have conducted reasonableness checks on the membership data to ensure that all dates, salaries and other amounts were reasonable. Overall, we are satisfied that the data provided is sufficiently accurate for the purposes of this investigation. Although we have no reason to doubt the quality of the data, the results of this investigation are dependent on the quality of the data provided.

The administrator also provided salaries effective 1 September 2024, these salary updates have been incorporated into the data used to value the liabilities in this report.

Membership Summary

Key membership statistics of Defined Benefit members at the investigation date are shown in the following tables, together with the corresponding figures at the previous triennial investigation date:

Active Members	30 June 2021	30 June 2024
Number of Members		
Part 1	79	43
Part 2	14	10
Part 9	-	-
Total	**93**	**53**
Average Age (years)	57.1	59.3
Average Past Membership (years)	29.2	32.6
Total Salaries ($)	20,186,000	11,098,000
Average Salary ($)	217,000	209,000

Pensioner Members	30 June 2021	30 June 2024
Number of Members		
Retirement	49	54
Disablement	33	27
Spouse	46	41
Child	1	1
Total	**129**	**123**
Average Age (years)	73.3	75.2
Total Pensions ($)	5,296,000 pa	5,479,000 pa

The Fund is closed to new entrants.

Section 4: Assets and investments

Asset Data

The Fund's administrator has provided data in relation to the value of the Net Assets held by the Fund in the Defined Benefit Reserve and the Pension Reserve as at 30 June 2024. In order to determine the value of assets available to fund the defined benefits we have adjusted this value to allow for benefits payable to members who exited the Fund prior to the investigation date, estimates of the contributions tax and an estimate of the Cash Reserve.

The Net Asset value represents the value of assets including any Transaction Costs that would be incurred on sale. We note that Professional Standard 404 requires the "Fair Value" of assets is used which is defined as the value of assets before the deduction of Transaction Costs. Based on the type of assets held by the Fund we confirm that the Transaction Costs are not expected to be material. We have therefore used the Net Asset value provided by the Fund's administrator for the purposes of this investigation.

We are satisfied that there are no material data discrepancies and that the net asset data provided is suitable for the purpose of this investigation. We have relied on the information provided for the purposes of this investigation. Although we have no reason to doubt the quality of the asset information provided, the results of this investigation are dependent on the quality of the asset information. Any changes to the asset values above will have an impact on the outcome of the investigation and any resulting recommendations.

Value of Assets at 30 June 2024

The following table shows the calculation of the Fund's net market value of assets supporting defined benefits as at 30 June 2024:

	30 June 2024 ($'000)
Defined Benefit Reserve	75,754
Pension Reserve	69,584
Estimated Cash Reserve	1,090
Benefits Payable	(4,876)
Pension purchase adjustment	-
Estimated Contributions Tax Payable	(223)
Total Net Market Value of Assets	**141,329**

We have used a net asset value of $141,328,817 for the purpose of assessing the financial position of the defined benefits and for recommendations regarding appropriate rates of funding.

The value of additional accumulation accounts of defined benefit members of $6,308,000 as at 30 June 2024 has been excluded from the asset values shown above.

Pension Reserve

As noted in Section 2, assets supporting active member liabilities and pensioner liabilities have been segregated and assets supporting pensioner liabilities are now held in the Pension Reserve. Because the Fund receives a tax concession with respect to investment earnings on assets supporting pensioners, it is valuable to ensure that the segregated Pension Assets match pensioner liabilities as closely as possible and that the respective position continues to be monitored.

Cash Reserve

We have estimated the value of the Cash Reserve based on the value determined as at 1 November 2016 when the Cash Reserve was apportioned between the Defined Benefit Division and the Defined Contribution Division, updated with interest at 2% per annum to 30 June 2024. We recommend the Cash Reserve is moved to the Defined Benefit Reserve.

Self-Insurance Reserve

We have excluded the Self-Insurance Reserve of $855,000 as at 30 June 2024 from the assets as while it represents an ongoing, self-funded liability of the Fund it is not included explicitly in the determination of the long-term funding of the Fund.

Operational Risk Financial Requirement (ORFR)

The ORFR in respect of the Fund is held in the MLC Super Fund (at the master trust level), not the sub-plan level so has not been included in Fund assets.

Investment Arrangements

Investment strategy

The investment strategy of the Fund has been developed with regard to the expected income streams of the Fund. We understand that the Fund only has a small proportion of assets invested in illiquid assets and the likelihood of having to sell the illiquid assets in the Fund on a forced sale basis is not expected to be material.

The Fund's assets in respect of members additional accumulation accounts are invested in accordance with the investment choices made by members with these balances.

Defined Benefit Reserve

The assets in the Defined Benefit Reserve are held to provide benefits for the active members of the Fund. The Trustee has determined the strategic asset allocation for the assets supporting active liabilities in accordance with the Dynamic Investment Strategy (DIS) reflecting BHP's Global De-Risking Strategy.

As at the investigation date, 15% of the assets supporting the active liabilities were invested in "growth" assets (such as shares and property) and the 85% balance was invested in "defensive" assets (such as fixed interest and cash).

Pension Reserve

The assets in the Pension Reserve are held to provide pension payments to the Fund's pensioner members. These assets are invested in a portfolio of fixed-interest bonds that closely match the duration of the Fund's pension liabilities.

The discount rate used to value the Fund's pension liabilities is derived from the overall market yield on the Pension Reserve. As the Pension Reserve and the Pension Liabilities have a similar duration changes in the market value of the Pension Reserve will be closely matched by a corresponding change in the value of the Pension Liabilities.

Asset Allocation

The asset allocation of the Defined Benefit and Pension Reserves as at the investigation date are set out in the table below:

Investment Sector	Defined Benefit Reserve	Pension Reserve
Australian Shares	8%	0%
Global Shares Unhedged	3%	0%
Global Shares Hedged	3%	0%
Global Property Securities	1%	0%
Australian Fixed interest	0%	100%*
Inflation Linked Securities	85%	0%
Cash	0%	0%
Total	**100%**	**100%**

* Includes swaps, options and futures contracts used for the purpose of adjusting the portfolio duration and to gain or hedge credit exposure.

We consider that the investment strategy adopted by the Trustee is appropriate for a fund of the size and the benefit design of the Fund. In reaching this conclusion we have noted that in the first instance the Employer assumes responsibility for making up any funding shortfall.

Crediting Rate Policy

The crediting rate policy relates to the crediting of investment earnings to accumulation accounts and Minimum Requisite Benefits for active members based on the actual investment returns of the underlying assets (except for the rate applying to family law offset accounts which is consistent with the legislation).

The interim crediting rates are the 90 day bank bill rates (on the last working day of the prior month) adjusted for 15% tax. They have been determined on a basis such that they are a reasonable proxy for the expected crediting rate.

In our view, the crediting rate policy currently adopted by the Trustee is appropriate.

Section 5: Financial and demographic experience

Professional Standard 400 requires that the financial and demographic experience of the Fund is reviewed every three years. The review of the Fund's experience since the previous triennial investigation as at 30 June 2021 is set out below.

Summary of Financial Experience

A summary of the financial experience of the Fund over the period from 1 July 2021 to 30 June 2024 is set out in the tables below.

Investment Returns

The table below sets out the investment returns of the Defined Benefit Reserve over the three year period to 30 June 2024:

Investment Returns	DB Reserve	Pension Reserve
1 July 2021 to 30 June 2022	-7.0%	-18.3%
1 July 2022 to 30 June 2023	5.8%	-1.2%
1 July 2023 to 30 June 2024	4.9%	1.7%
1 July 2021 to 30 June 2024	**3.2%**	**-17.9%**
Annualised Return	**1.0% p.a.**	**-6.4% p.a.**

The overall return on Defined Benefit Reserve is lower than the assumed long-term rate of 1.4% per annum in the last actuarial investigation at 30 June 2021. This experience alone would have had a negative impact on the Fund's financial position.

The return on the Pension Reserve was also lower than the long term rate of 1.9% per annum assumed in the previous triennial investigation. However, as the Pension Reserve is invested in a portfolio of fixed interest bonds which closely match the Fund's pension liabilities, the decrease in the value of the assets will be offset by a corresponding decrease on the present value of the pension liabilities. The overall impact on the financial position of the Fund should therefore have been neutral over the three year period since 30 June 2021.

Salary Increases

The average salary increase over the last three years has been 3.5% per annum. This is in line with the assumed rate of salary increases in the last actuarial investigation at 30 June 2021.

Real Returns

The 'real' return is the excess of the rate of investment return over the rate of salary increases. Comparing the actual rate of real returns to that assumed over the investigation period allows us to identify the impact of financial experience during this time.

The table below sets out the annualised real returns in respect of active members for the three year period to 30 June 2024. The real return assumption adopted for the previous triennial actuarial investigation as at 30 June 2021 is also shown for comparison.

Real Returns	Actual (p.a.)	Assumption as at 30 June 2021 (p.a.)
Investment Return	1.0%	1.4%
Salary	3.5%	3.5%
Real Return	**-2.5%**	**-2.1%**

The above table shows that the real return in respect of active members of the Fund was lower than the assumption adopted for the previous triennial actuarial investigation as at 30 June 2021. In total, the above returns have had a negative effect on the Fund, which considered in isolation, would have resulted in a decrease in the level of surplus between the Fund's assets and the value of Vested Benefits over the investigation period.

Demographic Experience

For the purpose of valuing the liabilities of the Plan it is necessary to make assumptions in respect of the rate at which members exit the Plan.

Exits out of the Fund

We have been advised that there were no deaths and one total and permanent disablement during the investigation period for defined benefit members.

The table below sets out the actual number of active members who exited the Plan in the three year period to 30 June 2024 compared to the expected number of exits based on the demographic assumptions adopted for the previous actuarial investigation as at 30 June 2021:

	Actual experience	Expected experience	Actual Versus Expected
Members at 30 June 2021	**93**	**93**	
less Retirements	(32)	(38)	-16%
less Withdrawals	(8)	(12)	-34%
less Death	-	(1)	na
less TPD	-	(1)	na
Members at 30 June 2024	**53**	**40**	**31.6%**

The table above shows that there is some variance in the demographic experience of the Plan over the period from 1 July 2021 to 30 June 2024. However, this experience would not have had a large impact on the financial position over the investigation period.

Pension take-up experience

In the previous triennial actuarial investigation, we had assumed 40% of all eligible members would elect to take 75% of their retirement benefit as a lifetime pension.

The table below sets out the actual number of active members electing to take a lifetime pension on retirement over the past three years to 30 June 2024:

Exits out of the fund	Number of active exits eligible to take a pension*	Number of members electing to take a pension on retirement	Pension take-up proportion (no. of members)
1 July 2021 to 30 June 2022	6	3	50%
1 July 2022 to 30 June 2023	7	1	14%
1 July 2023 to 30 June 2024	6	-	0%
1 July 2021 to 30 June 2024	**19**	**4**	**21%**

* Only members above the preservation age and in Part 1 of the Fund are eligible to elect a pension on retirement.

Members electing to take a pension can also choose the proportion of their benefit that they take as a lifetime pension with the remaining benefit taken as a lump sum. For the members that did elect to take a pension, over the three years to 30 June 2024, members elected to take 56% of their total retirement benefit as a lifetime pension on average, with the remaining benefit being paid as a lump sum.

Overall, of the benefit payments of $17.3 million made in relation to members that were eligible for a pension over the three-year period, $3.7 million was in respect of a lifetime pension (i.e. a pension take-up proportion of 21% on the basis of total benefit payments). This compares to an expected pension take-up proportion of 30% (i.e. it was assumed that 40% of all eligible members would elect to take 75% of their retirement benefit as a lifetime pension). Note that the results only show members that have elected to take a pension in the 3-year period prior to 30 June 2024.

The results show the proportion of benefits being taken as a lifetime pension was lower than anticipated. This had a positive effect on the Fund as a pension purchase causes a strain on the financial position of the Fund due to the pension benefit being more valuable than the lump-sum benefit under the current financial assumptions.

Given the experience over the past three years (and considering the longer-term experience) we have decided to retain the assumptions for this valuation, noting that the Fund now has a smaller active membership, and a few pension take-ups may have a material impact on the funding. It’s also worth noting that as the pension assets are fully matched to the liability, any potential pension take-up needs to be funded from the active assets (i.e. the assets are transferred to the pension asset reserve).

Therefore, we have retained the assumption that 40% of eligible members will take 75% of their retirement benefit as a pension.

It is noted that we have reflected that members are only eligible to take a pension benefit from preservation age as determined by the Trustee.

Section 6: Funding method

Funding Method

The funding method adopted at the previous actuarial investigation was the Projected Benefit Funding Method. We have used this method in this investigation to project the financial position of the Fund.

This method involves:

- Projecting the Fund's expected future cash flows including expected contributions made by the employer and employees, and benefit payments expected to be paid to terminating employees;
- Using the expected cash flows, projecting the total value of assets held by the Fund over the future lifetime of the Fund;
- Projecting the Fund's vested benefits, over the future lifetime of the Fund; and
- Comparing the value of the vested benefits with the value of the assets to assess the Fund's ability to pay benefits at any particular point in time in future.

In my opinion as the Fund is closed to new members and with consideration given to the regulatory requirements, this methodology remains appropriate for this investigation.

I have also determined the long term contribution rate under the Attained Normal and Aggregate Funding Methods as a guide to the underlying contribution rate based on the selected assumptions.

The Attained Normal Funding Method spreads the expected cost of funding future accrual of the Fund's defined benefits over the average future working lifetime of the current members to produce a level of contribution as a percentage of these members' salaries. This method makes no specific allowance for new members to replace current members who leave, which is appropriate for the Fund as the defined benefit division is closed to new entrants.

The Aggregate Funding method is similar to the Attained Normal Funding method but also spreads any surplus/deficit over the average future working lifetime of the current members to produce a level of contribution as a percentage of members' salaries.

Funding Objective

The Superannuation Industry (Supervision) Act 1993 (SIS) and associated Regulations contain a number of funding and solvency requirements.

SIS solvency standards consider the funding of Minimum Requisite Benefits, as well as the funding of vested benefits. A failure to cover Minimum Requisite Benefits with the net realisable value of assets results in "technical insolvency" and a requirement for a rigorous five year plan to restore solvency.

In addition, Superannuation Prudential Standard (SPS 160), focuses strongly on having superannuation funds aim to have assets in excess of vested benefits. This implies having a vested benefit index for defined benefits (DB VBI) that is in excess of 100%.

Section 7: Actuarial assumptions

Financial Assumptions

For the purposes of this investigation we have adopted the “best estimate” assumptions described above in order to determine the long-term funding assumptions. As these assumptions represent our “best estimate”, no element of conservatism has been included.

Best estimate assumptions were also used to determine the long-term assumptions used for the previous triennial investigation. However, due to changes in market conditions and the future expected salary increases, the actual values for these assumptions have changed since the last triennial investigation.

The factors of major significance in the long-term are the assumed future rates of investment earnings and salary increases. The difference between those two rates, known as the “real return” assumption, is the key determinant of the Fund’s financial position.

Summary of Assumptions

The financial assumptions as at 30 June 2024 are summarised in the following table. The assumptions used for the purpose of determining the financial indices as at 30 June 2021 in the previous triennial actuarial investigation are also shown for comparison.

Assumption	30 June 2021	30 June 2024
Investment Returns		
• Defined Benefit Reserve	1.4% pa	3.9% pa
• Pension Reserve	1.9% pa	4.8% pa
Salary Increases	3.5% pa	3.9% pa
Pension Increases	nil	nil
Real Returns (Long-term)		
• Active Members	-2.1% pa	0.0% pa
• Pensioner Members	1.9% pa	4.8% pa

Details of how each assumption has been determined are set out below.

Investment Returns – Defined Benefit Reserve

The investment return for assets held in the Defined Benefit reserve has been determined using the Willis Towers Watson investment model and are consistent with the duration of the liabilities and asset allocation of the Fund’s assets. Allowance has also been made for investment tax where applicable.

Investment Returns – Pension Reserve

The pension reserve is invested in a portfolio of fixed-interest bonds which closely match the duration of the liabilities. As these bonds are expected to be held until maturity we have used the overall yield on this portfolio as the expected investment return.

Salary Increases

Following the same approach adopted for the most recent triennial investigation, I consider a long-term salary inflation of 3.9% pa to be appropriate for this actuarial investigation of the Fund. This assumption is based on the expectation that salary increases will be 1.50% pa in excess of the expected general price inflation of 2.4% pa. The long-term salary assumption used for the previous actuarial investigation was 3.5% pa.

Additionally, we have used the actual superannuation salaries of Defined Benefit members at 1 September 2024 as provided by the administrator.

Real Rate of Return

The assumption of major significance in the funding of the future benefit liabilities of the Fund is the difference between investment returns and salary growth / pension increases (i.e. the net 'real' rate of return after allowing for salary inflation and pension increases).

The net real rates of return in respect of active liabilities has increased since the previous actuarial investigation. The overall impact of this change will be to decrease the value of the Fund's liabilities.

As the pension reserve is invested in a portfolio of fixed-interest bonds which closely match the Fund's pension liabilities the reduction in the value of assets will be offset by a corresponding reduction in the present value of the pension liabilities. Therefore, the change in the real rate of return for pensioners should have a neutral impact on the financial position of the Fund.

Expenses

Annual administration, actuarial, audit and other expenses have been allowed for at the rate of 0.15% pa of assets (equivalent to 1% of Define Benefit Superannuation Salaries). This is the same assumption from the previous actuarial investigation.

Insurance

The cost of insurance has been allowed for at the rate of 0.80% of Defined Benefit Superannuation Salaries in accordance with the premiums set out in the insurance policy. This is in line with the assumption in the previous investigation report.

Allowance for Pension Expense

We have included an amount in the pension liability of 1% of the total liability to allow for the cost of administering and paying future pensions. This is in line with the assumption in the previous investigation report.

Taxation

Any change in the taxation regime applying to superannuation funds in Australia will have an impact on the financial status of the Fund. We have assumed that the current regime will continue and that the tax rate presently applying to the Fund will be maintained in future (i.e. that the Fund will remain a complying superannuation fund for taxation purposes). Thus, we have assumed a concessional tax rate of 15% will apply to net deductible contributions and investment earnings.

Demographic Assumptions

The Fund does not have a large defined benefit membership which means there is insufficient data to produce statistically reliable demographic assumptions from the experience of the Fund. For this reason the assumptions about future demographic experience are based on our experience of other, similar defined benefit funds.

We have reviewed the demographic assumptions for the active defined benefit membership used for the previous investigation and we consider that these assumptions remain appropriate for the Fund.

Pensioner Mortality

For this investigation we have made the following assumptions in respect of mortality for normal health retirement pensioners and disability pensioners:

Pensioner Mortality Assumptions	Normal Health Retirement Pensioners	Disability Pensioners
Base Table	ALT 2015-17	a(90) rated up 20 years at age 55 reducing to a(90) at age 85
Future Mortality Improvements	1% pa from 1 July 2016	nil

These assumptions are consistent with the previous triennial actuarial investigation.

Proportion of Benefits Taken as a Lifetime Pension

We have assumed that 40% of eligible members will elect to receive 75% of their benefits in the form of a lifetime pension on retirement (i.e. after preservation age). This is in line with the assumption in the previous investigation report.

A summary of these assumptions is included in Appendix B.

Section 8: Financial position as at 30 June 2024

When assessing the adequacy of the assets and future contribution rates, both the long-term funding and short-term solvency positions should be considered. To assess the short term solvency position, we have calculated two measures of the Fund's financial position at the investigation date: the Vested Benefits Index and the Accrued Benefits Reserve Index. The Fund's position with respect to the minimum requisite benefit requirements and the position on termination are also considered.

Vested Benefits Index (VBI)

The Vested Benefits Index (VBI) represents the ratio of the assets at market value to the vested benefits. The value of vested benefits represents the total amount which the Fund would be required to pay if all members were to voluntarily leave service on the investigation date.

The vested benefits have been determined as the amount of the member resignation benefit, or the early retirement benefit for those members who are eligible to retire. We have also made allowance for the assumed take-up of the pension option for those active members eligible for the pension option as at the investigation date in the determination of vested benefits.

In the case of lifetime pensioners, the present value of the expected future pension payments plus an allowance for the future expenses of maintaining future pensions is used to determine the vested benefit.

The Vested Benefits Index in respect of the Fund at the investigation date is shown in the following table, together with the corresponding figures at the previous investigation date:

	30 June 2021 ($'000)	30 June 2024 ($'000)
Net Asset Value	**215,039**	**141,329**
Vested Benefits		
Active Members	112,950	62,045
Pensioner Members	96,657	69,832
Total	**209,607***	**131,878***
Vested Benefit Surplus/(Deficit)	**5,431**	**9,451**
Vested Benefit Index	**102.6%**	**107.2%**

* Totals in the table may not add due to rounding.

The above result shows that as at the investigation date the Fund had sufficient assets to meet the expected liabilities, including pension liabilities (calculated using the assumed pension take up rate for active members), should all active members resign from employment at that date. The VBI has increased since the previous triennial investigation date primarily due to the employer contributions being greater than normal cost. This has been partly offset by the investment return on the active assets being lower than expected.

A Vested Benefits Index higher than 100% indicates that the Fund was in a satisfactory financial position as at the investigation date.

Accrued Benefits Index (ABI)

The Accrued Benefits Index (ABI) compares the net asset value with the present value of the accrued benefits of members at the investigation date. The Accrued Benefits Index is a simple measure of a fund's strength on a continuing or "going concern" basis. Accrued Benefits represent the present value of expected future benefit payments arising in respect of membership of the Fund up to the investigation date. Allowance has been made for the assumed take-up of the pension option for active members on retirement.

The Accrued Benefits Index in respect of the Fund at the investigation date is shown in the following table, together with the corresponding figures at the previous investigation date:

	30 June 2021 ($'000)	30 June 2024 ($'000)
Net Asset Value	**215,039**	**141,329**
Accrued Benefits		
Active Members	131,618	66,027
Pensioner Members	96,657	69,832
Total	**228,275**	**135,860**
Accrued Benefit Surplus/(Deficit)	**(13,237)**	**5,469**
Accrued Benefit Index	**94.2%**	**104.0%**

The ABI has increased since the previous triennial investigation date primarily due to the employer contributions being greater than the normal cost and the increase in the real rate of return assumption used to value the active member liability. This has been partly offset by the investment return on the active assets being lower than expected.

Minimum Requisite Benefit Index

Minimum Requisite Benefits (MRBs) are the minimum benefits required to be paid in respect of a member to satisfy Superannuation Guarantee legislation. Regulation 9.06(3) of the Superannuation Industry (Supervision) Regulations defines a superannuation fund to be “technically insolvent” if its market value of assets is not sufficient to cover its accrued MRBs.

The Minimum Requisite Benefits Index (MRBI) represents the ratio of the assets at market value to the MRB in respect of defined benefit liabilities. A MRBI of less than 100% would mean that the market value of assets in respect of defined benefits was not sufficient to cover the accrued MRBs in respect of defined benefits and was therefore technically insolvent.

If, while carrying out an actuarial function, an actuary determines that a superannuation fund is technically insolvent, he or she must declare in writing that this is the case and provide the declaration to the Trustee.

Given that for most Part 1 members, the leaving service benefit is significantly higher than their MRB, in aggregate, total MRBs are expected to be much less than the total leaving service benefits for active members as at the investigation date. The MRBs for Part 2 members have been incorporated into the calculation of their leaving service benefits.

With a VBI of 107.2% at the investigation date, in my opinion it is extremely likely that the net market value of assets exceeds the MRBs as at that date.

The previous actuarial investigation report recommended that the configuration of the MRB should be reviewed for all DB members of the Fund to allow for confirmation of the above result and to allow for ongoing testing of technical insolvency, particularly given that the Superannuation Guarantee rate is legislated to progressively increase in the future. In addition, the Fund is required to report values of the MRBs to APRA on a regular basis and hence it is necessary to be able to make these calculations.

We understand that the coding of the MRBs has been reviewed by the Plan Administrator and is now complete. Using the MRB provided by the Plan Administrator we note the MRBI for the Fund is 162.1% at the valuation date, this means the Fund is not technically insolvent at this date. We have not performed detailed checks on the MRB values provided and have relied on the data provided by the administrator.

Retrenchment Benefits

On retrenchment, members in Part 1 are entitled to the member's reserve in the Fund, the value of this amount as defined in the Participation Agreement is equal to the vested benefits. For members covered under Part 2 of the Participation Agreement the retrenchment benefit is at least equal to the vested benefits for all members.

The retrenchment benefit index is therefore equal to the VBI of 107.2%.

Termination of the Fund

Clause 7 of the Agreed Terms and Clause A.14 of Schedule 2 of the Participation Agreement indicates that, on termination of employer contributions, assets are to be apportioned in respect of each Member after obtaining the advice of the Actuary. The amounts apportioned to members are then either transferred into another superannuation fund, approved deposit fund or eligible rollover fund or retained in the Fund and paid to the member on their cessation of service with the employer as determined by the Trustee.

As total allocations are limited to the assets held in the Fund, if the Fund was to be terminated at a time when its VBI was less than 100%, members' vested benefits would likely be reduced unless the employer made up any shortfall.

On termination, the Trustee would also need to consider and should obtain legal advice to determine whether to:

- continue to provide lifetime pensions in a superannuation fund similar to the Fund; or
- transfer the lifetime pension liabilities to a life insurance company (i.e. purchase lifetime annuities for the pensioners).

The calculations of the VBI, Accrued Benefit Reserve Index and MRBI all assume that the first of these scenarios applies. Life insurance companies have strict capital adequacy requirements and therefore would be likely to hold higher assets in respect of lifetime pensioners than held by the Fund. In practice, the amount of assets required to outsource lifetime pensioners would depend upon commercial considerations at the time.

The current pension assets are held in a bond portfolio which may be similar to the assets adopted by life insurers. However, the pension liability held within the Fund is likely to understate the required amount to outsource lifetime pensions because it makes no allowance for the insurer's profit margin, expenses and any reserves required.

Shortfall Limit

APRA Superannuation Prudential Standard SPS 160 requires the Trustee to determine a 'shortfall limit' which represents the level at which a fund can reasonably expect that, because of corrections to temporary negative market fluctuations in the value of fund assets, the fund can be restored to a satisfactory financial position within one year.

The Fund's shortfall limit is currently 99% which in my opinion continues to be suitable having regard to the benefit design and investment strategy of the Fund.

Section 9: Projection of financial position

As described in Section 6, the funding method to be used to determine the contribution requirements involves projecting forward the Fund's financial position (i.e. the Vested Benefit Index) on the basis of the selected assumptions. We have also considered the long term contribution rates as a guide to the underlying contribution rates based on selected assumptions.

We have used the term 'Defined Benefit Superannuation Salaries' to be the Member's Salary field provided in the administration data for all active members.

Long-Term Contribution Rate

We have determined the long-term contribution rate required to meet the Plan's liabilities on an ongoing basis below:

30 June 2024	($'000)
Net Value of Assets	141,329
Accrued Benefits	135,860
Accrued Benefit Surplus/(Deficit)	**5,469**
Future Service Liability (net of member contributions)	**4,120**
Present Value of 1% of Future Defined Benefit Superannuation Salaries	**282**
	% of accruing members' Defined Benefit Superannuation Salaries
Future Service Benefit Contribution rate	**14.6%**
Contribution Tax	2.6%
Contribution Rate for Benefits Accruing	**17.2%**
Allowance for Expenses	1.0%
Allowance for Insurance Premiums	0.8%
Contribution Rate for Benefit Accruing and Expenses	**19.0%**

The result above shows that a long-term Employer Contribution Rate of 19.0% of accruing members' Defined Benefit Superannuation Salaries payable from 1 July 2024, allowing for tax, administration expenses and insurance premiums, is required to finance the future liabilities expected to arise over the remaining lifetime of the current membership, assuming that the actuarial assumptions are borne out in future. This contribution rate does not allow for the utilisation of the current surplus in the Fund.

The long term contribution rate has decreased since the last triennial valuation due to the increase in the real return used to value the active liability.

The long term rate by category of members is as follows:

- Part 1 members: 19.3% of Defined Benefit Superannuation Salaries.
- Part 2 members: 17.0% of Defined Benefit Superannuation Salaries.

Funding Objective

For this investigation, we have targeted a VBI between 105% to 110% over the next three years to protect the Fund's financial position against adverse experience.

The graph below shows the Fund's future expected VBI based on the proposed contribution rate scenarios described below. The projection includes allowance for actual investment returns to 31 October 2024, all other assumptions are based on the assumptions detailed in Appendix B:

Scenario 1: Current Contribution Rates:

From 1 July 2024:

- Part 1 members: 52.0% of Defined Benefit Superannuation Salaries.
- Part 2 members: 17.0% of Defined Benefit Superannuation Salaries.

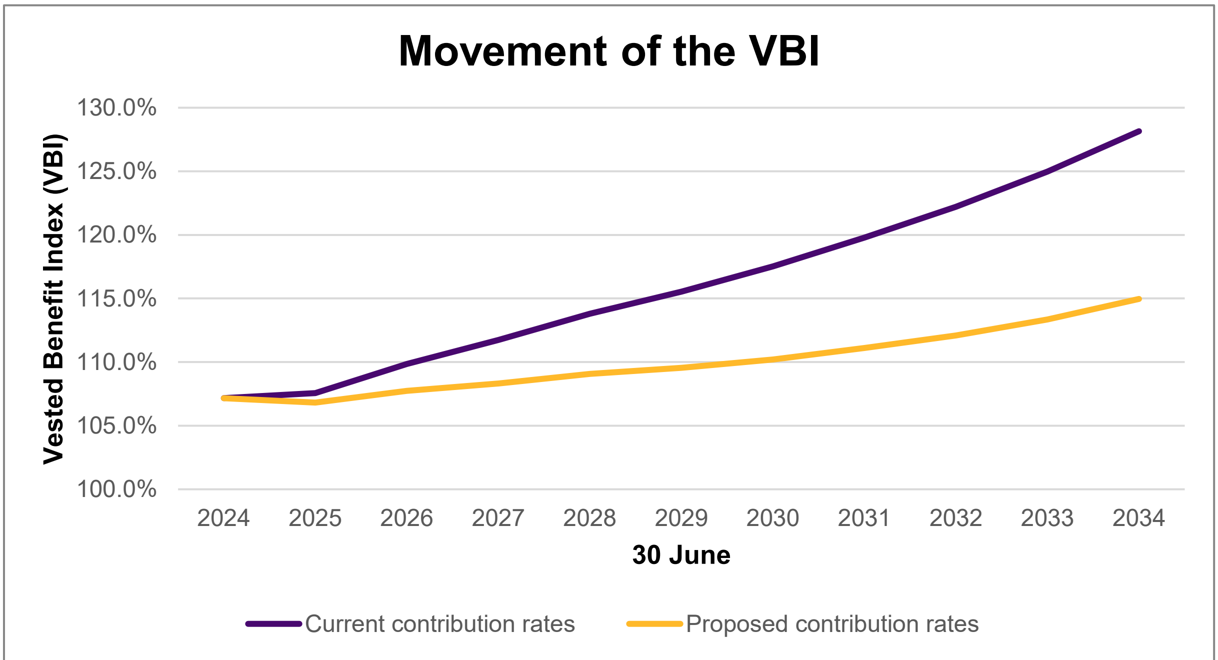
Scenario 2: Proposed Contribution Rates:

From 1 July 2024 to 31 January 2025:

- Same contribution rates as above.

From 1 February 2025:

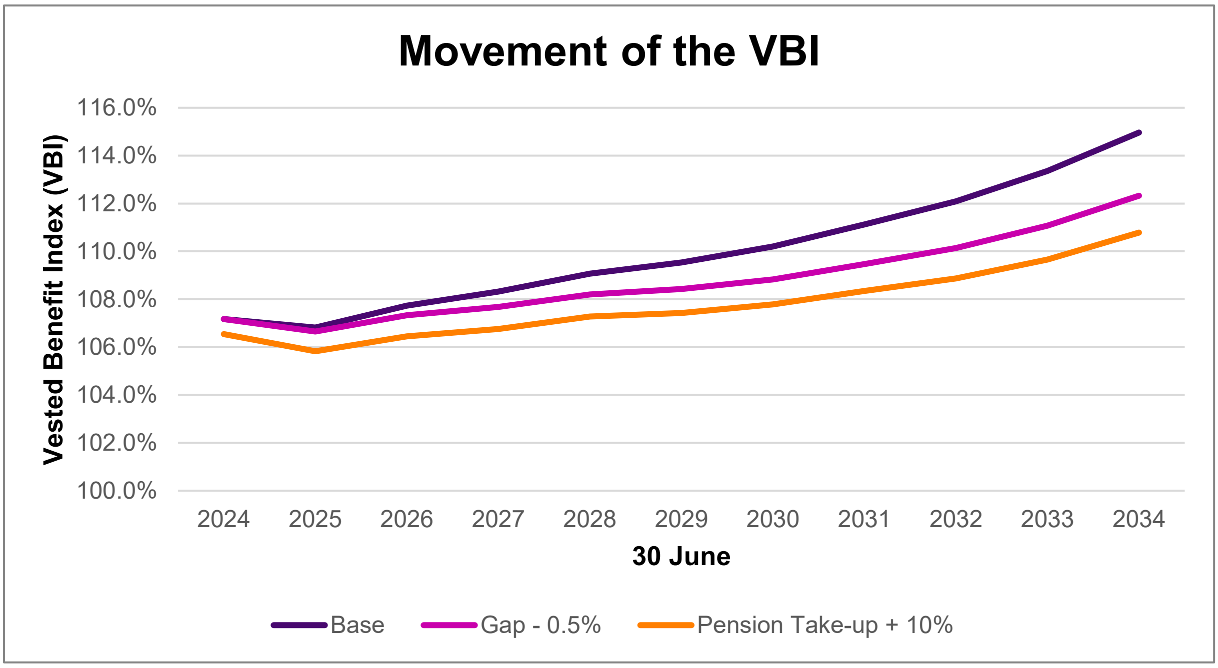
- Part 1 members: 19.0% of Defined Benefit Superannuation Salaries.
- Part 2 members: 17.0% of Defined Benefit Superannuation Salaries.



Under the proposed contribution program, the Fund remains in a satisfactory financial position and the VBI remains at or above 100.0% over the period to 30 June 2027 (i.e. until the results of the next triennial actuarial investigation).

The graph below shows the effect on the financial position (measured by the VBI) if experience is more adverse than expected, all scenarios allow for actual investment returns to 31 October 2024 and for the proposed contributions rates as stated above.

- Base scenario: all financial and demographic assumptions as set out in Section 7 of the report.
- Gap – 0.5%: A reduction of 0.5% per annum in the investment return assumption for the actives assets only.
- Pension take-up rate + 10%: An increase in the pension take up rate by 10% such that the proportion of benefits taken up as life-time pension is 40% (rather than 30%).



The graph shows that, under all scenarios, the VBI is expected to steadily increase under the proposed contribution rates over the next ten years. The above graph shows that if experience is more adverse than assumed (particularly in relation to the number of members electing to take their benefits in the form of a pension) then the VBI will increase at a slower rate, however it is still expected to be above 110% in ten years.

We recommend that the financial position of the Fund continue to be monitored regularly. If the position is determined to be unsatisfactory or the actuary believes the position is about to become unsatisfactory, additional contributions will be requested from the Company. The actuary will determine the amount and timing of the additional contributions and a fair apportionment of these contributions between employers.

Sensitivity of Long-term Contribution Rate

The table below shows the impact of varying the primary assumptions (i.e. discount rate and pension take up rate) on the Fund's financial position and long term contribution rate. No changes have been made to the demographic assumptions, other than the pension take up rate, adopted for the valuation in the scenarios below.

The scenarios considered are:

- BASE – The base assumptions used in valuing the Long-term Contribution Rate.
- Scenario 1 – A reduction of 0.5% per annum in the investment return assumption for the active members' assets only.
- Scenario 2 – An increase of 0.5% per annum in the salary increase assumption for the active members.
- Scenario 3 – An increase in the pension take up rate by 10% (as described in the scenarios of the graph above).

30 June 2024	BASE ($'000)	Scenario 1 ($'000)	Scenario 2 ($'000)	Scenario 3 ($'000)
Net Value of Assets	141,329	141,329	141,329	141,329
Accrued Benefits	135,860	136,682	136,498	144,510
Accrued Benefit Surplus/(Deficit)	**5,469**	**4,647**	**4,831**	**(3,182)**
Future Service Liability (net of member contributions)	**4,120**	**4,251**	**4,237**	**4,655**
Present values of 1% of Defined Benefit Superannuation Salaries	**282**	**285**	**285**	**282**
	% of accruing members' salaries			
Future Service Benefit Contribution rate	**14.6%**	**14.9%**	**14.8%**	**16.5%**
Contribution Tax	2.6%	**2.6%**	**2.6%**	**2.9%**
Contribution Rate for Benefits Accruing	**17.2%**	**17.5%**	**17.5%**	**19.5%**
Allowance for Expenses	1.0%	**1.0%**	**1.0%**	**1.0%**
Allowance for Insurance Premiums	0.8%	**0.8%**	**0.8%**	**0.8%**
Contribution Rate for Benefit Accruing and Expenses	**19.0%**	**19.3%**	**19.3%**	**21.3%**

It should be noted that the variations selected in the sensitivity analysis above do not indicate upper or lower bounds of all possible outcomes. The contribution rate shown in the table above also do not make any allowances for utilisation of the current surplus of assets.

Contribution Recommendation

We recommend that the Employer contribute to the Fund at the following rate until 30 June 2027, or until the results of the next actuarial investigation have been made available:

For the period to 31 January 2025:

- For members in Part 1 of the Fund: 52.0% of Defined Benefit Superannuation Salaries.
- For members in Part 2 of the Fund: 17.0% of Defined Benefit Superannuation Salaries.

For the period from 1 February 2025:

- For members in Part 1 of the Fund: 19.0% of Defined Benefit Superannuation Salaries.
- For members in Part 2 of the Fund: 17.0% of Defined Benefit Superannuation Salaries.

In making the above recommendation I understand that the Employer, at its discretion, may wish to make additional top-up contributions by respective Reporting Entities following the end of each financial year if the salary increases experienced by members of the Reporting Entity during the year exceed the assumed rate used for Employer accounting reporting purposes. The additional contributions would be the amount advised by the Fund's actuary as the increase in Fund liabilities arising in respect of the higher than assumed rates of salary increase, adjusted for contribution tax.

Based on the above Employer Contribution Rates the VBI of the Fund is expected to remain above 100% until 30 June 2027. While the position is expected to improve further, as shown in the projections of the Vested Benefit Index in section 9 of this report, there is a risk that if experience is more adverse than expected then the VBI could fall below 100%. The financial position of the Plan is monitored quarterly. If the position is determined to be unsatisfactory or the actuary believes the position is about to become unsatisfactory, additional contributions will be requested from the company. The actuary will determine the amount and timing of the additional contributions and a fair apportionment of these contributions between employers.

The rate of contributions will next be reviewed as part of the actuarial investigation as at 30 June 2025.

Section 10: Certification required under SPS 160 in respect of Pension Liabilities

Paragraph 23(h) of SPS 160 requires the Actuary to form an opinion as to whether there is a high degree of probability that a fund will be able to pay the pension as required under its governing rules.

Allocation of Assets on Termination

In forming this opinion, it is necessary to identify the assets which would be available to finance future pension payments. The principles set out in Guidance Note 465 issued by the Institute of Actuaries of Australia require the Actuary to consider which assets would be available to meet the current pension liabilities (after allowing for benefit liabilities which rank ahead of or equally with the current pensions) if the Fund were to be wound up.

Under the MLC Super Fund Trust Deed, the clause setting out priorities for the allocation of assets on termination of a sub-plan gives pensioners priority over active members.

It is important to note that the pension assets are currently segregated for tax purposes. If the sub-plan was terminated, under the Participation Agreement, all of the assets of the sub-plan would be available to pay out benefits to pensioners in accordance with the termination provisions.

Probability of Making Pension Payments

The funding objective of maintaining the VBI above 100% under SPS 160 combined with the priority of pensions over active members in a fund termination, allows us to conclude that there is a high degree of probability that the Fund will be able to pay the pensions on an ongoing basis.

While this statement may be made at the current time based on a VBI marginally over 100%, as the number of active members reduces over time (and particularly if the number of pensioners increases), there may come a point where we can no longer make this statement without a larger funding margin.

Section 11: Insurance

Insurance Arrangements

The Fund provides death and total and permanent disablement (TPD) benefits for members of the Fund. The death and TPD benefits of each active member are insured by TAL with the amount of insured cover based on the estimated benefit less the member's vested benefit. The original policy is effective 1 November 2016.

The uninsured risk is the extent to which the vested benefits are not covered by assets. The table below shows the coverage of the death and disablement risk:

	$m
Death / Disablement Benefits (A)	70.1
Net Value of Assets* (B)	69.2
Death / Disablement Benefits at Risk (A) – (B)	0.9
Amount of Risk Insured	10.4

* Amount excludes assets covering Lifetime Pensioners.

As at 30 June 2024, the amount of risk insured exceeded the benefits at risk by approximately $9.5 million suggesting that the Plan can be considered over-insured at that date on that basis.

There remains minimal elements of self-insurance relating to past insurance arrangements not fully covering the risk, which is discussed further below. The amount of the insured cover for Total and Temporary Disablement (TTD) for Hay Point employees is 75% of Annual Basic Salary payable until the first of certain events occurs with payments limited to one year which is consistent with the benefit payable under the Trust Deed.

The Fund retains a small amount of self-insured risk which is managed according to the Fund policy. The self-insured risk relates primarily to:

- insured benefits exceeding the Automatic Acceptance Limit (AAL) of certain senior staff; and
- uninsured claims relating to the period prior to 1 January 2009.

We note that there is no self-insured risk in respect of insured benefits exceeding the Automatic Acceptance Limit imposed by the insurer as at 30 June 2024 as we understand that there are no members that had insured benefits exceeding the AAL. However, there is still a small risk of the fund receiving claims from the period prior to 1 January 2009 (although we have not been advised of any current claims).

The self-insurance reserve at 30 June 2024 was $855,000 is relatively small compared to the size of the Fund. The reserve is credited with investment earnings, no contributions are made to the reserve. We recommend removing the self-insurance reserve given the low probability of a claim relating to the period prior to January 2009 and the current funding position of the Fund and transferring the funds from the self-insurance reserve to the DB reserve.

Section 12: Material risks

The funding of the Fund is dependent upon future experience. As part of this review I have briefly considered the following to be the material risks associated with the actuarial assumptions used in the investigation and that relate directly to the ongoing actuarial management of the Fund.

Investment Risk

A risk facing the Fund is that investment returns will not be as high as expected. If that were to occur, the VBI may fall below 100% or the shortfall limit. Consequently, the current funding plan might need to be amended prior to 30 June 2027.

It is expected that the assets (relating to active members) will remain invested in 85% “defensive assets” and 15% “growth assets” and the assets backing the pensioner liabilities remain invested in fixed interest bonds with a duration matched to the liabilities. The investment risk facing the Fund is therefore minimised by the implementation of this defensive strategy.

Salary and Price Inflation Risk

Salary increases or price inflation exceeding expectations will have a negative impact on funding. Although one aim of the investment strategy is to protect the Fund against price inflation, higher than expected real salary increases (i.e. salary increase rates minus price inflation) would have a negative impact on the funding position of the Fund.

The long term assumptions in relation to salary increases have been set in conjunction with the Principal Employer.

In accordance with APRA’s reporting requirements, the Trustee will monitor the VBI on a quarterly basis and as such would identify if the funding position is deteriorating as a result of investment performance or salary increases.

Catastrophe Risk

The Fund, and by implication the Employer, self-insures death and TPD risks that are not covered by the insurer, TAL. A material risk would be the occurrence of a catastrophe which affected members of the Fund. The main risk is in respect of the unfunded portion of benefits – to the extent that the VBI is less than 100%. As at 30 June 2024, the VBI was 107.2% therefore there was no unfunded benefits of this nature at that time. If the VBI falls further below 100% in the future, under the requirements of the applicable legislation (SPS 160) it would be necessary to implement an appropriate rectification strategy.

Longevity Risk

The current lifetime pensioners or their spouses may experience a lower rate of mortality than has been assumed for this investigation resulting in them living longer than expected. If this occurs, a strain may be placed on the pension assets, and this may require further contributions from the employer sponsor.

Pensioner Liability Risk

I have assumed that 40% of all eligible retiring members will elect to take pension benefits on retirement after preservation age (and will take 75% of their benefit as a pension benefit), noting that the present value of the pension is higher than the lump sum benefit. It is possible that more members may elect a pension benefit in the future. If this occurs, a strain may be placed on the Fund, and this may require further contributions from the employer sponsor.

Other Risks

Other material risks include material retrenchment programs, transfers to accumulation arrangements, Company restructuring or other large downsizing of the membership if the VBI is less than 100% because each benefit payment would further erode the value of the VBI (although this risk can be minimised by additional top-up contributions in respect of benefit payments).

In addition, the Fund faces a variety of operational and other risks which may in some circumstances lead to cost increases. We understand that the Trustee monitors and takes action on such risks as part of its risk management framework.

Any changes to the tax structure of superannuation arrangements may have an impact on the financial position of the Fund.

Section 13: Reliance statement and data

This report is provided subject to the terms set out herein, in our Consulting Agreement dated 21 September 2012 as amended by an agreement dated 17 May 2016 and subsequently novated to Willis Towers Watson on the terms and conditions set out in the letter dated 10 March 2017. This report is provided solely for the Trustee's and Principal Employer's use and for the specific purposes indicated above. It may not be suitable for use in any other context or for any other purpose.

Except where we expressly agree in writing or where required by law, this report should not be disclosed or provided to any third party. In the absence of such consent and an express assumption of responsibility, no responsibility whatsoever is accepted by us for any consequences arising from any third party relying on this report or any advice relating to its contents.

Where the report is provided to a third party, we make no representation as to the suitability of this report for any purpose other than that for which it was originally provided and accept no responsibility or liability in this regard.

We consent to the Trustee making a copy of this report available on the Fund's website where required in accordance with relevant legislation.

In preparing this report, we have relied upon information and data provided to us orally and in writing by the Trustee or Principal Employer and other persons or organisations designated by the Trustee. We have relied on all the data and information provided, including Fund provisions, membership data and asset information, as being complete and accurate. We have not independently verified the accuracy or completeness of the data or information provided, but we have performed limited checks for consistency.

In our opinion, all calculations are in accordance with requirements of applicable professional standards.

Appendix A: Summary of benefits and conditions

The Fund consists of a number of classes of membership (known as Parts), each of which provides different benefits.

- Part 1 – Permanent Employees (Staff) – closed 1/8/1997 – further details provided below.
- Part 2 – former members of the Hay Point Services Superannuation Fund – closed 1/1/1995 – further details provided below.

Under the Participation Agreement, as a result of an actuarial investigation, the Trustee may change employer contributions, member contributions and/or benefits payable to members after obtaining the advice of the actuary and subject to the consent of the Employer. In addition, under the Participation Agreement, the Trustee has the power to amend the Rules subject to certain constraints.

The following is a summary of the Fund Benefits provided to members.

Definitions

Contributory Membership (CM) – the time during which the Member was a contributor to the Fund.

Defined Wage (DW) – sum of all wages of the Member.

Early Retiring Age – For Parts 1, it is age 55. For Part 2 members, it is age 57.

Final Average Salary (FAS) – For Parts 1 and 2 members, it is the average salary of a Member during the three years immediately preceding termination of service or attainment of Normal Retirement Age.

Final Average Wage (FAW) – the average weekly wage as at 1 January on each of the final three years of Contributory Membership, multiplied by 52.

Member's Accumulated Contributions (MAC) – total contributions made by the Member, accumulated with interest, assuming all contributions are paid mid-year.

Membership Period – the time between the date the Member joined the Fund and the date the Member leaves the Fund, subject to a maximum of 36 years.

Normal Retirement Date –it is the Member's 65th birthday.

Salary – the yearly rate of the ordinary fixed salary of the Member, as determined by BHP.

Wage – the Member's wage as advised by BHP.

Part 1 – Defined Benefits

Contributions and Accounts

Contributions by Members

Part 1 Members of the Fund are required to contribute at 4% of Salary (excluding bonuses, overtime and allowances), subject to a maximum of $2,400 pa. If the member chooses to make the contributions as salary sacrifice (before tax), the member is to contribute 4.71% of Salary (this is to take account of the 15% contributions tax).

Members may make additional voluntary contributions (“AVCs”) which accumulate with interest and are paid on leaving service for any reason.Benefits

Minimum Benefit

The minimum benefit that applies on resignation and retirement is equal to the sum of:

- 2.5 x Member’s Accumulated Contributions;
- 3% x Final Average Salary x years of membership from 1 March 1987;
- balance of additional voluntary accounts the member may have; and
- any roll-in that bought back-dated membership while in BHP.

Leaving Service Benefit

When the member leaves for any reason other than death or disablement the benefit is calculated as:

> 20% x Final Average Salary x Membership Period x Benefit Factor
>
> where
>
> Benefit Factor = max (0, (1 – (55 – max (40, min (55, age))) x 0.02))

plus the balance of additional voluntary accounts in the Fund.

The leaving service benefit is subject to the minimum benefit.

On leaving service after the preservation age (but before the Normal Retirement age) the member can elect to take their benefit as a pension rather than a lump sum, equal to:

> Leaving Service Benefit / Pension Discount Factor
>
> where
>
> Pension Discount Factor = 10.80 + (65 – age at retirement) x 0.3

Similarly, on leaving service at Normal Retirement Age the member can take the benefit as a pension, equal to:

> 1/54 x Final Average Salary x Membership Period x Discount Factor
>
> where
>
> Discount Factor = 10.80 / (10.80 + (65 – age at retirement) x 0.3)

The pension is fixed (that is, it is not indexed with price increases). A reversionary pension may be paid on the death of the member.

Death Benefit

A lump sum benefit equal to:

> 20% x Projected Final Average Salary at 65 x Potential Membership to 65

Potential Membership has a maximum of 36 years.

If the member joined the Fund before 1 July 1994 the death benefit can be paid as part lump sum plus part pension(s) payable to the Spouse and Child Dependant(s).

The part lump sum is calculated as:

> Final Average Salary x (65 – max (age at death, 45)) x 0.15

The Spouse Pension is calculated as:

> Half of the member's TPD pension.

The Dependants' Pension on death is calculated as:

> One sixth of the member's TPD pension, provided for up to three dependants, where dependants include children up to 18 years of age, or children up to 25 if in full-time study.
>
> Pensions, other than those payable to children, do not increase in line with inflation or investment earnings.

Disablement Benefit

A benefit is payable on assessment of total and permanent disability (TPD) equal to the benefit payable had the Member died on the date of assessment.

If the member joined the Fund before 1 July 1994 the TPD benefit can be paid as part lump sum plus part pension.

The part pension is calculated as:

> 1/54 x Final Average Salary x Total Potential Membership to age 65

In addition, these members would also receive a part lump sum calculated as:

> Final Average Salary x (65 – max (age at death, 45)) x 0.15.

Part 2 – Defined Benefits

Contributions and Accounts

Contributions by Members

Part 2 Members of the Fund are required to contribute 5% of their Wage (excluding bonuses, overtime and allowances). If the member chooses to make the contributions as salary sacrifice (before tax), the member is to contribute 5.88% of Wage (to take account of the 15% contributions tax).

Members may make additional voluntary contributions (“AVCs”) which accumulate with interest and are paid on leaving service for any reason.

No administration fees are levied on members in Part 2 of the Fund.

Productivity Accumulation Account

The accumulation with interest at the determined rate of productivity contributions at the following rates:

- 2.55% of Wage for the period of Contributory Membership (CM) from 6 July 1987 to 30 June 1992;
- 3.40% of Wage for the period of CM from 1 July 1992 to 31 December 1992;
- 4.25% of Wage for the period of CM from 1 January 1993 to 30 June 1995;
- 5.10% of Wage for the period of CM from 1 July 1995 to 30 June 1998;
- 5.95% of Wage for the period of CM from 1 July 1998 to 30 June 2000;
- 6.8% of Wage for the period of CM from 1 July 2000 to 30 June 2002;
- 7.65% of Wage for the period of CM from 1 July 2002 onwards.

Benefits

Benefit Multiple

The Benefit Multiple is the sum of:

- 12.5% of that part of the Member’s Contributory Membership (CM) prior to 1 January 1984;
- 15.0% of that part of the Member’s CM between 1 January 1984 and 31 December 1987;
- 16.0% of that part of the Member’s CM between 1 January 1988 and 30 June 1990;
- 14.4% of that part of the Member’s CM commencing on or after 1 July 1990; and
- any other multiple granted in respect of amounts transferred into the Fund from any other eligible fund.

Retirement Benefit

A lump sum benefit equal to:

- Benefit Multiple at date of Retirement x Final Average Wage

Leaving Service Benefit

A lump sum equal to the sum of:

Member contributions plus interest; and

The greater of:

- 10% of member contributions plus interest for each year of contributory membership in excess of three years, subject to a maximum of 100% after 13 years; and
- the Member's Productivity Accumulation Account

Death Benefit

A lump sum benefit equal to:

Death Benefit Multiple x Prospective Final Average Wage

Where:

- Prospective Final Average Wage is that which would have applied at Normal Retirement Age, assuming Wage remained unaltered until Normal Retirement Age; and
- Death Benefit Multiple is the Benefit multiple including the member's prospective service to age 65 (with a maximum benefit period of 36 years).

Disablement Benefit

A benefit is payable on assessment of total and permanent disability equal to the benefit payable had the Member died on the date of assessment. This benefit is equal to that payable on death.

Appendix B: Summary of actuarial assumptions

Financial Assumptions

Assumption	30 June 2021	30 June 2024
Investment Return		
Active Assets	1.4% pa	3.9% pa
Pensioner Assets	1.9% pa	4.8% pa
Salary Increases	3.5% pa	3.9% pa

Demographic Assumptions

Assumption	30 June 2021	30 June 2024
Pensioner Mortality • Normal Health Pensioners • Disability Pensioners	• ALT 2015-17 with 1.0% pa improvements from 1 July 2016 • A (90) rated up 20 years at age 55 reducing to a(90) at age 85	• ALT 2015-17 with 1.0% pa improvements from 1 July 2016 • a(90) rated up 20 years at age 55 reducing to a(90) at age 85
Pensioner Life Expectancies • Normal Health – Male 65 • Normal Health – Female 65 • Disability – Male 65 • Disability – Female 65	21.5 years 24.2 years 12.7 years 17.3 years	21.8 years 24.5 years 12.7 years 17.3 years
Proportion Married	90%	
Spouse Age Difference • Active Members • Pensioner Members	Husbands 3 years older Actual difference if spouse date of birth known else +/- 3 years	
Pension Take-Up	40% of eligible retirees (from preservation age) take 75% of their benefit as a pension	

Sample Decrement Rates

Specimen annual rates of decrement appear in the tables below. The same assumptions were adopted at 30 June 2024 and 30 June 2021.

Age	Number out of 10,000 members aged X at the beginning of the year assumed to leave the Fund during the year on account of:		
	Death	Disablement	Resignation
25	5	3	1000
30	5	3	1000
35	5	3	1000
40	8	7	1000
45	11	16	1000
50	16	38	1000
55	25	85	-

Age	Number out of 10,000 members aged X at the beginning of the year assumed to retire during the year
55	1,000
56	1,000
57	1,500
58	2,000
59	2,500
60	3,000
61	3,500
62	4,000
63	4,500
64	5,000
65	10,000

Age	Number out of 10,000 pensioners aged X at the beginning of the year assumed to die during the year	
	Males	Females
55	43	26
60	65	37
65	97	57
70	155	96
75	263	168
80	469	316
85	868	628
90	1,519	1,221
95	2,242	2,042

Expenses

Expenses of investment management are allowed for within the assumed net rates of investment return.

Annual administration, actuarial, audit and other expenses in respect of the DB Division have been allowed for at the rate of 0.15% pa of assets (i.e. equivalent to 1% of Defined Benefit Superannuation Salaries). The cost of insurance has been allowed for at the rate of 0.8% of Defined Benefit Superannuation Salaries.

Pensioner liabilities have been increased by 1% to allow for the expenses incurred in administering and paying future pensions.

Taxation

It has been assumed that the current rates of taxation applying to the Fund will remain unchanged and that the Fund will remain a complying fund and therefore be entitled to concessional tax treatment.

Accordingly, future employer contributions have been assumed to be taxed at 15%.

No allowance has been made for GST or Reduced Input Tax Credits.

No allowance has been made for excess contributions tax as this is payable by the Member.

Member Contributions

Member contributions for Part 1 members are currently capped at $2,400 pa (the contribution for a member with a salary of $60,000 or more). For the purpose of this investigation I have assumed that the maximum member contribution will not be varied in the future.

Appendix C: Statements required under SPS 160 paragraphs 23(a) – (i)

BHP Superannuation Fund

Actuarial Investigation as at 30 June 2024

(a) Fund Assets

At 30 June 2024, the value of the assets of the Defined Benefit Division of the Fund, excluding the funded amount held to meet the Operational Risk Financial Requirement (ORFR), was $141,328,817.

(b) Projection of Vested Benefits

The projected likely future financial position of the Fund during the three years following the investigation date and based on my best estimate assumptions is as follows.

Date	Vested Benefits Index
30 June 2024	107.2%
30 June 2025	106.8%
30 June 2023	107.7%
30 June 2027	108.3%

(c) Accrued Benefits

The value of the accrued liabilities of all members as at 30 June 2024 was $135,860,000.

In my opinion, the value of the assets of the Fund at 30 June 2024 was adequate to meet the liabilities in respect of the accrued benefits of members of the Fund (measured as the value of members' accrued entitlements using the actuarial assumptions).

The assets are considered to be adequate in the long-term based on the recommended contributions set out below.

This assessment has been made using assumptions and a funding method which I regard as reasonable.

(d) Vested Benefits

The value of the vested benefits of all members as at 30 June 2024 was $131,878,000.

In my opinion, the financial position of the Fund is satisfactory at 30 June 2024. The shortfall limit does not need to be reviewed at this time.

(e) Minimum Benefits

The value of the minimum benefits of all members as at 30 June 2024 was $87,210,000.

At 30 June 2024 the value of the liabilities of the Fund in respect of minimum benefits of the members of the Fund were less than the assets of the Fund as at that date. Minimum benefits are as defined in Regulation 5.04 of the Superannuation Industry (Supervision) Regulations.

(f) Funding and Solvency Certificates

Funding and Solvency Certificates for the Fund covering the period to 30 June 2024 have been obtained. The Fund was solvent, as defined in the Superannuation Industry (Supervision) Regulations, at 30 June 2024. In my opinion, the solvency of the Fund will be able to be certified in any other Funding and Solvency Certificate required under the Regulations during the three year period to 30 June 2027.

(g) Employer Contributions

The report on the actuarial investigation of the Fund at 30 June 2024 recommends that the Employer contribute to the Fund at the following rate:

For the period to 31 January 2025:

- For members in Part 1 of the Fund: 52.0% of Defined Benefit Superannuation Salaries.
- For members in Part 2 of the Fund: 17.0% of Defined Benefit Superannuation Salaries.

For the period from 1 February 2025:

- For members in Part 1 of the Fund: 19.0% of Defined Benefit Superannuation Salaries.
- For members in Part 2 of the Fund: 17.0% of Defined Benefit Superannuation Salaries.

(h) Defined Benefit Pensioners

In my opinion, as at 30 June 2024, there is a high degree of probability that the Fund will be able to pay the pensions as required in the governing rules.

(i) Pre-July 1988 Funding Credit

A pre-July 1988 funding credit has not been granted to the Fund.

J. Downham

Jackie Downham
Fellow of the Institute of Actuaries of Australia

18 December 2024

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