

REPORT TO THE TRUSTEE ON THE ACTUARIAL INVESTIGATION AS AT 30 JUNE 2021

WA COAL INDUSTRY CATEGORY A SUB-PLAN IN THE MINE SUPERANNUATION FUND

29 November 2021

Contents

1. Key Results and Recommendations.....	2
2. Introduction.....	6
3. Experience since the last review.....	8
4. Actuarial assumptions	12
5. Assets	16
6. The Actuarial Approach.....	19
7. Financial Position of the Plan	21
8. Key Risks	29
9. Insurance and Related Risks	32
10. Prudential Standards.....	34
11. Actuarial Certification	38
Appendix A: Plan Design	41
Appendix B: Data and Decrement assumptions.....	44
Appendix C: Calculation of the Actuarial Value of Accrued Benefits	46
Appendix D: Information for AASB 1056 Purposes.....	48

1

Key Results and Recommendations

This report on the actuarial investigation of the WA Coal Industry Category (the WA Category) of the Mine Superannuation Fund (the Fund) as at 30 June 2021 has been prepared to meet the requirements of the Fund's governing rules and the SIS legislation. This investigation report should not be relied upon for any other purpose or by any party other than the Trustee of the Fund. Mercer is not responsible for the consequences of any other use. This report should be considered in its entirety and not distributed in parts. The Trustee should share this report with the Employers who contribute to the Plan. The Employers may consider obtaining separate actuarial advice on the recommendations contained in the report.

Change in Financial Position

The following table summarises the WA Category's financial position, at both this and the previous actuarial investigation.

Defined Benefits Only*	Position at 30 June 2021		Coverage at 30 June 2018
	\$000	Asset Coverage	
Assets	126,585		
Liability for Vested Benefits	78,072	162.1%	153%
Liability for Actuarial Value of Accrued Benefits	75,181	168.4%	173%
Liability for SG Minimum Benefits	59,343	213.3%	187%

*The above totals exclude additional accumulation balances for defined benefit members of \$70,547,000 as at 30 June 2021.

Coverage of Defined Benefit Vested Benefits at 30 June 2021 was higher than the previous actuarial investigation, due to the following items of positive experience:

- Investment earnings of 5.8% pa being higher than the increase in the Benchmark Amount¹ of 2.9% pa;
- Members leaving over the period and taking their benefits which means that the surplus is spread over a smaller base; and

¹ Members' benefits are determined based on the Benchmark Amount. Under the rules, the Benchmark Amount is increased each year in line with the index of Average Weekly Ordinary Time Earnings (AWOTE). As at 1 July 2021, the Benchmark Amount was \$76,252.

- Investment earnings on the existing surplus has further increased the surplus.

This was partially offset by contributions received being less than the cost of expenses and benefits being earned over the period (whilst noting these were as expected).

Coverage of Defined Benefit Accrued Benefits at 30 June 2021 was lower than the previous actuarial investigation. This is mainly because the gap between the assumed rate of investment earnings and the Benchmark Amount increase assumption reduced from 1.9% to 0.6% which increases the value we place on the liabilities. There are two reason for this reduction, the first is that the exposure of the investment portfolio to growth assets has reduced from 70% at the last investigation date to 50% and the second is due to changes in the long term economic growth outlook. This has increased the Actuarial Value of Accrued Benefits, and reduced the coverage of Actuarial Value of Accrued Benefits.

Recommended Contribution Rates and Projections

At 30 June 2021, the WA Category was in a satisfactory financial position. The 162.1% coverage of the Defined Benefit Vested Benefits was significantly above the financing objective of 110% coverage adopted for this investigation.

The WA Category’s Trust Deed and Rules state that the employers shall not pay less than 7% of the Benchmark Amount and no more than 10% of the Benchmark Amount.

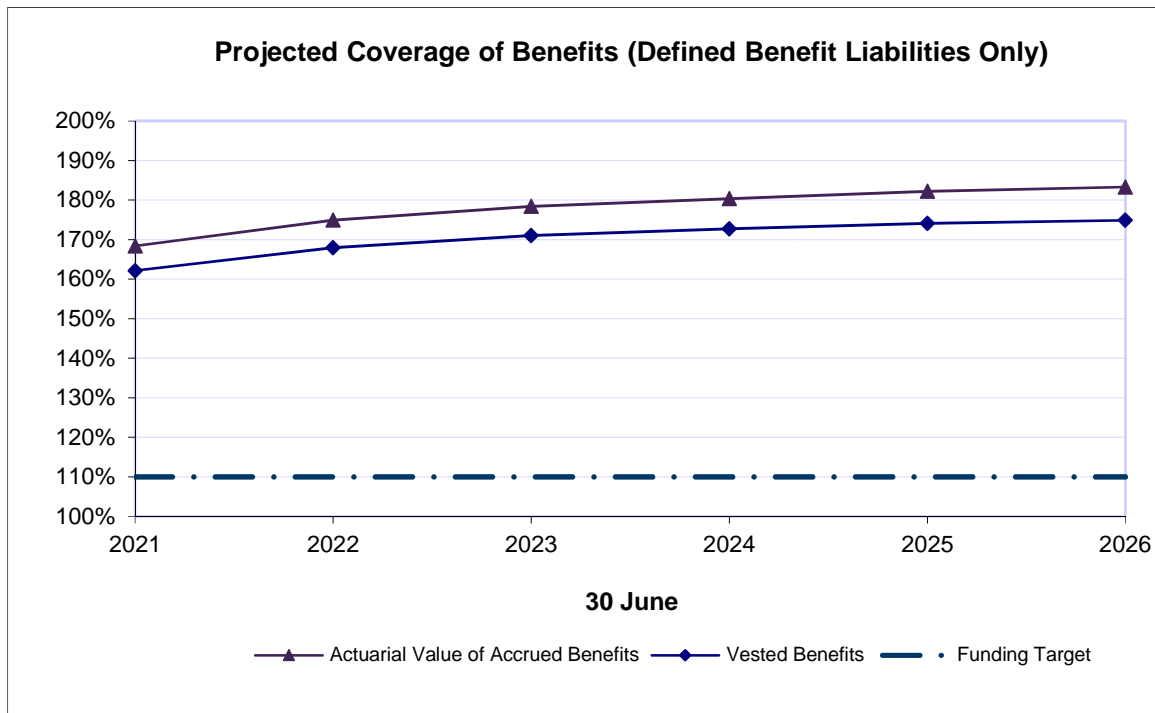
The estimated employer cost of future service benefits is 11.4% of the Benchmark Amount per active member. The projections in Section 7 of this report show that, due to the strong financial position of the WA Category, assuming experience is in line with assumptions, and contributions are as recommended then the WA Category will maintain a satisfactory financial position in future years.

There is some uncertainty around the employer situation for Griffin Coal but at this stage we have assumed they will continue to contribute as recommended. Further details, including illustrations to demonstrate the potential impact if this position changes are contained in Section 7.

I recommend that the Employers contribute as follows:

Category	Recommended Contributions
Defined Benefit members	7.0% of Benchmark Amount plus the balance of the Employers’ Superannuation Guarantee (SG) obligations, allowing for the above contributions, to an accumulation account (it is noted that this may be made to another superannuation fund)
Accumulation members	SG% of Ordinary Time Earnings (OTE) or if the Employer is meeting all or part of the SG liability in another fund(s), such lesser amount of Employer contributions as used to offset the Employer’s SG liability

Based on the assumptions adopted for this investigation and the recommended contribution rates, and allowing for any material experience after the investigation date as detailed in this report, we have prepared the following projection of WA Category assets and benefit liabilities:



The graph above shows that the recommended contributions are anticipated to result in assets of at least 110% of Defined Benefit Vested Benefits (which is the financing objective adopted in this investigation) up to and beyond 30 June 2024.

The WA Category is also projected to be in a satisfactory financial position between the valuation date and 30 June 2024.

Risks

The Trustee should note that the above projection is based on the assumptions adopted, which represent a single scenario from a range of possibilities. The future is uncertain and the WA Category’s actual experience will differ from these assumptions; these differences may be minor in their overall effect, or they may be significant and material. In addition, different sets of assumptions or scenarios may also be within the reasonable range and results based on those alternative assumptions would be different. However the coverage ratios will be reviewed by the Fund’s actuary at least once every year. The Trustee’s monitoring of the experience specified in the Notifiable Events section of the Funding and Solvency Certificate will provide a further means of identifying adverse experience which warrants an immediate review of the WA Category’s financial position.

Sections 7 and 8 provide illustrations of the impact of investment volatility on the projected coverage of Vested Benefits and shows that a 1% pa reduction in the assumed future investment return would result in a 6.6% increase in the assessed value of liabilities.

Sections 8 and 9 discuss other risks associated with the liabilities, including Benchmark Amount growth risk, legislative risk and the risks associated with the current valuation method whereby it is assumed that the WA Category will continue, with the current investment policy and the ongoing support of the Employer sponsor.

Other Findings and Recommendations

Suitability of Policies

I am satisfied that the following current policies for the defined benefit section of the WA Category are suitable:

- The investment policy
- The crediting rate policy
- The Shortfall Limit (for the purposes of SPS 160)
- The Trustee's process for monitoring the WA Category's financial position given the financial position of the WA Category

Recommendations

- The Shortfall Limit (for the purposes of SPS 160) should continue to be set at a vested benefit index of 100.0%.
- There is a significant level of over-insurance and we recommend that this be revisited, subject to APRA's views (refer to Section 9).

Actions Required by the Trustee

The Trustee should consider this report and confirm its agreement (or otherwise) to the contribution and other recommendations.

The Trustee should seek formal agreement from the Employers to contribute in line with the recommendations.

2

Introduction

Background of the WA Category

The WA Coal Industry Category of the Mine Superannuation Fund is operated for the benefit of employees of the participating employers. The Trustee of Mine Superannuation Fund, AUSCOAL Superannuation Pty Ltd, holds a Registrable Superannuation Entity Licence under the SIS legislation and operates the Fund as required under the Trust Deed.

The Fund is a resident regulated fund and a complying superannuation fund for the purposes of the SIS legislation. The Fund is taxed as a complying superannuation fund.

The advice contained in this report is given in the context of Australian law and practice. No allowance has been made for taxation, accountancy or other requirements in any other country.

The governing rules of the WA Coal Industry Category are set out in Schedule F of the Trust Deed and Rules of the Mine Superannuation Fund dated 3 September 2018.

Purpose

I have prepared this report exclusively for the Trustee of the WA Coal Industry Category for the following purposes:

- To present the results of an actuarial investigation of the WA Category as at 30 June 2021;
- To review the WA Category experience for the period since the previous actuarial investigation as at 30 June 2018;
- To recommend contributions to be made by the Employer intended to allow the WA Category to meet its benefit obligations in an orderly manner, and to maintain an appropriate level of security for members' accrued benefit entitlements;
- To satisfy the requirements of the Fund's Trust Deed for actuarial investigations of the WA Category's financial position; and
- To meet legislative requirements under relevant Commonwealth superannuation legislation.

It has been prepared in accordance with the requirements of the Trust Deed, the Superannuation Industry (Supervision) Act 1993 and associated regulations (SIS legislation), Prudential Standard SPS 160 issued by APRA and Professional Standard 400 issued by the Actuaries Institute setting out requirements for actuarial investigations of defined benefit superannuation funds under SIS legislation.

The previous actuarial investigation was conducted as at 30 June 2018 by Angela Hartl, on behalf of Mercer, and the results are contained in a report dated 11 December 2018.

Significant events since the investigation date

One of the participating employers, The Griffin Coal Mining Company Pty Limited (Griffin Coal), in July 2021 has given notice to its customers that under the corresponding Coal Supply Agreements, it has been prevented from carrying out its obligations due to an event of Force Majeure.

Griffin Coal are up to date with their contributions at the date of signing this Investigation but the Trustee does not know if there will be an issue with Griffin Coal paying contributions in the future.

Based on the analysis in Section 7 of this report, if Griffin Coal were to cease contributions to allow time for the resolution of the situation without having to cease members' benefit accrual, I don't expect this to have a significant impact on the WA Category. However there are some legal issues that need to be addressed which may impact the results presented.

I am not aware of any other significant events that have occurred since 30 June 2021 which would have had a material impact on the findings or recommendations in this report.

3

Experience since the last review

Membership

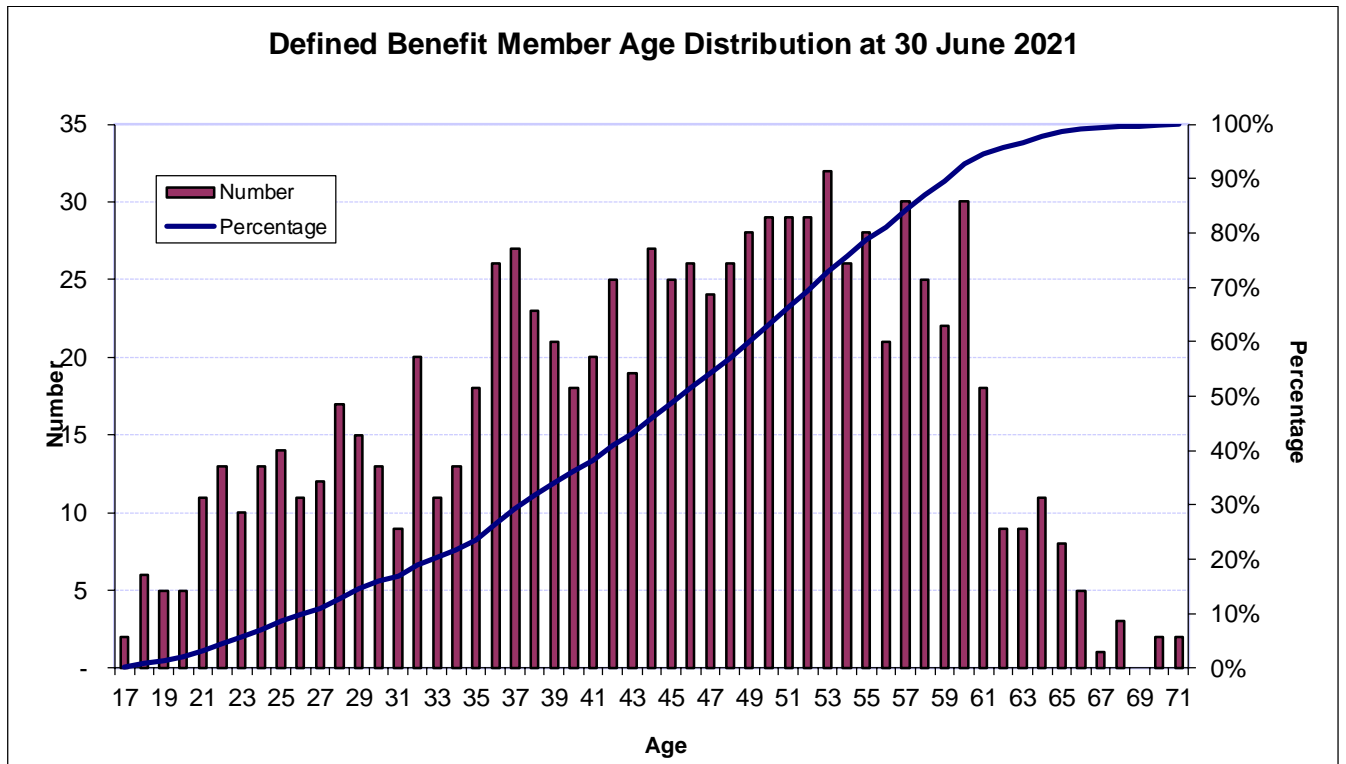
The membership of the defined benefit section has changed since 30 June 2018 as follows:

Membership at 30 June 2021	Active	Retained
Defined Benefit at 30 June 2018	586	461
Exits	-74	-244
New Entrants	179	14
Active to Retained	-123	123
Retained to Active	24	-24
Defined Benefit at 30 June 2021	592	330
Accumulation only members at 30 June 2021 [^]	-	-
Total Member Records at 30 June 2021	592	330
<hr/>		
Total Benchmark Amount for all active defined benefit members at 30 June 2021	\$45,141,000	N/A
Average Benchmark Amount at 30 June 2021	\$76,252	N/A
Average age at 30 June 2021	44.2 years	46.7 years

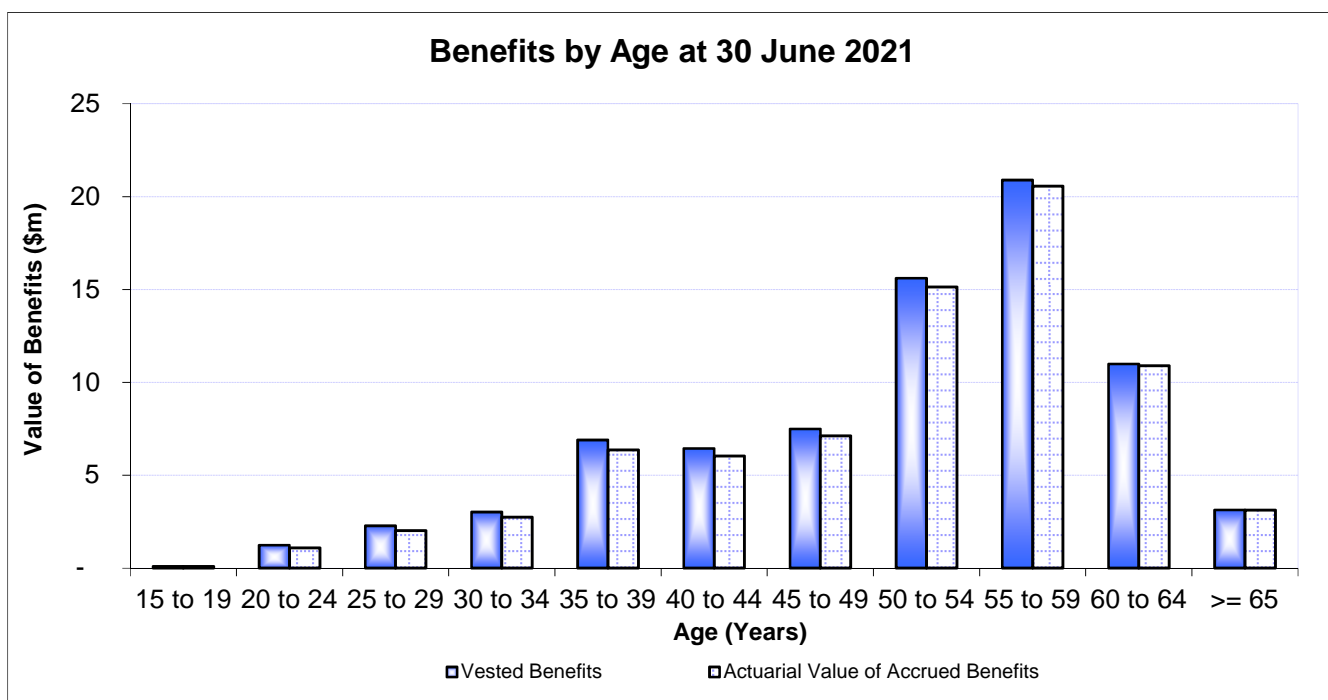
[^] We understand there are no accumulation members in the WA Category as at 30 June 2021.

The membership data used for this investigation was provided by the Fund's administrator. I have carried out broad 'reasonableness' checks on the data and I am satisfied with the quality of the data and its suitability for this purpose.

The defined benefit membership split by age as at the 30 June 2021 is shown in the following graph:



The following graph shows the Vested Benefits and Actuarial Value of Accrued Benefits of defined benefit members (excluding additional accounts) at 30 June 2021, split by age.



Investment Returns

The table below shows the rates of investment earnings (after tax, investment fees and asset based administration fees) for the assets supporting defined benefits, and crediting rates applied to defined benefit members’ accounts, over the period since the previous investigation.

Year Ending	Investment Return (pa)	Crediting Rate (pa)
30 June 2019	5.4%	5.4%
30 June 2020	1.5%	1.5%
30 June 2021	10.8%	10.8%
Compound Average	5.8%	5.8%

The average investment return for the three year period to 30 June 2021 was 5.8% pa compared to our long term assumption at the last actuarial investigation of 5.4% pa. The higher return than assumed had a positive impact on the WA Category’s financial position.

Benchmark Amount Increases

Benchmark Amounts for the current defined benefit members increased by an average of 2.9% pa over the period compared to our longer term assumption at the last actuarial investigation of 3.5% pa. The lower than assumed increases had a positive impact on the financial position.

Contributions

The Employer contributions paid since the date of the previous actuarial investigation were as follows:

Category	Contributions
Defined Benefit members	<p><u>From 1 July 2018 to 31 December 2018: 8.5% of Benchmark Amount</u></p> <p><u>From 1 January 2019 to 31 December 2021: 7.0% of Benchmark Amount</u></p> <p>plus the balance of the Employers' Superannuation Guarantee (SG) obligations, allowing for the above contributions, to an accumulation account (it is noted that this may be made to another superannuation fund)</p>
Accumulation members	SG% of Ordinary Time Earnings (OTE) or if the Employer is meeting all or part of the SG liability in another fund(s), such lesser amount of Employer contributions as used to offset the Employer's SG liability

The Employer contribution rates for the defined benefit members were in accordance with the recommendation from the prior actuarial investigation.

Impact of the experience on the financial position

The main experience items affecting the WA Category's financial position during the period from 30 June 2018 to 30 June 2021 were as follows:

Item	Assumption at previous review	Plan experience	Comment on effect
Investment returns	5.4% pa	5.8% pa	Positive effect – investments grew at a higher rate than assumed
General Benchmark Amount Increases	3.5% pa	2.9% pa	Positive effect – benefit liabilities grew at a lower rate than assumed

4

Actuarial assumptions

The ultimate cost to the Employer of providing the benefits to members is:

- the amount of benefits paid out; and
- the expenses of running the WA Category, including tax;

less

- members' contributions; and
- the return on investments.

The ultimate cost to the Employer will not depend on the actuarial assumptions or the methods used to determine the recommended Employer contribution, but on the actual experience of the WA Category. The financing method and actuarial assumptions adopted will however affect the timing of the contribution requirements from the Employer.

The actuarial process includes projections of possible future WA Category assets and benefit liabilities on the basis of actuarial assumptions about future experience.

These assumptions include investment returns, Benchmark Amount increases, crediting rates, the rates at which members leave the WA Category for various reasons, and other factors affecting the financial position of the WA Category.

It is not expected that these assumptions will be precisely borne out in practice, but rather that in combination they will produce a model of possible future experience that is considered a suitable basis for setting contribution rates.

Economic assumptions

The most significant assumption made in estimating the cost of defined benefits is the difference between:

- the assumed rate of investment earnings; and
- the rate of Benchmark Amount increases used in the projections of future benefit payments.

This difference is commonly referred to as the "gap".

The key economic long term assumptions adopted for this investigation are:

	Assumption
Investment returns (after tax, investment and asset based administration fees)	3.6% pa
General Benchmark Amount increases	3.0% pa

The assumption for investment returns is based on the expected long-term investment return for the WA Category's current benchmark investment mix, calculated using Mercer's assumptions of the means and standard deviations of returns from the various underlying asset classes and the correlations of returns between those asset classes.

The general Benchmark Amount increase assumption is based on long term economic forecasts for future increases in average weekly ordinary time earnings (AWOTE).

Demographic assumptions

Retirement

The rates at which members are assumed to leave the WA Category due to retirement are set out in Appendix B. These take into account the WA Category's experience.

Death and Disablement in Service

I have maintained the same assumptions in relation to rates of death and total and permanent disablement (TPD), that is zero rates at all ages, as were adopted at the 30 June 2018 actuarial investigation. The potential impact of the death or TPD of members are allowed for in the expense assumptions.

Resignation

Specimen rates at which members are assumed to leave the WA Category due to resignation are set out in Appendix B. These take into account the WA Category's experience.

Retrenchment

No specific allowance is made for the possibility of future retrenchments.

Other assumptions

New members

New defined benefit members are assumed to join the WA Category to replace active members who retire or resign. It is assumed that active members join the WA Category at age 35.

Expenses

Administration costs, management expenses and consulting fees plus the net cost of group life insurance for defined benefit members are deducted from WA Category assets. Based on recent experience, these are assumed to average 1.5% of defined benefit members' Benchmark Amounts.

Administration fees and insurance premiums for accumulation members are deducted from member balances.

Tax

It is assumed that the current tax rate of 15% continues to apply to the WA Category's assessable income, along with current tax credits and other concessions.

All future Employer contributions are assumed to be subject to 15% contribution tax, after deduction of any insurance premiums and administration and management costs. All contribution recommendations quoted in this report are gross of contributions tax.

No allowance has been made for:

- Any surcharge liability as members' benefits will be reduced by a surcharge offset account equal to the surcharge payments made, accumulated at the WA Category crediting rate. Surcharge was abolished with effect from 1 July 2005.
- Excess contributions tax, as this is payable by the member.
- Additional tax on contributions (including defined benefit notional contributions) for those with incomes above the threshold (currently \$250,000), which is also payable by the member.

Impact of the Changes in Assumptions

Vested Benefits are the amounts payable as of right should all active members voluntarily resign or, if eligible, retire at the investigation date. Therefore they are not impacted by the assumptions used in this Investigation, other than in the projections.

The Actuarial Value of Accrued Benefits is the expected value (as at the investigation date) of all future expected benefit payments, based on membership to date, discounted to the investigation date, taking into account the probability of payment. This therefore varies depending on the assumptions used.

The following table sets out changes in assumptions from those used in the previous investigation and the reasons for the changes:

Assumption	Investigation at 30 June 2021	Investigation at 30 June 2018	Reason for change
Investment Return	3.6% pa	5.4% pa	Change in investment strategy to reduce exposure to growth assets from 70% to 50% and changes in the long term economic growth outlook
Benchmark Amount Increase	3.0% pa	3.5% pa	Changes in the long term economic forecast

The overall impact of the changes in assumptions was to increase the Actuarial Value of Accrued Benefits by \$5.4m and the Employer's long-term defined benefit funding cost by 1.4%.

5

Assets

Market value

The net market value of the WA Category's assets as at 30 June 2021 amounted to \$126,585,000 (based on the data provided by the Fund's administrator for the WA Category at 30 June 2021).

Calculation of Defined Benefits Assets at 30 June 2021	
Net market value of the WA Category assets as at 30 June 2021	\$197,132,000
Less accumulation accounts for defined benefit members	\$70,547,000
Net assets to support the defined benefit liabilities of the WA Category	\$126,585,000

Operational Risk Reserves

The assets to meet the Trustee's Operational Risk Financial Requirement (ORFR) are held separately from the assets of the WA Category.

The scope of this investigation does not include a review of the adequacy of assets held to meet the Trustee's ORFR or the Trustee's ORFR strategy.

Investment Policy

Assets backing defined benefit liabilities

The WA Category's investment strategy for assets supporting defined benefit liabilities currently involves a benchmark exposure of 50% to 'growth' assets such as shares and property and a benchmark exposure of 50% to 'defensive' assets such as cash and fixed interest.

A review of the investment strategy was conducted by Mine Super following the last investigation and the exposure to growth assets has been reduced from 70% to 50% based on the recommendations of that review.

Please refer to the table below for the actual and benchmark investment allocations of these assets as at the investigation date. 'Growth' assets are expected to earn higher returns over the long term compared to 'defensive' assets, but at the same time to exhibit more variation in returns from year to year.

The actual asset allocation and Strategic Asset Allocation for the assets supporting the defined benefit liabilities are as follows:

Asset Class	Benchmark Allocation as at 30 June 2021	Actual Allocation as at 30 June 2021
Australian equities	20.0%	20.5%
Overseas equities	30.0%	31.1%
Property	0%	0%
Other growth	0%	0%
Total growth	50.0%	51.6%
Fixed interest	21.3%	22.2%
Other defensive	0%	0%
Cash	28.7%	26.2%
Total defensive	50.0%	48.4%
Total	100%	100%

The defined benefit liabilities are not affected by the investment return on the WA Category's assets. The volatility of the WA Category's investment returns will therefore affect the financial position of the WA Category from year to year and is likely to impact on the required level of employer contributions. I am satisfied that the current investment strategy is appropriate in view of the WA Category's longer term cash flows and the financial support provided by the Employers.

This conclusion takes into account my understanding that the Employers understand the possible variability in future contributions associated with the current investment policy. If the Employers have a different view, then this policy should be reviewed.

Assets backing accumulation benefit liabilities

The Fund provides members with a range of investment options for their accumulation benefits (including the additional account balances of defined benefit members). The assets supporting the Fund's accumulation benefit liabilities are invested according to members' selected investment options and the actual returns on those investments (whether positive or negative) are passed on to members via changes in the unit prices by which member account balances are determined. Thus the Fund's accumulation liabilities and related assets are fully matched.

The Fund's investments are expected to provide a high level of liquidity in normal circumstances.

I consider that the Fund's investment policy for assets relating to accumulation liabilities is suitable, having regard to the nature and term of these liabilities.

Crediting Rate Policy

Defined Benefits

The main features of the crediting rate policy in relation to defined benefits are summarised briefly below:

If a member resigns and elects to retain only part of the defined benefit payable in the fund, an amount equal to the portion of that component or amount that the member has elected to retain will be retained as an accumulation account (or credited to the member's existing accumulation account). For the period from the date of leaving service to the date of payment of the benefit, earnings credited are based on the actual net earning rates (i.e. earnings net of investment costs, asset-based administration fees and provisions for tax) of the investments in which the funds are invested.

Accumulation Benefits

The main features of the unit pricing and crediting rate policy in relation to accumulation member accounts and to the additional accumulation accounts of defined benefit members are summarised briefly below:

- Earnings credited to the accounts are based on the actual net earning rates (i.e. earnings net of investment costs, asset-based administration fees and provisions for tax) of the investments in which the funds are invested. Net earnings are allocated via unit prices.
- No investment reserves are held. Net investment earnings are fully passed on to member accounts via unit prices.

Documentation

We understand the Fund's crediting and unit pricing policies and related procedures are set out in a Unit Pricing Policy dated 21 November 2019.

Conclusion

Based on a review of the main features, I consider that the unit pricing and crediting rate policy adopted for these benefits is generally suitable. The general principles of the crediting rate policy are reasonable.

6

The Actuarial Approach

Financing Objective

The financing objective adopted for this investigation is to maintain the value of the WA Category's assets at least equal to:

- 100% of accumulation account balances plus
- 110% of Defined Benefit Vested Benefits

Accumulation account balances are matched by specific assets and do not require any additional margins. However the defined benefit liabilities are linked to increases in national average weekly ordinary time earnings (AWOTE) and not to the returns on the underlying assets. A margin in excess of 100% coverage of vested defined benefits is therefore desirable to provide some security against adverse experience such as poor investment returns.

I consider the target margin of 110% strikes a suitable balance between the Trustee's desire to provide security to members and the unreasonable build-up of surplus.

Based on the assumptions adopted for this investigation, achieving the financing objective of 110% of Vested Benefits for defined benefit members would also result in at least 100% coverage of the Actuarial Value of Accrued Benefits and a satisfactory margin of coverage over 100% of SG Minimum Benefits. Hence, it is not considered necessary to adopt specific financing objectives in relation to these benefit liability measures.

I have taken into consideration the provisions of the Trust Deed and any professional requirements as set out below.

Professional Requirements

Under Professional Standard 400 issued by the Actuaries Institute, the funding method selected by the actuary *“must aim to provide that:*

- (a) members' benefit entitlements (including any pension increases provided by the Trust Deed or in accordance with either precedent or the intentions of the Trustee and/or Fund Sponsor) are fully funded before the members retire; and*
- (b) the Net Assets of the Fund from time to time, after making full provision for the entitlements of any beneficiaries or members who have ceased to be employed, exceed the aggregate of benefits*

which employed members would reasonably expect to be payable to them on termination of membership, including the expenses of paying those benefits, and having regard to the provisions of the Trust Deed and the likely exercise of any Options or Discretions.” (Paragraph 5.5.4 of PS400).

Accordingly the actuary needs to be satisfied that any funding program is expected to provide a level of assets which meets or exceeds immediate benefit entitlements based on members' reasonable expectations. Should assets fall below that level, the funding program needs to aim to lift assets to at least the required level over a reasonable time period and to maintain assets at or above the required level thereafter.

The financing objective has been set on the basis that members' reasonable expectations on termination would be to receive their vested benefit entitlement.

Provisions of the Trust Deed

The rules of the WA Category require that:

- the Trustee ensures an actuarial investigation of the Fund is conducted when required by legislation. Accordingly actuarial investigations are carried out at three yearly intervals at a minimum; and
- the Employers must contribute at the rate determined by the Trustee, after consulting the Employers, on the advice of the Actuary to the WA Category. The amount of contributions to be made by the Employers will not be less than 7% or more than 10% of the Benchmark Amount.

Financing Method

There are various financing methods that could be followed in setting the Employer contribution level. This investigation uses a "Projected Unit" method.

Under this method, the standard contribution rate is the present value of liabilities expected to accrue in the year following the valuation.

Under this method of financing, the level of the Employer contributions may vary from time to time to ensure that the WA Category remains on course towards its financing objective (minimum 110% coverage of Vested Benefits).

I consider that the Projected Unit method is suitable in the WA Category's current circumstances as it allows the recommended contribution rate to be determined specifically to meet the WA Category's financing objective.

Changes in Financing Method

The Projected Unit method was also adopted at the last investigation.

7

Financial Position of the Plan

Funding status

Vested Benefits

Vested Benefits are the amounts payable as of right should all active members voluntarily resign or, if eligible, retire at the investigation date.

At 30 June 2021, the WA Category assets represented 162.1% of the vested benefits and hence the WA Category was considered to be in a “satisfactory financial position” under SIS legislation. The 162.1% coverage of the Defined Benefit Vested Benefits was also significantly above the financing objective of 110% coverage adopted for this investigation.

SG Minimum Benefits

SG Minimum Benefits are the minimum benefits required under SG legislation, as defined in the Benefit Certificate (also referred to as Minimum Requisite Benefits or MRBs).

The WA Category assets at 30 June 2021 were also greater than the SG Minimum Benefits and hence the WA Category was considered to be “solvent” under SIS legislation .

Actuarial Value of Accrued Benefits

The Actuarial Value of Accrued Benefits is the expected value (as at the investigation date) of all future expected benefit payments, based on membership to date, discounted to the investigation date, taking into account the probability of payment. This value is calculated using the actuarial assumptions and method outlined in the previous sections. In determining the value, I have not applied a minimum of the vested benefits. Further details concerning the calculation of the Actuarial Value of Accrued Benefits are set out in Appendix C.

The WA Category Assets at 30 June 2021 represented 168.4% of the Actuarial Value of Accrued Defined Benefits. This was significantly above the financing objective of at least 100% coverage adopted for this investigation.

The following table shows these funding measures at both the previous and current valuation dates.

Defined Benefits Only*	Position at 30 June 2021		Coverage at 30 June 2018
	\$000	Asset Coverage	
Assets	126,585		
Liability for Vested Benefits	78,072	162.1%	153%
Liability for Actuarial Value of Accrued Benefits	75,181	168.4%	173%
Liability for SG Minimum Benefits	59,343	213.3%	187%

*The above totals exclude additional accumulation balances for defined benefit members of \$70,547,000 as at 30 June 2021.

Coverage of Defined Benefit Vested Benefits at 30 June 2021 was higher than the previous actuarial investigation, due to the following items of positive experience:

- Investment earnings of 5.8% pa being higher than the increase in the Benchmark Amount² of 2.9% pa;
- Members leaving over the period and taking their benefits which means that the surplus is spread over a smaller base; and
- Investment earnings on the existing surplus has further increased the surplus.

This was partially offset by contributions received being less than the cost of expenses and benefits being earned over the period (whilst noting these were as expected).

Coverage of Defined Benefit Accrued Benefits at 30 June 2021 was lower than the previous actuarial investigation. This is mainly because the gap between the assumed rate of investment earnings and the Benchmark Amount increase assumption reduced from 1.9% to 0.6% which increases the value we place on the liabilities. There are two reason for this reduction, the first is that the exposure of the investment portfolio to growth assets has reduced from 70% at the last investigation date to 50% and the second is due to changes in the long term economic growth outlook. This has increased the Actuarial Value of Accrued Benefits, and reduced the coverage of Actuarial Value of Accrued Benefits.

Employer Future Service Cost

Based on the assumptions adopted for this investigation, I estimate that the Employer's long-term defined benefit funding cost (i.e. the normal cost of funding future service defined benefit accruals ignoring any surplus or deficit) is 11.4% of defined benefit members' salaries.

² Members' benefits are determined based on the Benchmark Amount. Under the rules, the Benchmark Amount is increased each year in line with the index of Average Weekly Ordinary Time Earnings (AWOTE). As at 1 July 2021, the Benchmark Amount was \$76,252.

The Employers' long-term defined benefit funding cost above includes the expected expenses (of 1.5% of the Benchmark Amount per member), excludes any award contributions and includes allowance for contributions tax.

Previous recommendations

The previous actuarial investigation made the following recommendations and the status of these are shown in the table below:

Recommendations	Status
Contribution program	Refer to Section 3
Regular monitoring of the WA Category	The Trustee monitors the WA Category (financial position, contribution requirements, notifiable events etc.) on an annual basis
Given the large surplus in the WA Category, the Trustee should consider whether to reduce the risk in the Investment Strategy to lock-in the surplus	The WA Category moved from a 70% Growth and 30% Defensive investment strategy to a more conservative 50% Growth and 50% Defensive in 2020
The Shortfall Limit (for the purposes of SPS 160) should continue to be set at a vested benefit index of 100.0%	Adopted

Recommended Contributions

The WA Category's Trust Deed and Rules state that the employers shall not pay less than 7% of the Benchmark Amount and no more than 10% of the Benchmark Amount.

The estimated employer cost of future service benefits is 11.4% of the Benchmark Amount per active member. The projections in this section show that, due to the strong financial position of the WA Category, assuming experience is in line with assumptions, and contributions are as recommended then the WA Category will maintain a satisfactory financial position in future years.

There is some uncertainty around the employer situation for Griffin Coal but at this stage we have assumed they will continue to contribute as recommended and we note that they have to the date that this report was signed. Further details, including illustrations to demonstrate the potential impact if this position changes are contained later in this section.

I recommend that the Employers contribute as follows:

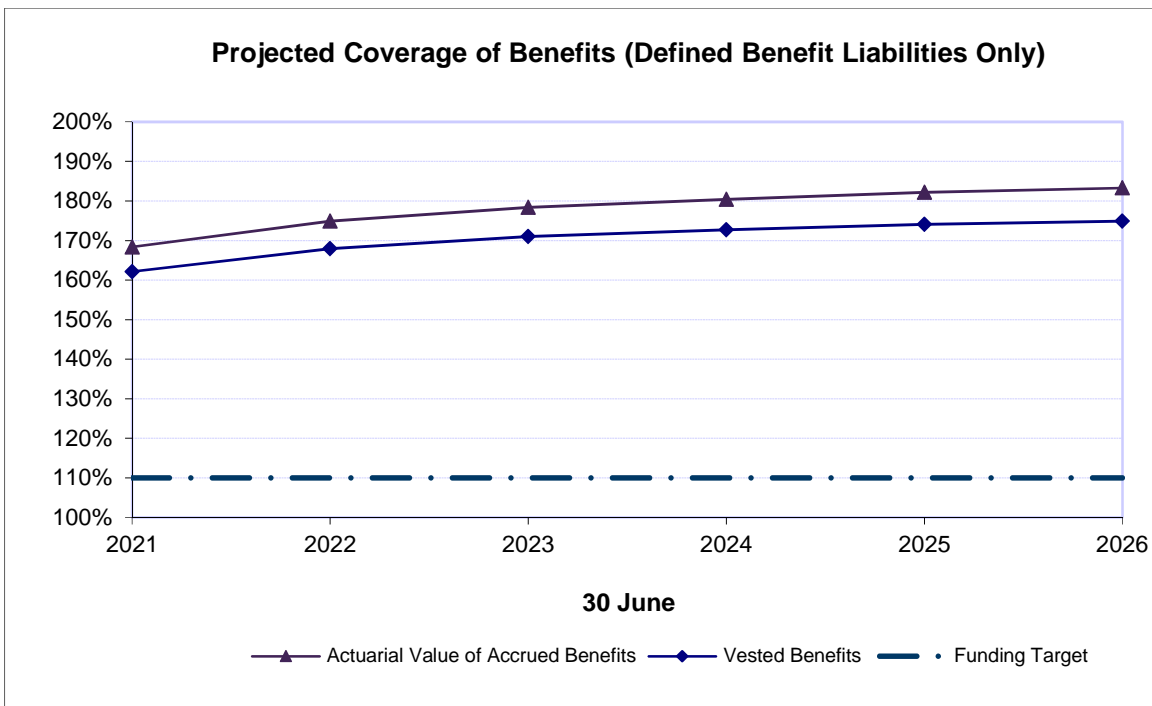
Category	Recommended Contributions
Defined Benefit members	7.0% of Benchmark Amount plus the balance of the Employers' Superannuation Guarantee (SG) obligations, allowing for the above contributions, to an accumulation account (it is noted that this may be made to another superannuation fund)
Accumulation members	SG% of Ordinary Time Earnings (OTE) or if the Employer is meeting all or part of the SG liability in another fund(s), such lesser amount of Employer contributions as used to offset the Employer's SG liability

Projected Financial Position

I have prepared a projection of WA Category's assets and benefit liabilities based on:

- the actuarial assumptions adopted for this investigation;
- assuming the recommended Employer contributions will be paid.

The results of the projection are as follows:



The Trustee should note that this projection is based on the assumptions adopted, which represent a single scenario from the range of possibilities. The future is uncertain and the WA Category's actual

experience will differ from those assumptions; these differences may be minor in their overall effect, or they may be significant and material. In addition, different sets of assumptions or scenarios may also be within the reasonable range and results based on those alternative assumptions would be different, as discussed below.

The projection above shows that the recommended contributions are anticipated to result in assets of at least 110% of Defined Benefit Vested Benefits (which represents the financing objective adopted in this investigation) up to and beyond 30 June 2024.

The WA Category is projected to be in a satisfactory financial position up to and beyond 30 June 2024.

The graph also shows the coverage level of assets compared with the Actuarial Value of Accrued Benefits. The recommended contributions are projected to result in asset coverage of at least 100% of the Actuarial Value of Accrued Benefits (which represents the financing objective adopted in this investigation) by 30 June 2024.

Sensitivity Analysis

We have tested the effect of changes to the key assumptions on the value of liabilities and the WA Category's net financial position.

The liabilities shown in this report have been calculated using our best estimate assumptions for investment return (3.6% per annum) and Benchmark Amount growth (3.0% per annum). As both future investment returns and future Benchmark Amount increases are unknown, it is almost certain that actual experience will differ from these assumptions.

It is the difference between the investment return rate and Benchmark Amount growth rate (commonly referred to as the 'gap') that is crucial rather than the individual assumptions, because the value of the assets move with investment returns while most of the defined benefit liabilities grow with Benchmark Amount.

To quantify the sensitivity of the net financial position to our assumptions, we have calculated the change in liability based on the following scenarios:

- Decrease the long term investment return assumption by 1% pa;
- Increase the Benchmark Amount growth assumption by 1% pa;
- A shock scenario, where the value of net assets suddenly reduces by 10%;
- Decrease in the long term investment return assumption by 1% AND the value of net assets suddenly reduces by 10% (known as the "Adverse assumptions").

All other assumptions, including the Employer contribution rates, are assumed to remain the same.

The effects of these changes are shown below:

	Net financial position	Change in net financial position	Asset coverage of defined benefit liabilities
Scenario	\$M	\$M	%
Base assumptions as shown previously	51.404		
Decrease investment return by 1% pa	46.429	-4.975	157.9%
Increase Benchmark Amount growth by 1% pa	46.450	-4.954	158.0%
Shock scenario - immediate 10% reduction in net value of assets	38.746	-12.659	151.5%
Adverse assumptions	33.771	-17.634	142.1%

Note that whilst the “shock scenario” and “adverse assumptions” can be considered extreme, they do not represent a floor of the downside risks, it is possible, albeit unlikely, that experience is worse than shown.

The Griffin Coal Mining Company – Force Majeure Event

One of the participating employers, The Griffin Coal Mining Company Pty Limited (Griffin Coal), in July 2021 has given notice to its customers that under the corresponding Coal Supply Agreements, it has been prevented from carrying out its obligations due to an event of Force Majeure.

Mine Super has confirmed that Griffin Coal has continued to contribute to the WA Category to September 2021 (latest date contributions were due at time of this report). Given the Force Majeure, we have considered what the impact would be to the WA Category if Griffin Coal were not able to make contributions in the future.

There are a number of legal issues that the Trustee may need to consider should no further contributions be received in respect of Griffin Coal members, for example, equity amongst employers – the WA Category is currently in surplus however only a proportion of this surplus is in respect of Griffin Coal. It may be unequitable to use any other surplus for the purposes of Griffin Coal members.

In the absence of such advice, the analysis below assesses the impact on the WA Category assuming Griffin Coal members continue accruing benefits and no further contributions are received in respect of these members.

The table below sets out the split of Griffin Coal and non-Griffin Coal members:

	Griffin Coal	Others	Total
Active	318	274	592
Retained	85	245	330
Total	403	519	922

As can be seen from the table above, Griffin Coal employees make up more than half of the active membership of the WA Category. It is therefore expected that more than half of the future contributions would be payable by Griffin Coal if the members continue to accrue benefits.

Impact of ceased contributions in respect of Griffin Coal Members

Assuming Griffin Coal members continue to accrue benefits in the WA Category, the estimated present value of the cost of the future entitlements (future service liability) for current active Griffin Coal members is approximately **\$23,000,000**. For this analysis, it is assumed no Griffin Coal employees will join the WA Category in future.

The above represents an extreme scenario which is not likely to occur in practice. Due to the nature of the industry and facilities of Griffin Coal, there may be a delay between ceasing of contributions and resolution of ongoing employment situation for members. Therefore the following analysis shows the impact of utilising surplus for one year of members' benefit accrual (subject to legal advice) which may allow time for the resolution of the situation without having to cease members' benefit accrual.

Similar to the assumptions made above, the estimated present value of the cost of one year's entitlement for current active Griffin Coal members is approximately **\$2,500,000**.

As at 30 June 2021, the surplus assets (assets in excess of Vested Benefits) in the WA Category are **\$48,513,000**.

Therefore, ignoring any legal constraints, there are sufficient assets to continue to fund the future entitlements of current active Griffin Coal members even if no future contributions are received.

Impact of certain Griffin Coal members retiring and crystallising their defined benefit

The following scenarios have been assessed as at 30 June 2021:

- All Griffin Coal members over age 55 retiring
- 50 Griffin Coal members over age 55 retiring
- 30 Griffin Coal members over age 55 retiring

As at 30 June 2021 there were 74 active Griffin Coal members over 55. The table below shows the expected total benefit payment and impact on funding level under the three scenarios above.

Scenario	Estimated Benefit Payment \$000	Estimated VBI at 30 June 2021
All active Griffin Coal members over 55 retire	\$12,600,000	174%
50 active Griffin Coal members over 55 retire	\$8,500,000	170%
30 active Griffin Coal members over 55 retire	\$5,100,000	166%

As a result of the WA Category being in surplus, any reduction in the Vested Benefits from paying out retirement benefits to members has a positive impact on the funding position. This is due to the excess assets being spread over a smaller remaining Vested Benefit.

Conclusion

Based on the analysis above, due to the strong financial position of the WA Category, there is expected to be no significant impact on the WA Category if no future contributions are received from Griffin Coal for a period until the employment and benefit accrual situation is resolved for members. However as noted above, there are some legal issues that need to be addressed which may impact the results presented above.

8

Key Risks

Investment Volatility

The current vested benefits for defined benefit members are not linked to investment returns (i.e. are based on Benchmark Amounts) and therefore the WA Category's vested benefits coverage is highly sensitive to changes in the investment returns.

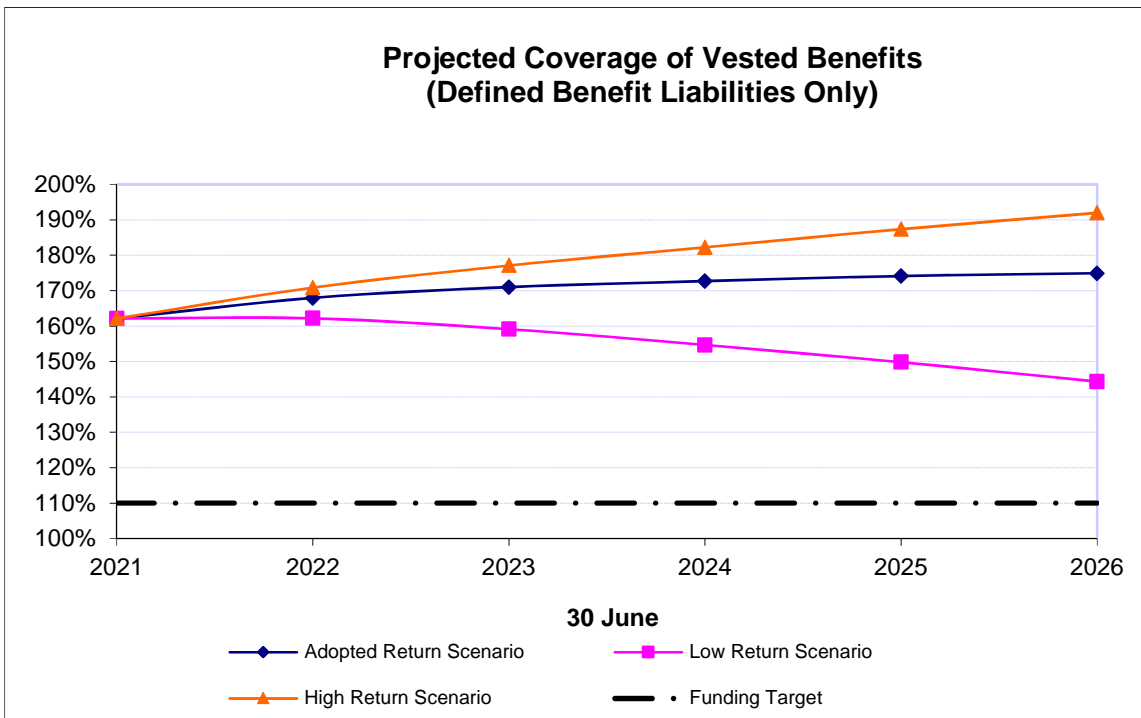
I have considered the impact of investment volatility on the WA Category's financial position over the next few years using a "High return" and a "Low return" scenario. The returns under both scenarios have been derived from assumptions about the likely risk attached to the WA Category's defined benefit investment strategy.

Using the investment return model and assumptions adopted, there is approximately a 10% chance of the WA Category's cumulative investment return being less than the "Low return" scenario over the next 5 years. Similarly, there is approximately only a 10% chance of the WA Category's cumulative investment return being greater than the "High return" scenario over the next 5 years.

1 July 2021 to 30 June	Assumed Cumulative Investment Return (%)		
	"Low Return"	Valuation	"High Return"
2026	0%	19.3%	30.1%

The extent of variation allowed for in these projections reflects the WA Category's asset mix and Mercer's views on potential variability in investment results in various investment sectors.

The graph below shows the effect on the projected ratio of assets to Vested Benefits for defined benefit members under the "High return" and "Low return" scenarios taking the average annual return of the assumed 5-year cumulative investment return, with all other investigation assumptions remaining unchanged.



Based on fluctuations in investment returns only, and assuming other experience is in line with the assumptions adopted for this investigation, there is approximately an 80% chance that the coverage of assets over Vested Benefits at 30 June 2026 will fall in the range from 144% to 192%.

Please note that the “low return” scenario and the “high return” scenario shown above are illustrations only, and show what may occur under assumed future experiences that differ from our baseline assumptions. These scenarios do not constitute upper or lower bounds and the actual future coverage of Vested Benefits may differ significantly from the range shown above, depending on actual future experience.

In fact, in any single year over the 5-year time horizon, there is a 10% chance that the investment return could be less than minus 6.6% based on the current WA Category asset allocation. The projections assume contributions are as recommended and continue to be received in respect of Griffin Coal members.

In my view, the Trustee should be satisfied with the expected level of security over the next few years if the Employer contributes at the recommended levels.

Benchmark Amount growth risk

The risk is that Benchmark Amounts (on which future benefit amounts will be based) will rise more rapidly than assumed, increasing benefit amounts and thereby requiring additional employer contributions. This risk is borne by the Employers.

For example, if the assumed future Benchmark Amount increase rate was increased by 1% pa with no change in other assumptions, then

- the Actuarial Value of Accrued benefits would increase by \$4,954,000 with a resulting reduction in the coverage of the Actuarial Value of Accrued Benefits from 168.4% to 158.0%; and
- the estimated employer cost of future service benefits would increase from 11.4% to 12.6% of Benchmark Amounts under this scenario.

The actual rate of future Benchmark Amount increases may vary (positively or negatively) from the rate assumed at this investigation by much more than the (positive) 1% pa illustrated in the example above.

Legislative risk

This risk is that the Commonwealth Government and/or the Western Australian State Government could make legislative changes that increase the cost of providing the defined benefits – for example, an increase in the rate of tax on superannuation funds. This risk is borne by the Employer.

9

Insurance and Related Risks

Insurance

The WA Category is not permitted to self-insure.

For defined benefit members, the group life sum insured formula currently in use (for both death and lump sum total and permanent disablement (TPD) benefits) is:

$$12\% * \text{Benchmark Amount} * \text{future years to age 60}$$

The total amount insured should cover the excess of the death/TPD benefits over the WA Category's assets, unless there is a funding shortfall. Based on the formula in use at the investigation date, the coverage of death/TPD risk as at 30 June 2021 for the WA Category was as follows.

	Defined Benefit members	\$000
	Death/Disablement Benefits	162,917
less	Sum Insured	85,916
less	Assets	126,585
	Uncovered Death/Disablement Benefits	(49,584)

There is a relatively large amount of over-insurance, mainly as a result of the large surplus in the WA Category. The 30 June 2015 valuation report also showed a significant surplus and therefore we recommended that the Trustee consider changing the sum insured to reflect the Vested Benefit Index. We understand that the Trustee considered this and decided to continue with the existing formula.

As noted in the 2018 valuation report, we understand that there is an inconsistency between the WA Category's obligation to pay a TPD benefit and the WA Category's ability to claim under the insurance policy and that this mismatch cannot be removed. For example, the WA Category would be liable to pay any cover above the automatic acceptance limit (AAL) if this cover was not accepted by the insurer, or if the insurer refused to pay because the member refused to return to Australia for treatment or if the injury arose as a result of war or pandemic or if the member has been on leave without pay for more than 12 months.

Given the funding level in the WA Category, the details above and that we are not aware of any such claims over the last 15 years, we are comfortable with this level of risk in the WA Category.

Documentation

The insurance arrangements are underwritten by TAL Life Limited (“the insurer”) and outlined in a policy dated 1 April 2018 with subsequent endorsement changes between the Trustee and the insurer. The purpose of the insurance policy is to protect the WA Category against unexpectedly large payouts on the death or disablement of members.

Conclusion

In my opinion, the current group life insurance arrangements, are appropriate and provide adequate protection for the WA Category. Mercer is seeking guidance from APRA to see whether it is permissible to reduce the amount of insurance in place for a defined benefit fund where there is a significant surplus. If it is determined that this is permissible, I recommend that the sum insured formula be reviewed to remove the large amount of over-insurance in the WA Category. Further analysis will be provided if there is to be a change to the sum insured formula.

10

Prudential Standards

The prudential regulator (APRA) has issued a number of Prudential Standards for the superannuation industry, including Prudential Standard (SPS 160) relating to the financial management and funding of defined benefit plans. We have commented below on several requirements arising from SPS 160.

Shortfall Limit

The Trustee must determine a “Shortfall Limit” for each fund, being:

“the extent to which the fund can be in an unsatisfactory financial position with the Trustee still being able to reasonably expect that, because of corrections to temporary negative market fluctuations in the value of the fund assets, the fund can be restored to a satisfactory financial position within a year”.

We understand that the WA Category’s Shortfall Limit, determined by the Trustee on the basis of previous actuarial advice, is 100.0%.

The Shortfall Limit is expressed as the coverage level of the defined benefits vested benefits by the defined benefit assets. It is appropriate to consider the following factors when determining if the Shortfall Limit remains appropriate:

- The guidance provided in the relevant Actuaries Institute Information Note;
- The investment strategy for defined benefit assets, particularly the benchmark exposure of 50% to “growth” assets;
- The results of this investigation regarding the extent to which the current and projected Vested Benefits are not linked to the investment return on defined benefit assets (i.e. based on Benchmark Amounts) and the current and projected relativity between Vested Benefits and Minimum Requisite Benefits.

Based on the above, the liabilities are all based on Benchmark Amounts (i.e. no accumulation component) and assuming the current investment strategy is continued in our view it would be reasonable for the Trustee to adopt a Shortfall Limit of 97.5% or higher for the WA Category. However, given the good financial position of the WA Category, we recommend that the Trustee continue to set the Shortfall Limit to be a defined benefit vested benefit index of 100.0%. This is consistent with the approach taken for the other Defined Benefit schemes within the Fund.

The projections also indicate that the level of Minimum Requisite Benefits is not expected to be a constraint in determining the Shortfall Limit. We will reassess the suitability of the adopted Shortfall Limit as part of the next regular actuarial investigation. The Shortfall Limit should be reviewed earlier if

there is a significant change to the investment strategy for defined benefit assets or if the Trustee otherwise considers it appropriate to do so.

The Shortfall Limit should continue to be documented in the Fund's Defined Benefit Framework.

Monitoring Process

SPS 160 also requires the Trustee to determine and implement a process for monitoring the defined benefit Vested Benefits coverage against the Shortfall Limit for each plan. If this monitoring process indicates that the vested benefits coverage has (or may have) fallen below the Shortfall Limit, then under SPS 160:

- An "Interim Actuarial Investigation" may be required (depending on the timing of the next regular actuarial investigation).
- A Restoration Plan is required to be put in place if an Interim Actuarial Investigation finds the plan has breached its Shortfall Limit. The Restoration Plan must be designed to return the plan to a "satisfactory financial position", so that the Vested Benefits are fully covered, within a reasonable period that must not exceed 3 years and this must be submitted to APRA.

We understand that the Trustee has adopted a monitoring process which includes the following:

- Monitoring of the financial position is undertaken annually;
- If the Trustee's estimate indicates that the Shortfall Limit has, or may have been breached, action will be taken as required by SPS 160;
- For funds in a satisfactory financial position where there has been a significant reduction in the Trustee's estimate of defined benefit vested benefits coverage, the Trustee will request a review of the financial position and formal advice from the Fund actuary as to whether or not the current contribution program remains appropriate;
- For funds in an unsatisfactory financial position, the Trustee will request a review of the financial position and advice from the Fund actuary each quarter as to whether or not the current contribution program remains appropriate or any other action should be taken.

Given the current financial position of the WA Category, we consider that the adopted monitoring process is appropriate.

The Trustee should also continue to monitor the "Notifiable Events" specified in the WA Category's Funding and Solvency Certificate and advise the actuary should any actual or potential Notifiable Events occur.

Requirements due to Unsatisfactory Financial Position

Restoration Plan

Under SPS 160, a Restoration Plan is also required to be put in place if the actuary finds in a regular Actuarial Investigation that a plan:

- Is in an unsatisfactory financial position (whether or not the Shortfall Limit has been breached); or
- Is likely to fall into an unsatisfactory financial position.

The Restoration Plan must be designed to return the plan to a “satisfactory financial position”, so that Vested Benefits are fully covered, within a reasonable period that must not exceed 3 years from the investigation date.

An SPS 160 Restoration Plan is not required if the plan is technically insolvent (in which case the insolvency rules must be followed). If an SPS 160 Restoration Plan is already in place then any changes to the contribution program (including its period) must be made within the framework of that Restoration Plan.

As indicated by the financial position and the projections, we consider that:

- The WA Category is not in an unsatisfactory financial position; and
- The WA Category is not likely to fall into an unsatisfactory financial position.

Hence the special requirements of SPS 160 for funds in an unsatisfactory financial position do not apply at this investigation.

Actuary’s Reporting Requirements

Section 130 of the SIS Act requires that if an actuary forms the opinion that a plan’s financial position may be unsatisfactory, or may be about to become unsatisfactory, and that opinion was formed in performing an actuarial function, the actuary must advise both the Trustee and the prudential regulator (APRA) in writing immediately. Note: an unsatisfactory financial position applies where assets are less than Vested Benefits.

These requirements do not currently apply as I am of the opinion that the WA Category’s financial position is not unsatisfactory (or about to become unsatisfactory).

Statements Required by SPS 160

This section provides statements required to be made under APRA Prudential Standard SPS 160. Values cited relate to the WA Category as a whole (inclusive of all accumulation members and accounts).

- (a) The value of the WA Category’s assets as at 30 June 2021 was \$197,132,000. This value excludes assets held to meet the Operational Risk Financial Requirement.
- (b) In my opinion, the value of the liabilities of the WA Category in respect of accrued benefits as at 30 June 2021 was \$145,728,000. Hence, I consider that the value of the assets at 30 June 2021 is adequate to meet the value of the accrued benefit liabilities of the WA Category as at 30 June 2021. Taking into account the circumstances of the WA Category, the details of the membership and the assets, the benefit structure of the WA Category and the industry within which the

Employers operates, I consider that the assumptions and valuation methodology used are appropriate in relation to the determination of the accrued benefit liabilities for the purposes of this report. Further comments on the assumptions and valuation methodology are set out in Sections 4 and 6 of this report. Assuming that the Employers contribute in accordance with my recommendations based on the assumptions used for this actuarial investigation, I expect that assets will remain sufficient to cover the value of accrued benefit liabilities over the period to 30 June 2024.

- (c) In my opinion, the value of the liabilities of the WA Category in respect of vested benefits as at 30 June 2021 was \$148,620,000. Hence I consider that the value of the assets at 30 June 2021 is adequate to meet the value of the vested benefit liabilities of the WA Category as at 30 June 2021. Assuming that the Employers contribute in accordance with my recommendations based on the assumptions made for this actuarial investigation, I expect that assets will remain sufficient to cover the value of vested benefit liabilities over the period to 30 June 2024. Hence I consider that the financial position of the WA Category should not be treated as unsatisfactory as defined in SPS 160.
- (d) In my opinion, the value of the liabilities of the WA Category in respect of the minimum benefits of the members of the WA Category as at 30 June 2021 was \$129,890,000. Hence the WA Category was not technically insolvent at 30 June 2021.
- (e) A projection of the likely future financial position of the WA Category over the 3-year period following 30 June 2021, based on what I consider to be reasonable expectations for the WA Category for the purpose of this projection, is set out in Section 7 of this report.
- (f) Based on the results of this investigation, I consider that the Shortfall Limit does not require review. Comments are set out earlier in this section.
- (g) The actuary recommended that the Employers contribute to the WA Category at the following rates from 1 July 2021:

Category	Recommended Contributions
Defined Benefit members	7.0% of Benchmark Amount plus the balance of the Employers' Superannuation Guarantee (SG) obligations, allowing for the above contributions, to an accumulation account (it is noted that this may be made to another superannuation fund)
Accumulation members	SG% of Ordinary Time Earnings (OTE) or if the Employer is meeting all or part of the SG liability in another fund(s), such lesser amount of Employer contributions as used to offset the Employer's SG liability

- (h) The WA Category is used for Superannuation Guarantee purposes :
 - all Funding and Solvency Certificates required under Division 9.3 of the SIS Regulations have been issued for the period from the date of the last investigation to 30 June 2021;
 - I expect to be able to certify the solvency of the Plan in any Funding and Solvency Certificates that may be required in the three year period from 30 June 2021.

Actuarial Certification

Actuary's certifications

Professional standards and scope

This report has been prepared in accordance with generally accepted actuarial principles, Mercer's internal standards, and the relevant Professional Standards of the Actuaries Institute, in particular PS400 which applies to *"...actuarial investigations of the financial condition of wholly or partially funded defined benefit superannuation funds."*

Use of report

This investigation report should not be relied upon for any other purpose or by any party other than the Trustee of the Fund. Mercer is not responsible for the consequences of any other use. This report should be considered in its entirety and not distributed in parts. The Trustee should share this report with the Employers who contribute to the Plan. The Employers may consider obtaining separate actuarial advice on the recommendations contained in the report.

The advice contained in this report is given in the context of Australian law and practice. No allowance has been made for taxation, accountancy or other requirements in any other country.

Actuarial Uncertainty and Assumptions

An actuarial investigation report contains a snapshot of a fund's financial condition at a particular point in time, and projections of the fund's estimated future financial position based on certain assumptions. It does not provide certainty in relation to a fund's future financial condition or its ability to pay benefits in the future.

Future funding and actual costs relating to the fund are primarily driven by the fund's benefit design, the actual investment returns, the actual rate of Benchmark Amount growth, and any discretions exercised by the Trustee or the Employers. The fund's actuary does not directly control or influence any of these factors in the context of an actuarial investigation.

The fund's future financial position and the recommended Employer contributions depend on a number of factors, including the amount of benefits the fund pays, the cause and timing of member withdrawals, plan expense, the level of taxation and the amount earned on any assets invested to pay the benefits. These amounts and others are uncertain and unknowable at the investigation date, but are predicted to fall within a reasonable range of possibilities.

To prepare this report, assumptions are used to select a single scenario from the range of possibilities. The results of that single scenario are included in this report.

However, the future is uncertain and the fund's actual experience will differ from those assumptions; these differences may be significant or material. In addition, different assumptions or scenarios may also be within the reasonable range and results based on those assumptions would be different. For this reason, this report shows the impact on the fund's financial position if alternative assumptions were to be adopted.

Actuarial assumptions may also be changed from one investigation to the next because of mandated requirements, fund experience, changes in expectations about the future and other factors. We did not perform, and thus do not present, an analysis of the potential range of all future possibilities and scenarios.

Because actual fund experience will differ from the assumptions, decisions about benefit changes, investment policy, funding amounts and benefit related issues should only be made after careful consideration of possible future financial conditions and scenarios, and not solely on the basis of a set of investigation results.

Additional information

The next **actuarial investigation** is required at a date no later than 30 June 2024. Note that the monitoring process recommended may lead to an earlier reassessment of the next full actuarial investigation.

The next **Funding and Solvency Certificate** is required at least 12 months before the expiry of the current Funding and Solvency Certificate (which must be replaced before 30 June 2022).

The next **Benefit Certificate** is required following the expiry of the current Benefit Certificate (which expires 30 June 2024). The current Benefit Certificate is designed to accommodate changes to the legislated Superannuation Guarantee schedule.

Further Information

Please contact me to provide any supplementary information or explanations about this actuarial investigation as may be required.



Angela Hartl

Fellow of the Institute of Actuaries of Australia

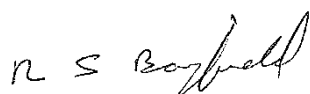


James Ma

Fellow of the Institute of Actuaries of Australia

29 November 2021

I have reviewed this report under Mercer's professional Peer Review Policy. I am satisfied that it complies with the applicable professional standards and uses assumptions and methods that are suitable for the purpose.



Richard Boyfield

Fellow of the Institute of Actuaries of Australia

Appendix A

Plan Design

Summary of benefits

A summary of the main benefit provisions in respect of defined benefit members is set out below. Reference should be made to the formal governing documents for definitive statements.

Member's Contribution	3% of Benchmark Amount
Accrual Rate	13% prior to 1 July 1988 12% since 1 July 1988
Accrued Benefit	Benchmark Amount x Accrual Rate for each year of service as a Category A member
Benchmark Amount	Benchmark Amount on the previous 30 June increased by either <ul style="list-style-type: none"> • An amount equal to the increase in the index of the AWOTE for the year ending on the previous 31 March, or • Such lesser amount as the determined by the board on the recommendation of the Actuary
Discount Factor	Discount Factor is determined from time to time by the Board on the advice of the Actuary. This is a discount rate of x% per annum for each year remaining until age 55, subject to a maximum of 20 years. Currently the discount rate is 0% per annum
Member's Multiple	Accrual rate x service in Category A to date of event.
Normal Retirement Age	65
Early Retirement Age	55
Member Account	Accumulation account recorded for the member.

Normal Retirement Benefit	<p>Category A members who leave service between age 55 and 65</p> <p>Accrual Rate x service in Category A x Benchmark amount at Retirement; plus balance of the member's accumulation account</p> <p>Category A members who leave service after age 65</p> <p>Accrual rate x service in Category A up to age 65 x Benchmark amount at date of payment; plus balance of the member's accumulation account</p>
Death/Total and Permanent Disability Benefit	<p>Category A members under 60</p> <p>Accrued benefit calculated as if the member had remained in service until reaching 60 years of age and the Benchmark Amount at date of death/TPD; plus balance of the member's accumulation account</p> <p>Category A member over aged 60</p> <p>Normal retirement benefit</p>
Partial and permanent disablement	<p>Category A members</p> <p>Accrued benefit calculated at date of disablement; plus balance of the member's accumulation account.</p>
Resignation Benefit	<p>Category A: If a member elects to retain the whole benefit in the WA Category as a defined benefit, the resignation benefit is equal to the balance of the member's accrued benefit.</p> <p>Otherwise, it is the member's accrued benefit multiplied by the discount factor.</p>
Retained Benefit	<p>If a member has elected to retain only part of the benefit payable, then the benefit retained in the WA Category is treated as an accumulation benefit and credited with interest each year. On withdrawal from the WA Category, the member is entitled to the balance in their accumulation account.</p> <p>If a member elects to retain the whole of the benefit payable in the WA Category and subsequently requests payment of the benefit prior to turning age 55, then the amount of the retained benefit is calculated as the discount factor times the member's multiple times Benchmark Amount at the date of benefit payment.</p> <p>If the member elected to retain the whole balance of their original benefit entitlement in the WA Category and subsequently requests</p>

payment of that benefit after turning age 55, then the benefit payable is calculated as the Normal Retirement benefit

The Trustee has the right to apply a discount factor if a member chooses to exit the WA Category and take their benefit. The Trustee also has the power to increase the Benchmark Amount by a lower amount than AWOTE.

The WA Category's Trust Deed and Rules state that the employers shall not pay less than 7% of the Benchmark Amount and no more than 10% of the Benchmark Amount.

Benefits on leaving service for any reason are subject to the minimum Superannuation Guarantee benefit described in the WA Category's Benefit Certificate.

The Superannuation Guarantee (Administration) Act 1992

This Act requires employers to provide minimum superannuation benefits that are fully vested in their employees within a complying superannuation fund.

The contribution rates recommended in this report and the projected financial positions allow for benefits being augmented as necessary to meet the minimum Superannuation Guarantee (SG) benefit described in the WA Category's current Benefit Certificate.

Under current legislation the SG rate will be 10.0% until 30 June 2022 and it will then increase by 0.5% pa until it reaches 12% from 1 July 2025.

Appendix B

Data and Decrement assumptions

Data provisions

To prepare this report, we have relied on financial and participant data provided by the Fund's administrator. The data used is summarised in this report. We have not independently verified or audited the data provided but have performed a range of broad "reasonableness" checks and tested for consistency with previous records. We are satisfied that the data is sufficiently accurate for the purposes of this actuarial investigation.

We have also relied upon the documents, including amendments, governing the Fund as provided by the Trustee. The Trustee is ultimately responsible for the validity, accuracy and comprehensiveness of this information. If the data or Fund provisions are not accurate and complete, the investigation results may differ significantly from the results that would be obtained with accurate and complete information; this may require a revision of this report.

Decrement Assumptions

The following tables show the assumptions that have been made concerning the rates at which members will leave the WA Category for a variety of reasons.

Retirement

Age Last Birthday	Percentage of members age x at beginning of year assumed to leave the WA Category during the year on account of early retirement	
x	%	
55	20	
56	20	
57	20	
58	20	
59	20	
60	30	
61	30	
62	30	
63	30	
64	30	
65	100	

Resignation

Age Last Birthday	Percentage of members age x at beginning of year assumed to leave the WA Category during the year on account of resignation	
x	Male %	Female %
20	5	5
25	5	5
30	5	5
35	5	5
40	5	5
45	5	5
50	5	5
55	0	0
60	0	0
65	0	0

Appendix C

Calculation of the Actuarial Value of Accrued Benefits

The calculation of the Actuarial Value of Accrued Benefits has been carried out using a method of apportionment of benefits between past and future membership that satisfies the requirements of Professional Standard No. 402 of the Actuaries Institute and is acceptable for Australian Accounting Standard AASB 1056 purposes. The information required for AASB 1056 is in Appendix D.

Defined Benefits

The past membership components of all defined benefits payable in the future from the WA Category in respect of current membership are projected forward allowing for assumed Benchmark Amount and credited interest rates and are then discounted back to the investigation date at the investment return rate assumed for the investigation.

The past membership component for each type of benefit is:

Retirement:	based on the member's accrued benefit multiple or relevant account balances at the investigation date
Death and Disablement:	calculated by adjusting the total expected benefit in proportion to the accrued benefit multiple at the investigation date divided by the accrued benefit multiple at the projected date of death or disablement
Resignation:	based on the member's accrued benefit multiple or relevant account balances at the investigation date, allowing, where applicable, for future vesting to the projected date of resignation

The weighted average term of the accrued benefit liabilities is 6.6 years.

Accumulation Benefits

The value of accumulation benefits has been taken as the sum of the balances held in accumulation accounts at the date of the investigation.

Methodology of Calculating the Actuarial Value of Accrued Benefits

The method used for the determination of Accrued Benefits is the same as that used at the previous investigation, the Projected Unit method.

Appendix D

Information for AASB 1056 Purposes

WA Coal Industry Category

The following information has been prepared for the purposes of Australian Accounting Standard AASB 1056 to enable the calculation of Member Liabilities at the specified reporting dates for inclusion in the relevant financial statements of the Mine Superannuation Fund.

To assist Mine Superannuation Fund to comply with AASB 1056 reporting standard within the required timescales, Mercer has provided a document ("*Mine Wealth + Wellbeing Superannuation Fund AASB1056 Estimated Past Service Liability*") dated March 2017 setting out a methodology for estimating the past service liability at the reporting date based on the results of the previous valuation. This has been restated below for completeness.

Data required:

- Total Benchmark Amount for all active members as at the AASB 1056 reporting date - BA
- Benefit payments over the period – Benefits
- Increase in Benchmark Amount over the period – Sal_inc
- Increase in Benchmark Amount assumption at the previous valuation date - Sal(20xx-1))
- Investment return assumption at the previous valuation date - i(20xx-1))

The following formula should be used to estimate the past service liability:

$$\text{PSL}_{30\text{June}(20xx)} = \text{PSL}_{30\text{June}(20xx-1)} \times (1 + i(20xx-1)) \times (1 + \text{Sal_inc}) / (\text{Sal}(20xx-1)) + 0.125 \times \text{BA} - \text{Benefits}$$

20xx represents the current year in question (i.e. 2021 this year) and 20xx-1 represents the prior year in question (i.e. 2020 this year). This applies for the remainder of this document.

Mercer Consulting (Australia) Pty Ltd

ABN 55 153 168 140

AFS Licence # 411770

One International Tower,

100 Barangaroo Avenue

Sydney NSW 2000

GPO Box 9946 NSW 2001

+61 2 8864 6800