

REPORT TO THE TRUSTEE ON THE ACTUARIAL INVESTIGATION AS AT 1 JULY 2021

MINES RESCUE STATIONS STAFF CATEGORY

A SUB-PLAN IN THE MINE SUPERANNUATION FUND

04 November 2021

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1

Key Results and Recommendations

This report on the actuarial investigation of the Mines Rescue Stations Staff Category (the Plan), a sub-plan in the Mine Superannuation Fund (the Fund), as at 1 July 2021 has been prepared to meet the requirements of the Fund's governing rules and the SIS legislation. This report should not be relied upon for any other purpose or by any party other than AUSCOAL Superannuation Pty Ltd, the Trustee of the Fund, and Coal Services Pty Limited, the Employer, who contributes to the plan. Mercer is not responsible for the consequences of any other use. This report should be considered in its entirety and not distributed in parts.

Change in Financial Position

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

Defined Benefits Only*	Position at 1 July 2021		
	\$000	Asset Coverage	Coverage at 1 July 2018
Assets	1,636		
Liability for Vested Benefits	1,320	123.9%	117.4%^
Liability for Actuarial Value of Accrued Benefits	1,609	101.7%	67.4%
Liability for SG Minimum Benefits	966	169.4%	117.4%

*Excludes additional accumulation accounts in the Plan.

^The coverage post 1 July 2018 was 68% which reflects the increase in the vested benefits for two members reaching age 55 in August and October 2018.

The coverage levels at 1 July 2021 were higher than the levels at the previous actuarial investigation, due to the following items of positive experience:

- A contribution of \$850,000 was made to the Plan on actuarial advice as two members received a significant increase in their benefits as a result of reaching age 55. This was received by the Plan on 2 November 2018;
- No salary growth which was lower than an expected 3.0% pa; and
- One member being paid their benefit over the period, which meant the surplus is spread over a smaller base.

This has been partially offset by the following items of negative experience:

- Two members reaching age 55 over the period resulting in a significant increase to their Vested Benefits; and
- Investment earnings of 1.2% p.a., which were lower than the assumed long term, rate 4.0% p.a.

Recommended Contribution Rates and Projections

At 1 July 2021, the Plan was in a satisfactory financial position. The 124% coverage of the Defined Benefit Vested Benefits was above the financing objective of 105% coverage adopted for this investigation.

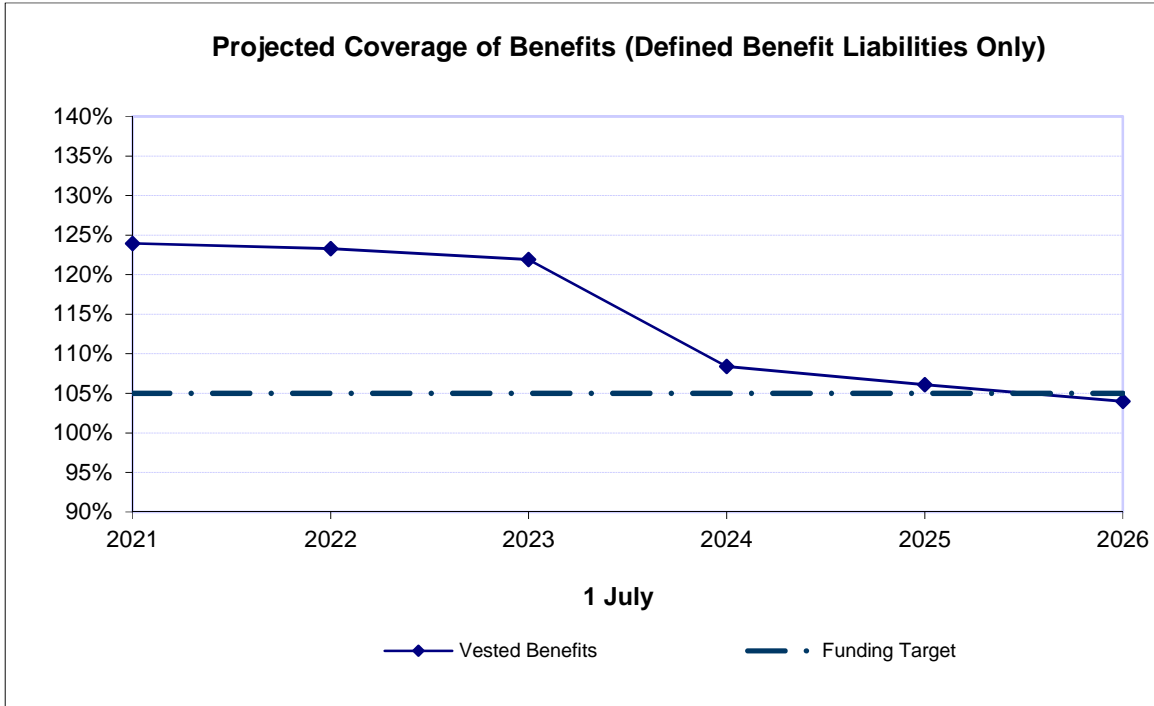
I recommend that the Employer contributes to the Plan as follows:

Period	Recommended contribution
From 1 July 2021	<ul style="list-style-type: none"> • 18.7% of member salaries (inclusive of 4.71% deemed member contributions); • Plus any additional Employer contributions agreed between the Employer and members (e.g. additional salary sacrifice contributions); and • Plus \$45,000 per annum to meet expenses.

In addition to the contributions above, I recommended that the Employer pays a top-up contribution in the following scenarios:

- i. If a member exits the Plan, the Actuary should assess whether a top-up contribution is required.
- ii. When a member reaches age 55 the funding position of the Plan should be assessed to see if additional contributions are necessary.

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, I have prepared the following projection of Plan assets and benefit liabilities:



The graph above shows that the recommended contributions are anticipated to result in assets of at least 105% of Defined Benefit Vested Benefits until 1 July 2025 (which is the financing objective adopted in this investigation). The reduction in coverage as at 1 July 2024 is largely due to the remaining member reaching age 55 in 2023. A lump sum contribution may be required at that time as this will depend on the actual increase in their benefit and the funding status of the Plan at that date.

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 Plan’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 Plan actuary at least once every year and quarterly on an approximate basis by the Trustee. 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 Plan’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 4.6% increase in the assessed value of liabilities.

Sections 8 and 9 discuss other risks associated with the liabilities, including salary growth risk, small plan and expense risk, legislative risk and the risks associated with the current valuation method whereby it is assumed that the Plan 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 Plan are suitable:

- The investment policy
- The crediting rate policy
- The insurance arrangements
- The Shortfall Limit (for the purposes of SPS 160)
- The Trustee's process for monitoring the Plan's financial position; it is important to continue to monitor the financial position at least annually and quarterly on an approximate basis

Actions Required by the Trustee

The Trustee should consider this report and confirm its agreement (or otherwise) to the recommended contribution and other recommendations. The Trustee should seek formal agreement from the Employers to contribute in line with the recommendations.

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Introduction

Background information of the Plan

The Plan is operated for the benefit of employees of the participating Employer of the Mines Rescue Stations Staff Category of the Mine Superannuation Fund. The Trustee, 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 Mines Rescue Stations Staff category are set out in Schedule G of the Trust Deed and Rules of the Mine Superannuation Fund dated 23 April 2018.

Purpose

I have prepared this report exclusively for the Trustee of the Mines Rescue Stations Staff Category for the following purposes:

- To present the results of an actuarial investigation of the Plan as at 1 July 2021;
- To review Plan experience for the period since the previous actuarial investigation as at 1 July 2018;
- To recommend contributions to be made by the Employer intended to allow the Plan to meet its benefit obligations in an orderly manner, and to reach and maintain an appropriate level of security for members' accrued benefit entitlements;
- To satisfy the requirements of the Plan's Trust Deed for actuarial investigations of the Plan'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 1 July 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

I am not aware of any significant events that have occurred since 1 July 2021, which would have had a material impact on the findings or recommendations in this report.

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Experience since the Last Review

Membership

The membership of the defined benefit section has changed since 1 July 2018 as follows:

Active members at 1 July 2018	3
Exits	1
New Entrants	-
Active members at 1 July 2021	2
Total salaries at 1 July 2021	\$353,000
Average salaries at 1 July 2021	\$177,000
Average age at 1 July 2021	55.2 years

During the period under review the number of defined benefit members within the Plan decreased from three to two members and the decrease was more than assumed.

As the surplus is spread over a smaller number of members, the coverage of the benefit liabilities (when expressed as a percentage) has increased accordingly.

Investment Returns and Crediting Rates

The table below shows the rates of investment earnings (after tax, investment fees and asset based administration fees) for the assets supporting the 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	5.3%	5.3%
30 June 2020	-4.0%	-4.0%
30 June 2021	2.5%	2.5%
Compound Average	1.2%	1.2%

The average investment return for the three-year period to 30 June 2021 was 1.2% p.a. compared to our long term assumption at the last actuarial investigation of 4.0% p.a. The lower return than assumed had a negative impact on the Plan's financial position. The lower return is consistent with the change to a more conservative investment strategy in 2020.

Salary Increases

Salaries for the current defined benefit members increased by an average of 0% pa over the period compared to our longer term assumption at the last actuarial investigation of 3% pa. The lower salary increases than assumed had a positive impact on the Plan’s financial position.

Contributions

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

Period	Contribution
From 1 July 2018 to 30 June 2021	<ul style="list-style-type: none"> • 18.7% of member salaries (inclusive of 4.71% deemed member contributions); • Plus any additional Employer contributions agreed between the Employer and a members (e.g. additional salary sacrifice contributions); and • Plus \$63,000 per annum to meet expenses.

In addition to the contributions above, I recommended that the Employer pays a top-up contribution in the following scenarios:

- i. Member exit when Vested Benefit Index is below 100%;
- ii. When a member reaches age 55; as two members turned age 55 in 2018, we wrote to the Trustee and advised that the Employer should be requested to pay \$850,000 to the Plan and this was received on 2 November 2018.

The ongoing Employer contributions were paid in accordance with my recommendations which were higher than the long term Employer contribution rate (i.e. the estimated employer cost of future service benefits). This had a positive impact on the Plan’s financial position.

Impact of the Experience on the Financial Position

The main experience items affecting the Plan's financial position during the period from 1 July 2018 to 30 June 2021 were as follows:

Item	Assumption at previous review	Plan experience	Comment on effect
Investment returns	4.0% p.a.	1.2% p.a.	Negative effect – investments grew at a lower rate than assumed
Salary increases	3.0% p.a.	0.0% p.a.	Positive effect – benefit liabilities grew at a lower rate than assumed
Membership exits	-	1	Positive effect – surplus spread over smaller number of members

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Actuarial Assumptions

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

- the amount of benefits paid out; plus
- the expenses of running the Plan, including tax;

less

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

The ultimate cost to the Employer will not depend on the actuarial investigation assumptions or the methods used to determine the recommended Employer contribution, but on the actual experience of the Plan. 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 Plans assets and benefit liabilities on the basis of actuarial assumptions about future experience.

These assumptions include investment returns, salary/wage increases, crediting rates, the rates at which members cease service for different reasons, and various other factors affecting the financial position of the Plan.

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 salary increases used in the projections of future benefit payments.

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

	Assumption
Investment returns (after tax and investment fees)	1.0% p.a.
Crediting rate (after tax and investment fees)	1.0% p.a.
General salary increases	2.5% p.a.

The assumption for investment returns is based on the expected long-term investment return for the Plan’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.

Based on salary increases being 0.0% per annum over the last three years and the long term economic forecasts for future increases in average weekly earnings (AWOTE), we have reduced the salary increase assumptions from 3.0% per annum to 2.5% per annum.

Demographic Assumptions

Resignation / Retirement

It is assumed that all members will retire at normal retirement age 60.

Death and Disablement in Service

It is assumed that there will be no deaths or total and permanent disablements (TPD).

Retrenchment

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

Other Assumptions

Pensioner option

The benefit can be paid to the member either as a lump sum or in some other form such as an annual pension through the purchase of an annuity. We understand that all members have taken a lump sum and therefore we have assumed that this will continue. If a member requests another option, we recommend obtaining actuarial advice before proceeding.

New members

The Plan's defined benefit section is closed to new entrants. No allowance has been made for new members.

Expenses

It is assumed that contributions will be made to exactly meet the administration and management expenses, actuarial consulting fees plus the net cost of group life insurance for the two members deducted from plan assets. Mine Super has estimated that these are expected to be \$45,000 per annum. This is based on annual expenses of \$6,000 (insurance) + \$20,000 (administration) + \$19,000 (actuarial fees, averaged). Whether this amount is sufficient to meet the expenses will be reviewed at each actuarial valuation.

Tax

It is assumed that the current tax rate of 15% continues to apply to the Plan's assessable income, along with current tax credits and 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 amount equal to the surcharge payments made, accumulated at the Plan 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

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

Assumption	Investigation at 1 July 2021	Investigation at 1 July 2018	Reason for change	Impact of change on Actuarial Value of Accrued Benefits
Investment Return	1.0%	4.0%	Change in market environment	Increase
Salary	2.5%	3.0%	Intervaluation experience and change in market environment	Small decrease
Expenses	\$45,000 pa	\$63,000 pa	Change in insurance premiums and actuarial fees	Neutral as they reflect the actual expenses

It is worth noting that we have gradually moved from the assumptions at 2018 to those now in the interim funding updates.

The overall impact of the changes in assumptions was to:

- increase the Actuarial Value of Accrued Benefits by \$167,000
- increase the assessed long-term employer cost of future service (gross of tax) from 14.9% to 16.6% of salaries.

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Assets

Market Value

The net market value of the Plan's assets as at 1 July 2021 amounted to \$1,636,000 (based on the data provided by the Plan's administrator) excluding any additional accumulation accounts and operational risk reserves.

Operational Risk Reserves

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

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 investment strategy was revised in 2020 from a 50% 'growth' and 50% defensive portfolio to the current more conservative portfolio to reduce the volatility of the Plan's investment returns. The Plan was previously invested in the Schroder Balanced Fund – Professional Class, the BlackRock Scientific Diversified Stable Fund and the Trust Cash Management Fund. This is likely to impact the required level of Employer contributions.

The Plan's investment strategy for assets supporting defined benefit liabilities, which is currently invested in the IFM Transaction Cash Fund and the Vanguard Growth Index Fund, involves a benchmark exposure of 13% to 'growth' assets such as shares and property and a benchmark exposure of 87% to 'defensive' assets such as cash and fixed interest. 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	Actual Allocation as at 1 July 2021	Strategic Asset Allocation
Australian equities	6%	5%
Overseas equities	10%	8%
Total growth	16%	13%
Fixed interest	7%	6%
Cash	77%	81%
Total defensive	84%	87%
Total	100%	100%

There are two members in the Plan. One member is older than 55 and is eligible for the early retirement benefit, the other member is currently entitled to the withdrawal benefit on exit and will be eligible for the early retirement benefit in 2023.

The withdrawal benefit is directly affected by the investment return on the Plan's assets. The early retirement benefit is not linked to investment returns. Therefore a proportion of the total liability will not be linked to the investment returns and so the volatility of the Plan's investment returns will affect the financial position of the Plan from year to year and is likely to impact on the required level of Employer contributions.

Given that it is not known when members will take their benefit with certainty, the exact term of the Plan's liabilities is unknown.

However, it is possible that the members will all leave in less than 6 years and require payment of their benefits. Thus the shorter-term liability profile reduces the ability of the Plan to 'ride out' the ups and downs in returns that are expected from investment strategies with higher exposure to 'growth' assets.

The Plan's investments are expected to provide a high level of liquidity in normal circumstances. Hence we do not envisage any problem in being able to redeem assets to meet benefit payments as they arise.

Hence, I am satisfied that the current investment strategy is appropriate in view of the Plan's cash flow profile and the financial support provided by the Employer.

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

Crediting Rate Policy

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

For the period up to the date of leaving service

Members' withdrawal benefits (where applicable), as well as their Superannuation Guarantee minimum benefits, are based on the accumulation of member and notional employer contributions with investment earnings at the Crediting Rate.

The Crediting Rate is determined based on the actual earning rate of the defined benefit assets, after allowance for expenses and tax. A year to date as well as an equivalent full year rate is calculated. The crediting rate is declared quarterly based on a calculation return which is made available by the 21st business day after the quarter. For benefit payments, interim crediting rates apply for the period up to the date of leaving service for which a declared rate is not yet available.

Documentation

The Fund's crediting and unit pricing policies and related procedures are set out in a policy document dated 21 November 2019 covering all defined benefit plans in the Fund.

Conclusion

Based on a review of the main features, I consider that the crediting rate policy adopted for these benefits is generally suitable taking into consideration any material risks which may have a significant impact on the Plan (i.e. a market shock or sudden downturn in investment markets). The general principles of the crediting rate policy is reasonable.

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The Actuarial Approach

Financing Objective

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

- 100% of accumulation account balances plus
- 105% of Defined Benefit Vested Benefits plus
- 100% of Actuarial Value of Accrued Benefits for each member when they reach age 55.

Accumulation account balances are matched by specific assets and do not require any additional margins. However most of the defined benefit liabilities are not linked 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 5% strikes a suitable balance between the Trustee's desire to provide security to members and the unreasonable build-up of surplus.

Financing objectives are required for both Vested Benefits and the Actuarial Value of Accrued Benefits as the relationship between these benefits is subject to change. For example, the Vested Benefit applicable on early retirement will often exceed the Actuarial Value of Accrued Benefits, whereas the Vested Benefit for members not yet eligible for early retirement will generally be less than the Actuarial Value of Accrued Benefits. As a result, changes in members' ages over time could result in significant changes in the relative values of Vested Benefits and the Actuarial Value of Accrued Benefits. The relativity can also be affected by changes in the actuarial assumptions, which affect the Actuarial Value of Accrued Benefits to a greater extent than Vested Benefits. It is therefore appropriate to set a Financing Objective for the Actuarial Value of Accrued Benefits of 100% for each member when they reach age 55.

It is noted that achieving the financing objective of 105% of Vested Benefits would also result in a satisfactory margin of coverage over 100% of SG Minimum Benefits. However, it is not considered necessary to adopt a specific financing objective in relation to this liability measure.

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 Plan require that:

- the Trustee ensures an actuarial investigation of the Plan is conducted when required by legislation. Accordingly actuarial investigations are carried out at three yearly intervals at a minimum; and
- The Employer should contribute at the rate determined by the Trustee, after consulting the Employer, on the advice of the Actuary to the Plan.

Financing Method

There are various financing methods that could be followed in setting the Employer contribution level. This investigation uses a “Target Funding” method, which was also used at the previous investigation.

Under this method, both benefit payments and contributions for current members are projected into the future allowing for the assumptions adopted for this actuarial investigation and the Employer contribution rate required to provide a target level of coverage of a particular benefit liability measure is determined.

Under this method of financing, the level of the Employer contribution may vary from time to time to ensure that the Plan remains on course towards its financing objective (minimum 105% coverage of Vested Benefits).

I consider that the Target Funding method is suitable in the Plan's current circumstances as it allows the recommended contribution rate to be determined specifically to meet the Plan's financing objective.

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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 1 July 2021, the Plan assets were greater than the vested benefits. Accordingly the Plan was considered to be in a “satisfactory financial position” under SIS legislation. The 123.9% coverage of the Defined Benefit Vested Benefits was above the financing objective of 105% 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).

Plan assets at 1 July 2021 were also greater than SG Minimum Benefits and hence the Plan 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 Plan Assets as 1 July 2021 represented 101.7% of the Actuarial Value of Accrued Defined Benefits. This was above the financing objective of 100% coverage adopted for this investigation.

The table below shows the coverage of assets over Vested Benefits, the Actuarial Value of Accrued Benefits and the SG Minimum Benefits as at 1 July 2021, and the corresponding values at the previous investigation date.

Defined Benefits Only*	Position at 1 July 2021		Coverage at 1 July 2018
	\$000	Asset Coverage	
Assets	1,636		
Liability for Vested Benefits	1,320	123.9%	117.4%^
Liability for Actuarial Value of Accrued Benefits	1,609	101.7%	67.4%
Liability for SG Minimum Benefits	966	169.4%	117.4%

*Excludes additional accumulation accounts in the Plan.

^The coverage post 1 July 2018 was 68% which reflects the increase in the vested benefits for two members reaching age 55 in August and October 2018.

The coverage levels at 1 July 2021 were higher than the levels at the previous actuarial investigation, due to the following items of positive experience:

- A contribution of \$850,000 was made to the Plan on actuarial advice as two members received a significant increase in their benefits as a result of reaching age 55. This was received by the Plan on 2 November 2018;
- No salary growth which was lower than an expected 3.0% pa; and
- One member being paid their benefit over the period, which meant the surplus is spread over a smaller base.

This has been partially offset by the following items of negative experience:

- Two members reaching age 55 over the period resulting in a significant increase to their Vested Benefits; and
- Investment earnings of 1.2% p.a., which were lower than the assumed long term, rate 4.0% p.a.

The actuarial assumptions used to value the liabilities have changed and there was a reduction in the gap between the assumed rate of investment earnings and the rate of salary increases from a gap of 1.0% p.a. to -1.5% p.a. This has increased the Actuarial Value of Accrued Benefits; refer to the assumptions section of this report.

Actuarial Balance Sheet

The following table shows the Plan's actuarial balance sheet which treats future contributions as an asset and future benefits (based on both past and future service) as a liability.

Item	1 July 2018 \$M	1 July 2021 \$M
Value of Plan Assets	1.519	1.636
Present Value of future Employer contributions (at rate recommended)	1.445* (14.0%)	0.275 (14.0%)
Present Value of future Member contributions (at rate(s) specified in Trust Deed)	0.170	0.079
Total available Assets (in absence of other contributions)	3.134	1.990
Present Value of future defined benefits payments in respect of membership after the valuation date	0.706	0.356
Present Value of future defined benefits payments in respect of membership accrued at the valuation date	2.254	1.609
Present Value of future Plan tax on contributions	0.217	0.041
Total Present Value of future payments out of Plan	3.177	2.006
Excess/(Deficit) of Assets to value of benefits	(0.043)	(0.016)

*Including the \$850,000 top-up contribution received on 2 November 2018

This shows that the contributions are not likely to be sufficient to meet the benefits based on the assumptions summarised in this report. This is due to one member receiving a step-up in their benefits when their benefits when they reach 55 in 2023. At that time, we will assess the financial position of the Plan and determine whether an additional contribution is required.

The above table ignores expenses as it assumed the contributions paid to meet expenses will exactly cover the costs.

Employer Future Service Cost

Based on the assumptions adopted for this investigation, I estimate that the Employer’s long-term funding cost (i.e. the normal cost of funding the future service defined benefit accruals ignoring any surplus or deficit) is 16.6% of defined benefit members’ salaries (excluding member contributions of 4.71%).

The Employer’s long-term funding cost above excludes the expected expenses which are payable in addition, and includes allowances for contributions tax.

Under the Target Funding method, it would be appropriate to require the Employer to pay additional top-up contributions when the remaining member that is under age 55 becomes entitled to the early retirement benefit to ensure that the Vested Benefit Index remains above 100%. Further, if a member exits and the Vested Benefit Index is less than 100%, then a top-up contribution is required as determined by the Actuary.

Previous Recommendations

Period	Recommended contribution
1 July 2018 to 30 June 2021	<ul style="list-style-type: none"> • 18.7% of member salaries (inclusive of 4.71% deemed member contributions); • Plus any additional Employer contributions agreed between the Employer and a members (e.g. additional salary sacrifice contributions); • Plus \$63,000 per annum to meet expenses.

In addition to the contributions above, I recommended that the Employer pays a top-up contribution in the following scenarios:

- i. Member exit when Vested Benefit Index is below 100%;
- ii. When a member reaches age 55; as two members turned age 55 in 2018, we wrote to the Trustee and advised that the Employer should be requested to pay \$850,000 to the Plan and this was received on 2 November 2018.

Recommended Contributions

Based on the Trustee’s financing objective described above and the results of this investigation, I recommend that the Employer contributes to the Plan as follows:

Period	Recommended contribution
From 1 July 2021	<ul style="list-style-type: none"> • 18.7% of member salaries (inclusive of 4.71% deemed member contributions); • Plus any additional Employer contributions agreed between the Employer and members (e.g. additional salary sacrifice contributions); and • Plus \$45,000 per annum to meet expenses.

In addition to the contributions above, I recommended that the Employer pays a top-up contribution in the following scenarios:

- i. If a member exits the Plan, the Actuary should assess whether a top-up contribution is required.
- ii. When a member reaches age 55 the funding position of the Plan should be assessed to see if additional contributions are necessary.

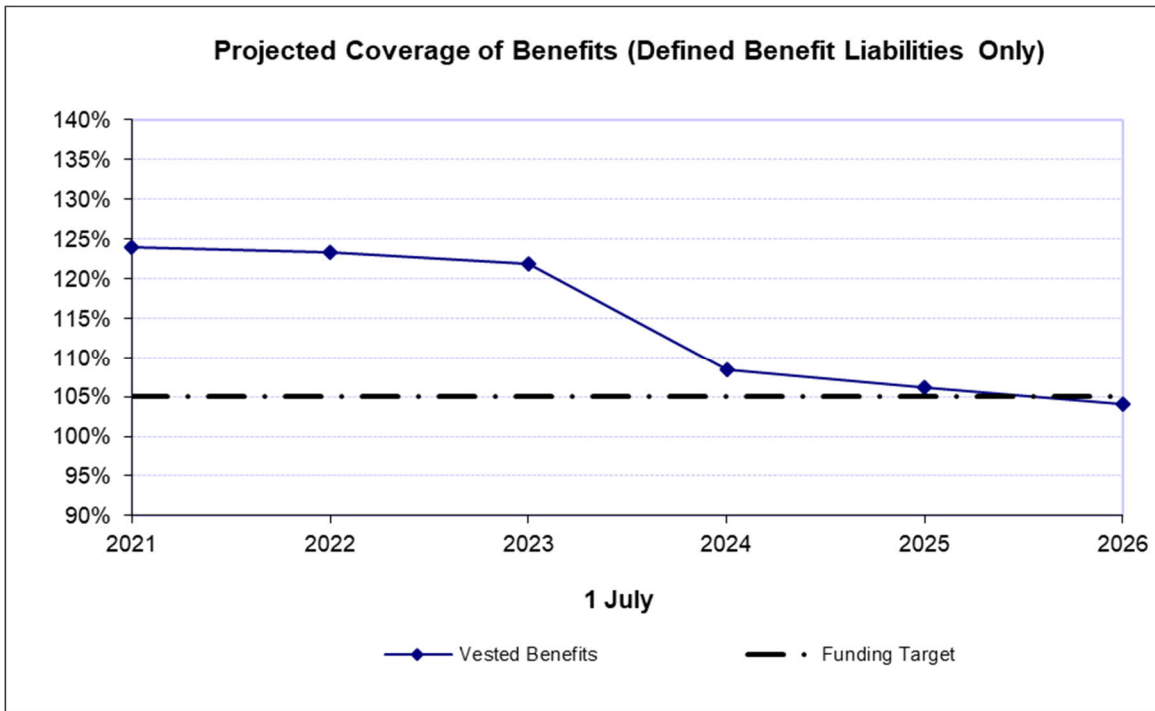
Projected Financial Position

I have prepared a projection of Plan assets and benefit liabilities based on:

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

The projection also takes into account the effects of increase in Vested Benefits due to members becoming eligible for the early retirement benefit.

The results of the projection are as follows:



We note that the one member will reach age 55 in 2023. Depending on the actual increase in their benefit and the funding status of the Plan at that date, a top-up contribution may be required as determined by the Actuary.

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 Plan’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 105% of Defined Benefit Vested Benefits until 1 July 2025 (which represents the financing objective adopted in this investigation). We note that one member will reach age 55 in the financial year-ending 30 June 2024 and a lump sum contribution may be required with will depend on the actual increase in their benefit and the funding status of the Plan at that date.

Sensitivity Analysis

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

The liabilities shown in this report have been calculated using our best estimate assumptions for investment return (1.0% per annum) and salary growth (2.5% per annum). As both future investment returns and future salary 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 salary 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 your defined benefit liabilities grow with salaries.

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 salary 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 remaining the same. The effects of these changes are shown below:

Scenario	Net financial position as at 1 July 2021 (\$million)	Change in net financial position (\$million)	Net financial position as % of all defined benefit liabilities
Base assumptions as shown previously	0.027		
Decrease investment return by 1% pa	(0.046)	(0.073)	(2.7%)
Increase salary increase and price indexation by 1% pa	(0.036)	(0.063)	(2.2%)
Shock scenario – immediate 10% reduction in net value of assets*	(0.137)	(0.164)	(8.5%)
Adverse assumptions*	(0.210)	(0.237)	(12.5%)

*Whilst we are showing these assumptions as Shock scenarios and Adverse, they are not a cap on the worst case scenario. It is possible that the net financial position could be even worse than shown if market conditions are worse than illustrated.

8

Key Risks

Investment Risk – Impact on Cost to the Employer

There is a risk that investment returns will be lower than assumed and the Employer will need to increase contributions to offset this shortfall. This risk is normally borne by the Employer. However as the Vested Benefits are directly linked to the accumulation accounts before age 55, the investment risk is borne by members until that point.

For example, if the assumed future investments return was reduced by 1% pa with no change in other assumptions, then:

- (i) the Actuarial Value of Accrued Benefits would increase by \$73,000 (Employer funding cost impact $\$73,000 / 0.85 = \$86,000$), with a resulting reduction in the coverage of the Actuarial Value of Accrued Benefits from 101.7% to 97.3% and
- (ii) the estimated employer cost of future service benefits would increase from 16.6% to 17.3% of salaries under this scenario.

The actual investment return achieved by the Plan in future may vary (positively or negatively) from the rate assumed at this investigation by much more than the (negative) 1% pa illustrated in the example above.

Investment Volatility

69% of the current vested benefits for defined benefit members are linked to salaries and not linked to investment returns (i.e. are salary based benefits). Therefore, the Plan's vested benefits coverage is highly sensitive to changes in the investment returns.

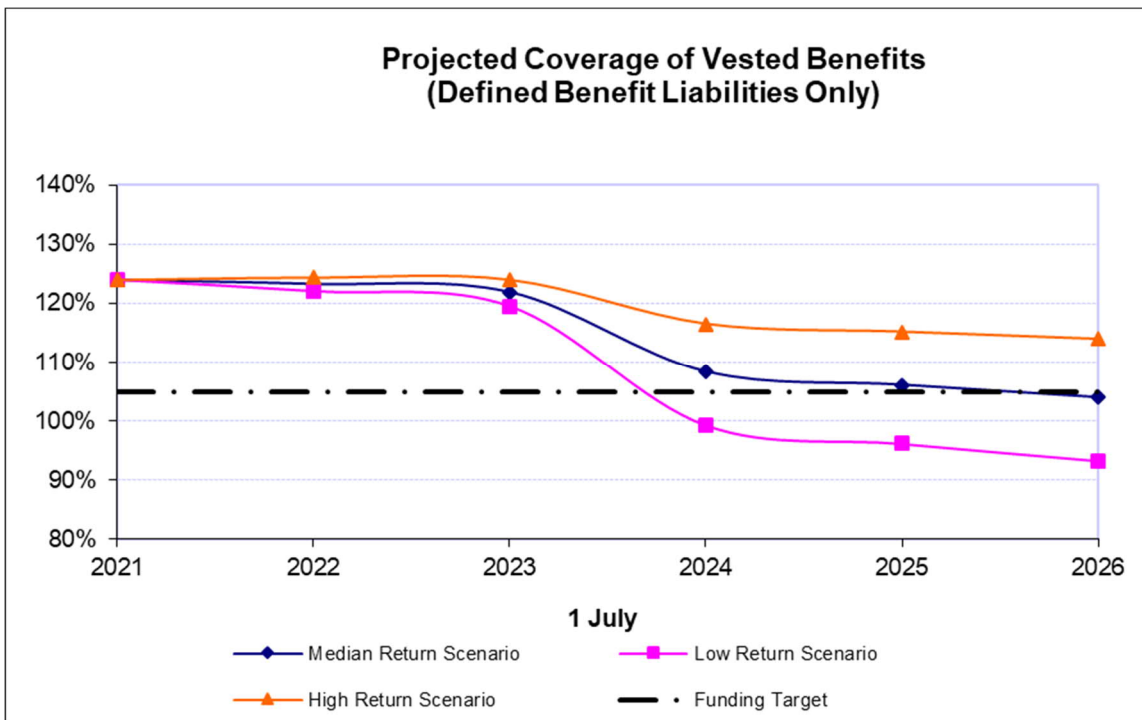
I have considered the impact of investment volatility on the Plan's financial position over the next few years using a "high return" and a "low return" scenario. The returns under both scenarios have been derived from assumptions about the likely risk attached to the Plan's defined benefit investment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

Using the investment return model and assumptions adopted, there is approximately a 10% chance of the Plan's cumulative investment return being less than the "low return" scenario. Similarly, there is approximately only a 10% chance of the Plan's cumulative investment return being greater than the "high return" scenario.

1 July 2021 to 30 June	Assumed Cumulative Investment Return (%)		
	"Low Return"	Valuation	"High Return"
2022	-0.5%	1.0%	2.3%
2023	-1.0%	2.0%	4.7%
2024	-1.5%	3.0%	7.1%
2025	-2.0%	4.1%	9.5%
2026	-2.5%	5.1%	12.0%

The cumulative investment return is the total return from 1 July 2021 up to 30 June in the year shown. The extent of variation allowed for in these projections reflects the Plan’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, 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 1 July 2024 will fall in the range from 99% to 117%.

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, there is a 1 in 20 chance that the investment return could be less than minus 3.0% in any year based on the current Plan asset allocation.

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.

Salary Growth Risk

The risk is that wages or salaries (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 Employer. The Employer has directed that no future salary increase will be granted. However, the Trustee will monitor this annually and additional contributions may be requested if salary increase are subsequently granted.

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

- (i) the Actuarial Value of Accrued Benefits would increase by \$63,000 (Employer funding cost impact $\$63,000/0.85 = \$74,000$), with a resulting reduction in the coverage of the Actuarial Value of Accrued Benefits from 101.7% to 97.9%, and
- (ii) the estimated employer cost of future service benefits would increase from 16.6% to 17.2% of salaries under this scenario.

The actual rate of future salary 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 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 and is a real risk in the post COVID-19 environment.

Small Plan Risk

This risk relates to supporting a defined benefit plan where there are few remaining defined benefit members meaning the law of averages no longer applies and the time horizon of the defined benefit liabilities may have become short. Issues that may require consideration include:

- (i) Funding may have previously been based on the Defined Benefit Plan continuing in the longer-term, which may no longer hold. Therefore greater focus is required on the funding of benefits immediately payable to members (e.g. Defined Benefit Vested Benefits);
- (ii) With few remaining members, the experience of a single member or event will have a proportionately larger impact on the financial position. Therefore more frequent monitoring of the financial position will be required;

- (iii) Contributions required to finance any shortfalls, specifically as a percentage of salary roll of defined benefit members, can become significant;
- (iv) Fees in respect of the Plan, particularly relative to the number of defined benefit members and salary roll, can become significant. Most actuarial tasks are essentially the same whether there are one or 100 defined benefit members. As defined benefit funds reduce in membership, the actuarial fees may, in fact, increase because of additional monitoring being required. Industry changes such as the SG rate increase can also result in additional fees; and
- (v) The expected wind-down of the remaining defined benefit members.

The Fund's Risk Management Statement and Risk Management Plan should identify a full range of risks faced by the Trustee.

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Insurance and Related Risks

Insurance

The Plan is not permitted to self-insure.

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

$$\text{Sum insured} = \text{Death or TPD benefit} - \text{Vested benefit}$$

The total amount insured should cover the excess of the death/TPD benefits over the Plan’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 1 July 2021 for the Plan was as follows.

	Defined Benefit members	\$000
	Death/Disablement Benefits	1,625
less	Sum Insured	305
less	Assets	1,636
	Uncovered Death/Disablement Benefits	(316)

There is a relatively small amount of over-insurance but it is not at a level where I consider that a change to the current insurance formula is necessary.

The definition of TPD in the policy is also used to establish a member’s eligibility for the benefit under the Plan’s governing rules, thus avoiding any definitions mis-match risk.

The TTD benefit is 12.5% of the TPD benefit payable until age 65 or earlier return to work, payable monthly. Our understanding is that the group life sum insured formula currently in use for disability income benefits (TTD) is:

$$\text{Sum insured} = 12.5\% \text{ of the sum insured for TPD}$$

However, as set out above, only part of the TPD benefit is insured and therefore this means that the insurance in place does not fully cover the TTD benefit. We understand that the policy is such that the TTD benefit ceases once a members is certified as being eligible for TPD and therefore the Trustee has taken the view that it is highly unlikely that the members will continue to receive a TTD benefit until age 65 and they are therefore comfortable with the underinsurance in the TTD benefit. Also, the TTD

benefit is payable monthly and so if there is a shortfall, the Plan only has to meet this shortfall monthly and not a large lump sum benefit.

In theory, the Trustee could consider changing the sum insured formula with a view to reducing the degree of over-insurance and the associated premiums. However, there are a number of practical difficulties with such a change. These include:

- navigating the regulatory environment relating to self-insurance and insurance management frameworks;
- accommodating movement in the levels of surplus; and
- the cost of implementing the insurance changes, which could potentially outweigh the premium savings.

I therefore conclude that the sum insured formula remains appropriate and provides adequate protection for the Plan.

Documentation

The death, lump sum total and permanent disablement benefits (TPD) and disability income benefits (TTD) insurance arrangements are underwritten by AMP (“the insurer”) and outlined in a policy dated 7 May 2002 (amended by the variation of the Policy dates 1 July 2018) between the Trustee and the insurer. The purpose of the insurance policy is to protect the Plan against unexpectedly large payouts on the death or disablement of members.

Conclusion

I consider that the Plan’s current insurance arrangements are suitable.

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 Plan’s Shortfall Limit, determined by the Trustee on the basis of previous actuarial advice, is 100%.

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: Shortfall Limit in Superannuation Prudential Standard 160 dated July 2020;
- The investment strategy for defined benefit assets, particularly the overall benchmark exposure of 13% to “growth” assets;
- The results of this investigation regarding the extent to which the current and projected defined benefit Vested Benefits are not linked to the investment return on defined benefit assets (i.e. salary-based benefits) and the current and projected relativity between Vested Benefits and Minimum Requisite Benefits.

Based on the above, we recommend maintaining the current Shortfall Limit.

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.

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.

I therefore recommend that the progress of the Plan’s coverage of vested benefits be reviewed after each annual review to ascertain if an adjustment to the Employer contribution levels is required prior to the next statutory investigation.

The Trustee should also continue to monitor the “Notifiable Events” specified in the Plan’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 Plan is not in an unsatisfactory financial position; and
- The Plan 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 Plan's financial position is not unsatisfactory (or about to become unsatisfactory).

The Plan's assets are sufficient to fully cover the SG Minimum Benefits at 1 July 2021. Therefore the Plan is not considered to be technically insolvent.

Statements Required by SPS 160

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

- (a) The value of the Plan's assets as at 1 July 2021 was \$1,636,000. This value excludes assets held to meet the Operational Risk Financial Requirement.
- (b) In my opinion, the value of the liabilities of the Plan in respect of accrued benefits as at 1 July 2021 was \$1,609,000. Hence, I consider that the value of the assets at 1 July 2021 is adequate to meet the value of the accrued benefit liabilities of the Plan as at 1 July 2021. Taking into account the circumstances of the Plan, the details of the membership and the assets, the benefit structure of the Plan and the industry within which the Employer 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 Employer contributes 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 1 July 2024.

- (c) In my opinion, the value of the liabilities of the Plan in respect of vested benefits as at 1 July 2021 was \$1,320,000. Hence, I consider that the value of the assets at 1 July 2021 is adequate to meet the value of the vested benefit liabilities of the Plan as at 1 July 2021. Assuming that the Employer contributes 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 1 July 2024. Hence, I consider that the financial position of the Plan should not be treated as unsatisfactory as defined in SPS 160.
- (d) In my opinion, the value of the liabilities of the Plan in respect of the minimum benefits of the members of the Plan as at 1 July 2021 was \$966,000. Hence, the Plan was not technically insolvent at 1 July 2021.
- (e) A projection of the likely future financial position of the Plan over the 3-year period following 1 July 2021, based on what I consider to be reasonable expectations for the Plan 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) In respect of the 3-year period following 1 July 2021, I recommend that the Employer contribute to the Plan at least:

Period	Recommended contribution
From 1 July 2021	<ul style="list-style-type: none"> • 18.7% of member salaries (inclusive of 4.71% deemed member contributions); • Plus any additional Employer contributions agreed between the Employer and a members (e.g. additional salary sacrifice contributions); and • Plus \$45,000 per annum to meet expenses;

In addition to the contributions above, I recommended that the Employer pays a top-up contribution in the following scenarios:

- i. If a member exits the Plan, the Actuary should assess whether a top-up contribution is required.
 - ii. When a member reaches age 55 the funding position of the Plan should be assessed to see if additional contributions are necessary.
- (h) The Plan 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 1 July 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 1 July 2021.

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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 Employer who contributes to the Plan. The Employer 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 Plan's financial condition at a particular point in time, and projections of the Plan's estimated future financial position based on certain assumptions. It does not provide certainty in relation to a Plan's future financial condition or its ability to pay benefits in the future.

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

The Plan's future financial position and the recommended Employer contributions depend on a number of factors, including the amount of benefits the Plan 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 Plan'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 Plan'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, Plan 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 Plan experience will differ from the assumptions, decisions about benefit changes, investment policy, funding amounts, benefit security and/or 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 1 July 2024. At that time, the adequacy of the Employer contribution levels will be reassessed. Note that the monitoring process recommended may lead to an earlier reassessment ahead 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 expires on 26 April 2026).

The next **Benefit Certificate** is required following the expiry of the current Benefit Certificate (which expires 30 January 2026). 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.

Prepared by



Angela Hartl
Fellow of the Institute of Actuaries of Australia



James Ma
Fellow of the Institute of Actuaries of Australia

4 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.



Clement Cheung
Fellow of the Institute of Actuaries of Australia

Appendix A

Plan Design

Summary of Benefits

A simplified 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.

Members' Contributions (% of salary)	Deemed at a rate of 4% of salaries (i.e. 4.71% on a pre-tax basis)
Accrual Rate	17.5% for each year of membership
Final Average Salary (FAS)	<p>Average of members' annual salaries relating to the review dates which occur within 3 years either:</p> <ul style="list-style-type: none"> • Immediately prior to the Member's Normal Retirement Date; or • Immediately prior to the date of cessation of Service, if prior to the Normal Retirement Date.
Normal Retirement Age	60
Early Retirement Age	55
Member Account	Accumulation with interest of deemed member contributions
Member Voluntary Account	Accumulation with interest of voluntary member contributions, less tax (where applicable)
Surcharge Account	Accumulation with interest of any surcharge tax assessments
Discounted Accrued Retirement Benefits Factor	1% for each year in the period from the date the Member ceases to be in the Employer's Service to the date the Member attains age 55, with a maximum discount factor of 20%
Normal and Early Retirement Benefit	Accrual Rate x Membership x FAS; plus Member Voluntary Account less Surcharge Account

Late Retirement Benefit	The Normal Retirement Benefit together with any member and SG contributions made after the Normal Retirement Date, accumulated with interest
Death/Total and Permanent Disability Benefit	A lump sum calculated as if the member had retired at the Normal Retirement Date, but calculated based on Salary at the review date prior to death; plus Member Voluntary Account less Surcharge Account
Temporary Disability Income Benefit	A monthly income benefit equal to 1/12 of 12.5% of the amount of the member's TPD benefit, subject to a maximum of 1/12 of 75% of the member's annual salary prior to the date of disablement. The benefit is payable until the member reaches age 65, or earlier returns to work or is eligible for the TPD benefit.
Withdrawal Benefit	<p>i) Illness, Injury, Retrenchment:</p> <p>2.25 times Member Account, subject to a maximum of the Member's Discounted Accrued Retirement Benefit.</p> <p>plus Member Voluntary Account less Surcharge Account</p> <p>ii) Other circumstances:</p> <p>The aggregate of $(1+12.5\% * \text{Years of participation})$ times Member Account.</p> <p>plus Member Voluntary Account less Surcharge Account</p> <p>The amount determined shall be subjected to a maximum of withdrawal benefits calculated under Illness, Injury and Retrenchment.</p>

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

The table below indicates the material discretions available to the Trustee and Employer and the member options specified within the Plan's legal documents, to the extent that these affect benefits. The table also shows the general prevalence of the past exercise of discretions and the options chosen by the members. Please note that past exercises of discretions should not be viewed as precedents that would constrain any future decisions.

Trustee and Employer Discretions	
Description and Deed Reference	Historical Prevalence
The Employer has the discretion to increase the withdrawal benefits under other circumstances (ii) above, subjected to a maximum of withdrawal benefits due to illness, Injury and Retrenchment (i). Rule 14.1 (b)	Not applicable as all current members' voluntary resignation benefits are higher than the maximum withdrawal benefits due to illness, injury and retrenchment so resignation benefits are capped at the maximum (subjected to SG minimum benefit)
Member Options	
Description and Deed Reference	Historical Prevalence
Lump sum retirement benefits may be converted to a pension (Rule 9). The rate of pension is to be determined by the Trustees (based on advice of an actuary)	There are no members that have elected the pension option in the Plan

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 Plan'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

Data Provisions

To prepare this report, we have relied on financial and participant data provided by the Plan'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 Plan as provided by the Trustee. The Trustee is ultimately responsible for the validity, accuracy and comprehensiveness of this information. If the data or Plan 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.

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 Plan in respect of current membership are projected forward allowing for assumed future salary increases 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 (subject to underwriting restrictions)
Resignation:	based on the member's discounted accrued benefit multiple or relevant account balances at the investigation date.

The weighted average term of the accrued benefit liabilities is 4 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.

Appendix D

Information for AASB 1056 Purposes

Mines Rescue Stations Staff Category

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 Final Average Salary for all members at the current reporting date – FAS
- Increase in Salary over the period – Sal_inc
- Benefit payments over the period – Benefits
- Salary Assumption at the previous reporting date – Sal_(20xx-1)
- Investment return assumption at the previous reporting date – i_(20xx-1)

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

$$\text{PSL}_{30\text{June}(20xx)} = \text{PSL}_{30\text{June}(20xx-1)} \times (1 + i_{(20xx-1)}) \times (1 + \text{Sal_inc}) / (\text{Sal}_{(20xx-1)} + 0.175 \times \text{FAS} - \text{Benefits})$$

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). If one of the members leave over the reporting period, this method will not work and we can provide updated figures.

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