Sydney Grammar School Superannuation Plan

Actuarial Investigation as at 31 December 2021

Report date: 20 June 2022

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20 June 2022

NULIS Nominees (Australia) Ltd
Level 8, 347 Kent Street
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Attention: Mr W Odendaal

Re: Sydney Grammar School Superannuation Plan
Actuarial Investigation as at 31 December 2021

We are pleased to present the actuarial investigation of Sydney Grammar School Superannuation Plan ("the Plan"), a sub-plan in the Plum Division of the MLC Super Fund ("the Fund"). This report presents the results of the actuarial investigation of the Plan as at 31 December 2021.

Please call Diane Somerville on (02) 9322 7636 if you would like to discuss.

Yours sincerely,

Diane Somerville
Fellow of the Institute of Actuaries of Australia

Andrew Boal
Fellow of the Institute of Actuaries of Australia

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1 Executive summary

1.1 Introduction

NULIS Nominees (Australia) Ltd has requested that Deloitte Actuaries & Consultants Limited ("Deloitte") conduct an actuarial investigation of the Sydney Grammar School Superannuation Plan ("the Plan"). The Plan is a sub-plan in the Plum Division of the MLC Super Fund ("the Fund"), having been successor fund transferred from the Plum Superannuation Fund on 1 July 2016. This report presents the results of the actuarial investigation of the Plan as at 31 December 2021.

The purposes of this report is to:

- Examine the sufficiency of the assets in relation to members' accrued benefit entitlements at the valuation date;
- Determine the contribution rate required to be paid by Sydney Grammar School ("the School") after the valuation date;
- Satisfy the requirements of the Superannuation Industry (Supervision) Act and Superannuation Prudential Standard 160;
- Comment on any other matter considered relevant or as required under relevant Professional Standards of the Institute of Actuaries of Australia; and
- Comment and advise on any other matter considered relevant.

This report has been prepared by Diane Somerville and Andrew Boal, of Deloitte Actuaries & Consultants Limited, in accordance with the Professional Standards, Guidance Notes and Practice Guidelines (in particular Professional Standard 400) issued by the Institute of Actuaries of Australia.

1.2 Financial position

Superannuation Prudential Standard (SPS) 160 requires statements to be made in respect of two measures of the financial position of the Plan, these measures being related to the current and projected "vested benefits" and the present value of "accrued benefits" of members.

Funding levels for defined benefits

This investigation is concerned primarily with the valuation of the Plan's assets and liabilities in respect of members' defined benefits only. The value of accumulation member liabilities is directly related to the value of the underlying assets and is not exposed to the same funding risks as defined benefit liabilities. Therefore, the value of accumulation members' assets and liabilities, and the accumulation benefits of defined benefit members where the members have an option to select how such monies are invested, are excluded from this investigation, unless explicitly stated otherwise.

In considering the financial position it is therefore appropriate to simply look at the funding levels for defined benefits alone. In respect of the defined benefit liabilities, the funding ratios at 31 December 2021 are shown in the table below:

Funding Measure	Defined Benefit Assets ($m)	Defined Benefit Liabilities ($m)	Funding Ratio
Vested Benefits	44.593	36.561	122%
Value of Accrued Benefits[1]	44.593	37.548	119%

[1] Minimum of vested benefits at an individual member level have been applied.

Therefore, the assets backing defined benefits were sufficient to meet the total vested benefits and the total of the present value of accrued benefits for defined benefit members at the valuation date.

Events since 31 December 2021

In the period since 31 December 2021, investment markets have been weaker. Based on information provided by the Plan's administrator, the Plan's funding ratio for Vested Benefits (the Vested Benefits Index or VBI) fell slightly to 119% as at 31 March 2022, driven by a positive smoothed crediting rate applied to member accounts whilst the Plan assets suffered falls in investment returns in that quarter. Also, for the period between 31 March 2022 and 31 May 2022, the Plan's assets earned approximately -1.8%, which we expect will have resulted in the Vested Benefits Index falling slightly further but remaining at least at 115%.

We have considered the impacts of investment market movements since 31 December 2021 to the extent possible when considering our contribution recommendations. This is discussed further later in the report.

The financial position of the defined benefits section of the Plan is sensitive both to financial experience and to changes in the Plan's demographics over time. We therefore recommend continuation of quarterly reviews of the vested benefit coverage.

Superannuation guarantee and technical insolvency

The School's Superannuation Guarantee obligation is met in full for all members by the minimum benefits provided under the Plan. The required Benefit Certificate was issued on 12 December 2018 with effect from 1 October 2018 for a period of 5 years.

The current Funding and Solvency Certificate (issued on 12 December 2018) is effective from 1 October 2018. The purpose of the Funding and Solvency Certificate is to specify the required Employer contributions needed to fund the Minimum Requisite Benefits used to offset the Superannuation Guarantee Charge. Pursuant to the SIS Act, a superannuation plan is "technically solvent" if the net value of its assets exceeds the minimum Superannuation Guarantee benefits.

It is expected that a new Benefit Certificate and new Funding and Solvency Certificate will be issued following completion of this investigation.

At 31 December 2021, the Plan was solvent on this basis and, based on the assumptions in relation to vested benefits, we expect that an actuary will be able to certify the solvency of the Plan at all times during the three years to 31 December 2024.

Investments

The Trustee has developed formal objectives and a policy for the investment of the Plan's assets. These objectives and policy are summarised in the Product Disclosure Statement and other information available to employers and members.

Further, the Trustee has agreed the investment policy in respect of those assets which are designated to support the defined benefit liabilities. We note that in previous years the School and the Trustee considered changing the asset allocation to a more conservative basis but decided to leave the asset mix with a moderate allocation to growth assets.

This has benefited the Plan's financial position in recent times but does leave the Plan's funding position somewhat exposed to investment market volatility. It may be appropriate that the School again consider de-risking the investment strategy of the Plan whilst the funding buffer is in place.

Having said that, we believe that the objectives and policy are within a range of policies which would be considered as appropriate for the Plan given that the School and the Trustee have considered the risks involved.

Regulatory requirements

Paragraph 23 of SPS 160 requires certain information to be included in actuarial reports. A summary of this information is included in Appendix C to this report. The Trustee may choose to provide this summary to any members who request details of the actuarial valuation, although members are entitled to request a copy of the full report.

The Trustee has set the shortfall limit at a level of 97.8% for the Plan and we confirm that the VBI is in excess of the shortfall limit as at 31 December 2021 and in the period since. We recommend that the Trustee increase the shortfall limit to 100%, as we believe that a shortfall limit of 100% is appropriate given the employer contribution holiday recommendations in this report, the current and target asset allocation for the Plan and the nature of the liabilities.

Insurance

The valuation shows that the current insurance arrangements in respect of death and disability benefits are adequate for the defined benefits section of the Plan.

1.3 Recommendations

Previous investigation

The previous actuarial investigation was conducted as at 31 December 2018. The report recommended that the School contributes the following:

- From 1 January 2019 to 30 June 2019:
  - at the rate of at least 8% p.a. of defined benefit members’ Plan Salaries;
  - at the rate of 20% p.a. of the Special Benefit member’s salary; and
  - at the rate of 5.88% p.a. of Contributory Members’ salaries where the School meets a member’s contributions on their behalf; and
- From 1 July 2019 until completion of the 31 December 2021 actuarial investigation:
  - at the rate of at least 6% p.a. of defined benefit members’ Plan Salaries; and
  - at the rate of 5.88% p.a. of Contributory Members’ salaries where the School meets a member’s contributions on their behalf.

In addition, it was recommended that:

- the Plan's financial position is reviewed on a quarterly basis to monitor its financial position;
- the contribution arrangement is reviewed annually to ensure its continued suitability in providing for defined benefit members’ benefits; and
- these recommendations be reviewed where the Plan undergoes significant changes to its membership or benefit basis, or there is a substantial reduction in the value of the Plan's investment portfolio.

In addition, the School should continue to pay employer contributions (of at least the minimum Superannuation Guarantee level) for Accumulation Members.

Current investigation

The Plan's VBI has increased since the last valuation. Accordingly, looking at the overall total service funding position and keeping a longer-term view, there is scope to reduce the contribution rate slightly.

The coverage of the present value of accrued benefits is currently over 100% (119% at 31 December 2021). This suggests that the current level of assets is higher than the actuarial value of the benefits accrued by members up to the valuation date and therefore looking at the Total Service Contribution Rate seems a reasonable approach since it takes into account the current assets and therefore allows for the current surplus over the value of accrued benefits. The calculated longer-term cost of funding the members' benefits in relation to total service is 5.0% p.a. of salaries based on the financial position as at 31 December 2021, allowing for actual investment return experience to 31 May 2022.

We have also completed a number of VBI projections in section 7 to gain a better feel of the sensitivity of the VBI to investment markets and contribution rates.

Taking all of these factors into account, based on the approach and assumptions set out in this report, the recommended School contribution rate for defined benefit members is:

- From 1 January 2022 to 31 March 2022:
  - continue at the rate of at least 6% p.a. of defined benefit members' Plan Salaries; plus
  - at the rate of 5.88% p.a. of Contributory Members' salaries where the School meets a member's contributions on their behalf; and
- From 1 April 2022 until completion of the 31 December 2024 actuarial investigation:
  - at the rate of at least 0% p.a. (nil) of defined benefit members' Plan Salaries; plus
  - at the rate of 5.88% p.a. of Contributory Members' salaries where the School meets a member's contributions on their behalf.

If the School decides to commence an employer contribution holiday following consideration of this report, it is important that the School recognises and accepts the high likelihood that employer contributions will need to re-commence shortly after completion of the next triennial actuarial investigation, with the employer contribution rate from that time likely to be close to the long-term funding rate of 17.8% p.a. of salaries. As the number of defined benefit members falls over time due to the defined benefit Plan being closed to new members, the dollar amount of contributions is expected to fall, however the volatility of the contributions when expressed as a percentage of defined benefit members' Plan Salaries may increase.

In addition it is recommended that:

- the Plan's financial position is reviewed on a quarterly basis to monitor its financial position;
- the contribution arrangement is reviewed annually to ensure its continued suitability in providing for defined benefit members' benefits; and
- these recommendations be reviewed where the Plan undergoes significant changes to its membership or benefit basis, or there is a substantial reduction in the value of the Plan's investment portfolio.

The School should continue to pay employer contributions (of at least the minimum Superannuation Guarantee level) for Accumulation Members, in addition to any salary sacrifice contributions paid on a member's behalf.

Next valuation

- The next valuation is required to be held no later than as at 31 December 2024.

Reliances and Limitations

We have relied on the accuracy and completeness of all data and other information (qualitative, quantitative, written and verbal) provided to us for the purpose of this report. We have not independently verified or audited the data but we have reviewed it for general reasonableness and consistency. It should be noted that if any data or other information is inaccurate or incomplete, our advice may need to be revised.

This report has been prepared for the sole use of the Trustee and School for the purpose stated earlier. No other use of, or reference to, this report should be made without prior written consent from Deloitte, nor should the whole or part of this report be disclosed to any other person. The report should be considered as a whole. Members of Deloitte staff are available to answer any queries, and the reader should seek that advice before drawing conclusions on any issue in doubt.

Diane Somerville, FIAA
20 June 2022

Andrew Boal, FIAA

2 Background

2.1 History

The Plan commenced as a sub-plan of the Plum Superannuation Fund, a predecessor fund of the MLC Super Fund, on 1 December 2003 following the decision to wind-up the Sydney Grammar School Superannuation Fund (the "Previous Fund"). I understand all defined benefit members' benefit entitlements under the Previous Fund were transferred to the Plan. Subsequently, the Plum Superannuation Fund was transferred to the MLC Super Fund on a successor fund basis on 1 July 2016, and the Plan became a sub-plan in the Plum Division of the MLC Super Fund ("the Fund").

The School has advised the defined benefit section of the Plan is closed to new employees and all new employees joining the Plan are provided with accumulation benefits.

As a sub-plan of the MLC Super Fund, the Plan is a resident regulated fund and a complying fund for the purposes of the Superannuation Industry (Supervision) Act 1993. The Plan therefore qualifies for concessional tax treatment.

2.2 Governing documents

The MLC Super Fund was established under a Trust Deed dated 9 May 2016 (as amended from time to time). The members and assets of the Plum Superannuation Fund were transferred into the MLC Super Fund on a successor fund basis from 1 July 2016. The operation of the Plan is governed by the Trust Deed as subsequently amended and by the Participation Schedule dated 27 November 2003 (as amended) between the Employer and PFS Nominees Pty Limited as the trustee of the Plum Superannuation Fund, which was novated across to the Trustee as part of the successor fund transfer.

A summary of the main benefit provisions is included as Appendix A to this report.

2.3 Purpose of the investigation

Current legislation requires that an actuarial investigation be undertaken at least every three years. Where a defined benefit fund is paying defined benefit pensions, legislation requires an actuarial investigation to be undertaken annually, unless APRA determines that less frequent investigations (at intervals determined by APRA, between 1 year and 3 years) are permitted for that fund.

The purposes of this investigation are to:

- Examine the sufficiency of the assets in relation to members' accrued benefit entitlements at the valuation date;
- Determine the recommended employer contributions required after the valuation date;
- Satisfy the requirements of the Superannuation Industry (Supervision) Act and SPS 160;
- Comment on any other matter considered relevant or as required under relevant Professional Standards of the Institute of Actuaries of Australia; and
- Comment and advise on any other matter considered relevant.

Current legislation also requires that the investigation consider the solvency and financial position of the Plan, both as at the investigation date and during the ensuing three years.

2.4 Key risks

There are a number of risks relating to the operation of the Plan. The more significant financial risks for the Plan are:

- ***Investment risk***

  Investment risk (and reward) is borne by the Employer. The risk is that investment returns will be less than assumed and the Employer will need to increase contributions to offset this shortfall.

  For example, the sensitivity analysis shown in section 7.3 of this report estimated that if the assumed future investment return was reduced by 1% p.a. with no change to other assumptions, then the Plan's net surplus would fall by approximately $457,000.

  We note that the actual investment return achieved by the Plan in the future may vary (positively or negatively) from the rate assumed in this investigation by much more than the negative 1% p.a. in the above sensitivity scenario.

- ***Salary growth risk***

  Salary growth risk is borne by the Employer. This risk is that wages or salaries (on which future benefit amounts will be based) will increase more rapidly than anticipated, increasing benefit amounts and thereby requiring additional contributions from the Employer.

  For example, the impact of an additional 1% p.a. salary increase would be expected to result in the Plan's net surplus falling slightly by approximately $36,000. This is indicative of accumulation underpins applying for the projected benefits for many of the defined benefit members in the Plan, and therefore the liabilities are not overly sensitive to salary increases. This is also reflected in the sensitivity analysis in section 7.3 of this report.

- ***Liquidity risk***

  Liquidity risk is borne by the Employer. The expected average term of the defined benefit liabilities is approximately 5 years. As is the case with many closed defined benefit plans, it is possible that the benefit payments in coming years will exceed net contributions to the Plan. This means that there is a need for the Trustee to ensure that the Plan's investments provide a suitable level of liquidity to meet projected benefit payments.

  We note that the Plan's assets are invested in an investment option together with the assets of many other funds and members, both accumulation and defined benefit based. Therefore, we expect that the current investment policy will provide an adequate level of liquidity for the Plan.

- ***Legislative risk***

  Legislative risk is borne by the Employer. The risk is that legislative changes could be made which increase the cost of providing the defined benefits – for example, an increase in the rate of taxation on superannuation funds or an increase in the Superannuation Guarantee (SG) rate.

  Legislation has been passed to increase the SG rate from 10% to 12% progressively over the period from July 2021 to July 2025, with the next increase occurring with effect from July 2022. The benefits provided to active defined benefit members are subject to a minimum of the Minimum Requisite Benefits defined in the Plan's Benefit Certificate, which has been updated to reflect the SG rate increases. This may increase the benefits payable to some defined benefit members, and therefore increase the cost of providing the defined benefits.

The Risk Management Strategy and Risk Management Policy of the MLC Super Fund should identify the full range of risks faced by the Trustee in respect of the Fund as a whole and also in respect of its employer plans including the Plan.

2.5 Previous investigation

The previous actuarial investigation was conducted as at 31 December 2018 and was undertaken by Diane Somerville and Geoff McRae of Deloitte. The report (dated 7 June 2019) recommended that the School contributes:

- From 1 January 2019 to 30 June 2019:
  - at the rate of at least 8% p.a. of defined benefit members' Plan Salaries;
  - at the rate of 20% p.a. of the Special Benefit member's salary; and
  - at the rate of 5.88% p.a. of Contributory Members' salaries where the School meets a member's contributions on their behalf; and
- From 1 July 2019 until completion of the 31 December 2021 actuarial investigation:
  - at the rate of at least 6% p.a. of defined benefit members' Plan Salaries; and
  - at the rate of 5.88% p.a. of Contributory Members' salaries where the School meets a member's contributions on their behalf.

In addition it is recommended that:

- the Plan's financial position is reviewed on a quarterly basis to monitor its financial position;
- the contribution arrangement is reviewed annually to ensure its continued suitability in providing for defined benefit members' benefits; and
- these recommendations be reviewed where the Plan undergoes significant changes to its membership or benefit basis, or there is a substantial reduction in the value of the Plan's investment portfolio.

In addition, the School should continue to pay employer contributions (of at least the minimum Superannuation Guarantee level) for Accumulation Members.

2.6 APRA Prudential Standards

Superannuation Prudential Standard 160 (Defined Benefit Matters) ("SPS 160") deals with a range of matters affecting defined benefit funds.

SPS 160 requires a Registered Superannuation Entity ("RSE") licensee (that is, a trustee) of a defined benefit fund to set a shortfall limit, and to determine and implement a monitoring process to detect when the fund has, or may have, breached the shortfall and/or moved into an unsatisfactory financial position. If the shortfall limit is, or may be, breached, SPS 160 outlines a range of actions that will need to be performed, which may include conducting an actuarial investigation.

The Trustee has set the shortfall limit at a level of 97.8% for the Plan and we confirm that the VBI is in excess of the shortfall limit as at 31 December 2021 and in the period since. We recommend that the Trustee increase the shortfall limit to 100%, as we believe that a shortfall limit of 100% is appropriate given the employer contribution holiday recommendations in this report, the current and target asset allocation for the Plan and the nature of the liabilities.

As at 31 December 2021, the Plan was in a satisfactory financial position. It is expected that the Plan will maintain a satisfactory financial position over the period to 31 December 2024. Further details regarding future projections of the Plan's financial position are shown in Section 7 of this report.

3 Data

3.1 Current data

We have obtained details of the membership of the Plan at 31 December 2021 from the administrator of the Plan, MLC Wealth Limited ("the Administrator"). The details are summarised below.

At the valuation date, there were 45 active defined benefit members with total annual salaries of $8.245m.

Category	Number of active members	Average Age (years)	Average Service (years)	Total Annual Salaries ($)	Average Annual Salary ($)
Defined benefit	45	55.7	24.0	8,245,425	183,232

We have reconciled the movements in the defined benefit membership between 31 December 2018 and 31 December 2021 as follows:

Category	Number of members at 31 December 2018	Exits during period	Number of members at 31 December 2021
Defined benefit	57	12	45

Approximately 21% of members have exited the Plan since 31 December 2018.

We placed checks on the data to ensure that all dates, salaries and other amounts were reasonable. We are satisfied that the data provided is reasonable and correct.

4 Assets

4.1 Asset information

Assets and cash flow information was provided to us by the Administrator, MLC Wealth Limited, for the purposes of this investigation.

We were provided with the value of assets held as at 31 December 2021 and a reconciliation of cash flows from the previous investigation date (31 December 2018) up to 31 December 2021.

As the Plan is a sub-plan in the Plum Division of the MLC Super Fund, a separate set of financial statements is not prepared for the Plan. The asset information for the Plan is therefore not separately audited.

We are satisfied that the information provided appears to be correct based on our knowledge of the Plan.

4.2 Net market value

The assets backing defined benefit members are invested in the Plum Pre-Mixed Moderate (Pre-mixed Moderate) Portfolio. The net market value of these assets was advised to be $44,592,680 as at 31 December 2021.

We have reviewed the asset and transaction details provided by the Administrator and we are satisfied they are appropriate for use in this investigation.

4.3 Investment strategy

The general aim of the investment strategy of the Plan is to achieve capital and income growth, while minimising the risk that members' benefits will not be adequately covered, through asset diversification and the use of professional fund managers.

The defined benefit members' monies are invested in the Pre-mixed Moderate portfolio.

The benchmark asset allocation of the Pre-mixed Moderate option includes 66% ‘growth’ assets (equities, property, private markets and growth alternatives) and 34% ‘defensive’ or non growth assets (fixed interest, defensive alternatives and cash). It is shown in the table below.

Asset Class	Benchmark Allocation (%)
Equities	53%
Fixed interest	19%
Property	6%
Private markets	5%
Growth alternatives	2%
Infrastructure	6%
Defensive alternatives	2%
Cash	7%
Total	**100%**

Based on information received from the administrator we understand that the Plan’s actual allocation was very close to the benchmark allocation as at 31 December 2021.

The School has previously considered 'de-risking' the investment strategy of the Plan to be less heavily invested in growth assets but, having understood the risks involved, they decided to leave the allocation unchanged. Leaving the strategy unchanged has benefited the Plan's financial position in recent times but does leave the Plan's funding position somewhat exposed to investment market volatility.

Having said that, the allocation of the Plan's assets that are invested in "growth" assets is similar to other superannuation funds of a similar size, and we believe that the objectives and policy are within a range of policies which would be considered as appropriate for the Plan given that the School and the Trustee have considered the risks involved.

4.4 Investment performance

Over the 3 years to 31 December 2021, the rates of return earned on the Plan's assets net of tax and investment management fees were estimated to be:

Year	Earning rate (% p.a.)
2021	15.0%
2020	2.8%
2019	14.4%
Average annual rate	**10.6%**

In the period from 31 December 2021 to 31 March 2022, the Plan earned -1.0% for the quarter, and in the period between 31 March 2022 and 31 May 2022, the Pre-mixed Moderate portfolio earned -1.8%. That is, the total return between 31 December 2021 and 31 May 2022 was approximately -2.8%. We consider the impacts of performance in the period since 31 December 2021 on our contribution recommendations later in this report.

4.5 Crediting rate policy

The Plan's approach to crediting interest rates to member's accounts is to use a three-year average approach subject to a minimum of nil. This is referred to as the "smoothing" policy. The interim rate is based on a similar approach but using the current government bond yield for the final quarter of the three year period.

During the period to 31 December 2021, the crediting rates applied to member accounts in the Plan were approximately:

Year	Earning rate (% p.a.)
2021	8.5%
2020	4.7%
2019	8.0%
Average annual rate	**7.0%**

Over the three years to December 2021, the average rate of interest credited to members' accounts was approximately 7.0% p.a. compared to actual earnings of 10.6% pa. Hence, the Plan has credited less than it has earned over the inter-valuation period and this has had a positive effect on the financial position of the Plan. However, in the period since 31 December 2021 up to the date of issuing this report, the crediting rate applied to member accounts exceeds the actual investment earnings on Plan assets, and therefore this has had a negative effect on the financial position of the Plan due to post-valuation date experience.

The smoothing method adopted will eventually see average crediting rates increasing in line with actual Plan earnings rates over time. However variations in the level of member balances over time may mean that the mismatch in crediting and earning rates which has occurred may have a real, albeit small, financial effect on the Plan.

We confirm the Plan's current approach to crediting interest to defined benefit member's account balances is appropriate for the Plan at this time.

4.6 Nature of liabilities

The defined benefit liabilities of the Plan primarily reflect a combination of salary growth, member service and movements, the aging of the workforce, and the declared crediting rates. Also important is the level of the minimum Superannuation Guarantee accounts of members. The supporting assets however depend on:

- The amount of employer and member contributions; and
- The level of investment returns over time.

Most critical is the fact that the defined benefit liabilities are not directly linked to the investment returns.

In this case, it is the employer who bears the net effect of investment risk. The level of employer contributions depends in part on the level of investment returns achieved.

Note that in the case of member accumulation accounts, there is a direct link between the investment return and the value of the member account, and hence the employer does not carry investment risk in respect of those accounts, other than due to the operation of the crediting rate policy.

An investment strategy that is framed to take a long term view will often adopt relatively high levels of growth assets (property and equity investments) in order to:

- Secure attractive long term investment returns; and
- Provide an opportunity for capital appreciation and dividend growth, which gives some protection against inflation (as benefits are linked to salary growth which is also influenced by inflation).

Historically, growth assets have provided higher investment returns over medium to longer time periods than defensive assets (bonds and cash). However, these returns have also been more volatile exposing the Plan to a greater risk of a fall in the value of assets, as was experienced during the Global Financial Crisis.

Some funds hold a reserve as a buffer against the likely fluctuation in asset values. The size of the required reserve will depend on the degree to which the employer is willing and able to accept short term variations in contributions as part of underwriting the defined benefits of the fund.

The concern about the volatility in asset values has led some companies to adopt more conservative investment policies. While this may reduce short term fluctuations in asset values, it is also likely to reduce long term returns and hence result in increased employer contributions in the long term.

In summary, a balance needs to be achieved between these short term and long term considerations in funding the defined benefit liabilities.

The valuation report assumes the current investment strategy will be retained by the Trustee in respect of defined benefit liabilities. We confirm that, in our opinion, the current investment strategy is appropriate for the long term, provided that the School recognises and accepts the potential variability in returns and the resulting impact on contribution requirements.

5 Valuation method and assumptions

5.1 The valuation process

To carry out an actuarial valuation, it is necessary to decide on:

- The funding method to be adopted;
- The value of the assets for the purposes of long term assessment; and
- The assumptions as to the factors which will affect the cost of the benefits to be provided by the Plan in the future.

5.1.1 Funding method

A funding method is a systematic basis for meeting the cost of benefits over the years of operation of the Plan. This valuation was conducted using the "Attained Age Normal" funding method. The previous valuation was also conducted using this method.

This method separately identifies the School contribution rate required to meet the cost of providing current members with benefits in respect of:

- future membership of the Plan (the "Future Service Contribution Rate" or FSCR); and
- any difference between value of members' benefits in respect of past membership (Past Service Liability) and the Plan assets (Past Service surplus or deficit)

Where a Past Service surplus exists at the valuation date – then the FSCR can be decreased. Conversely, where a Past Service deficit exists at the valuation date – then the FSCR can be increased.

In the case of the Plan, there is a Past Service surplus as assets are higher than the Past Service Liability at the valuation date. Where appropriate an adjustment can be overlayed on the calculated FSCR to reflect the individual circumstances of the Plan.

In addition, for this valuation we have adopted a target of 100% of the members' vested benefits, consistent with the requirements of SPS 160.

Given the Plan is closed to new defined benefit members I believe the Attained Age Normal Method is an appropriate method to adopt for this investigation. It was used here because it provides a future contribution rate that:

- is relatively simple to understand;
- is relatively stable over time; and
- limits the retention of excessive assets within the Plan.

The important point is that there is a direct and transparent link between School contributions and the security afforded to member benefits by the accumulated assets held in the Plan on their behalf. From the School's perspective there is greater clarity about the logical underpinning behind the contribution recommendation, the Plan's current financial position, and the Plan's financial objectives.

The choice of method does not directly affect the cost of benefits provided by the Plan, which depends upon the Plan's actual experience in future years. All funding methods are expected to produce the same total cost of benefits with the choice of method determining the "pace" at which such costs are met by the School.

5.1.2 Value of assets

For the purposes of this valuation, we have used an asset value of $44.593m as at 31 December 2021. We are satisfied that this value is appropriate.

5.2 Plan experience

It is important when setting the valuation assumptions to examine the past experience of the Plan to see whether the previous assumptions have been borne out in practice. A summary of the major items of experience over the period to the investigation date is given in the following paragraphs.

5.2.1 Financial assumptions

5.2.1.1 Investment return

Over the period since the previous investigation, the Plan earned in the order of 10.6% p.a. compared to the assumption in the previous valuation of 6.0% p.a. This has had a positive effect on the financial position of the Plan.

For this valuation we have assumed long term future investment returns of 6.0% p.a. (net of tax and investment management fees), given the current economic environment of low interest rates. This assumption takes into account the investment strategy of the Trustee with respect to assets supporting the defined benefit liabilities. This rate reflects our current long term earnings expectations of the major asset classes in which the defined benefit assets of the Plan are invested.

5.2.1.2 Salary increases

Over the period covered by this report, overall salary increases have been approximately 2.25% p.a. for defined benefit members who were in the Plan at both 31 December 2018 and 31 December 2021. This is lower than the 4.0% p.a. assumed in the 31 December 2018 valuation. This has had a positive effect on the financial position of the Plan.

Based on discussions with the School on what level of increase is factored into budget planning over the foreseeable outlook, we have slightly reduced the salary inflation assumption to 3.5% per annum. This is consistent with other organisations in a similar industry.

5.2.1.3 Net real return

The difference between the level of investment returns and salary increases is important as it links the growth in assets to the growth in salary-related liabilities.

Over the investigation period, the difference between the actual investment return and the rate of salary growth has been in the order of 8.3% per annum. The "gap" assumed in the 31 December 2018 valuation was 2.0% per annum. Since this is lower than the actual "gap", the combined effect of the Plan's investment and salary experience has had a positive effect overall on the financial position of the Plan.

This impact is somewhat reduced as the Plan's crediting rate of interest applied to member accounts is a smoothed rate based on the average of earnings over the last three years.

The "gap" between the assumed rate of future investment earnings and the assumed rate of future salary increases in the long-term, i.e. the real rate of return on invested assets, in this investigation is 2.5% p.a., which is higher than the 2.0% gap assumed in the previous investigation.

5.2.2 Non financial assumptions

Considering the size of the membership, a full analysis of the experience in respect of the rates at which members left service due to retirement, resignation, death, or total and permanent disablement (TPD) would not produce statistically credible results.

For the purposes of this valuation, we have not undertaken a detailed analysis of decrement experience over the period from 1 January 2019 to 31 December 2021. The size of the membership does not allow enough data to conduct a meaningful statistical analysis.

However, we have instead conducted a simplified experience analysis by count, looking at the actual numbers of exits occurred in the three years ended 31 December 2021 compared to the numbers expected under the actuarial basis adopted for the 31 December 2018 valuation, for each decrement type.

The following table shows a comparison of actual exits versus those expected under the valuation basis over the three years ended 31 December 2021:

Decrement Type	Actual	Expected	Difference (A-E)
Withdrawal	1	0.6	0.4
Retirement	11	13.9	(2.9)
Total	**12**	**14.5**	**(2.5)**

This table shows that actual experience is slightly lower than that expected. Given the size of the Plan, this difference is not material. Accordingly, we have retained the same retirement assumptions and withdrawal assumptions as those used in the 2018 valuation.

Details of the demographic assumptions used are set out in Appendix B.

5.2.3 Expenses

The investment earnings rate is assumed to be net of investment expenses. However, an allowance for the cost of administration and insurance expenses is required.

At the previous investigation an assumption of 2.5% of salaries was used which was based on the actual experience over the 3 years to 31 December 2018. Over the 3 years to 31 December 2021, the cost of insurance and admin expenses was 2.6% p.a. of members' salaries so has had a slight negative impact on the financial position of the Plan.

As the size of the Plan continues to run down, it is likely that this allowance may need to be increased (as a percentage of defined benefit salaries) in future investigations. Accordingly, we have increased the allowance for administration and insurance expenses to 3.0% p.a. of salaries for the purposes of this investigation.

5.2.4 Insurance

Details of the Plan's group insurance arrangements in respect of death and disablement benefits are included in Section 8.

5.2.5 Taxation

The Plan is a "regulated superannuation fund" and is governed by the regulations of the Superannuation Industry (Supervision) Act 1993. We have assumed that the current tax regime will continue and that the tax rate presently applying to the Fund will be maintained in future i.e. that the Fund will remain a regulated and complying fund under SIS and the Tax Act respectively and that a concessional tax rate of 15% will apply to net deductible contributions and investment earnings.

We note the Division 293 taxes for high income earners are an individual's responsibility and are not expected to have any material impact on the results of the investigation and therefore have not been allowed for.

6 Solvency and funding measures

SPS 160 requires statements to be made in respect of two measures of the financial position of the Plan, these measures being related to the current and projected (i.e. in three years' time) "vested benefits" and the present value of "accrued benefits" of members.

6.1 Vested Benefits

"Vested benefits" are benefits that would be paid if all members voluntarily left service. The following table shows the progression of the vested benefits position of the defined benefit section of the Plan as at 31 December 2021 compared to that at the previous valuation date (31 December 2018):

	31 December 2018	31 December 2021
Value of assets ($m)	38.881	44.593
Vested benefits ($m)	34.381	36.561
Vested Benefits Index (VBI)	**113%**	**122%**

The Vested Benefits Index (VBI) is the ratio of the market value of the Plan's assets to the vested benefits. As shown above, at 31 December 2021 the VBI was 122%. In comparison, the VBI at 31 December 2018 was 113%. The improvement in the VBI over the inter-valuation period is largely due to higher than expected investment returns, crediting rates being lower than actual returns, actual salary increases being less than expected; partially offset by actual employer contributions being lower than the future service contribution rate over the inter-valuation period.

The assets and vested benefits at 31 December 2021 above exclude $11.1m of voluntary accumulation account balances in respect of defined benefit members.

6.2 Accrued Benefits Index

An indication of the funding status of the Plan is also given by the ratio of the value of the Plan's assets to the present value of all benefits accrued at the investigation date (subject to a minimum of the member's leaving service benefit, otherwise known as vested benefits). The term "Accrued Benefits" is used in Australian Accounting Standard AAB 1056 and is alternatively referred to as the past service liability or the actuarial value of benefits.

The value placed on the Accrued Benefits is calculated using the actuarial assumptions set out in Appendix B. It represents the value in today's dollars of future benefits based on membership completed to the investigation date, allowing for future salary increases, investment earnings and expected incidence of benefit payments. For this valuation, each member's accrued benefit has been made subject to a minimum of the member's vested benefit.

A fully secured position is represented by a ratio of 100%. At this level, if the Plan were closed to new entrants and no further benefits were allowed to accrue to current members then assets would be expected to be sufficient to meet all future benefit payments as and when they fall due if the actuarial assumptions were borne out in practice.

The following table shows the progression of the Accrued Benefits position of the Plan as at 31 December 2021 compared to that at 31 December 2018:

	31 December 2018	31 December 2021
Value of assets ($m)	38.881	44.593
Accrued benefits[1] ($m)	35.802	37.548
Accrued Benefits Index (ABI)	**109%**	**119%**

[1] Minimum of vested benefits at an individual member level have been applied.

The Accrued Benefits Index (ABI) is the ratio of the market value of the Plan's assets to the accrued benefits. As shown above, at 31 December 2018 the ABI was 109%. In comparison, the ABI at 31 December 2021 was 119%, representing an increase in the accrued benefit coverage.

The increase in the Accrued Benefits Index over the inter-valuation period is largely due to higher than expected investment returns, crediting rates being lower than actual returns, actual salary increases being less than expected; partially offset by employer contributions paid being lower than the future service contribution rate over the inter-valuation period.

We note that the value of accrued benefits before application of the vested benefits minimum was $37.341 million as at 31 December 2021, which would have resulted in an Accrued Benefits Index (before vested benefits minimum) of 119%.

The assets and accrued benefits at 31 December 2021 above exclude $11.1m of voluntary accumulation account balances.

6.3 Minimum Requisite Benefits

Another test of the adequacy of the Plan's assets relates to the benefits which the Plan must provide in order to satisfy the Superannuation Guarantee requirements. These benefits are termed Minimum Requisite Benefits and are defined in the Plan's Benefit Certificate. As the Minimum Requisite Benefits for each member is less than or equal to the member's vested benefit, it is clear that the assets comfortably cover the total Minimum Requisite Benefits.

The following table shows the progression of the Minimum Requisite Benefits Index of the defined benefit section of the Plan as at 31 December 2021 compared to that at the previous valuation date (31 December 2018):

	31 December 2018	31 December 2021
Value of assets ($m)	38.881	44.593
Minimum Requisite Benefits ($m)	23.031	26.602
Minimum Requisite Benefits Index (MRBI)	**169%**	**168%**

The assets and Minimum Requisite Benefits at 31 December 2021 exclude $11.1m of voluntary accumulation account balances.

At 31 December 2021, the ratio of defined benefit assets to defined benefit Minimum Requisite Benefits was 168%, compared to 169% at 31 December 2018.

6.4 Termination Benefits

In the event of Plan termination, there are no guaranteed benefits, and existing members are entitled to their actuarial reserve as determined by the Actuary. Therefore the value of the Plan's assets is, by definition, sufficient to meet members' benefits on termination.

Clause 7.5 of Schedule 2 (Plum Division) of the MLC Super Fund Trust Deed provides that on termination of the Plan the Trustee must apply the Plan assets in the following order of priority:

1. Meet all costs, expenses and liabilities which have occurred or are likely to occur (other than benefits),
2. Meet Plan benefits which have commenced payment or become payable before the termination date,
3. Pay to each accumulation member the Member's Account Balances and to each defined benefit member the amount which the Actuary determines has accrued in respect of the member. If the assets are insufficient to meet these amounts, then all benefits are reduced proportionately.
4. Pay any remaining balance to the participating employers in the proportions determined by the Trustee unless otherwise requested by the employer.

Thus there is no prescribed benefit on Plan termination and there is no liability on the employer for additional amounts other than in respect of contributions unpaid or owing to the date of termination.

6.5 Events since 31 December 2021

In the period since 31 December 2021, investment markets have been weaker. Based on information provided by the Plan's administrator, the Plan's funding ratio for Vested Benefits (the Vested Benefits Index or VBI) fell slightly to 119% as at 31 March 2022, driven by a positive smoothed crediting rate applied to member accounts whilst the Plan assets suffered falls in investment returns in that quarter. Also, for the period between 31 March 2022 and 31 May 2022, the Plan's assets earned approximately -1.8%, which we expect will have resulted in the Vested Benefits Index falling slightly further but remaining at least at 115%.

Although it is important not to over-react to short term market movements, we have allowed for an estimate of recent market movements based on available information in determining the contribution recommendations in the following section.

6.6 Summary of total liabilities

The following table provides a summary of the total liabilities in the Plan, for both defined benefit members and accumulation members, as at 31 December 2021.

	Defined benefit members $'000	Accumulation members $'000	Total $'000
***Accrued benefits* [1]**			
Defined benefit interests	37,341	-	37,341
Defined contribution interests	11,079	18,372	29,451
Total interests	**48,420**	**18,372**	**66,792**
Vested benefits			
Defined benefit interests	36,561	-	36,561
Defined contribution interests	11,079	18,372	29,451
Total interests	**47,640**	**18,372**	**66,012**
Minimum benefits			
Defined benefit interests	26,602	-	26,602
Defined contribution interests	11,079	18,372	29,451
Total interests	**37,681**	**18,372**	**56,053**

1. For consistency with AASB 1056, the accrued benefits in this table have not been subject to a minimum of vested benefits. This approach is in accordance with Practice Guideline 499.06 issued by the Actuaries Institute.

7 Valuation results

7.1 Introduction

At the most basic level, the key objective of our contribution recommendations is to maintain the VBI above 100%.

The Plan's Vested Benefits Index (VBI) was 122% at 31 December 2021 and 119% at 31 March 2022. The continued strong VBI in the Plan since the previous investigation does allow some flexibility to reduce contributions from their current levels. However, based on the Plan's current asset mix (which has a 66% allocation to 'growth' assets), the Plan's VBI is exposed to investment markets and just as the VBI has increased over the inter-valuation period and then decreased over the period to 31 March 2022, it could just as quickly rise or fall again. This suggests that a longer term view is appropriate when recommending contribution rates.

The coverage of the present value of accrued benefits is currently over 100% (119% at 31 December 2021). This suggests that the current level of assets is higher than the actuarial value of the benefits accrued by members up to the valuation date and therefore it may be appropriate to reduce future contributions below the future service contribution rate.

In the next few sections, we calculate the cost of funding these future service benefits and, to provide greater context on the variability of contributions, consider the estimated progression of the VBI over the next 5 years on a number of different scenarios.

7.2 Long term funding rate

The results of the valuation of the Plan on a "going concern" basis are set out below. For this purpose, the value of all future benefit payments is determined using the assumptions described in Appendix B of this report.

Specifically, we show:

- The Employer Additional Contribution Rate which represents the contribution rate required to fully amortise any current deficit, arising from past service, over members' future periods of Plan membership
- The Employer Normal Contribution Rate which represents the cost of future accruing benefits, factoring in future member contributions and administration/other expenses.

The following table shows the long term funding rate calculation of the Plan:

31 December 2021	($'000)
Future Service Liabilities	7,576
Future insurance and admin expenses	1,296
Future Member Contributions (5.0% of defined benefit members' salaries)	(2,160)
Total Future Net Liabilities	6,712
Present value of 1% of future salaries	432
Employer normal contribution rate – future service (after 15% contributions tax)	**17.8%**
Past Service Liabilities (after VB minimum)	37,548
Assets	44,593
Past Service Liabilities – Assets	(7,045)
Present value of 1% of future salaries	432
Employer additional contribution rate (after 15% contributions tax)	**(19.2%)**

The future service contribution rate (which does not allow for any surplus/deficit in respect of past service benefits) is 17.8% after tax and expenses. However, as at 31 December 2021, available assets were $7,045,000 greater than the value of accrued defined benefit liabilities.

However, allowing for the weakening of investment markets since 31 December 2021, and the operation of the Plan's crediting rate methodology, we estimate that the excess of assets over accrued benefits will have fallen to roughly $4.7 million at 31 May 2022.

Adjustment for post-valuation events	($'000)
Employer normal contribution rate – future service (after 15% contributions tax) ***from above***	**17.8%**
Past Service Liabilities – Assets: Estimate at 31 May 2022	(4,700)
Present value of 1% of future salaries	432
Employer additional contribution rate (after 15% contributions tax): Updated Estimate	**(12.8%)**
Required employer contribution rate (after 15% contributions tax)	**5.0%**

This allows for a reduction in the required long-term contribution rate to about 5.0% per annum of defined benefit members' salaries. This rate represents the average long-term Employer contribution rates required to ensure sufficient assets are accumulated in the Plan to meet the cost of the Plan members' defined benefits in respect of past and future years of Plan membership based on the assumptions in this report.

Alternatively, the School could reduce its employer contributions to as low as nil (0%) for the period until completion of the next actuarial investigation, at which time the contribution recommendations would be re-assessed. If so, the School would need to be cognisant that it is likely that employer contributions will need to re-commence at a future date, if actual experience is in line with expectations for the period since 31 May 2022.

In addition to this longer term view of the cost of funding benefits, given the focus of SPS 160 is to maintain full coverage of the vested benefits (i.e. VBI of at least 100%) whenever possible, we set out in section 7.4 below a number of VBI projections over the next 5 years, which indicate that a nil employer contribution rate is expected to maintain the Plan's VBI of at least 100% over the next 5 years.

7.3 Sensitivities

We have calculated the actuarial surplus of the Plan, assuming future investment returns of 5.0% p.a. (net of tax) instead of 6.0% p.a. (net of tax) with other assumptions unchanged.

	Value of assets ($m)	Accrued benefits ($m)	Accrued Benefits Index (ABI)
5.0% discount rate	44.593	38.005	117%

On this basis, the Plan's net surplus falls by approximately $457,000 and the Accrued Benefits Index drops by approximately 2%.

We have also calculated the actuarial surplus of the Plan, assuming future investment returns of 6.0% p.a. (net of tax) and salary assumption of 4.5% p.a. instead of 3.5% p.a. with other assumptions unchanged.

	Value of assets ($m)	Accrued benefits ($m)	Accrued Benefits Index (ABI)
6.0% discount rate and 4.5% salary increase	44.593	37.584	119%

On this basis, the Plan's net surplus falls slightly by approximately $36,000, and the Accrued Benefits Index remains 119% (rounded to the nearest percentage). This is indicative of accumulation underpins applying for the projected benefits for many of the defined benefit members in the Plan, and therefore the liabilities are not as sensitive to salary increases.

The variations selected in the above sensitivity analyses do not indicate upper or lower bounds of all possible outcomes.

7.4 Funding projections

We have projected the build-up of the defined benefit assets over the next five years and compared the assets to the projected levels of the vested benefits on a number of scenarios.

These projections have been performed using the actuarial assumptions contained in section 5.

The tables demonstrate an important point in that the Plan is quite 'leveraged' as are most defined benefit plans that are closed to new entrants and winding down. By this we mean that every 1% of vested benefits equates to around 4.3% of salaries. After grossing up for 15% contributions tax, this means that roughly every 1% of VBI above 100% equates to an approximate 5.1% reduction in contributions for 1 year to keep the VBI at 100%. Conversely, every 1% fall in assets requires an additional contribution of 6.0% of salaries to make good.

The first projection shows the estimated VBI progression over the next 5 years assuming the starting VBI of 119% at 31 March 2022 and the current 6.0% level of recommended contributions continues, allowing for the weak investment returns over the period ended 31 May 2022.

Projection 1: 119% starting VBI at March 2022, 6.0% contributions continue and investment return of 6.0% pa

Projected Date	No. members	Salaries $000s	Contribution rate	Employer contributions[1] $000s	Projected DB Assets $000s	Projected DB Vested Benefits $000s	Projected DB VBI
31 December 2021 (actual)	45	8,245			44,593	36,561	122%
31 March 2022 (actual)	42	7,969			41,114	34,540	119%
31 December 2022[2]	39	7,297	6.0%	343	39,008	33,970	115%
31 December 2023	34	6,621	6.0%	418	36,735	32,540	113%
31 December 2024	30	6,064	6.0%	380	34,997	31,621	111%
31 December 2025	25	5,248	6.0%	339	31,131	28,451	109%
31 December 2026	21	4,564	6.0%	294	28,127	25,983	108%

1. Excludes member contributions made by the School on behalf of the members
2. Allows for actual investment returns earned in the period to 31 May 2022

The table shows that the VBI gradually reduces over the next 5 years assuming experience is in line with assumptions based on the current recommended contributions level of 6.0% p.a. of salaries, but the VBI remains comfortably over 100%. This shows that the current contribution recommendation of 6% p.a. is a reasonable balance between maintaining a buffer above a 100% VBI to avoid large contribution 'top-ups' in times of market downturn, and not building up an unnecessarily high level of surplus as the Plan's membership continues to reduce.

As an alternative, to give an indication of the sensitivity of the VBI to contribution rates, we have also projected the financial position of the Plan if employer contributions are reduced to 4.0% or 0.0% (i.e. nil) of defined benefit members' Plan salaries from 1 April 2022, and assuming that experience is in line with the valuation assumptions. See Projection 2 and Projection 3 respectively below.

Projection 2: 119% starting VBI at March 2022, 4.0% contributions from 1 April 2022 and investment return of 6.0% pa

Projected Date	No. members	Salaries $000s	Contribution rate	Employer contributions[1] $000s	Projected DB Assets $000s	Projected DB Vested Benefits $000s	Projected DB VBI
31 December 2021 (actual)	45	8,245			44,593	36,561	122%
31 March 2022 (actual)	42	7,969			41,114	34,540	119%
31 December 2022[2]	39	7,297	4.0%	229	38,911	33,970	115%
31 December 2023	34	6,621	4.0%	278	36,510	32,540	112%
31 December 2024	30	6,064	4.0%	254	34,648	31,621	110%
31 December 2025	25	5,248	4.0%	226	30,662	28,451	108%
31 December 2026	21	4,564	4.0%	196	27,544	25,983	106%

1. Excludes member contributions made by the School on behalf of the members
2. Allows for actual investment returns earned in the period to 31 May 2022

This table shows that the VBI reduces over the next 5 years assuming experience is in line with assumptions if the employer contributions are reduced to 4.0% of defined benefit member salaries. Compared to the first projection, the VBI will reduce more quickly over the next five years, but is expected to remain above 100% over that period if actual experience is consistent with that assumed.

Projection 3: 119% starting VBI at March 2022, 0% contributions from 1 April 2022 and investment return of 6.0% pa

Projected Date	No. members	Salaries $000s	Contribution rate	Employer contributions[1] $000s	Projected DB Assets $000s	Projected DB Vested Benefits $000s	Projected DB VBI
31 December 2021 (actual)	45	8,245			44,593	36,561	122%
31 March 2022 (actual)	42	7,969			41,114	34,540	119%
31 December 2022[2]	39	7,297	0%	-	38,716	33,970	114%
31 December 2023	34	6,621	0%	-	36,060	32,540	111%
31 December 2024	30	6,064	0%	-	33,949	31,621	107%
31 December 2025	25	5,248	0%	-	29,723	28,451	104%
31 December 2026	21	4,564	0%	-	26,378	25,983	102%

1. Excludes member contributions made by the School on behalf of the members
2. Allows for actual investment returns earned in the period to 31 May 2022

The above table shows that the VBI reduces more quickly over the next 5 years assuming experience is in line with assumptions if the employer commences an immediate contribution holiday. On this basis, it is highly likely that employer contributions will need to re-commence shortly after the next triennial actuarial investigation is completed.

To give an indication of the sensitivity of the VBI to investment returns, we also considered the progression of the VBI if investment returns were 1% p.a. lower at 5.0% p.a. and employer contributions are based on current recommendations.

Projection 4: 119% starting VBI at March 2022, 6.0% contributions continue, with investment return of 5.0% pa.

Projected Date	No. members	Salaries $000s	Contribution rate	Employer contributions[1] $000s	Projected DB Assets $000s	Projected DB Vested Benefits $000s	Projected DB VBI
31 December 2021 (actual)	45	8,245			44,593	36,561	122%
31 March 2022 (actual)	42	7,969			41,114	34,540	119%
31 December 2022[2]	39	7,297	6.0%	343	38,789	33,708	115%
31 December 2023	34	6,621	6.0%	418	36,149	32,055	113%
31 December 2024	30	6,064	6.0%	380	34,067	30,943	110%
31 December 2025	25	5,248	6.0%	339	29,922	27,670	108%
31 December 2026	21	4,564	6.0%	294	26,666	25,110	106%

1. Excludes member contributions made by the School on behalf of the members
2. Allows for actual investment returns earned in the period to 31 May 2022

To give an indication of the sensitivity of the VBI to contribution rates and investment returns, we also considered the progression of the VBI if investment returns were 1% p.a. lower at 5.0% p.a. and if employer contribution rates decrease to 4.0% p.a. or to 0% p.a. (i.e. nil) with effect from 1 April 2022.

Projection 5: 119% starting VBI at March 2022, 4.0% contributions from 1 April 2022, with investment return of 5.0% pa.

Projected Date	No. members	Salaries $000s	Contribution rate	Employer contributions[1] $000s	Projected DB Assets $000s	Projected DB Vested Benefits $000s	Projected DB VBI
31 December 2021 (actual)	45	8,245			44,593	36,561	122%
31 March 2022 (actual)	42	7,969			41,114	34,540	119%
31 December 2022[2]	39	7,297	4.0%	229	38,692	33,708	115%
31 December 2023	34	6,621	4.0%	278	35,926	32,055	112%
31 December 2024	30	6,064	4.0%	254	33,722	30,943	109%
31 December 2025	25	5,248	4.0%	226	29,461	27,670	106%
31 December 2026	21	4,564	4.0%	196	26,117	25,110	104%

1. Excludes member contributions made by the School on behalf of the members
2. Allows for actual investment returns earned in the period to 31 May 2022

Projection 6: 119% starting VBI at March 2022, 0% contributions from 1 April 2022, with investment return of 5.0% pa.

Projected Date	No. members	Salaries $000s	Contribution rate	Employer contributions[1] $000s	Projected DB Assets $000s	Projected DB Vested Benefits $000s	Projected DB VBI
31 December 2021 (actual)	45	8,245			44,593	36,561	122%
31 March 2022 (actual)	42	7,969			41,114	34,540	119%
31 December 2022[2]	39	7,297	0%	-	38,498	33,708	114%
31 December 2023	34	6,621	0%	-	35,480	32,055	111%
31 December 2024	30	6,064	0%	-	33,033	30,943	107%
31 December 2025	25	5,248	0%	-	28,540	27,670	103%
31 December 2026	21	4,564	0%	-	24,980	25,110	99%

1. Excludes member contributions made by the School on behalf of the members
2. Allows for actual investment returns earned in the period to 31 May 2022

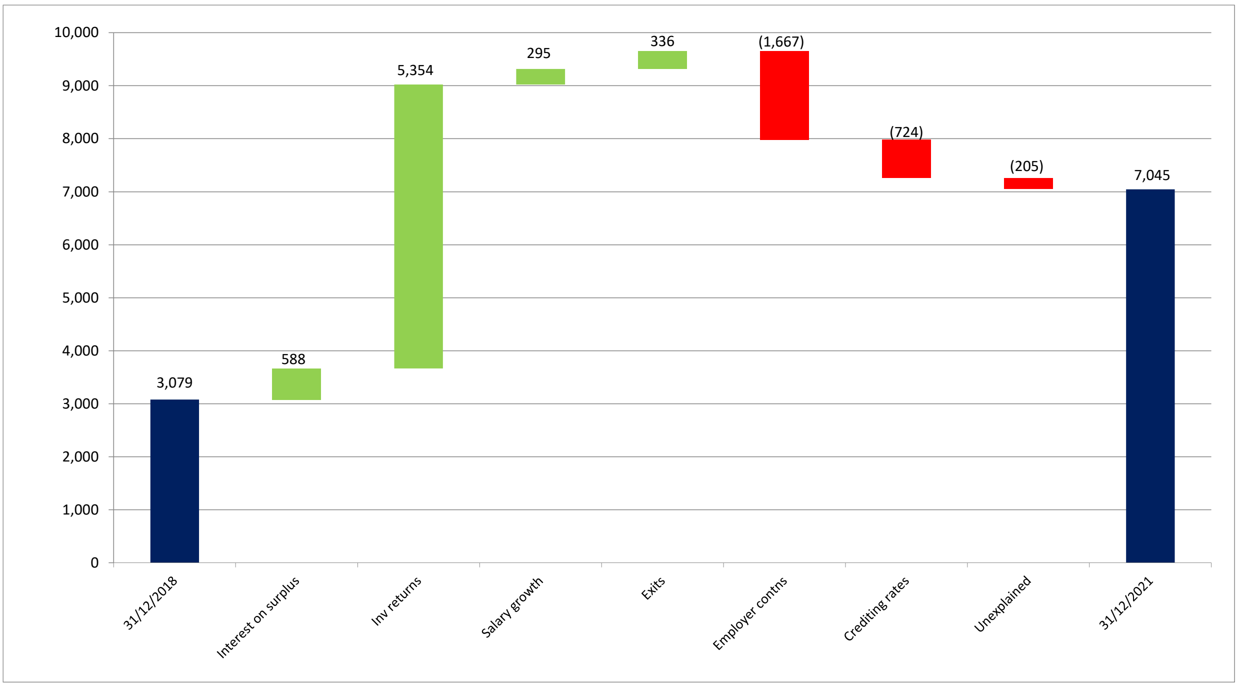
The tables above show that with a contribution rate of at least 4.0% p.a., the VBI is expected to remain above 100% for at least the next five years. Alternatively, if the School commences an employer contribution holiday (i.e. 0% p.a. contributions) from 1 April 2022, the VBI is expected to remain above 100% for at least the next three years, but may potentially fall below 100% unless employer contributions commence shortly after completion of the next actuarial investigation as at 31 December 2024.

The above sensitivity analyses do not indicate upper or lower bounds of all possible outcomes.

7.5 Analysis of change in financial position

The financial position of the Plan has improved significantly from that revealed in the previous investigation. The following chart summarises our analysis of the change in excess of assets over past service liabilities between 31 December 2018 to 31 December 2021. Brief commentary is included below the chart.

Analysis of change of Surplus of Assets over Past Service Liabilities ($'000)



From the analysis above, this result has been mainly due to the following:

Positive Factors:

- Earnings on the previous surplus position at 31 December 2018;
- Significantly higher than expected investment returns over the period;
- Lower than expected salary growth;
- Gains on payment of exits as the vested benefit is lower than past service liability.

Negative Factors:

- School contributions are less than the cost of accruing benefits;
- Crediting rates on average were higher than expected over the period.

7.6 Recommended School contribution rates

In this section we have considered the long term cost of funding the future benefits as well as shorter term impacts on the VBI under a number of scenarios. We have also highlighted the sensitivity of the contribution rate to investment markets.

In summary:

- The Plan's VBI (which had fallen slightly to 119% as at 31 March 2022) does allow some flexibility to reduce contributions from their current levels.
- However, based on the Plan's current allocation to growth assets it is prudent to take a longer term view with a level of conservatism when setting contributions.
- The VBI projections show that a contribution rate of at least 0% p.a. is estimated to keep the VBI above 100% over the next 5 years, if actual experience is in line with the valuation assumptions for the period since 31 May 2022.

Taking all of these matters into consideration, the recommended School contribution rate for defined benefit members is:

- From 1 January 2022 till 31 March 2022:
  - continue at the rate of at least 6% p.a. of defined benefit members' Plan Salaries; plus
  - at the rate of 5.88% p.a. of Contributory Members' salaries where the School meets a member's contributions on their behalf; and
- From 1 April 2022 until completion of the 31 December 2024 actuarial investigation:
  - at the rate of at least 0% p.a. (i.e. nil) of defined benefit members' Plan Salaries; plus
  - at the rate of 5.88% p.a. of Contributory Members' salaries where the School meets a member's contributions on their behalf.

If the School decides to commence an employer contribution holiday following consideration of this report, it is important that the School recognises and accepts the high likelihood that employer contributions will need to re-commence shortly after completion of the next triennial actuarial investigation, with the employer contribution rate from that time likely to be close to the long-term funding rate of 17.8% p.a. of salaries. As the number of defined benefit members falls over time due to the defined benefit Plan being closed to new members, the dollar amount of contributions is expected to fall, however the volatility of the contributions when expressed as a percentage of defined benefit members' Plan Salaries may increase.

In addition, the School should continue to pay employer contributions (of at least the minimum Superannuation Guarantee level) for Accumulation Members, in addition to any salary sacrifice contributions paid on a member's behalf.

Next valuation

- The next valuation is required to be held no later than 31 December 2024.

8 Insurance arrangements

8.1 Death and Disability

Insurance cover in respect of the unfunded portion of death, total and permanent disablement (TPD) and total and temporary disablement (TTD) benefits is provided by MLC. The purpose of insurance is to protect the Plan against adverse death & TPD & TTD experience.

The "Amount at Risk" for death and TPD is the difference between:

- the members’ total death or disablement benefits; and
- the sum of insured amounts for all defined benefit members.

The table below shows the overall death and TPD benefits and insurance levels as at 31 December 2021 for defined benefit members.

Defined Benefit Members ($’000)	Death $m	TPD $m
Total death/TPD benefits	55.380	54.823
less Accumulation benefits (for DB members)	(11.079)	(11.079)
less Insurance Amount	(8.199)	(7.642)
Amount at risk	**36.102**	**36.102**

On this basis the Amount at Risk is less than the value of the Plan's assets of $44.593m at 31 December 2021 which means that if all members were to have died on 31 December 2021 (albeit highly unlikely), the assets would have been more than sufficient to cover the sum of all members’ death benefits to be paid out.

The insured benefit is 18% x the future service to retirement age. As the resignation benefit is less than the fully accrued retirement benefit, the Plan is exposed to a financial strain in the event of a death for any member younger than retirement age.

Ideally the insured benefit formula would not be the future service accrual component of the benefit but the difference between the death benefit to be paid and the existing vested benefit. However, the financial strain on the Plan of a single death payout is unlikely to be material in the context of the entire Plan and the likelihood of a large number of deaths occurring to the extent the financial position of the Plan is threatened is also not material.

I therefore consider the Plan’s insurance arrangements are adequate to protect the Plan against adverse Death and TPD experience.

I also note that the Plan’s TTD benefit is fully insured and consider the Plan’s current TTD insurance arrangements are suitable to protect the Plan against adverse experience.

Appendix A: Summary of benefits

A brief summary of benefits is set out below:

DEFINITIONS

Eligibility:	Defined Benefit members of the old Sydney Grammar School Fund
Salary:	Annual amount due to be paid to a member by the employer under the Independent Teachers' or other relevant award together with any over award payment but excluding overtime, bonuses and other fixed allowances.
Final Average Salary (FAS):	Highest average of the member's salary during any consecutive 36 month period during the last 10 years of employment.
Normal Retirement Age (NRA):	60
Early Retirement Age (ERA):	50 with employer consent, 55 with 10 years of service or any age if member has 25 years' service
Compulsory Member Contributions:	5% of after tax salary or 5.88% of pre-tax salary
Employer Contributions:	The Employer contributes to the Plan on the basis of the rate(s) recommended by the Plan actuary as being required to provide for members' benefits.
Member Compulsory Contributions Account:	The members' compulsory contributions accumulated with interest
Employer Account:	The accumulation of Employer contributions to the Plan
Surcharge Account:	Surcharge assessments advised by the ATO accumulated with interest
Vesting Factor:	

Completed years of service	Vesting Factor
0-17	120%
18	130%
19	140%
20	150%
21	160%
22	170%
23	180%
24	190%
25 and over	200%

Retirement Benefits

The benefit payable on retirement between the ages of 60 and 65 is a lump sum equal to:

18.0% x FAS x Period of Membership

Early retirement is generally permitted from age 50 with employer consent or age 55 with at least 10 years' service or at any age with 25 years' service at member's option. The benefit payable on early retirement is the member's Normal Retirement Benefit ("NRB") calculated at their early retirement date.

Death or Total & Permanent Disablement ("TPD") Benefit

Prior to age 60, the benefit payable on Death or TPD is a lump sum equal to their prospective NRB calculated using FAS at the date of death or TPD.

After age 60, the benefit payable on Death or TPD is equal to the Late Retirement Benefit (as defined in the Participation Schedule).

Withdrawal Benefit

Lump sum benefit equal to the sum of:

- Member's Defined Benefit Account x Vesting Factor (based on completed years of service); and
- Member's Employer Account

Former Fund Benefits and Accumulation Benefits

Defined benefit members may be provided with additional benefits in respect of their membership of the former fund. Details of these benefits were advised by the Plan Administrator and are set out in the Plan Summary.

In addition to the above defined benefits a member may be entitled to receive a further amount in respect of their voluntary/rollover account less an amount in respect of their surcharge account. These additional benefits were not included in this valuation.

Minimum Benefits

All benefits payable to members are subject to a minimum of the amount of their Minimum Requisite Benefit as defined in the Plan's current Superannuation Guarantee Benefit Certificate.

Appendix B: Summary of assumptions

Interest Rate Earned on Assets 6.0% p.a. compound (net of tax and investment expenses)

Salary Increase Rate 3.5% p.a. compound (long-term)

Rates of Retirement

Assumed rates at which members retire from the Plan per year per 10,000 members are as follows:

Age	Retirement	Death/TPD	Withdrawal
25	-	5	1,638
35	-	7	750
45	-	19	270
50	-	39	20
55	1,000	77	-
60	2,000	-	-
65	10,000	-	-

Future Expenses

The investment earnings rate is assumed to be net of investment expenses.

An allowance of 3.0% p.a. of salaries was made for administration/general expenses and insurance costs for defined benefit members.

Surcharge

All liability for surcharge is assumed to be met by an appropriate reduction in the benefits of affected members. Likewise, where Division 293 taxes are not paid separately by individuals, the liability for Division 293 taxation is assumed to be met by reducing the benefits of affected members.

Appendix C: Statement required by SPS 160

Sydney Grammar School Superannuation Plan, a sub-plan in the Plum Division of the MLC Super Fund

Summary of Information included in 31 December 2021 Actuarial Report pursuant to Paragraph 23 of SPS 160

We have carried out a valuation of the Sydney Grammar School Superannuation Plan (the Plan) effective 31 December 2021. Paragraph 23 of SPS 160 prescribes the following matters to be contained in actuarial reports for private sector defined benefit superannuation plans:

1. For the purposes of comparison with vested benefits and accrued benefits and in the calculation of the long term Employer contribution rate, the net assets of the defined benefit section of the Plan have been valued at $44,592,680 at 31 December 2021.

2. Pursuant to SPS 160, the *"liabilities in respect of the accrued benefits of the members of the fund"* is the present value of the expected future benefits payable from the Plan to current members and their dependents in respect of membership completed to date. In our opinion, the assets of the defined benefit section valued at 31 December 2021 were sufficient to meet the liabilities of the Plan in respect of defined benefit accrued benefits of $37,547,998. We consider that the assumptions and valuation methods set out in this report are appropriate for determining the accrued benefit liabilities.

3. The Plan's defined benefit assets are sufficient to meet the liabilities of the Plan in respect of defined benefit Vested Benefits of $36,560,618 as at 31 December 2021. A plan is in an *"unsatisfactory"* financial position if the value of its assets is less than the value of the benefits payable if every member voluntarily left the Plan. Therefore, in our opinion, the Plan was in a satisfactory financial position at 31 December 2021. Based on the Trustee's policy for setting shortfall limits, we recommend that the Trustee increases the shortfall limit to 100% for the Plan, given the employer contribution holiday recommendation in this investigation. Furthermore, assuming that:

    - There are no significant improvements to the benefits described;
    - Employer contributions are paid in accordance with the recommendations set out in the report on the actuarial valuation of the Plan at 31 December 2021; and
    - The future experience of the Plan is in accordance with the actuarial assumptions made at 31 December 2021;

    then we certify that the Plan will maintain a satisfactory financial position in the period to 31 December 2024.

4. Based on the results of this investigation, the recommended Employer contribution rates for defined benefit members are:

    - From 1 January 2022 to 31 March 2022:
        - continue at the rate of at least 6% p.a. of defined benefit members' Plan Salaries; plus
        - at the rate of 5.88% p.a. of Contributory Members' salaries where the School meets a member's contributions on their behalf; and
    - From 1 April 2022 until completion of the 31 December 2024 actuarial investigation:
        - at the rate of at least 0% p.a. (i.e. nil) of defined benefit members' Plan Salaries; plus
        - at the rate of 5.88% p.a. of Contributory Members' salaries where the School meets a member's contributions on their behalf.

In addition we recommend that:

- the School should continue to pay employer contributions (of at least the minimum Superannuation Guarantee level) for Accumulation Members, in addition to any salary sacrifice contributions paid on a member's behalf;
- the Plan's financial position is reviewed on a quarterly basis to monitor its financial position;
- the contribution arrangement is reviewed annually to ensure its continued suitability in providing for defined benefit members' benefits; and
- these recommendations be reviewed where the Plan undergoes significant changes to its membership or benefit basis, or there is a substantial reduction in the value of the Plan's investment portfolio.

5. Payment of Employer contributions as above, together with the assets of the Plan (valued at $44.593m) and the expected earnings of the Plan over the period from 1 January 2022 to 31 December 2024 are expected to provide adequately for the expected liability during the period to 31 December 2024. They are also expected to fully provide for the liability at the end of that period in respect of both vested benefits and accrued benefits.

6. The projected likely future financial position of the Plan during the three years following the valuation date, based on our best estimate assumptions used in the actuarial investigation of the Plan as at 31 December 2021 and the recommended Employer contributions above, is set out below.

Projected Date	Projected DB Assets ($'000)	Projected DB Vested Benefits ($'000)	Projected DB Vested Benefits Index
31 December 2021 (actual)	44,593	36,561	122%
31 December 2022	38,716	33,970	114%
31 December 2023	36,060	32,540	111%
31 December 2024	33,949	31,621	107%

7. The Plan has not been granted a Pre-1 July 1988 funding credit, nor has it obtained such a credit by way of transfer.

8. A plan is "*solvent*" if the value of its assets exceeds the total of the Superannuation Guarantee component of each member's benefit. The Plan's assets are sufficient to meet the minimum benefits of the defined benefit members of the Plan of $26,601,520 as at 31 December 2021. Funding and Solvency Certificates for the Plan covering the period from 1 January 2019 to 31 December 2021 required by the Superannuation Industry (Supervision) Act have been provided. In our opinion, the solvency of the Plan will be able to be certified in any Funding and Solvency Certificate required under the Superannuation Industry (Supervision) Regulations during the three year period to 31 December 2024, based on the assumptions used in the actuarial investigation of the Plan as at 31 December 2021.

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Diane Somerville, FIAA   Andrew Boal, FIAA

20 June 2022

Appendix D: AASB 1056 Statement

Sydney Grammar School Superannuation Plan, a sub-plan in the Plum Division of the MLC Super Fund

Actuarial Statement pursuant to Australian Accounting Standard AASB 1056

The purpose of this statement is to provide the summary of the information contained in the Actuarial Report on the investigation of the Plan as at 31 December 2021, for the purposes of AASB 1056. This statement has been prepared at the request of the Trustee of the Plan and is in accordance with the Professional Standards and Guidance Notes (in particular PS402 and PG499.06) issued by the Institute of Actuaries of Australia.

Assets

The net asset value used for this valuation at 31 December 2021 was $44,592,680. This represents assets for defined benefit and hybrid members only and excludes $11.1m of voluntary accumulation account balances for these members. These figures are not audited.

Vested Benefits

Vested benefits are the benefits to which members would be entitled if they voluntarily left service.

At the date of the actuarial investigation, the vested benefits were $36,560,618. This includes only defined benefit and hybrid members and excludes $11.1m of voluntary accumulation account balances for these members.

The ratio of the net market value of the Plan's assets to total vested benefits for defined benefit members was 122% at 31 December 2021, which indicates a satisfactory coverage of vested benefits as at the date of the actuarial investigation.

Accrued Benefits

The value of the accrued benefits is the present value of the expected future benefits payable from the Plan to current members, but only in respect of Plan membership completed up to the date of the actuarial investigation. Calculation of future retirement benefits use the normal retirement benefit formula, taking into account membership to the date of the actuarial investigation and using salary projected to the date of expected payment. We have not applied a minimum of vested benefits (at individual or total level) in the calculation of accrued benefits for the purposes of AASB 1056.

The value of the accrued death and total and permanent disablement benefits is determined to be the same proportion of the death (or disablement) benefit as the accrued retirement benefit bears to the retirement benefit at normal retirement date.

To determine the actuarial value of accrued benefits, assumptions are required concerning the potential experience of the Plan over the long term. The main assumptions used to determine the actuarial value of the accrued benefits at 31 December 2021 were:

- The future rate of investment return (net of investment taxes and net of investment management fees) earned on the Plan's assets would be 6.0% p.a.
- The future rate of long-term salary increases would be 3.5% p.a.

The future rate of investment return used to determine the accrued benefits is the anticipated rate of return on the Plan's assets over the average expected term of the benefit liabilities, calculated to be approximately 5 years.

All other assumptions used, including demographic assumptions, are considered to be best estimate assumptions, with no allowance for conservatism.

The total value of accrued benefits (for AASB 1056 purposes) at 31 December 2021 was $37,341,473. This includes only defined benefit and hybrid members and excludes $11.1m of voluntary accumulation account balances for these members.

The ratio of the assets to the value of the total accrued benefits (for AASB 1056 purposes) was 119% at 31 December 2021. The assets were therefore sufficient to meet the value of the liabilities of the Plan in respect of accrued benefits.

The Plan's funding policy is intended to fully cover benefits by the time that they become payable. The method of funding benefits adopted is the Attained Age Normal Funding method which bases the contribution recommendation on the calculated cost of funding the future service accruals of members with an adjustment if appropriate.

Sensitivities

AASB 1056 requires the Trustee to show sensitivities for accrued benefits (defined benefit member liabilities) in the financial statement notes.

Accordingly, we have shown the value of accrued benefits (before vested benefit minimums) based on changes in the key assumptions in the following table.

Sensitivities	31 December 2021 ($000s)	Increase /(Decrease) in Accrued Benefits Liability ($000s)
Base Case	37,341	
Discount Rate + 1%	36,898	(443)
Discount Rate - 1%	37,874	533
Salary Increase Rate + 1%	37,392	51
Salary Increase Rate - 1%	37,321	(20)

The variations selected in the above sensitivity analyses do not indicate upper or lower bounds of all possible outcomes.

Recommended Employer Contributions

Based on the results of this investigation, the recommended Employer contribution rate for defined benefit members is:

- From 1 January 2022 to 31 March 2022:
  - continue at the rate of at least 6% p.a. of defined benefit members' Plan Salaries; plus
  - at the rate of 5.88% p.a. of Contributory Members' salaries where the School meets a member's contributions on their behalf; and
- From 1 April 2022 until completion of the 31 December 2024 actuarial investigation:
  - at the rate of at least 0% p.a. (i.e. nil) of defined benefit members' Plan Salaries; plus
  - at the rate of 5.88% p.a. of Contributory Members' salaries where the School meets a member's contributions on their behalf.

In addition the report recommended that:

- the School should continue to pay employer contributions (of at least the minimum Superannuation Guarantee level) for Accumulation Members, in addition to any salary sacrifice contributions paid on a member's behalf;

- the Plan's financial position is reviewed on a quarterly basis to monitor its financial position;
- the contribution arrangement is reviewed annually to ensure its continued suitability in providing for defined benefit members' benefits; and
- these recommendations be reviewed where the Plan undergoes significant changes to its membership or benefit basis, or there is a substantial reduction in the value of the Plan's investment portfolio.

Financial Condition

In our opinion, the Plan was in a satisfactory financial condition at the date of the actuarial investigation.

In addition to the position reported above, the actuary projected the Plan's ongoing ability to meet both Vested Benefits and Accrued Benefits over the three years following the date of the investigation. This was undertaken on the basis that:

- the actuarial assumptions as to investment, salary inflation and membership turnover would apply over the next three years; and
- the Employer will contribute to the Plan at the recommended rates over the next three years.

In the light of the projections, it is anticipated that both the Plan's Vested Benefits and Accrued Benefits will remain covered by Plan assets as a whole during the three years following the date of the investigation.

Diane Somerville, FIAA

Andrew Boal, FIAA

20 June 2022