

# MILLENNIUM INORGANIC CHEMICALS LIMITED PLAN

STATEMENT OF ADVICE

REPORT TO THE TRUSTEE ON THE  
ACTUARIAL INVESTIGATION AS AT  
30 JUNE 2018

17 DECEMBER 2018

## CONTENTS

1. Key Results and Recommendations.....	1
• 1.1. Change in Financial Position .....	1
• 1.2. Recommended Contribution Rates and Projections.....	2
• 1.3. Other Findings and Recommendations for the Trustee.....	3
• 1.4. Action Required .....	3
2. Liability Measures as at 30 June 2018 .....	4
• 2.1. Vested Benefits .....	4
• 2.2. SG Minimum Benefits .....	4
• 2.3. Actuarial Value of Accrued Benefits.....	4
3. Experience.....	6
• 3.1. Change in Financial Position since Previous Investigation.....	6
• 3.2. Recommendations in Previous Actuarial Investigation.....	8
4. Contribution Requirements.....	9
• 4.1. Financing Objective .....	9
• 4.2. Financing Method .....	10
• 4.3. Employer Future Service Cost .....	10
• 4.4. Recommended Contributions .....	11
• 4.5. Projected Financial Position.....	11
5. Projections .....	12
• 5.1. Meeting the Financing Objective.....	13
6. Investment Policy and Related Risks .....	14
• 6.1. Investment Policy.....	14
• 6.2. Crediting Policy.....	15
• 6.3. Investment Risk – Impact on Cost to the Employer.....	15
• 6.4. Investment Volatility.....	16
7. Insurance Policy and Related Risks .....	18
• 7.1. Documentation .....	18
• 7.2. Conclusion.....	19

8. Other Risks .....	20
• 8.1. Salary growth risk .....	20
• 8.2. Legislative risk .....	20
9. Assets .....	21
• 9.1. Assets .....	21
• 9.2. Operational risk reserves .....	21
10. Actuarial Assumptions .....	22
• 10.1. Economic assumptions .....	22
• 10.2. Other assumptions .....	23
• 10.3. Changes in Assumptions since the Previous Investigation .....	25
11. The Regulator and Prudential Standards .....	26
• 11.1. Shortfall Limit .....	26
• 11.2. Monitoring Process .....	27
• 11.3. Requirements due to Unsatisfactory Financial Position .....	27
• 11.4. Statements Required by SPS 160 .....	28
12. Actuarial Certification .....	30
• 12.1. Purpose .....	30
• 12.2. Background information of the Plan .....	30
• 12.3. Governing Documents .....	30
• 12.4. Additional information .....	31
• 12.5. Actuary's certifications .....	31
Appendix A: Membership Information .....	34
• A.1. Active defined benefit member age profile .....	35
• A.2. Actuarial Value of Accrued Benefits age profile .....	35
Appendix B: Plan Design .....	36
• B.1. Summary of benefits .....	36
• B.2. The Superannuation Guarantee (Administration) Act 1992 .....	38

## 1

## Key Results and Recommendations

This report on the actuarial investigation of the Plan as at 30 June 2018 has been prepared to meet the requirements of the Plan's governing rules and the SIS legislation. This report should not be relied upon for any other purpose or by any party other than the Trustee of 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. The Trustee should share this report with the Employer(s) who contribute(s) to the Plan. The Employer(s) may consider obtaining separate actuarial advice on the recommendations contained in the report.

### 1.1. Change in Financial Position

	Position at 30 June 2018		Position from 30 June 2015 Investigation Report
	\$000	Asset Coverage	Coverage at 30 June 2015
<b>Defined Benefits Only*</b>			
Assets	40,364		
Liability for Vested Benefits	34,746	116.2%	103.4%
Liability for Actuarial Value of Accrued Benefits	38,130	105.9%	102.2%
Liability for SG Minimum Benefits	17,066	236.5%	185.7%

\*The above totals exclude all additional accumulation balances for defined benefit members and any accumulation liabilities relating to accumulation members.

The coverage levels at 30 June 2018 were higher than the levels at the previous actuarial investigation, due to the following items of experience:

- Investment earnings of 4.5% pa, which were higher than the long term rate (3.7% pa)
- Salary growth of 1.1% pa which was lower than expected (4.0% pa);
- The payment of contributions at a rate in excess of the long term normal contribution cost from 1 July 2015 to 1 January 2017.
- A significant number of exits while the plan was in surplus which further increased the asset coverage.

There was a material reduction in the gap between the assumed rate of investment earnings and the rate of salary increases used to determine the Actuarial Value of Accrued Benefits from a gap of -0.3% p.a. to -1.5% p.a.. This has increased the Actuarial Value of Accrued Benefits. The change in the gap was due to:

- a reduction in the salary increase assumption from 4.0% pa to 2.0% pa; and
- a reduction in the long term investment return assumption from 3.7% to 0.5% to account for the change in investment strategy from a conservative investment option to a cash investment option, expected to occur on 1 January 2019 should the Trustee approve (please refer to Section 6.1).

## 1.2. Recommended Contribution Rates and Projections

At 30 June 2018, the Plan was in a satisfactory financial position. The 116.2% coverage of Defined Benefit Vested Benefits was significantly above the financing objective of 105% coverage adopted for this investigation.

Based on the financial position at 30 June 2018, I recommend that the Company continues to contribute to the Plan as follows:

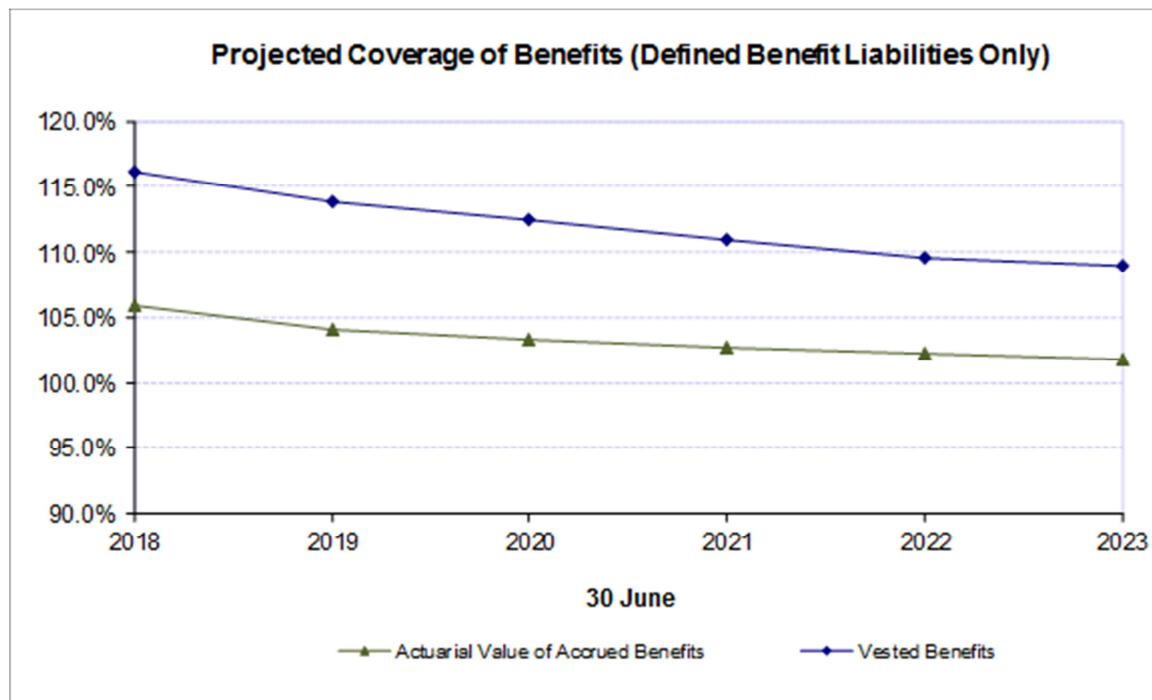
### Defined Benefit members

- 16% of salaries (nil for any member whose defined benefit multiple has been frozen) from 1 July 2018.
- Member contributions made by salary sacrifice.

### Accumulation Members

- 9.5% of Ordinary Time Earnings (OTE), increasing in line with the percentage required by the Superannuation Guarantee legislation (or such other rate as agreed with the Employer).
- Member contributions made by salary sacrifice.

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



In preparing these projections, we have allowed for the actual return on the Plan’s investments from 1 July 2018 to 30 November 2018 of -0.77%. The graph above (and the corresponding values in the table below) shows that the recommended contributions are anticipated to result in assets that continue to be higher than the two financing objectives of 105% coverage of Defined Benefit Vested

Benefits and 100% coverage of the Actuarial Value of Accrued Benefits over the period to 30 June 2021.

Year Ending 30 June	Vested Benefits	Actuarial Value of Accrued Benefits
2018	116.2%	105.9%
2019	113.9%	104.0%
2020	112.5%	103.3%
2021	110.9%	102.7%
2022	109.6%	102.2%
2023	108.9%	101.9%

### 1.3. Other Findings and Recommendations for the Trustee

#### Suitability of Policies

- The investment policy for the defined benefit section of the Plan is suitable.
- The crediting policy for the defined benefit section of the Plan is suitable.
- The insurance arrangements for the defined benefit section of the Plan are suitable.
- The Trustee's process for monitoring the Plan's financial position is suitable, in particular we note that the Trustee will request formal monitoring from the Actuary annually.

#### Recommendations / Points of Note

- The Trustee has advised that the Employer has requested that the Plan's assets be switched from Conservative to Cash shortly. The Trustee has requested that we allow for this as part of the Investigation. We have assumed in this Investigation that the switch will occur on 1 January 2019 should the Trustee approve the request (please refer to Section 6.1).
- Should the assets be switched to Cash, the Shortfall Limit should be amended from 99.0% to 100.0%

We have allowed for the return on the Plan's investments of -0.77% from 1 July 2018 to 30 November 2018.

### 1.4. Action Required

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

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

# 2

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## Liability Measures as at 30 June 2018

### 2.1. Vested Benefits

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

At 30 June 2018, Plan assets were greater than Vested Benefits. Accordingly the Plan was considered to be in a “satisfactory financial position” under SIS legislation. The 116.2% coverage of Defined Benefit Vested Benefits was also significantly above the financing objective of 105% coverage adopted for this investigation.

### 2.2. 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 30 June 2018 were also greater than SG Minimum Benefits and hence the Plan was considered to be “solvent” under SIS legislation.

### 2.3. 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 actuarial methods and assumptions. In determining the value, I have not applied a minimum of the vested benefits.

The coverage of the Actuarial Value of Accrued Defined Benefits at 30 June 2018 was also above 100% which is the other financing objective adopted for this investigation.

#### 2.3.1. *Summary of Method of Attributing Benefits to Past Membership*

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.

#### 2.3.2. *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.

### **2.3.3. 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:

<b>Retirement:</b>	based on the member's accrued benefit multiple or relevant account balances at the investigation date
<b>Death and Disablement:</b>	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
<b>Resignation:</b>	based on the member's accrued benefit multiple or relevant account balances at the investigation date, allowing, where applicable, for future vesting to the projected date of resignation

The weighted average term of the accrued benefit liabilities is 6.4 years.

### **2.3.4. Changes in 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.

## 3

## Experience

**3.1. Change in Financial Position since Previous 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 30 June 2018, and the corresponding values at the previous investigation date.

	Position at 30 June 2018		Position from 30 June 2015 Investigation Report
	\$000	Asset Coverage	Coverage at 30 June 2015
<b>Defined Benefits Only*</b>			
Assets	40,364		
Liability for Vested Benefits	34,746	116.2%	103.4%
Liability for Actuarial Value of Accrued Benefits	38,130	105.9%	102.2%
Liability for SG Minimum Benefits	17,066	236.5%	185.7%

\*The above totals exclude all additional accumulation balances for defined benefit members and any accumulation liabilities relating to accumulation members.

The coverage levels at 30 June 2018 were higher than the levels at the previous actuarial investigation due to overall positive experience as explained below.

Offsetting this positive experience was a change in the actuarial assumptions resulting in an increase in the actuarial value of the accrued benefits. The impact of this is examined in the assumptions section of this report but broadly it increased the Actuarial Value of Accrued Benefits by \$3.5m.

The experience since the previous investigation is detailed below.

**3.1.1. Investment Returns**

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

Year Ending	Investment Return (pa)
30 June 2016	4.5%
30 June 2017	4.4%
30 June 2018	4.5%
<b>Compound Average</b>	<b>4.5%</b>

The average investment return for the three year period to 30 June 2018 was 4.5% pa. The higher than assumed return had a positive impact on the Plan's financial position.

### **3.1.2. Salary Increases**

Salaries for the current defined benefit members increased by an average of 1.1% pa over the period compared to our longer term assumption at the last actuarial investigation of 4.0% pa. The lower than assumed salary increases had a positive impact on the Plan's financial position.

### **3.1.3. Changes in Membership/Decrement**

During the period under review the number of defined benefit members within the Plan decreased from 112 members at the previous investigation to 69 members currently. This has improved the Plan's overall financial position because the members have received 100% of their Vested Benefits whilst the Plan is in surplus, leaving the surplus to be shared across fewer members so the coverage for the remaining members increases.

### **3.1.4. Contributions**

The recommended Employer contribution rates from the prior actuarial investigation were as follows:

#### Defined Benefit members

- 25% of salaries (9% for any member whose defined benefit multiple has been frozen) until 31 December 2018, reducing to 16% of salaries (rate for frozen members reduces to nil) from 1 January 2019; and
- Member contributions made by salary sacrifice.

#### Accumulation Members

- 9.5% of Ordinary Time Earnings (OTE), increasing in line with the percentage required by the Superannuation Guarantee legislation (or such other rate as agreed with the Employer).
- Member contributions made by salary sacrifice.

Due to positive experience throughout the review period, it was recommended that Employer contributions reduce from a rate of 25% of defined benefit member salaries to 16% effective from 1 January 2017. A two month contribution holiday was also agreed.

The Employer contributions paid over the review period were in line with the recommendations but to 1 January 2017 were higher than the cost of benefits being earned and therefore this improved the financial position.

### 3.2. Recommendations in Previous Actuarial Investigation

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

<b>Recommendation</b>	<b>Status</b>
Review of the crediting rate policy	Completed and simpler methodology implemented
Change to the Plan's sum-insured formula	Implemented
Regular monitoring of the Plan	The Trustee monitors the Plan (financial position, contribution requirements, notifiable events etc.) on a quarterly basis.
New funding and Solvency Certificate	Completed and issued

# 4

## Contribution Requirements

### 4.1. Financing Objective

The financing objective I have 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 and
- 100% of Actuarial Value of Accrued Benefits.

Accumulation account balances are matched by specific assets and do not require any additional margins. However 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 that the target margin of 5% is suitable. This is the same margin as adopted at the last investigation. Once the investment strategy has been changed to Cash, pending Trustee approval, it may be appropriate to reduce this margin.

I also consider that a separate target should be 100% coverage of the Actuarial Value of Accrued Benefits.

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

#### 4.1.1. 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 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 the greater of their vested benefit entitlement and the Actuarial Value of their Accrued Benefits.

#### **4.1.2. 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 must contribute at the rate determined by the Trustee, after consulting the Employer, on the advice of the Actuary to the Plan.

#### **4.2. Financing Method**

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

Under this method, the Employer contribution rate required to provide a target level of coverage of a particular benefit liability measure is determined. Also, 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 and 100% coverage of the Actuarial Value of Accrued 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.

##### **4.2.1. Changes in Financing Method**

The Target Funding method was also adopted at the last investigation.

#### **4.3. Employer Future Service Cost**

Based on the assumptions adopted for this investigation, I estimate that the Employer's long-term defined benefit funding cost (i.e. the normal cost of funding future service defined benefit accruals ignoring any surplus or deficit) is 19.0% of defined benefit members' salaries.

The Employer's long-term defined benefit funding cost above includes allowance for contributions tax.

The assessed long-term costs have increased by 2.9% of salaries since the last investigation due to:

- a reduction in the gap between the assumed rate of investment earnings and the rate of salary increases (referred to as the "gap" ) from -0.3% pa to -1.5% pa;
- a change in the membership profile of the Plan.

Under the Target Funding method, it is appropriate to maintain the current employer contribution requirements below the long-term defined benefit funding costs in the circumstances of a strong financial position. We have done this as part of this investigation.

#### **4.4. Recommended Contributions**

##### Defined Benefit members

- 16% of salaries (nil for any member whose defined benefit multiple has been frozen) from 1 July 2018.
- Member contributions made by salary sacrifice.

##### Accumulation Members

- 9.5% of Ordinary Time Earnings (OTE), increasing in line with the percentage required by the Superannuation Guarantee legislation (or such other rate as agreed with the Employer).
- Member contributions made by salary sacrifice.

#### **4.5. Projected Financial Position**

The next section of the report shows the projected financial position on the recommended contributions compared with the Financing Objective adopted by the Trustee.

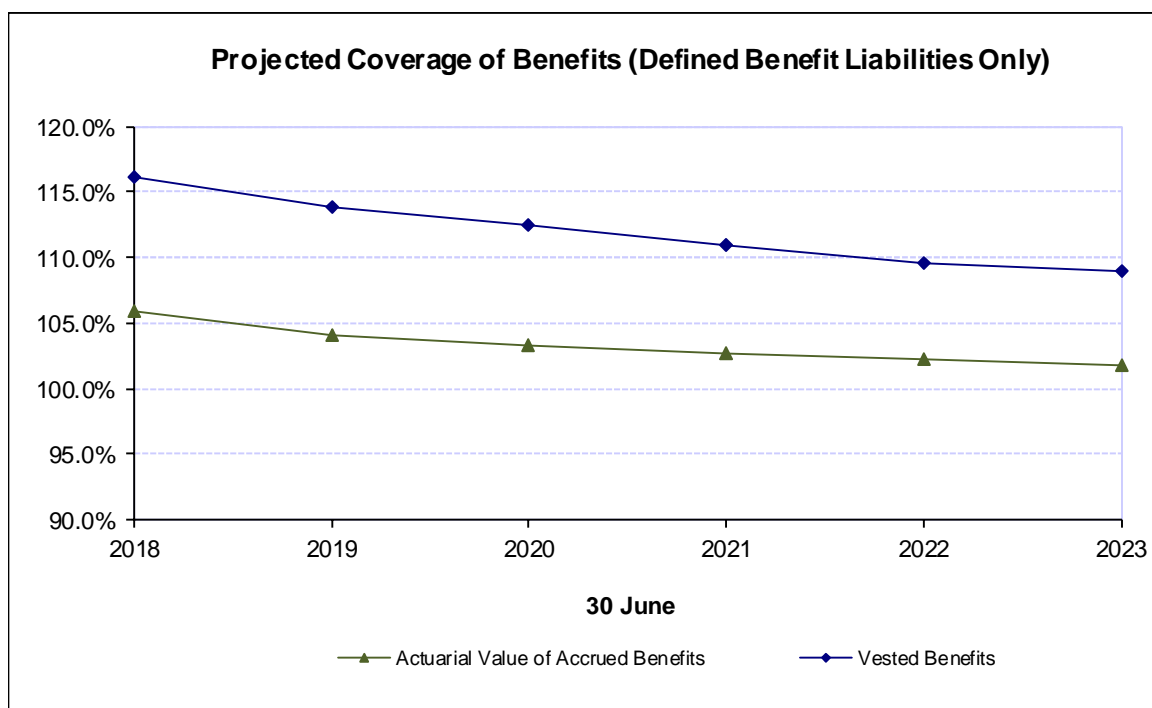
# 5

## Projections

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

- the actuarial assumptions adopted for this investigation;
- but allowing for actual investment returns for the 5 months immediately after 30 June 2018 of -0.77%;
- assuming that the Employer contributes on the basis as recommended above; and
- assuming the assets are moved into a Cash investment effective 1 January 2019.

The results of the projection are as follows:



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

## 5.1. Meeting the Financing Objective

The projection above shows that the recommended contributions are anticipated to result in assets that continue to exceed the financing objectives (105% of Defined Benefit Vested Benefits and 100% of Actuarial Value of Accrued Benefits) adopted for this investigation over the period to 30 June 2021.

# 6

## Investment Policy and Related Risks

### 6.1. Investment Policy

#### *Assets backing accumulation benefit liabilities*

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

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

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

#### *Assets backing defined benefit liabilities*

The Plan's investment strategy for assets supporting defined benefit liabilities, BT Lifetime Super Employer Plan – Multi-manager Conservative, currently involves a benchmark 30% exposure to 'growth' assets such as shares and property and a benchmark 70% exposure to 'defensive' assets such as cash and fixed interest (refer to the table below for the 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.

30 June 2018	Benchmark Allocation	Range
Australian Shares	12.0%	0 - 28%
Overseas Shares	10.0%	0 - 23%
Property	7.0%	0 - 23%
Fixed Interest	52.0%	0 - 54%
Alternatives	5.0%	0 - 25%
Cash	14.0%	7 - 47%
<b>Total</b>	<b>100.0%</b>	

#### *Change in Investment Strategy*

We have been advised that the Employer has requested that the Trustee switch the investment strategy for assets supporting defined benefit liabilities from BT Multi-Manager Conservative to BT Cash, which involves a benchmark of 100% 'defensive' assets. We have incorporated this into our results as requested by the Trustee and have assumed that the change will occur on 1 January 2019.

The defined benefit liabilities are not affected by the investment return on the Plan's assets. There is unlikely to be significant volatility of the Plan's investment returns when they are moved to Cash. If the Plan continues in the long term and salary increases are granted each year, then to the extent that the members' salaries increase at a rate that is higher than the return on BT Cash, the surplus will be eroded over time. It is possible, therefore, over the longer term that the Employer may have to pay higher contributions into the Plan.

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

I have reviewed the Plan's defined benefit investment policy taking into account the Plan's financial position and the nature and term of the Plan's defined benefit liabilities and confirm I consider that both the current investment policy adopted and the proposed switch to a Cash option are suitable policies.

This conclusion takes into account my understanding that the Employer understands and accepts that the contributions may increase over the term of the Plan as the returns on the Cash investment are expected to be lower than the increases to members' benefits which are linked to their salary increases.

## **6.2. Crediting Policy**

The Trustee has a Crediting Rate policy in place.

The policy is used to allocate investment earnings to the Surcharge and Family Law accounts of defined benefit members which make up about 0.5% of total defined benefit liabilities. It also applies to retirement benefits for members aged over 70.

The Crediting Rate is determined based on the actual earning rate of the relevant defined benefit assets, after allowance for tax and investment costs, asset-based administration fees and any applicable rebates. The crediting rate is declared monthly after the actual earning rate for the month becomes available. 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. The Interim Crediting Rate is determined based on an appropriate cash rate as agreed with the Trustee. This was recently changed following a review detailed in a letter dated 30 November 2017.

Whilst the monthly update of the interim rate theoretically allows some scope for anti-selection, taking into account the nature of the benefits and that termination of service (with associated notice periods) would generally be required to trigger a payment, I consider that the current frequency of review of interim rates is appropriate.

### **6.2.1. Conclusion**

Based on a review of the main features, I consider that the unit pricing and crediting policy adopted for these benefits is generally suitable taking into consideration the principles of equity between different generations of members and any material risks which may have a significant impact on the Plan (i.e. a market shock or sudden downturn in investment markets).

## **6.3. 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.

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

- (i) the Actuarial Value of Accrued Benefits would increase by 2,527,000 (Employer funding cost impact  $\$2,527,000/0.85 = \$2,973,000$ ), with a resulting reduction in the coverage of the Actuarial Value of Accrued Benefits from 105.9% to 99.3% and
- (ii) the estimated employer cost of future service benefits would increase from 19.0% to 20.2% 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. Although once the assets are switched to Cash, this is unlikely.

#### 6.4. Investment Volatility

All current vested benefits for defined benefit members are not linked to investment returns (ie are salary based benefits) and therefore the Plan's vested benefits coverage highly sensitive to changes in the investment returns.

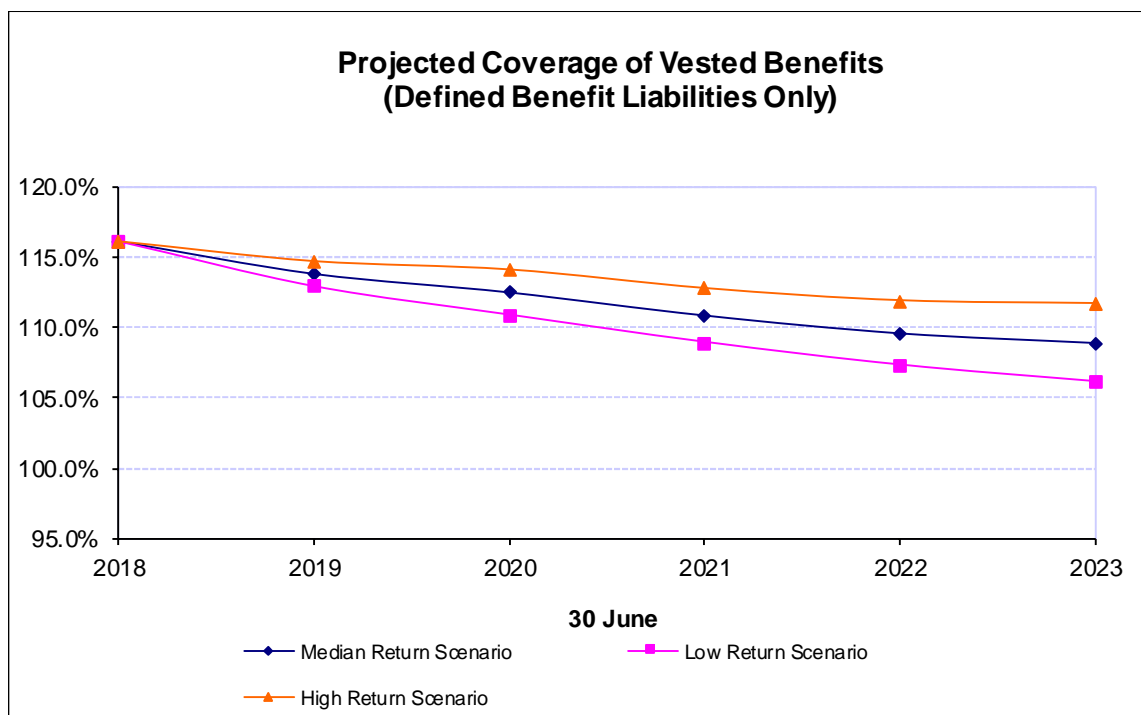
I have considered the impact of investment volatility on the Plan's financial position over the next few years using a "high return" and a "low return" scenario. The returns under both scenarios have been derived from assumptions about the likely risk attached to the Plan's defined benefit investment 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 2018 to 30 June	Assumed Cumulative Investment Return (%)		
	"Low Return"	Valuation	"High Return"
2019	-1.3%	-0.5%	0.3%
2020	-1.4%	0.0%	1.4%
2021	-1.1%	0.5%	2.1%
2022	-0.8%	1.0%	2.8%
2023	-0.5%	1.5%	3.5%

The cumulative investment return is the total return from 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.



Year Ending 30 June	Median Return Scenario	Low Return Scenario	High Return Scenario
2018	116.2%	116.2%	116.2%
2019	113.9%	113.0%	114.8%
2020	112.5%	110.9%	114.1%
2021	110.9%	109.0%	112.8%
2022	109.6%	107.3%	111.9%
2023	108.9%	106.1%	111.7%

Based on fluctuations in investment returns only, and assuming other experience is in line with the assumptions adopted for this investigation, there is approximately an 80% chance that the coverage of assets over Vested Benefits at 30 June 2021 will fall in the range from 109.0% to 112.8%.

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 which 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 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.

## 7

## Insurance Policy and Related Risks

### Death Benefit

For defined benefit members, the group life sum insured formula currently in use is:

Sum Insured = Death/TPD Benefit – Vested Benefit x maximum of (Vested Benefit Index,1)

### Total and Permanent Disablement (TPD) Benefit

The Plan's Trust Deed states that the TPD benefit is equal to the death benefit.

However, for 26 out of the 69 members, the TPD benefit in the data does not match the death benefit. This is because for these members their death benefit is calculated using 'Salary plus Shift Allowance' (Salary 1 in the data) whilst the TPD benefit is calculated using 'Salary excluding Shift Allowance' (Salary 2 in the data). For all other members Salary 1 equals Salary 2 and so their death benefit is equal to their TPD benefit.

For TPD benefits, the sum insured is calculated using the same formula as per the death benefit except the component 'DVB' is calculated using the 'Salary excluding Shift Allowance'.

### Coverage

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 30 June 2018 for the Plan was as follows.

		Death	TPD
		\$000	\$000
	<b>Defined Benefit members</b>		
	Death/Disablement Benefits	47,430	45,048
<b>less</b>	Sum Insured	8,680	6,805
<b>less</b>	Assets	40,364	40,364
	Uncovered Death/Disablement Benefits	(1,614)	(2,121)

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.

In my opinion, the current group life insurance arrangements, including the sum insured formula for defined benefit members, are appropriate and provide adequate protection for the Plan.

### 7.1. Documentation

The death and lump sum total and permanent disablement benefits (TPD) insurance arrangements are underwritten by Westpac Life Insurance Services Limited ("the insurer") and outlined in a policy

between the Trustee and the insurer dated 1 January 2018. The purpose of the insurance policy is to protect the Plan against unexpectedly large payouts on the death or disablement of members.

## **7.2. Conclusion**

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

# 8

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## Other Risks

There are a number of other risks relating to the operation of the Plan. The more significant financial risks, other than investment and insurance risk, relating to the defined benefits are:

### 8.1. 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.

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 \$1,986,000 (Employer funding cost impact  $\$1,986,000/0.85 = \$2,336,000$ ), with a resulting reduction in the coverage of the Actuarial Value of Accrued Benefits from 105.9% to 100.6%, and
- (ii) the estimated employer cost of future service benefits would increase from 19.0% to 19.9% 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.

### 8.2. Legislative risk

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 tax on superannuation funds. This risk is borne by the Employer.

# 9

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## Assets

### 9.1. Assets

The net market value of the Plan's assets as at 30 June 2018 amounted to \$40,364,000 (based on the data provided by the Plan's administrator for the Plan at 30 June 2018).

<b>Calculation of Defined Benefit Assets at 30 June 2018</b>	<b>\$</b>
<b>Net market value of the Plan's assets as at 30 June 2018</b>	<b>\$40,555,000</b>
Less provision for tax payable	\$190,000
<b>Assets to support the defined benefit liabilities of the Plan</b>	<b>\$40,364,000</b>

### 9.2. Operational risk reserves

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

The scope of this Investigation does not include a review of the adequacy of assets held to meet the ORFR or the ORFR strategy.

# 10

## Actuarial Assumptions

The ultimate cost to the Employer of providing Plan benefits 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 methods used to determine the recommended Employer contribution rate, 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 Plan assets and benefit liabilities on the basis of actuarial assumptions about future experience.

These assumptions include investment returns, salary/wage increases, crediting rates, 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.

### 10.1. 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.

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

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

	<b>Assumption</b>
Investment returns (after tax, investment and asset based administration fees) <sup>#</sup>	0.5% p.a.
General salary increases	2.0% p.a.

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

The general salary increase assumption is based on long term economic forecasts for future increases in average weekly earnings (AWOTE) and feedback from the Employer.

## 10.2. Other assumptions

### *New members*

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

### *Expenses*

The cost of administration expenses have been allowed for in deriving the employer future service cost. Based on the data provided, administration expenses are currently around \$13,000 per quarter (\$52,000 per annum) or around 0.1% of Plan assets.

Actuarial consulting fees are deducted from plan assets and based on recent experience these are assumed to average around \$20,000 per annum.

### *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 other concessions.

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

**Death and Disablement in Service**

I have maintained the same assumptions in relation to rates of death and total and permanent disablement (TPD) as were adopted at the 30 June 2015 actuarial investigation. Examples of the assumed death and TPD rates for current employee members are set out below:

Age Last Birthday	Percentage of members age x at beginning of year assumed to leave the Plan during the year on account of:			
	Death		Disablement	
x	Male %	Female %	Male %	Female %
40	0.085	0.085	0.038	0.038
45	0.140	0.140	0.083	0.083
50	0.236	0.236	0.182	0.182
55	0.401	0.401	0.389	0.389
60	0.678	0.678	0.828	0.828

**Retirement**

The rates at which members are assumed to leave the Plan due to retirement are set out below. These take into account the Plan's experience and the experience of similar plans administered or advised by Mercer.

Age Last Birthday	Percentage of members age x at beginning of year assumed to leave the Plan during the year on account of early retirement
x	%
55 -59	5
60	20
61	10
62	10
63	15
64	20
65 - 69	50
70	100

### **Resignation**

Specimen rates at which members are assumed to leave the Plan due to resignation are set out below. Given the small size of the Plan, these are based on the experience of similar plans administered or advised by Mercer.

Age Last Birthday	Percentage of members age x at beginning of year assumed to leave the Plan during the year on account of resignation	
x	Male %	Female %
40	3.8	3.8
45	2.9	2.9
50	1.7	1.7
55	0.0	0.0
60	0.0	0.0
65	0.0	0.0

### **Retrenchment**

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

The retrenchment benefit is the same as the benefit paid on resignation or retirement.

## **10.3. Changes in Assumptions since the Previous Investigation**

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

Assumption	30 June 2018 investigation	30 June 2015 investigation	Reason for change
Investment Return	0.5% p.a.	3.7% p.a.	Updated to reflect the upcoming change to a cash investment option
Salary Increase	2.0% p.a.	4.0% p.a.	Revised outlook by employer and general economy

The overall impact of the changes in assumptions was to:

- increase the Actuarial Value of Accrued Benefits by \$3.5m
- increase the assessed long-term employer cost of future service from 16.1% to 19.0% of salaries.

# 11

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## The Regulator and Prudential Standards

The 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 a number of the requirements arising from SPS 160.

### 11.1. 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 99.0%. If the assets remain in the Conservative Option then we can confirm that this Shortfall Limit is reasonable.

The Shortfall Limit is expressed as a percentage coverage level of defined benefit vested benefits by defined benefit assets and it is appropriate to consider the following when determining if the Shortfall Limit remains appropriate:

- The guidance provided in the Actuaries Institute Information Note: Shortfall Limit in Prudential Standard 160 dated June 2013;
- The investment strategy for defined benefit assets. We understand that the assets will be moved to Cash shortly and therefore will have an overall benchmark exposure of 0% 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, and the imminent move to a cash option, we recommend updating the current Shortfall Limit to 100%.

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 (other than the proposed switch to Cash) - or if the Trustee otherwise considers it appropriate to do so.

## 11.2. 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 defined benefit vested benefits coverage has (or may have) fallen below the Shortfall Limit, then under SPS 160:

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

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

- A broad estimate of the defined benefit vested benefits coverage for each Plan is prepared each quarter using an approximate approach which takes into account key factors such as the investment return and top-up contributions (if any) for the quarter (“Trustee’s estimate”);
- Annually, the Actuary will be requested to formally update the financial position;
- If the Trustee’s estimate indicates that the Shortfall Limit has, or may have been breached, action will be taken as required by SPS 160;
- For plans in a satisfactory financial position where there has been a significant reduction in the Trustee’s estimate of defined benefit vested benefits coverage, the Trustee will request a review of the financial position and formal advice from the Plan actuary as to whether or not the current contribution program remains appropriate;
- For plans in an unsatisfactory financial position, the Trustee will request a review of the financial position and advice from the Plan actuary each quarter as to whether or not the current contribution program remains appropriate or any other action should be taken;

We consider that the adopted monitoring process is appropriate.

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.

## 11.3. Requirements due to Unsatisfactory Financial Position

### 11.3.1. 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.

- 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.

### **11.3.2. 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 regulator (APRA) in writing immediately (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).

### **11.4. Statements Required by SPS 160**

*This section provides statements required to be made under APRA Prudential Standard SPS 160.*

The results presented in this report relate only to the defined benefit members of the Millennium Inorganics Chemicals Limited Plan. Additional accumulation balances for defined benefit members and any accumulation liabilities relating to accumulation members have been **excluded** as these liabilities are exactly matched by the assets backing the benefits.

- (a) The value of the Plan's assets as at 30 June 2018 was \$40,364,000. 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 30 June 2018 was \$38,130,000. Hence I consider that the value of the assets at 30 June 2018 is adequate to meet the value of the accrued benefit liabilities of the Plan as at 30 June 2018. Taking into account the circumstances of the Plan, the details of the membership and the assets (and assuming that the assets are switched to Cash as advised), 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 this Section of the report. Assuming that the Employer contributes in accordance with my recommendations, then, based on the assumptions made for this actuarial investigation which I consider to be reasonable expectations for the Plan, I expect that assets will remain sufficient to cover the value of accrued benefit liabilities over the period to 30 June 2021.
- (c) In my opinion, the value of the liabilities of the Plan in respect of vested benefits as at 30 June 2018 was \$34,746,000. Hence I consider that the value of the assets at 30 June 2018 is adequate to meet the value of the vested benefit liabilities of the Plan as at 30 June 2018.

Assuming that the Employer contributes in accordance with my recommendations, then, based on the assumptions made for this actuarial investigation, I expect that assets will remain sufficient to cover the value of vested benefit liabilities over the period to 30 June 2021. 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 30 June 2018 was \$17,066,000. Hence the Plan was not technically insolvent at 30 June 2018.
- (e) A projection of the likely future financial position of the Plan over the 3-year period following 30 June 2018, based on what I consider to be reasonable expectations for the Plan for the purpose of this projection, is set out in Section 5 of this report,
- (f) When the assets are moved to Cash, I consider that the Shortfall Limit should be changed to 100.0%. Comments are set out in Section 11.1 of this report.
- (g) In respect of the 3-year period following 30 June 2018, I recommend that the Employer contribute to the Plan at least:

#### Defined Benefit members

- 16% of salaries (nil for any member whose defined benefit multiple has been frozen) from 1 July 2018.
- Member contributions made by salary sacrifice.

#### Accumulation Members

- 9.5% of Ordinary Time Earnings (OTE), increasing in line with the percentage required by the Superannuation Guarantee legislation (or such other rate as agreed with the Employer).
- Member contributions made by salary sacrifice.

- (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 30 June 2018;
  - I expect to be able to certify the solvency of the Plan in any Funding and Solvency Certificates that may be required in the three year period from 30 June 2018.

# 12

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## Actuarial Certification

### 12.1. Purpose

I have prepared this report exclusively for the Trustee of the Millennium Inorganic Chemicals Limited Plan for the following purposes:

- To present the results of an actuarial investigation of the Plan as of 30 June 2018;
- To review Plan experience for the period since the previous actuarial investigation (effective at 30 June 2015);
- 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 30 June 2015 by Stuart Mules, on behalf of Mercer, and the results are contained in a report dated 29 February 2016.

### 12.2. Background information of the Plan

The Plan is operated for the benefit of employees of Cristal Pigment Australia Limited and is a part of the BT Lifetime Super – Employer Plan within Retirement Wrap. The Trustee, BT Funds Management Limited, holds a Registrable Superannuation Entity Licence under the SIS legislation and operates the Plan as required under the Trust Deed.

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

### 12.3. Governing Documents

The governing rules of the Plan are set out in the transfer deed dated 14 August 2003 (as amended).

## 12.4. Additional information

**Significant events since the investigation date** – We have allowed for the investment returns on the Plan's assets of -0.77% from 1 July 2018 to 30 November 2018.

Also, we have been advised that the Trustee will be moving the assets to Cash shortly and therefore, as requested, we have assumed that this switch occurs on 1 January 2019.

**Next actuarial investigation** - Required at a date no later than 30 June 2021. At that time, the adequacy of the Employer contribution levels will be reassessed. Note that the annual monitoring process recommended may lead to an earlier reassessment ahead of the next full actuarial investigation.

**Next Funding and Solvency Certificate** – required at least 12 months before the expiry of the current Funding and Solvency Certificate (which expires on 30 June 2022).

**Next Benefit Certificate** – required following the expiry of the current Benefit Certificate (which expires 30 June 2022). The current Benefit Certificate is designed to accommodate changes to the legislated Superannuation Guarantee schedule.

## 12.5. Actuary's certifications

### *Professional standards and scope*

This report has been prepared in accordance with generally accepted actuarial principles, Mercer 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 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. The Trustee should share this report with the Employer(s) who contribute(s) to the Plan. The Employer(s) 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 inflation 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 also shows the impact on the likely contribution requirements/funding levels if one alternative set of 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 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 be made only after careful consideration of alternative future financial conditions and scenarios, and not solely on the basis of a set of investigation results.

### ***Data and Plan 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 reviewed the financial and participant data for internal consistency and general reasonableness and believe it is suitable for the purpose of this report. We have not verified or audited any of the data or information provided. 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.

### ***Further Information***

If requested, the actuary is available to provide any supplementary information and explanation about the actuarial investigation.

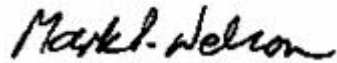
Prepared by



.....  
**Angela Hartl**  
**Fellow of the Institute of Actuaries of Australia**

**17 December 2018**

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



.....  
**Mark Nelson**  
**Fellow of the Institute of Actuaries of Australia**

# APPENDIX A

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## Membership Information

The membership of the defined benefit section has changed since 30 June 2015 as follows:

Active members at 30 June 2015	112
Exits	43
New Entrants	0
Active members at 30 June 2018	69
<hr/>	
Total salaries at 30 June 2018	\$8,033,000
Average salaries at 30 June 2018	\$116,000
Average age at 30 June 2018	56 years

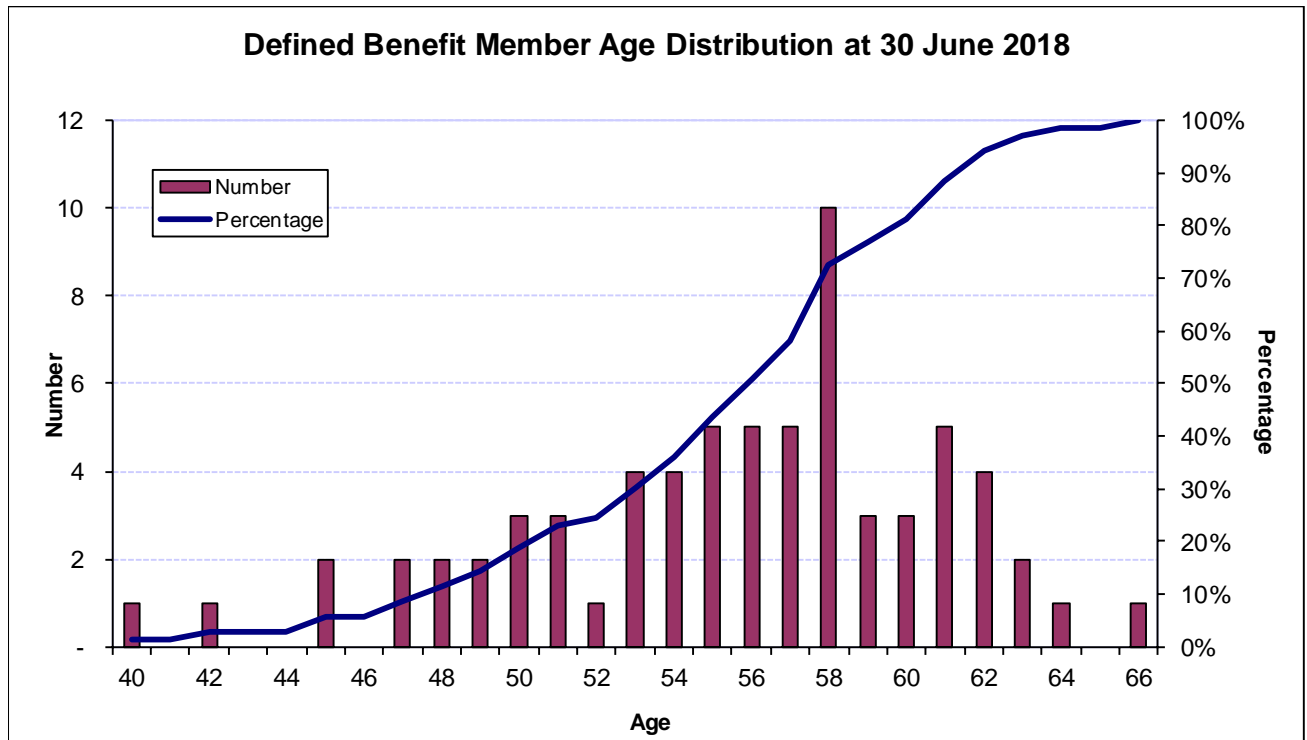
The breakdown of membership by category at 30 June 2015 is shown below:

Category	Number of Members
A	1
B	2
C	35
EW	31
F	0
<b>Total</b>	<b>69</b>

The membership data used for this investigation was taken from the database used to administer the Plan. I have carried out some broad “reasonableness” checks on the data and I am satisfied with the quality of the data and its suitability for this purpose.

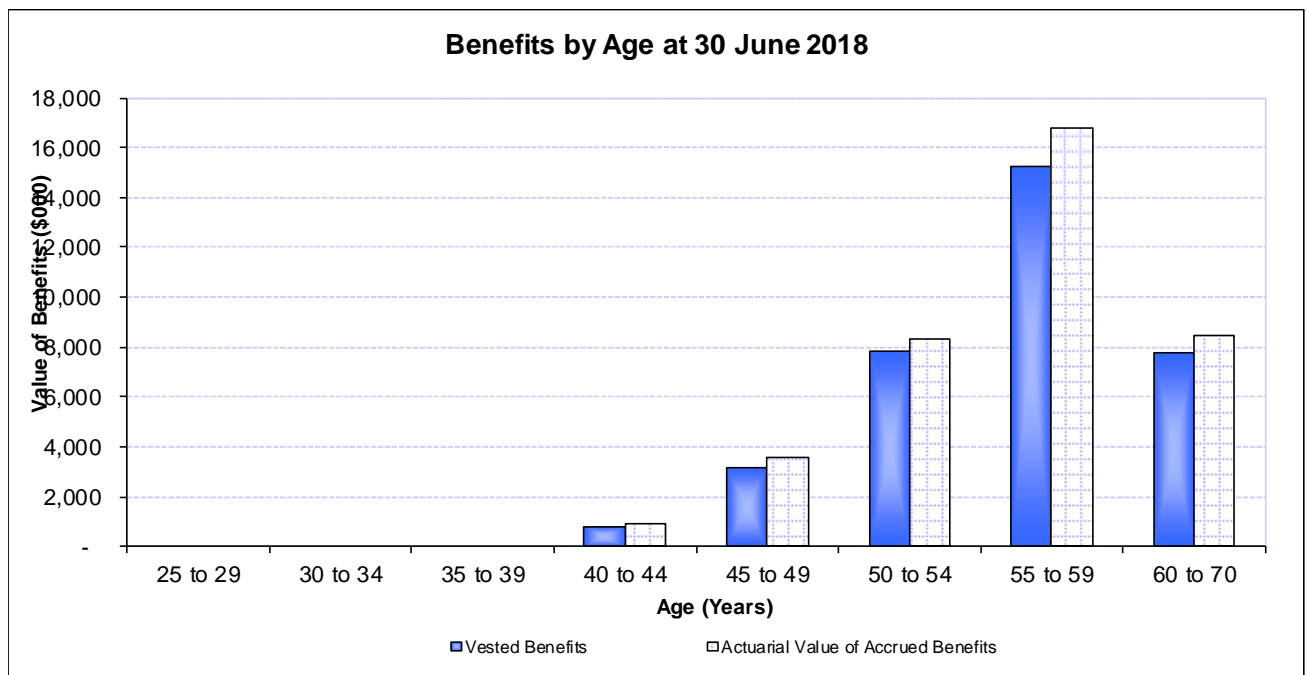
### A.1. Active defined benefit member age profile

The 30 June 2018 defined benefit membership split by age is shown in the following graph:



### A.2. Actuarial Value of Accrued Benefits age profile

The following graph shows the Vested Benefits and Actuarial Value of Accrued Benefits of defined benefit members (excluding additional accounts) at 30 June 2018, split by age.



# APPENDIX B

## Plan Design

### B.1. Summary of benefits

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

<b>Members' Contributions (% of salary)</b>	Members can make voluntary contributions in order to obtain additional defined benefits. Contributing members can be identified by either 1 or 2 in their benefit class code.
---------------------------------------------	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

Benefit Class	Member Contribution Rate as % of Salary	Voluntary Contribution Benefit Factor Accrual
1	2.5%	3.25%
2	5.0%	6.5%

#### Accrual Rate

Benefit Class	Award Benefit Factor	Basic Benefit Factor
A	9.8%	13.1%
B	9.8%	8.1%
C	9.8%	5.6%
EW	9.8%	5.6%
F	Nil	Nil

<b>Normal Retirement Age</b>	65 but members' will continue to accrue a benefit until age 70
<b>Final Average Salary (FAS)</b>	Up to age 65: Average of 3 highest salaries in the 10 years prior to the date of exit  After age 65: FAS calculated at age 65 and frozen thereafter
<b>Voluntary Contribution Benefit</b>	Voluntary Contribution Benefit Factor x FAS
<b>Award Benefit</b>	Award Benefit Factor x FAS
<b>Basic Benefit</b>	Basic Benefit Factor x FAS reduced by (1/6)% for each complete month before member's 60th birthday
<b>Accrued Retirement Benefit</b>	Award Benefit + Basic Benefit
<b>Surcharge Account</b>	Accumulation with interest of any surcharge tax assessments

<b>Leaving Service Benefit</b>	All members have more than 10 years' service and are eligible for the following benefit on resignation and retirement from the Plan.  The lesser of: i. Accrued Retirement Benefit; and ii. 8 x FAS Plus Voluntary Contribution Benefit Plus Surcharge Account
<b>Late Retirement Benefit</b>	Leaving Service Benefit at member's 70th birthday increased with interest at the Plan's crediting rate.
<b>Death/TPD Benefit</b>	The sum of: i. Accrued Retirement Benefit that member would have received had he remained in service to age 65 assuming that his salary at date of death remained the same until age 65; plus ii. Voluntary Contribution Benefit at the date of death; plus iii. Surcharge account at the date of calculation.

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 which would constrain any future decisions.

<b>Trustee and Employer Discretions</b>	
<b>Description and Deed Reference</b>	<b>Historical Prevalence</b>
Section 5.12(a) Principal Employer may request benefits to be increased given that they contribute additional amounts which the Actuary deems necessary to ensure financial stability to the plan.	No known occurrences
Section 5.7(b) Employer may reduce the temporary disability benefit by periodic payments received that already covers the member for the disability period.	No known occurrences.
<b>Member Options</b>	
<b>Description and Deed Reference</b>	<b>Historical Prevalence</b>
None	

Neither the Trustee nor the Employer has a right within the Trust Deed to review benefits or member contribution rates.

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

## **B.2. 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.

The SG rate will remain at 9.5% until 1 July 2021 and is then scheduled to increase by 0.5% pa until it reaches 12% from 1 July 2025.



Mercer Consulting (Australia) Pty Ltd  
ABN 55 153 168 140  
AFS Licence # 411770  
One International Towers  
100 Barangaroo Ave Sydney NSW 2000  
GPO Box 9946 Sydney NSW 2001  
+61 2 8864 8888