

2 KEY REFERENCE POINTS & RESEARCH

2.1 Local Government Act 1995

The relevant provisions within the Act allow for borrowings and stipulate:

- Local government in Western Australia may borrow money or obtain credit to enable it to perform the functions and exercise the powers conferred to it under the Local Government Act 1995 (WA)
- where a Council proposes to borrow money, and this has not been accounted for in the budget for that financial year, the Council must first obtain an absolute majority in order to exercise the power to borrow, and then give one month's public notice of the proposal
- Local government may only provide security in limited forms, as set out in s 6.21 of the Local Government Act 1995.

2.2 City of Joondalup Positioning Statement on Sustainable Borrowings

The City has adopted a Positioning Statement on Sustainable Borrowings as follows:

"The City supports borrowing as an appropriate form of financing capital expenditure in the achievement of objectives contained within the Strategic Community Plan 2012-2022 and the 20 Year Strategic Financial Plan."

Sustainable borrowing parameters should be determined as follows:

1. *Long term borrowing requirements will be identified as part of the 20 Year Strategic Financial Plan and specific borrowings will be approved as part of the annual budget process.*
2. *Borrowings should only be considered where the impacts are within the range of the key ratio targets contained within the 20 Year Strategic Financial Plan – Guiding Principles, in particular, the Debt Service Coverage Ratio."*

The positioning statement has replaced the Borrowing Strategy that was adopted by Council in 2010, this has now been revoked. The position above is now a lot more flexible than the previous Borrowings Strategy and therefore allows consideration of different options that are considered in this report.

2.3 Guiding Principles – 20 Year Strategic Financial Plan

The Positioning Statement refers to the Guiding Principles within the 20 Year SFP. The Guiding Principles first of all refer to 7 key principles which are worth bearing in mind when considering the different financing options:

- Sustainability
- Transparency
- Prudence
- Consistency
- Performance and Accountability
- Flexibility and Long-Term Approach
- Service Levels and Asset Management

The Guiding Principles also have a specific section regarding Funding/Treasury as follows:

“The City is an asset intensive business, and as such loan funding could be expected to be used to fund Capital Expenditure. The Borrowings should be consistent with the City’s Strategic Positioning Statement on Sustainable Borrowings. The primary measure of evaluation is the Debt Service Coverage Ratio which is not to exceed five consecutive years with an annual debt service cover ratio of between three and five, with all other periods exceeding a ratio of five.

Revenue from the Tamala Park land sale should be applied in accordance with the City’s adopted Strategic Position Statement.

The Strategic Asset Management Reserve is able to be applied to fund projects based on an internal payback mechanism. Municipal funds should pay back to the Strategic Asset Management Reserve principal and interest over a 10 year period. The payback mechanism should only be used where affordable for the municipal fund such that the overall objective of achieving a net nil closing balance each year is achieved.”

2.4 Strategic Community Plan

This report supports the City of Joondalup Strategic Community Plan as follows:

- Financial Sustainability – manage liabilities and assets through a planned long-term approach
- Optimise funding options for new projects that take advantage of favourable economic conditions

2.5 ACELG (Australian Centre of Excellence for Local Government)

The ACELG have commissioned various reports during the past few years to assist the industry with considering best practice. In 2014 a report was issued called “Debt is Not a Dirty Word”, which considered current practices for financing, other options for borrowings and changes that the industry should consider.

The ACELG report indicated that the industry (in general) was stuck in its ways regarding borrowing options and financing. The industry generally fears debt and a well run Local Government is often recognised as one that has minimal or no debt – however this can be short-sighted and is not necessarily a good indicator of a well run Local Government. Debt is underutilised within the industry and when it is used it is often the wrong type of debt that is used due to a lack of understanding of the risk, costs and options available.

One of the other key observations is regarding “Tied Reserves”, which for most Local Governments are regarded as sound healthy financial management. However from an overall Treasury Management perspective the use of “Tied Reserves” is often sub-optimal and lacks the foresight to minimise overall financing costs. In essence the use of “Tied Reserves” is akin to shoebox accounting.

The ACELG has many useful observations and will be referred to throughout this report. However the ACELG report also makes the key observation that there is not one size that fits all, every Local Government must consider carefully the available options and evaluate those which are right for them. Therefore the recommendations in this report are not necessarily made just because they may have been repeated in the ACELG report.

2.6 West Australian Treasury Corporation (WATC)

WATC are the body used by Local Government in WA to assist with borrowings. WATC have been referred/consulted in several ways regarding the JPACF project and this review:

- 2015 – The City began to have informal discussions regarding the City's SFP and more importantly the assumption that it would be in a position to secure large borrowings for the JPACF.
- 2016 – WATC were again provided with a copy of the City's draft SFP and asked to provide comment. They reviewed the plans based on their standard assessment criteria and confirmed that if all assumptions remained the same then the City would qualify for the proposed borrowings. This was an informal exercise.
- Local Govt. Circulars – during the past year WATC have issued 4 circulars to provide background information regarding borrowings and different types of arrangements that could be used. These circulars have been referred to in this report.
- Additional Borrowing Capacity Model – WATC issued a financial model to all Local Government which helps evaluate borrowing criteria and plan for future borrowings. The City has used this model to enhance the SFP model; this will be explained in more detail later on.
- Informal discussions September 2016 regarding alternative arrangements reviewed in this report (variable rates, interest only).

Whilst discussions have taken place with WATC during the past 2 years regarding the JPACF borrowings, it must be emphasised that these are INFORMAL, and at no point has there been any formal confirmation that the City would definitely obtain the borrowings. Indeed since those discussions some of the key assumptions in the SFP have worsened (Tamala Park Proceeds are now lower) or at risk of being lower (General Rates increases may be lower than the SFP increases of 4% to 5%) It is therefore vital that the City continues to have open regular dialogue with WATC, and indeed when the City commits to the JPACF it will need to formally secure the borrowings before it can invest further.

Some of the key observations from WATC in their circulars are:

- An LGA with a no-debt policy may regard itself as financially conservative or not wanting to burden constituents with debt. However, such a policy may not be consistent to achieving an appropriate balance in intergenerational equity or in providing services to the community expected.
- LGAs that only borrow where they expect an independent source of revenue to service the loan are subjecting themselves, and ultimately their ratepayers, to a higher degree of financial risk. This arises as the alternative income streams expected to support such loans are generally subject to a degree of uncertainty in comparison to an LGA's core sources of income (i.e. rates and regular grants).
- A quote for a Fixed Rate loan is expected to be higher than for a Variable rate loan of an equivalent term.

2.7 Terminology

The table below summarises some of the key terms referred to throughout the report (tbc)

	Item	Definition
1	Loans or Borrowings	<ul style="list-style-type: none"> ○ The amount of money financed by a 3rd party ○ The term Loan and Borrowings are used interchangeably to describe the original amount that is borrowed.
2	Principal	<ul style="list-style-type: none"> ○ The amount of the original loan outstanding at any point in

		<p>time.</p> <ul style="list-style-type: none"> o At the time of creating the loan the principal will equal the loan amount. However the principal will be repaid over time and eventually be zero.
3	Interest Expense	<ul style="list-style-type: none"> o The additional expense that is payable regularly (normally quarterly) on top of any repayment of principal o Interest expense is calculated as a % of the outstanding principal. o Sometimes referred to as the “Costs of Borrowing”
4	Repayment	<ul style="list-style-type: none"> o The total cash flow paid at a given point in time. o Repayment comprises of both the Principal being repaid and the Interest Expense
5	Earnings on Cash	<ul style="list-style-type: none"> o This term is used in this report to denote that earnings that are earned by the City at financial institutions with cash that has been banked. o This term is referred to because each of the options will affect cash flow differently and therefore the earnings on cash will be affected by the amount differently
6	Interest Rate	<ul style="list-style-type: none"> o % figure that is relevant for either Interest Expense or Earnings on Cash o Interest Rate applicable for borrowings can either be fixed or variable. o The term interest rate can be interchangeable applied to interest expense (on borrowings) or relating to the income received through cash banked
7	Financing & Funding	<ul style="list-style-type: none"> o The term Financing and Funding are often used interchangeably but in this report and commonly in public finance the terms have different meanings. Funding refers to the raising of revenue (e.g. general rates, fees/charges), whereas Financing describes how a payment for an outlay is accommodated. o Financing could be through an entity utilising its financial assets (e.g. cash reserves) or by an arrangement to use another entity's funds (e.g. raising a borrowing). o While financing and funding are different functions they are interrelated i.e. the repayment of a finance arrangement has to be funded by revenue.
6	Net Cash is Not Unencumbered Cash	<ul style="list-style-type: none"> o Net Cash is a key metric used in the evaluation of the options. o This is calculated as the difference between Total Cash Reserves and principal owing. o Care has to be taken in the interpretation of this metric though, because Net Cash cannot be assumed to be total cash available to the City for projects or the like. Within the Reserves figure there will be tied reserves whose purpose are legally/contractually tied and cannot be available for projects. o Therefore Net Cash is not the same as Unencumbered Cash, which is term meaning cash available. It would overcomplicate this report to split out Net Cash and Unencumbered Cash and in any case it would not serve any purpose in evaluating the difference between options.

OPTION EVALUATION

3 BASELINE & KEY ASSUMPTIONS

3.1 Adopted 20 Year Strategic Financial Plan (June 2016)

As mentioned earlier it is necessary to consider financial options for the overall City, not just for one project in isolation. The starting point of the analysis is the 20 Year SFP that was adopted by Council in June 2016. This is shown in Attachment 1.

3.2 Restated SFP based on Reduced Tamala Park Land Sales

The Adopted SFP included estimated land proceeds from Tamala Park based on 2015 projections from TPRC (Tamala Park Regional Council). Since the SFP was adopted the City has received updated projections from TPRC. The expected distribution during the next few years (when JPACF is planned for construction) is reduced by \$7m and the overall distribution forecast (up to 2028/29) is also \$7m lower. The shortfall in the next few years means fewer reserves available to contribute to the JPACF which result in higher borrowings which have to be repaid from municipal funds. It is therefore deemed prudent to restate the SFP for the purposes of this report using the reduced Tamala Park Land Sales.

3.3 Projected New Borrowings

The SFP (restated) now estimates approx \$93m of new borrowings based on the current assumptions (Fixed Interest). This comprises of the following projects:

- \$55m JPACF
- \$4.5m Hockey
- \$12m Edgewater Quarry (self-financed with land proceeds to repay borrowings)
- \$17m Second Multi Storey Car Park (self-financed using surpluses from parking operations)
- \$4.5m Admin Building Refurbishment

Of the total \$93m borrowings, approx \$29m can be regarded as self-financed to some extent (Edgewater Quarry and Multi Storey Car Park). Of the remaining \$64m, the vast majority (\$55m) is for the JPACF. Therefore whilst the analysis in this report relates to the overall City finances the major driver regarding borrowings is the JPACF.

3.4 Interest Rate Forecasts

The analysis in this report uses various interest rate forecasts as shown in Appendix 1. These are based on information provided recently by WATC, although they have only provided estimated rates up to the 2025/26 the forecasts thereafter are by the City.

WATC have provided estimated rates for Fixed Interest loans. This evaluation also includes options for Variable Interest Rates and an assumption has been made that the Variable Interest Rates would be 0.5% less every year than the Fixed Interest Rates. This is a reasonable assumption because in the long run it is normal for Fixed Rates to be higher than Variable Rates as Fixed Rates include a premium above the prevailing market rate.

Appendix 1 also shows the cost of the Govt Guarantee of 0.7% which would apply to all options, albeit the impact would be different as it is calculated on the principal owing which would be different for each option.

3.5 Earnings on Cash

Appendix 1 also indicates the assumption for interest earned on cash reserves by the City. The assumption is that the City would earn 1% less than the costs of borrowing; this is a generally recognised prudent assumption and has been the standard assumption within the Adopted SFP for a number of years. These assumptions are important because the 20 Year SFP recalculates the earnings from cash based on the various cash flows, and therefore any option which has a bigger drain on cash flow will result in fewer earnings for the City.

3.6 Existing Borrowings Assumed to Continue on Same Terms

The City currently (as at July 2016) has circa \$15m outstanding on borrowings set up during the past few years. Appendix 2 provides a summary of the borrowings, the principal repayments and the end date. The City is paying almost \$3m per year in principal and interest, most of which will reduce by 2020/21, just as the JPACF borrowings come on line. Whilst the reduced burden of the existing borrowings will help in some respects with the new borrowings for the JPACF this is already factored into the SFP.

The analysis assumes that the repayment arrangements of these existing borrowings will continue as they are and are included equally in each of the models. Therefore there is no consideration of refinancing existing borrowings. The graphs which compare the cashflows of each option will EXCLUDE existing borrowings and only show the impacts for new borrowings.

3.7 Edgewater Quarry Borrowings – assumptions same in all options

The Edgewater Quarry borrowings are set up within the SFP as follows:

- Borrowings of \$12.2m split mostly between 2 years 2020/21 and 2021/22
- Interest only loan for a short-time
- Sales proceeds of \$12.2m received in 2023/24 and 2024/25 are used to repay the principal
- Interest Rate of 5% assumed for the years when principal is outstanding
- Interest expense on borrowings costs \$2.5m

All options have used the same assumptions for Edgewater Quarry because it is a unique self-funded loan.

3.8 Parameters for Evaluation

The various options are modelled on a like for like basis. The key parameters for the model are:

- SFP model is used to calculate all the impacts for each individual option, so a full 20 year impact up to 2034/35 is assessed. Whilst there are some options (e.g. 20 year repayment terms) which still have many years to run to repay borrowings beyond 2034/35, this has been taken account of in the key metrics – for example the Net Cash at 2034/35 takes account of borrowings outstanding.
- All whole of life cash flow impacts are considered in the SFP model, including the earnings on cash reserves. The earnings on cash reserves are affected by the different cashflows of different arrangements.
- Reserves – the use of reserves for all options is the same as the Adopted 20 Year SFP except the Strategic Asset Management Reserve. The assumptions for Reserves are:
 - Tamala Park proceeds are only used for the JPACF
 - JPACF reserve only used for JPACF
 - Parking Surpluses go to the Parking Reserve which is then used to repay borrowings for Parking Facilities
 - Strategic Asset Management Reserve used for a variety of projects and where it is used the municipal fund has to pay back to the reserve over a 10 year period or until such time as the Municipal Fund can afford to do so. The Flexible option will be explained later in the report treats this principal differently.

The key metrics used to summarise the impacts comprise of the impacts on cash flow, operating results, debt ratios and overall ratios.

4 LIST OF OPTIONS

4.1 List of Options

The Chart below lists the 13 different options that have been evaluated. These are categorised as follows:

- A. Arrangement Type - Fixed, Variable or Flexible
- B. Repayment Terms. For option 1 and 2 this is 5, 10, 15 or 20 years or a mix thereof. For Option 3 Flexible there are 3 different types of repayment terms

Arrangement	Option	Term
Option 1) Fixed Interest Fixed Terms	Option 1a	5/10/15 years
	Option 1b	5 Years
	Option 1c	10 Years
	Option 1d	15 Years
	Option 1e	20 Years
Option 2) Variable Interest Fixed Terms	Option 2a	5/10/15 years
	Option 2b	5 Years
	Option 2c	10 Years
	Option 2d	15 Years
	Option 2e	20 Years
Option 3) Interest Only	Option 3a	Balloon Payments
	Option 3b	Repay Quickly
	Option 3c	Free up Reserves

4.2 Approach for Evaluation

Financial Evaluation has been completed for all 13 options. However it is impractical to compare the 13 options all at once i.e. 13 lines on a graph would not be clear. The evaluation will therefore comprise of 2 separate parts:

- I. Firstly the Repayment Terms (5, 10, 15 or 20 years) that are relevant for Options 1 and 2 will be evaluated first. This analysis will then make a recommendation for the appropriate repayment term(s).
- II. Secondly, and most importantly, the three Arrangement Types will then be assessed (Fixed, Variable or Flexible). For Option 1 and 2 just one subset of repayment terms will be considered and for Option 3 only Option 3b will be used in the report, the reasons for this will be explained later.

5 REPAYMENT TERMS (5, 10, 15 OR 20 YEARS)

5.1 Current Practice – Mixed Terms

The City has traditionally fixed the repayment term at either 5 years or 10 years, depending on the size of the borrowings. For example, the \$8.5m for the Multi Storey Car Park is repaid over a 10 year period, whereas the Bramston Park Clubrooms \$1.8m is repaid over a 5 year basis. The SFP has assumed 15 year terms for JPACF borrowings projected in 2017-18 and 2018-19, the 15 year term was suggested by WATC in 2015 rather than the 10 year term previously assumed. The City does not currently, nor was it intending to have 20 year repayments, but these are evaluated in this section.

5.2 Key Features

The different repayment terms have the following features:

- Longer the term the higher the interest costs
- Shorter the term the higher the annual repayment and the more pressure there is on operating cash flow to afford the repayments.

5.3 Repayment Options Evaluated

Five options have been evaluated for the different repayment terms.

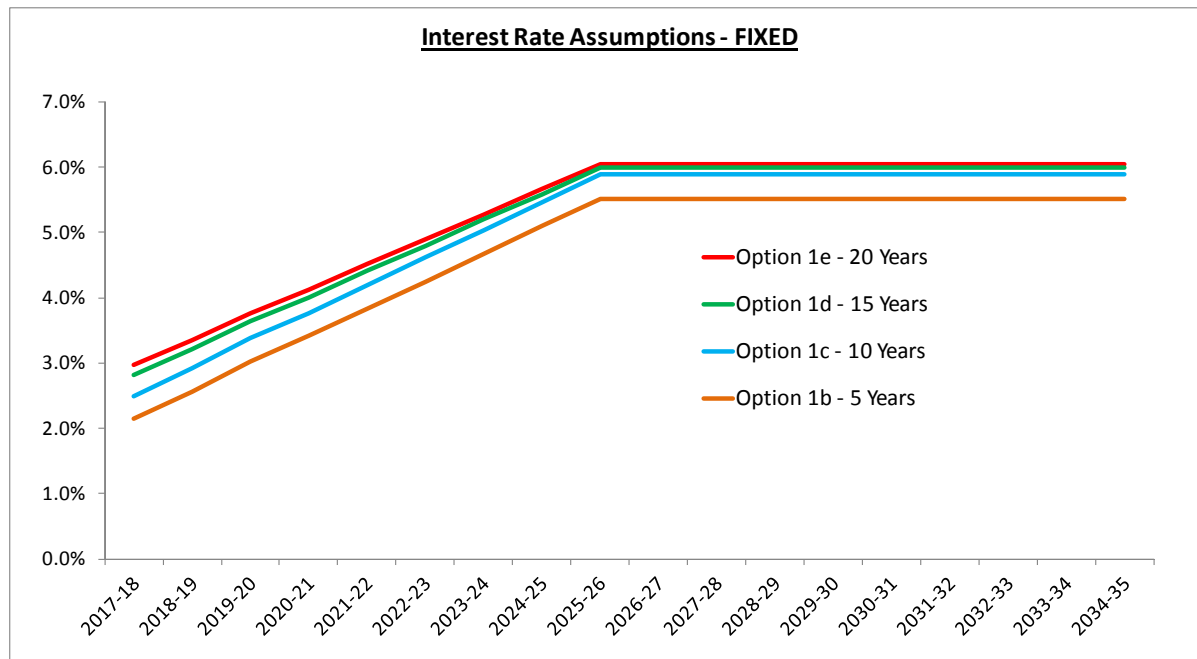
- a) Option 1a - Firstly, the current practice of mixed terms (5, 10 or 15 years) is the first option.
- b) Option 1b - Then a separate option where all borrowings are taken on a 5 year repayment term
- c) Option 1c – All borrowings on a 10 year repayment term
- d) Option 1d – All borrowings on a 15 year repayment term
- e) Option 1e – All borrowings on a 20 year repayment term

For ease of comparison the arrangement method assumed for all 5 options is just a Fixed Interest arrangement.

5.4 Interest Assumptions

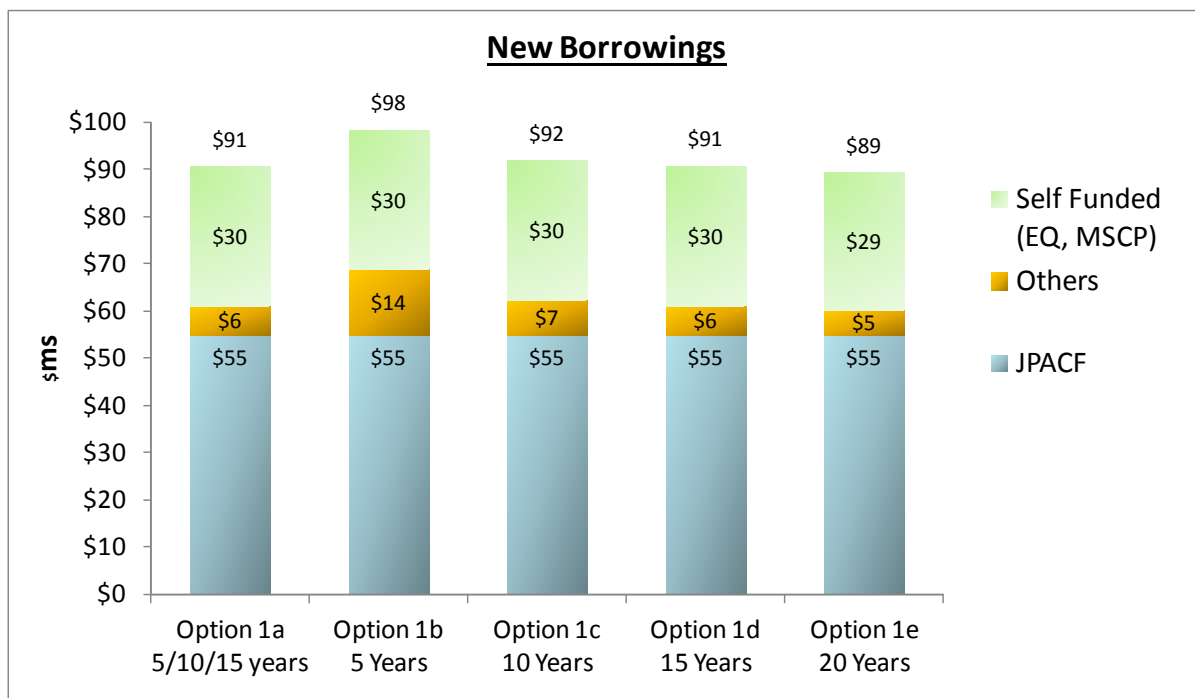
The graph below shows the assumptions applied in the evaluation. The key features are:

- All options are assumed to have increased costs of borrowing with increases from 2017-18 to 2026/27.
- The longer the term the higher the rate is.



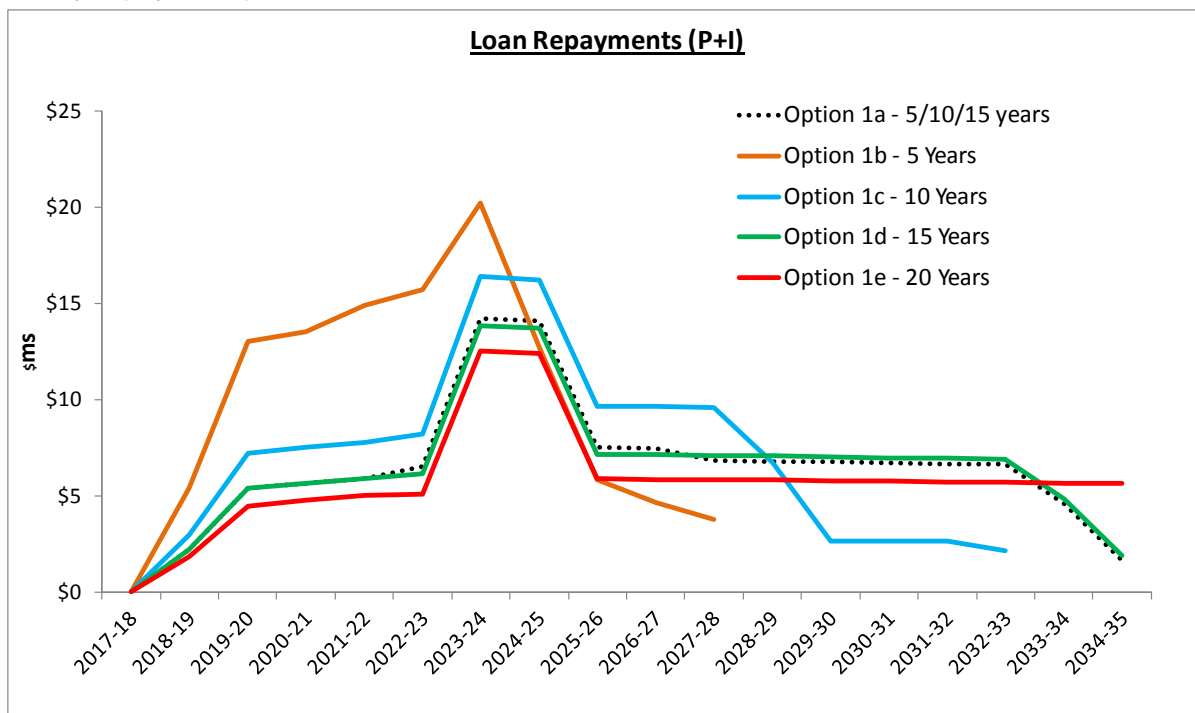
5.5 Borrowings Estimates

The graph below summarises the total estimated borrowings for the 20 years of the plan for each option. Bear in mind that all options are now based on a restated SFP which has \$7m less Tamala Proceeds. There are differences in the amount of borrowings for each option because each option affects cashflows in a different way and has different levels of municipal funds/reserve funds available before borrowings are considered. For example Option 1b (5 year repayment term) would result in higher borrowings because there would be a short term drain on cash due to the higher repayments which ultimately results in more borrowings than the other options.



5.6 Loan Repayments

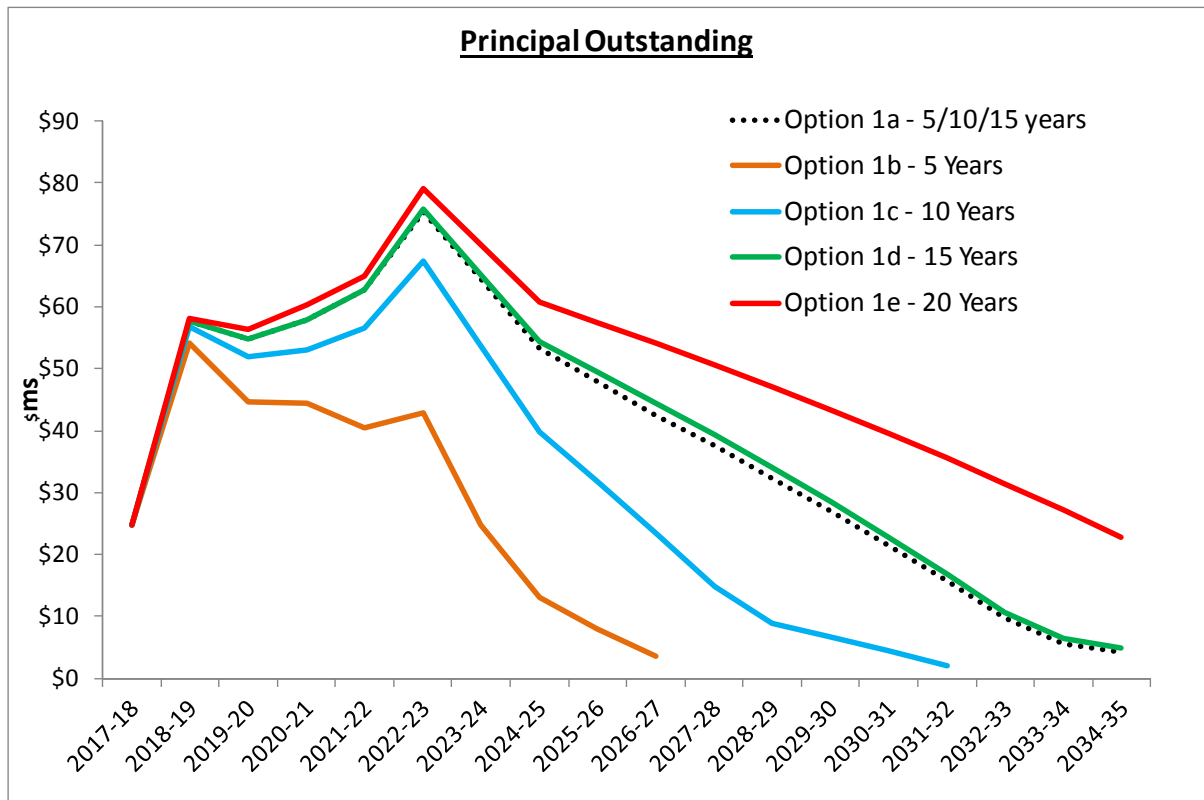
The graph below summarises the annual loan repayments for each option. This shows that Option 1b has much higher loan repayments in the earlier years but this reduces greatly in 2024/25 as the principal is reduced. Meanwhile the 20 year option provides a much more steady repayment profile.



5.7 Principal Owing

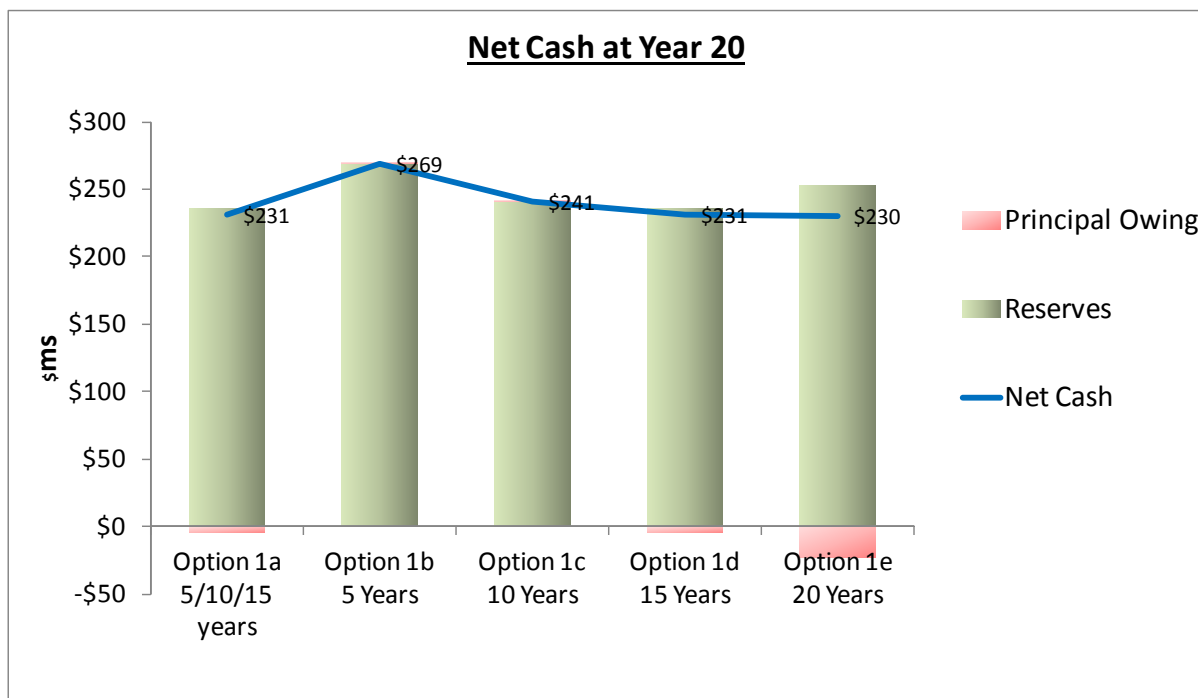
The graph below shows the principal outstanding for each option: Key issues to note are:

- Year 20 – at 2034/35 Options 1d (15 year repayment terms) and Option 1e (20 year repayment terms) still have principal outstanding on loans. All other options have repaid their borrowings before year 20 and most notably Option 1b has repaid by 2026/27
- Maximum borrowings – the highest point of borrowings outstanding is in 2022/23 for Option 1e (20 year repayment terms)



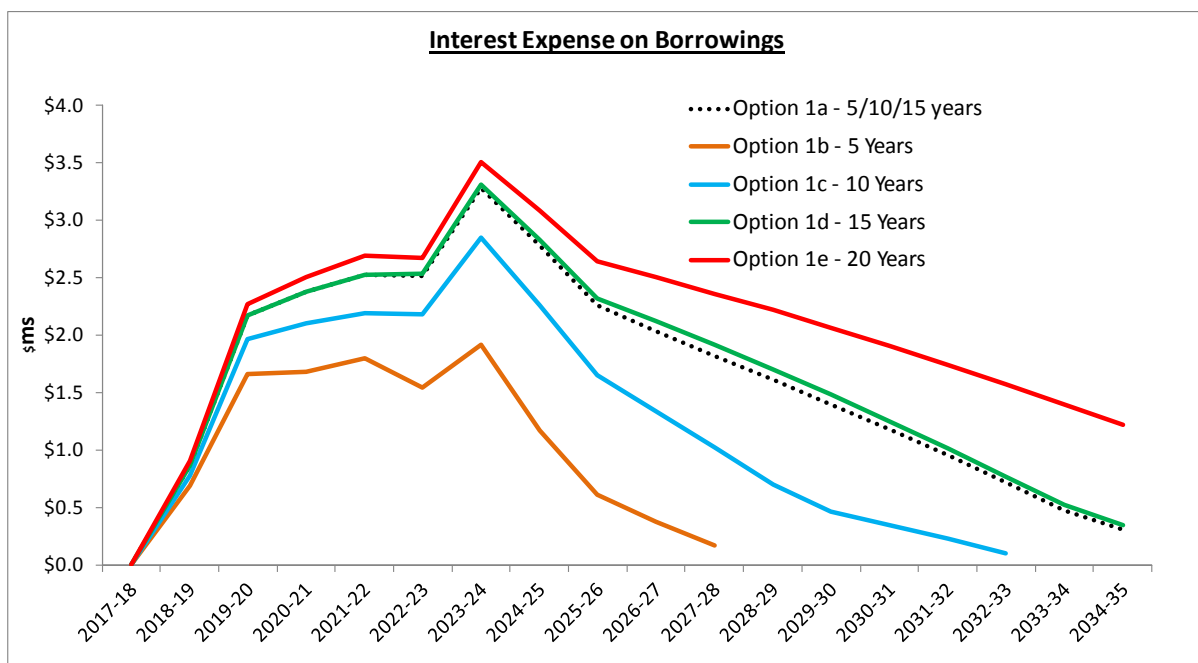
5.8 Net Cash at Year 20

The graph below is the total net cash at 2034/35, which is the difference between cash reserves and principal outstanding. This indicates that Option 1b has a much higher outcome than any of the other options with approx \$28m more cash than the next highest option.



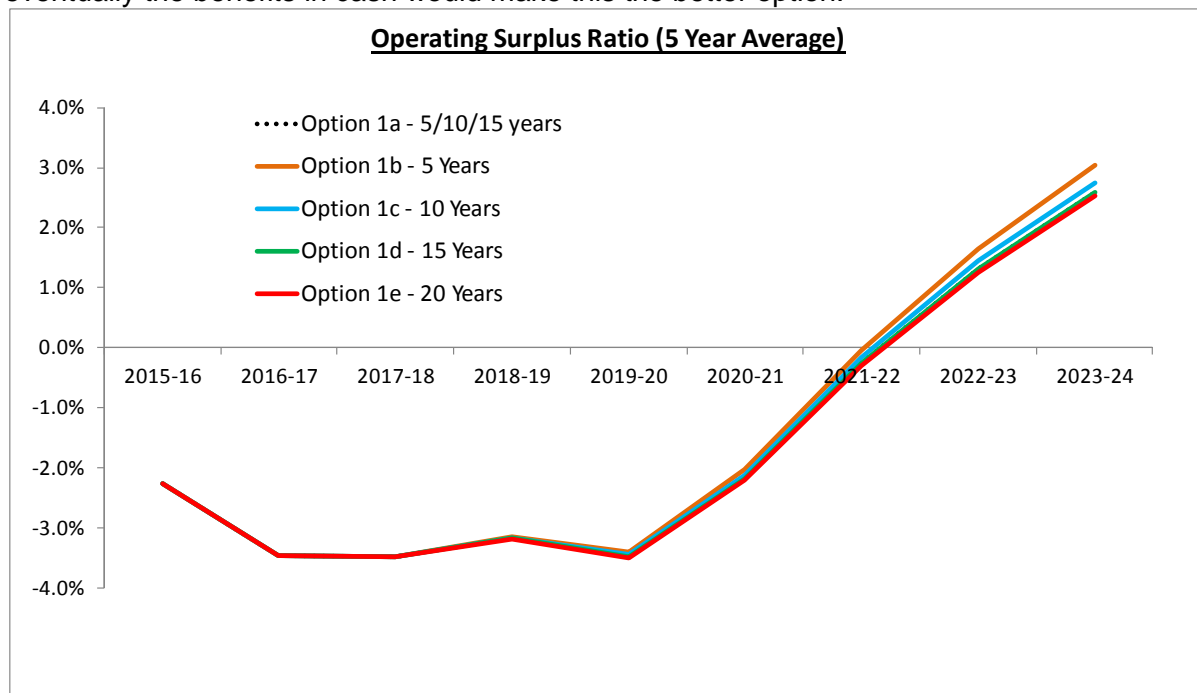
5.9 Interest Paid

The graph below shows that the 5 year repayment terms would only result in Interest costs of \$17.1m which is less than 50% of the current method (Option 1a) where \$37.7m interest is paid and far lower than the \$46.8m paid in Option 1e. Indeed the 20 year repayment term results in interest costs which are approx 50% of the total amount borrowed, this is inefficient.



5.10 Operating Surplus Ratio

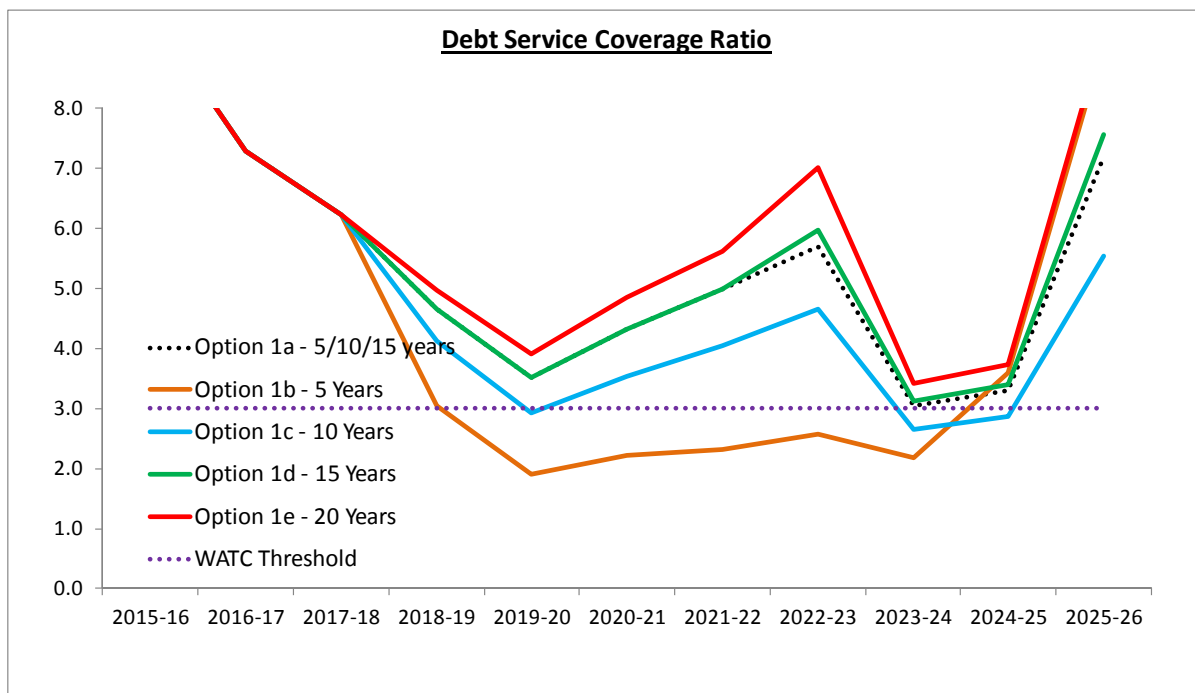
The most important indicator for financial sustainability is the Operating Surplus Ratio, which includes both the Interest Expense and the Earnings on Cash Reserves. Option 1b would initially have a negative impact due to the higher interest expense and drain on cash but eventually the benefits in cash would make this the better option.



5.11 Debt Service Coverage Ratio

The Debt Service Coverage Ratio compares the amount of Loan Repayments (Principal + Interest) versus Operating Surplus before interest and depreciation. The Ratio is a key ratio within the City's SFP, and is also used by WATC to assess capacity. Ideally the City strives to achieve a multiple of 5 or more, i.e. Operating Surplus is at least 5 times more than loan repayments, although the WATC threshold for a City the size of Joondalup is a multiple of 3.

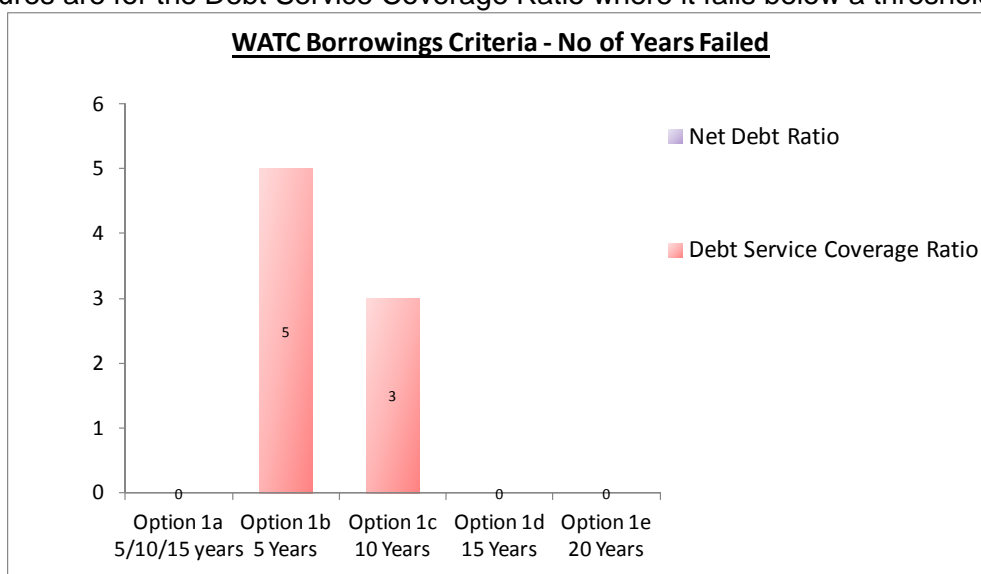
Option 1b presents a challenge in this ratio due to the higher loan repayments and as a result fails the test in 3 out of 20 years; likewise Option 1c fails the ratio in some years.



5.12 WATC Indicative Additional Borrowing Capacity Model

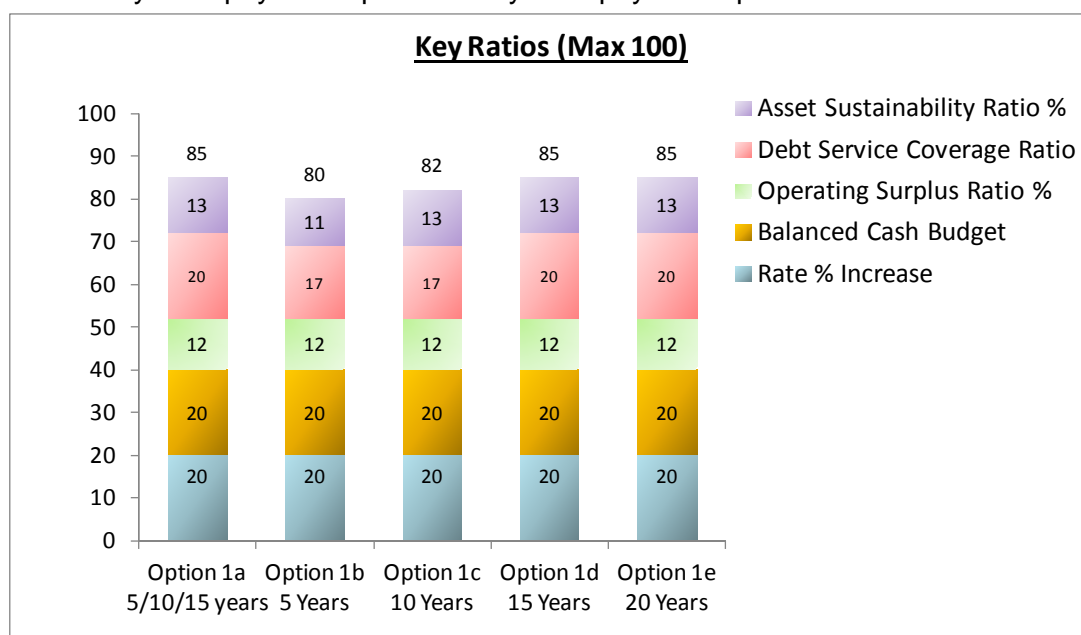
WATC have provided a tool to assist Local Government in assessing their borrowing capacity. The City has added the key parts of the WATC model to the SFP model so that the borrowing criteria can be assessed automatically as the SFP is updated. There are 2 main elements to the WATC model, the Debt Service Coverage Ratio as described above and the Net Debt Ratio. The Net Debt Ratio compares the Principal owing versus Cash Reserves and indicates a maximum of 50%.

The graph below summarises the total failures of the WATC criteria for each option, identified as either a failure of the Debt Service Coverage Ratio or the Net Debt Ratio. The only failures are for the Debt Service Coverage Ratio where it falls below a threshold of 3.



5.13 Key Ratios

The graph below summarises the overall impact on Key Ratios. The achievement of a Balanced Cash budget is a must for all 20 years which is the case for all options. Likewise it is crucial that the Debt Service Coverage Ratio is achieved in all 20 years, this is not the case for the 5 year repayment option or 10 year repayment option.



5.14 Summary

The table below ranks each option against 5 of the key metrics and then calculates an overall average, the lower the score the higher the ranking. This indicates that Option 1a (mixed terms) has the best overall ranking.

There is no 'one case that fits all' for borrowings for Local Government and some options are better than others in one criteria but not so in other factors. However the analysis does help to rule out the use of 5 year or 10 year borrowings for all borrowings, as the Debt Service Coverage Ratio is failed. This doesn't mean to say though that the City would not enter into 5 or 10 year terms for some borrowings, just not for all of them. Meanwhile, the disadvantage with the 15 year terms and 20 year terms is the higher interest repayments and the lower net cash.

In summary the current method of having different terms (5, 10 or 15 years) is a more effective approach when using Fixed Interest arrangements. This will be the same for Option 2 (Variable Interest Rates). Therefore Options 1b, 1c, 1d, 1e, 2b, 2c, 2d, 2e can now be ruled out for the remainder of this paper.

FINANCIAL ANALYSIS



Rankings based on above	Option 1a 5/10/15 years	Option 1b 5 Years	Option 1c 10 Years	Option 1d 15 Years	Option 1e 20 Years
1 Borrowings	2	5	4	2	1
2 Interest Payments Total	3	1	2	4	5
3 Net Cash	3	1	2	4	5
4 Debt Service Coverage Ratio	1	5	4	1	1
5 Ratios	3	5	4	2	1
6 Average of above	2.4	3.4	3.2	2.6	2.6

6 FIXED VS VARIABLE VS FLEXIBLE ARRANGEMENT

6.1 Current Practice

At present the City uses Option 1 whereby it fixes the interest rate at the time of setting up the loan. This is common practice for most Local Governments and provides the City with a guaranteed no-change set of cashflows that it can include in budgets and long-term plans.

6.2 Arrangement Options Evaluated

Three different arrangement types have been evaluated:

Option 1 - Fixed Interest

Option 2 - Variable Interest

Option 3 – Flexible Repayment

There are several different types of ways that these 3 options can be set up. The table below explains some of these features and also specifies the assumptions used for the evaluation in this report. There are some other different options which are subject to comment later on in the report.

Arrangements Evaluated		<u>Option 1</u>	<u>Option 2</u>	<u>Option 3</u>
		Fixed Interest	Variable Interest	Interest Only
1	Currently	Yes	No	No
2	Term	Assumed 5, 10 or 15 years as per previous section. The larger borrowings (e.g. JPACF) would be 15 years		Maximum 15 Years, but attempt to pay back earlier
3	Interest Rate	Fixed at time of setting up loan.	Varies according to WATC costs of borrowing. Eg. 90 Day Bank Bill Swap Rate (tbc)	Could be Fixed or Variable. Model has assumed the interest rate is variable
4	Principal Repayment	Principal is paid frequently and continually reduces.		This could vary depending on different circumstances, for example a large one-off repayment (a 'balloon' payment could be planned as is the case with Edgewater Quarry). Alternatively a minimum repayment could be established. For the purposes of the evaluation it is assumed that principal is repaid if affordable to do so. Also see Key Features
5	Frequency of Payments	Quarterly	Quarterly	Probably Quarterly (tbc). Alternative mechanisms could be evaluated
6	Cashflows	Fixed Repayments throughout the term of the loan, so the future cashflows are known with 100% certainty.	The cashflows will vary depending on the interest rate. However the amount of principal repaid is assumed to be same as Option1	Would vary significantly depending on interest rate, amount of surplus cash.

Arrangements Evaluated		Option 1 Fixed Interest	Option 2 Variable Interest	Option 3 Interest Only
7	Reserves - impact on repayments	Parking Surpluses are used to repay loans for Multi Storeys		This option could provide flexibility for the City to adapt the use of reserves and potentially minimise interest expenses.
8	Disposal Proceeds e.g. Tamala Park	Would not have a direct impact on the borrowings as a fixed term schedule is set up		Can be used to repay principal. If the proceeds are higher than more principal can be repaid.
9	Day to Day Cash	No impact	No impact	Where surplus cash is available in early part of year (due to Rates Income) it may be a better overall position for the City to repay borrowings and hence reduce interest costs - this impact may be better than the earnings that the City would otherwise earn from banking surplus cash. This type of arrangement could be similar to an "offset" account.
10	WATC Approval	Likely (as long as criteria is sound)	Less Likely but still probable (as long as the criteria is sound)	Less Likely but still possible (as long as the criteria is sound)

6.3 Option 3 Key Features

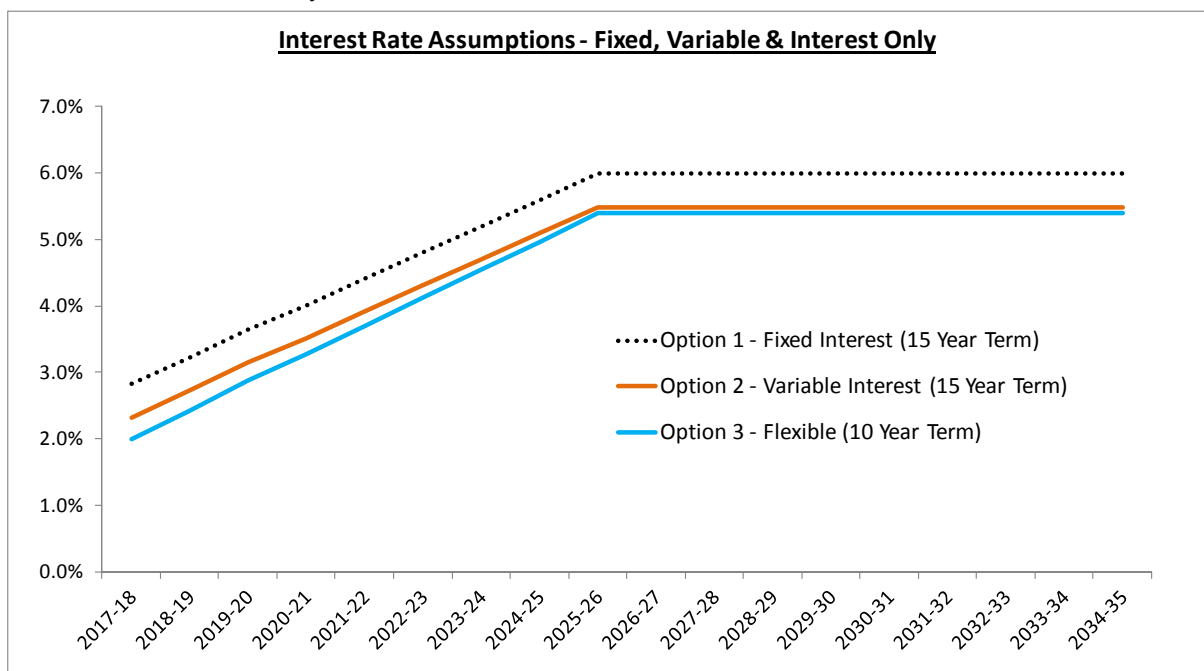
Option 3 has a wide number of variations on how it could work in practice. The model has had to make the following assumptions, but these could be different in practice:

- Principal is paid back as quickly as possible, but a balanced budget must be achieved each year. Therefore a calculation is made each year of the amount of municipal funds that are available for loan repayments but only after achievement of a balanced budget.
- New Borrowings – before any repayment is made to principal any surplus cash is first of all reduced against any new borrowings that are estimated.
- Repayment of principal is prioritised ahead of expenditure on the "CWP renewal" line. The SFP has set aside expenditure from 2020/21 to "CWP Renewal" which is required to achieve an Asset Sustainability Ratio of 90%. There is no specific program where this expenditure has been identified, although there are already increases for specific programs from 2020/21 onwards. Whilst the need to have adequate planning for capital renewals is vital, Option 3 is based on the premise that surplus funds should be used to repay principal. As a result of this assumption, Option 3 has lower capital expenditure for some of the earlier years in the plan and the Asset Sustainability Ratio falls below 90% where Option 1 & 2 it doesn't.
- Option 3 also prioritises Loan repayments ahead of payback to the Strategic Asset Management Reserve. The SFP currently has a mechanism in place whereby the Strategic Asset Management Reserve is topped up by surplus funds from the Municipal Fund. The rationale for Option 3 prioritising repayment of debt ahead of reserve is that it is a better use of funds to repay debt which has a higher interest rate than putting into reserve which earns a lower rate. Meanwhile Option 1 and 2 stretch out the repayments for larger loans to 15 years which results in surplus cash which has to go to reserve (even though it earns less than the cost of borrowings).

6.4 Interest Assumptions for the 3 Options

The graph below shows the assumptions applied in the evaluation. The key features of the assumptions are:

- All options are assumed to have increased costs over time, at the same increments.
- Fixed Interest Rates are assumed to be 0.5% more expensive than the variable rates. It is reasonable to assume that variable rates are cheaper than Fixed Interest.
- Rates shown on the graph for Fixed and Variable relate to 15 year terms, which are the key assumptions for Option 1 and 2 due to the JPACF borrowings.
- Flexible assumptions (Option 3) – the rates shown on the graph for Flexible are for a 10 year variable term. As Option 3 is repaying quicker it is assumed that the prevailing rate would be a 10 year variable rate.



6.5 Interest Rates assumed for JPACF

The table below explains the rates assumed for the JPACF borrowings for each option. These are shown separately as they are by far the biggest borrowings and the biggest impact on the differences between each option

Option	Interest Rates	Comments
Option 1 Fixed	2017/18 – 2.82% 2018/19 – 3.22%	These rates are the fixed rates for a 15 year term for those 2 years. The model then locks down those rates for the duration of the 15 year term
Option 2 Variable	2017/18 – 2.32% to 2034/35 - 5.49%	Under option 2 the rates would vary each year. The rates would initially be lower than the Fixed Rates, but are then projected to increase and eventually be higher than the Fixed Interest rates. The final year of the 15 year term is 2034/35 when the rates are estimated to be 5.49%
Option 3 Flexible	2017/18 – 1.99% to	Option 3 is based on 10 year variable rates. The initial rate in 2017/18 is therefore assumed to be 3.2%,

	2023/24 – 4.54%	<p>which is slightly lower than the 15 year variable rate. As per Option 2, Option 3 also assumes that the rates increase and by 2021/22 they are assumed to be higher than the Fixed Rates that have been locked down in Option 1.</p> <p>However Option 3 pays back the principal much quicker and the final year without borrowings is 2023/24 with an interest rate of 4.54% assumed.</p>
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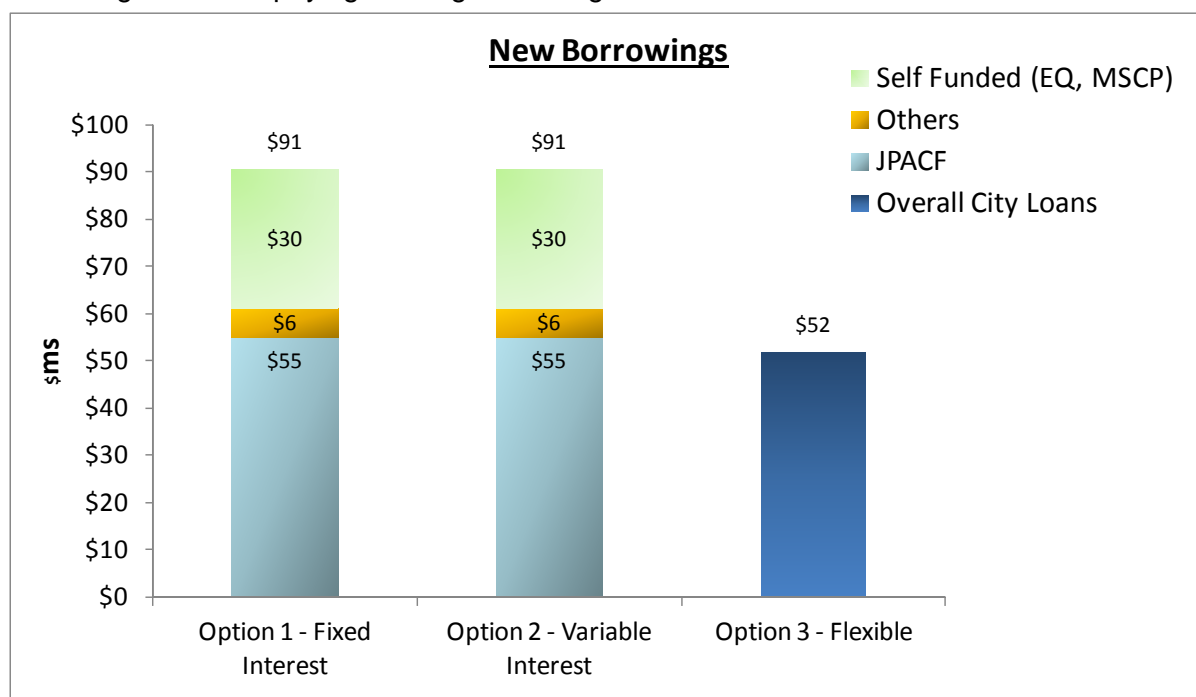
6.6 Attachments

As explained earlier, Attachment 1 is the Adopted 20 Year SFP, as at June 2016. Attachments 2 to 5 are the updated versions of the SFP based on the assumptions explained above:

- Attachment 2 – Option 1 Fixed Interest Fixed Term
- Attachment 3 – Option 2 Variable Interest Fixed Term
- Attachment 4 – Option 3 Flexible Repayment
- Attachment 5 – Option 3 vs. Option 1

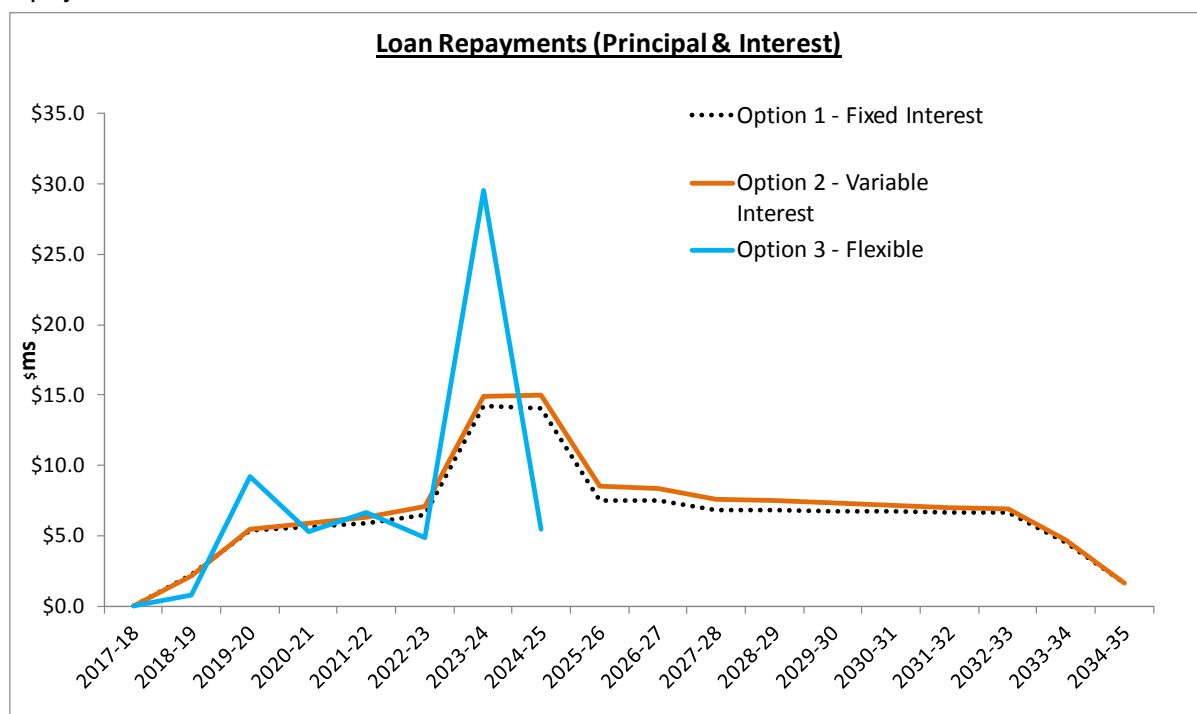
6.7 Borrowings Estimates

The graph below summarises the total estimated borrowings for the 20 years of the plan for each option. Bear in mind that all options are now based on a restated SFP which has \$7m less Tamala Proceeds. The graph indicates that the borrowings would be similar for Option 1 and Option 2, but much lower for Option 3. As explained in section 6.3, Option 3 assumes that surplus municipal funds should first of all be used to reduce the raising of new borrowings before repaying existing borrowings.



6.8 Loan Repayments

The graph below shows the annual loan repayments for each option. Options 1 & 2 have a stable set of repayments in comparison to the volatile repayments of Option 3. Option 3 has large repayments in 2023-24 due to Edgewater Quarry sales proceeds and surplus municipal funds), which then reduce the principal outstanding significantly and causing future repayments to be lower.



6.9 Principal outstanding

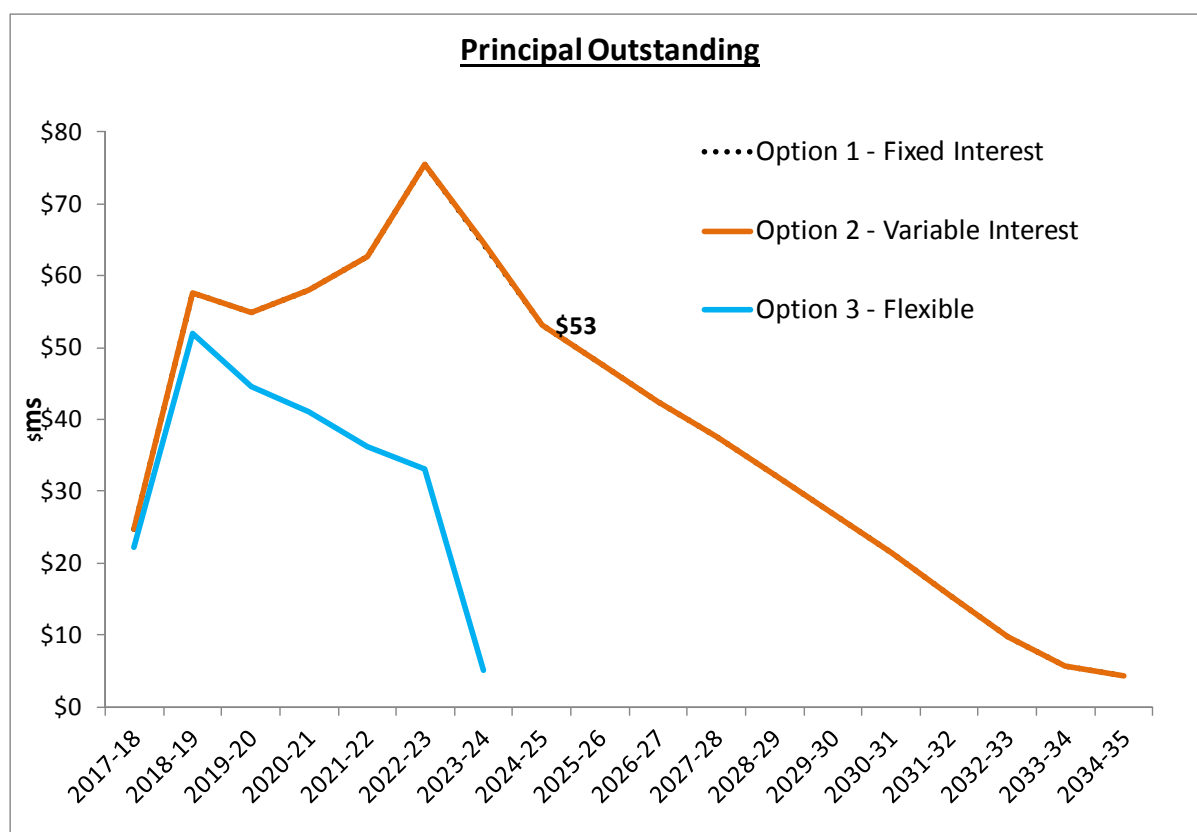
The graph below shows the principal outstanding for each option. This indicates that at Year 20 (2034/35) Options 1 and 2 still have principal outstanding on loans but Option 3 though has repaid all principal by 2024/25. At 2024/25 there is still \$53m principal for Option 1 and 2 this large gap to Option 3 is caused mostly by the following two factors:

- \$18m less transferred into Strategic Asset Management Reserve (SAMR) for Option 3. The mechanism for Option 3 assumes that surplus funds should be used to repay borrowings before the reserve is topped back up. The issue of paying \$18m less in Option 3 may appear to give it an unfair advantage to Option 1 and 2, but this is not the case – under Option 1 and Option 2 the loan repayments are stretched out over a longer period (15 years for the JPACF) resulting in surplus cash - to balance the books the cash has to go to either Reserve or Capital Renewal as described below – it is therefore completely appropriate the Option 3 has the benefit of less transferred into reserves.
- \$29m less set aside for Capital renewal in Option 3. The SFP model currently strives to achieve an Asset Sustainability Ratio of between 90% and 110% and to achieve this surplus funds are shown as Backlog Capital Replacement. The allocation to Capital renewal is arbitrary and is not identified against specific programs. There is already large increases built into the SFP in specific programs from 2020/21 (e.g. Road Resurfacing increases from \$7m to \$10m) and it is possible that the arbitrary allocation to Backlog Replacement is unnecessary – this will ultimately be determined by the completion of all Asset Management Plans. In the meantime Option 3 has assumed that

priority can be given for repayment of borrowings rather than the allocation to unidentified backlog capital replacement.

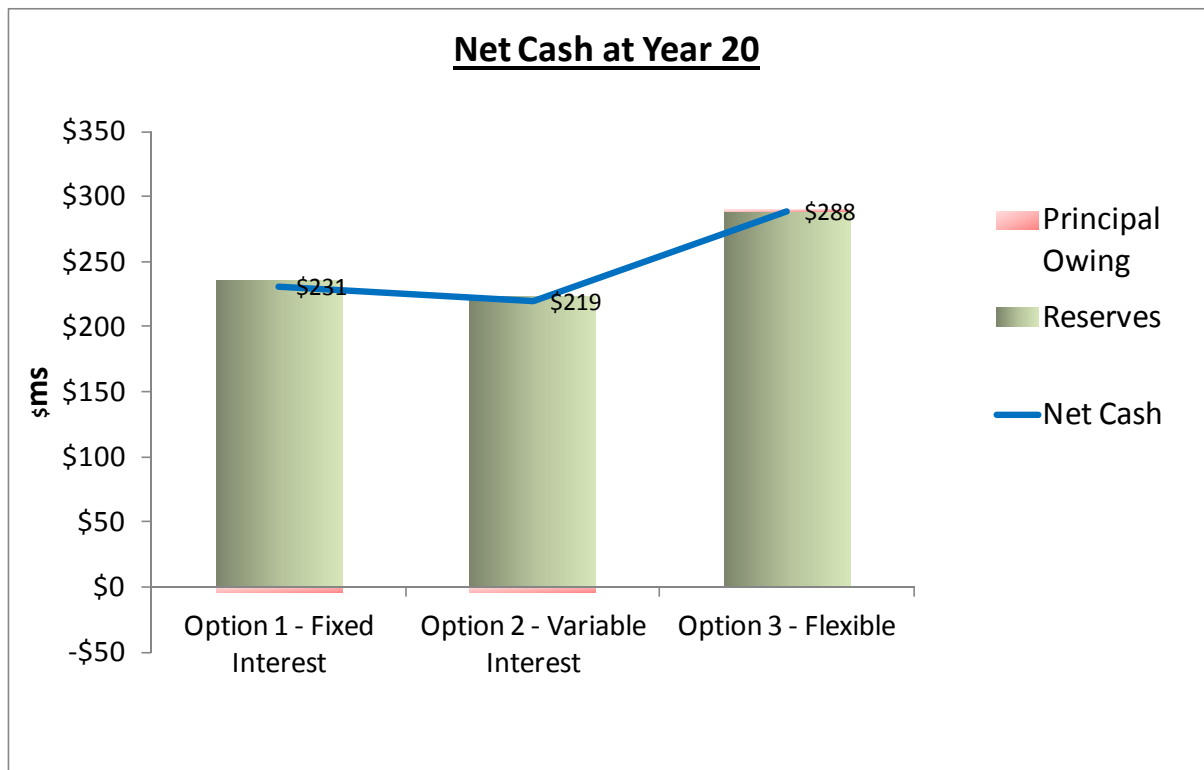
From 2024/25 onwards Option 3 makes up for the above two factors as it is in a stronger position than Option 1 and 2 with no borrowings. Therefore by Year 20, Option 3 has more in reserve than Option 1 or Option 2.

The ability to reduce the principal to zero by 2024/25 is also underpinned by the other assumptions in the SFP, most notably the increase in General Rates between 4% and 5% for the next few years. If the City does not increase General Rates by 4% to 5% in the next few years then the principal could not be repaid by 2024/25. However the General Rates increases are the same in all three options so the differences in the options would be the same.



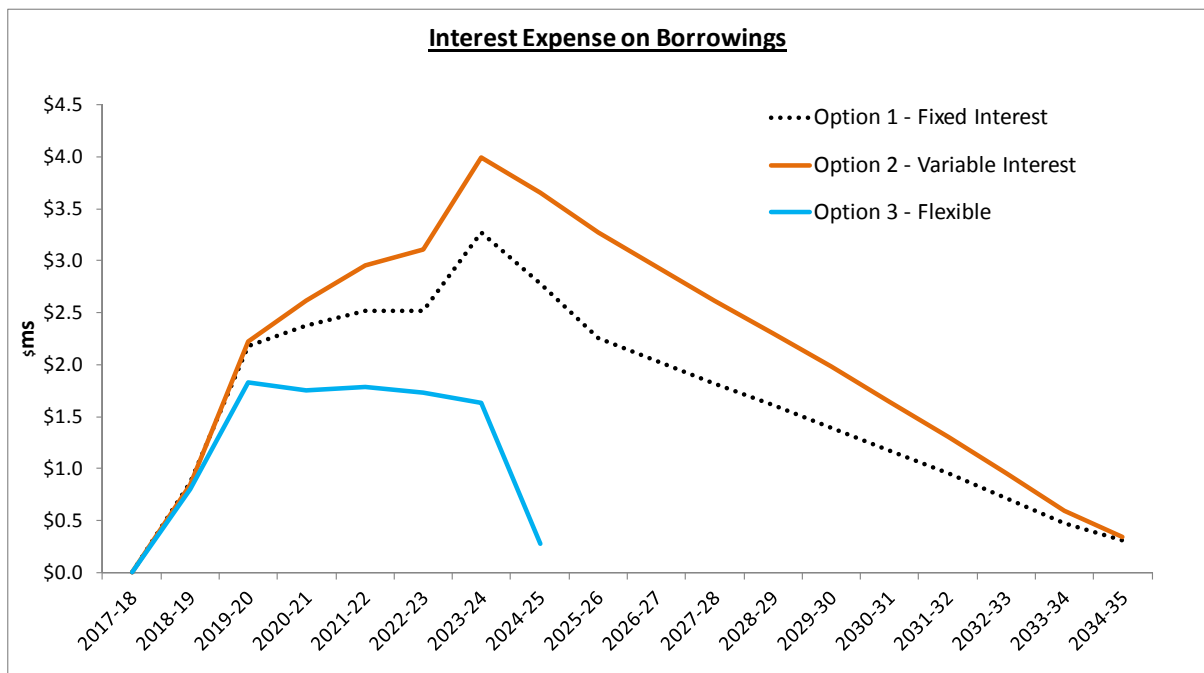
6.10 Net Cash at Year 20

The graph below is the total net cash at 2034/35, which is the difference between cash reserves and principal outstanding. Option 3 has the better outcome with Options 1 and 2 lagging behind. This is because Option 3 makes a much better use of cash than Option 1 and 2.



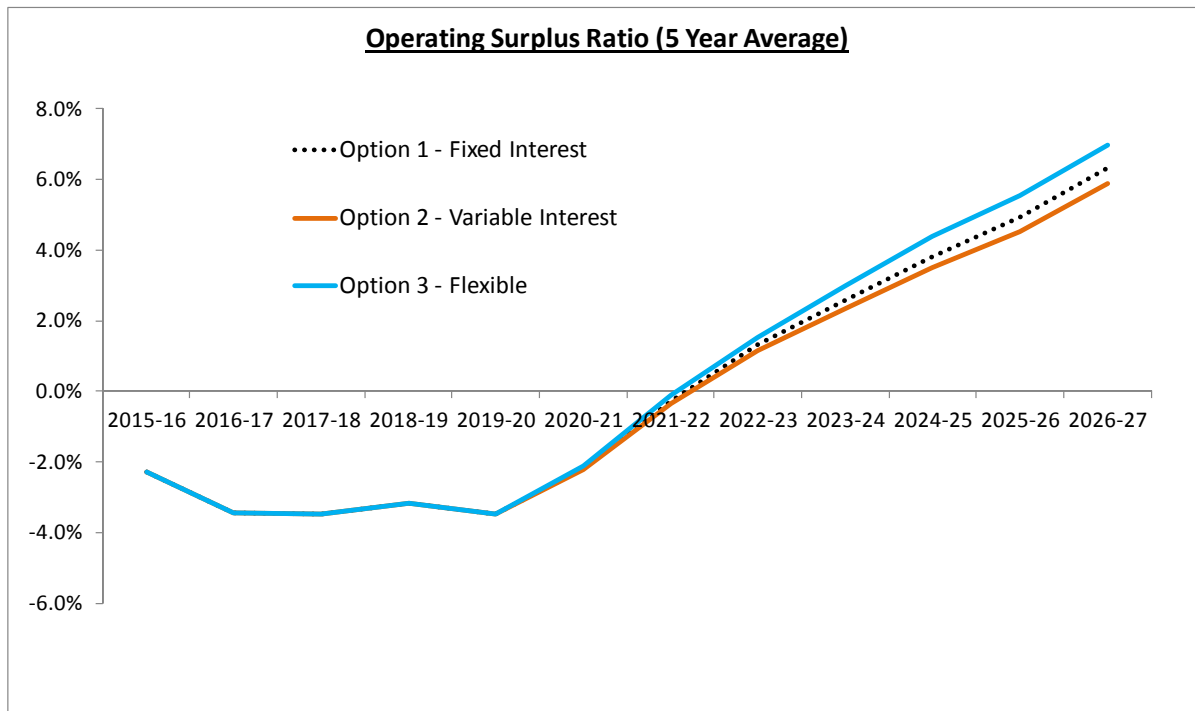
6.11 Interest Paid

The graph below shows that Option 3 would have a much lower cost of interest than Option 1 or Option 2, this is because Option 3 repays more quickly.



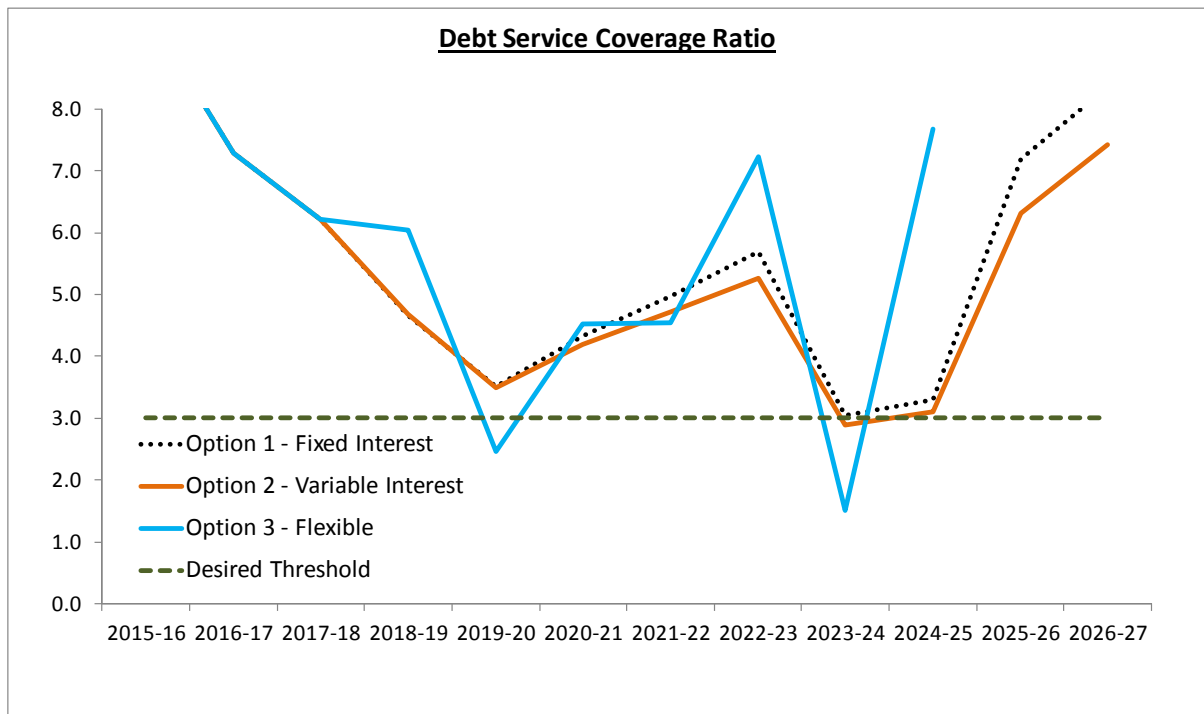
6.12 Operating Surplus Ratio

Option 3 has lower interest payments and higher interest earnings compared to Options 1 and 2 and therefore has a better Operating Surplus Ratio outcome.



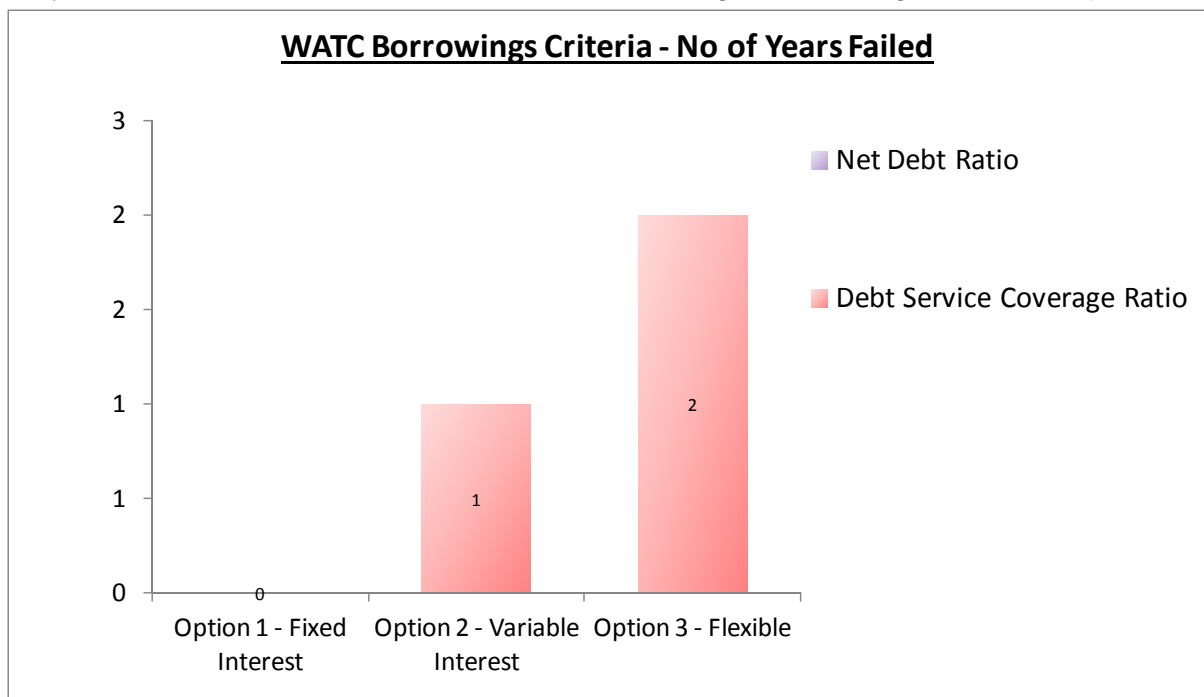
6.13 Debt Service Coverage Ratio

As explained in section 5, the City strives for a multiple of 5, but the minimum threshold can be a multiple of 3 as advised by WATC. Option 3 falls below the multiple of 3.0 in 2 years, and these 2 years show as failures in the WATC Borrowings Criteria. However one of the problems with the Debt Service Coverage Ratio is that it fails to acknowledge one-off events which trigger large repayments (e.g. sales proceeds from Edgewater Quarry) which accounts for 1 of the years that has failed. The other year that is failed is again due to a healthy reason, the projection that the loan repayments in 2019/20 could be high so as to pay back as much principal as possible. Both failures of the ratio for Option 3 may therefore be acceptable, but there would need to be detailed discussions anyway with WATC if Option 3 was preferred.



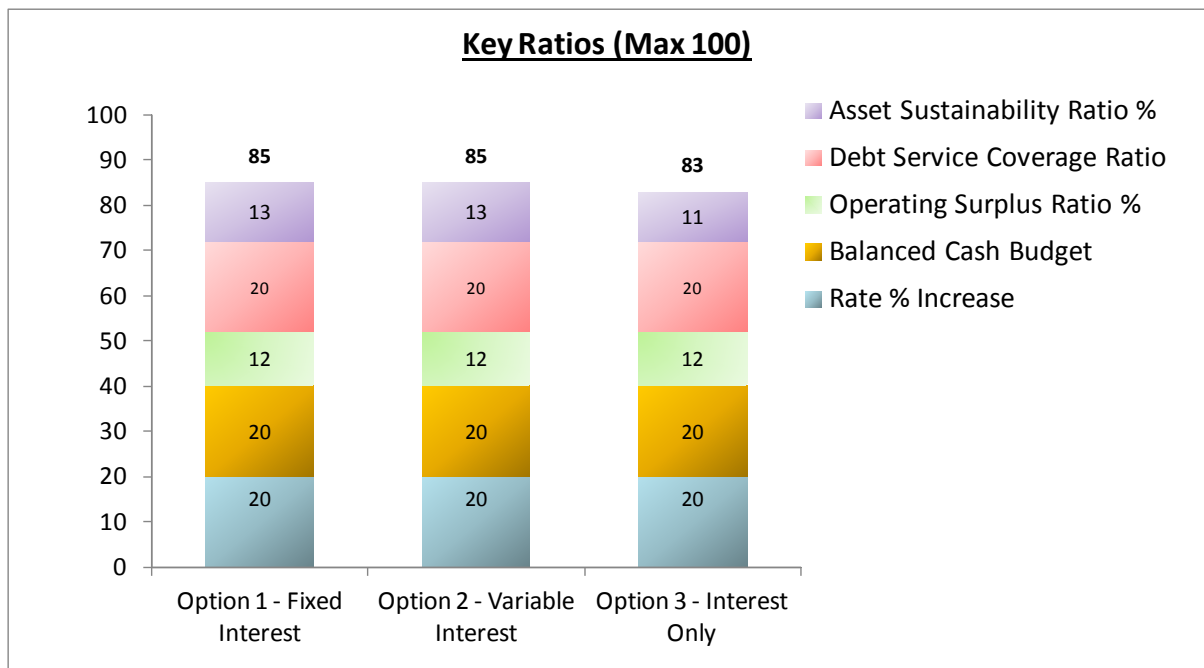
6.14 WATC Criteria

The graph below shows that Option 2 and Option 3 would fail the WATC criteria in some of the years, the failure is due to the Debt Service Coverage Ratio falling below a multiple of 3.



6.15 Key Ratios

The graph below summarises the overall impact on Key Ratios. The achievement of a Balanced Cash budget is a must for all 20 years which is the case for all options. Likewise it is crucial that the Debt Service Coverage Ratio is achieved in all 20 years. The only difference between the options is the Asset Sustainability Ratio because the repayments under option 3 are given a higher priority than expenditure to backlog replacement. The Key Ratios are there to help guide the development and review of the plan, but it may not be necessary or ideal for the City to achieve every ratio every year.



6.16 Option Summary

The table below summarises the projections for each of the 3 options for all key metrics described above and others.

Option Summary		Option 1 Fixed Interest	Option 2 Variable Interest	Option 3 Flexible	Best
<u>Borrowings</u>					
1 New Borrowings	Year 3 to Year 20 \$m	\$91	\$91	\$52	Option3
2 Maximum Amount Owed	Maximum Principal Owing	(\$77)	(\$77)	(\$63)	Option3
3 Principal owing at Year 20	Principal Owing at 2034-35	(\$4)	(\$4)	\$0	Option3
4 Year that Borrowings paid off	What year paid off ?	2037-38	2037-38	2024-25	Option3
5 Repayments Total (P+I)	20 Year Total (\$m)	(\$116)	(\$124)	(\$62)	Option3
6 Interest Expense on Borrowings	Total 20 Year Costs \$m	(\$29)	(\$37)	(\$10)	Option3
<u>Cash</u>					
7 Interest Earned	Total Earned \$m	\$124	\$120	\$131	Option3
8 Capital Renewal	20 Year Total \$m	(\$742)	(\$742)	(\$712)	Option1
9 Reserves	Cash Reserves 2034-35 \$m	\$235	\$223	\$288	Option3
10 Net Cash less Borrowings	\$m at 2034-35	\$231	\$219	\$288	Option3
<u>Key Ratios</u>					
11 Rate % Increase	Increase 5% or less	20	20	20	Same
12 Balanced Cash Budget	Balanced Budget	20	20	20	Same
13 Operating Surplus Ratio %	5 Year Average > 2%	12	12	12	Same
14 Asset Sustainability Ratio %	Between 90% and 110%	13	13	10	Option1
15 Debt Service Coverage Ratio	Ratio not below 5 for 5 yrs	20	20	20	Same
16 Total	Total out of 100	85	85	82	Option3
17 Treasury Borrowings Criteria	No of Years Failed	0	1	2	Option1
18 Financial Health Indicator	Year 1 to 10	74	74	71	Option1

6.17 Ranking Summary

The table below ranks the 3 options against key metrics. Option 3 is far superior in cash terms to Option 1 and 2 but is far from ideal in the ratios. In overall terms Option 3 has the lowest score and therefore the highest ranking, but this doesn't mean that Option 3 should be recommended just because of this, there are a range of other factors that have to be considered.

Rankings based on above	Option 1 - Fixed Interest	Option 2 - Variable Interest	Option 3 - Interest Only
1 Borrowings	3	2	1
2 Interest Payments Total	2	3	1
3 Net Cash	2	3	1
4 Debt Service Coverage Ratio	1	1	1
5 Ratios	1	1	3
6 Average of above	1.8	2.0	1.4

7 FIXED INTEREST AGREEMENTS – OTHER ISSUES

7.1 Lack of Flexibility

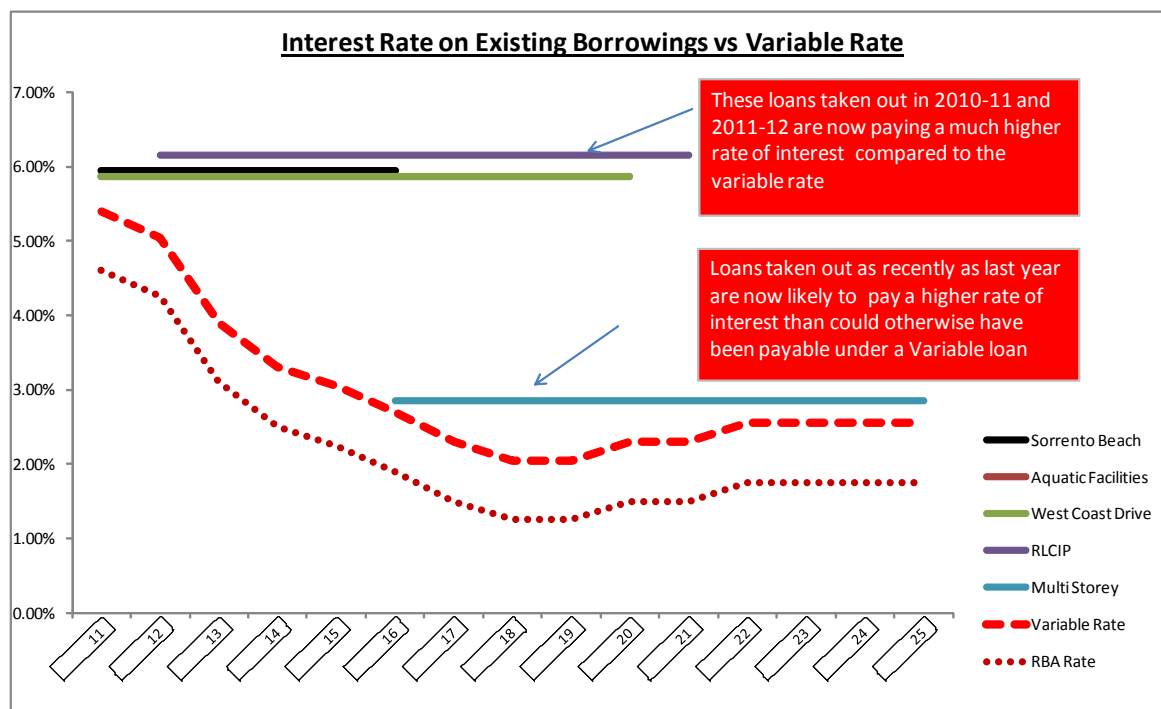
One of the major disadvantages with fixed interest arrangements is the lack of flexibility and ability to adapt to changing circumstances. If the City sets up a 15 year Fixed Interest Fixed Term for the JPACF project it is stuck with it. This may not be ideal if there were changes in some circumstances. For example it is intended that the proceeds from Tamala Park land sales are used to assist in the repayment of the JPACF borrowings. If the property market improved and the Tamala Park land sales were higher than the loan repayments in one year, then the surplus proceeds would just have to be put into reserve. This may not be the optimal treasury solution if there was flexibility – it is likely that the earnings on those reserves would be less than the benefit that the City would otherwise have had, had it been able to reduce the borrowings outstanding and reduce the interest costs. Unfortunately a Fixed Interest arrangement does not provide for flexible repayments without there being a cost (“early termination charges”).

Furthermore if the variable interest rates eventually become lower than the fixed rates (which they are likely to), then the City is paying higher interest costs than it may be. This is illustrated further in the next paragraph with regards the existing borrowings that the City has.

7.2 Existing Borrowings

The chart below compares the interest cost (%) for all existing City borrowings and compares to the RBA cash rate and the estimated variable rate that the City may have paid had it set up the borrowings on a variable rate basis. This shows that all borrowings have paid a higher cost than it may otherwise have had to. Had variable interest rates been used instead of fixed rates, this could have reduced the interest expense on borrowings of circa \$2m (this is based on the full costs of interest over the terms of the loans).

It is vital to emphasise that this does not mean that the City made any bad judgement/error in setting up these loans. Fixed Interest Loans have significant advantages over other arrangements i.e. certainty, transparency. The City doesn't have a crystal ball and cannot be expected to foresee the trend in interest rates. At the time of setting the earlier loans which are at over 5% it may well have been a view that the interest rates would increase in the years ahead not reduce. The economy (both nationally and globally) has been subject to significant volatility since the GFC.



7.3 ACELG

The ACELG report provides further comments regarding the use of Fixed Interest Rates and other general observations regarding local government approach to borrowings

- In Local Government, debt levels should not be as “low as possible” in an absolute sense but should instead be as low as possible relative to what is needed by a Local Government in order to provide affordable, preferred service levels on an ongoing basis.
- Any well managed organisation that is dependent on large investment in infrastructure assets to deliver its service objectives is probably justified in having a considerable level of borrowings.
- It might be appropriate for households or businesses to borrow at fixed rates as they have little capacity to accommodate potential increase in variable rates, but local governments differ fundamentally as they have a high degree of certainty regarding future income projections and can set their own income levels.
- A sound long term financial plan can help make decisions about affordable and appropriate levels of debt.
- A rational person would pay off credit card debt in full if possible (and thereby avoid interest charges) rather than only make the required minimum monthly payment rather than keep money in the bank for a rainy day. Local Governments could operate in the same manner, potentially avoiding raising borrowings when they have sufficient cash and liquidity to meet immediate foreseeable needs
- A Local Government is exposed to interest rate risk whenever it borrows, or lends money, regardless of whether the interest rates fixed or variable. Locking into a long term fixed interest rate borrowing effectively means that a Local Government is taking a risk that the variable interest rates over the period of the borrowing will be higher than the fixed rate. If a Local Government takes out a fixed interest rate loan and interest rates on average fall over the duration of the loan then the Local Government will be worse off than it would have been if it had taken out a variable interest rate. Such a Local Government may not

have been intending to risk on interest rate movements but choosing a fixed interest rate does not obviate risk, it only removes only one risk, the risk from higher average variable interest rates.

- On average fixed interest rate borrowings are usually slightly more expensive than variable rate borrowings because of the certainty they offer. Fixed Interest effectively reflect the market's expectations of likely variable interest rates over the term plus a margin for the interest rate risk borne by the lender
- Fear of debt is a key barrier to the optimal use of debt financing in local government.
- Many Local Governments have traditionally engaged in single purpose borrowings to finance a particular project regardless of their current holdings or future cash flow projections
- Even when Local Governments have undertaken borrowings to finance specific assets it may be more fruitful for them to think of those borrowings as simply part of the overall mix from their total stock is financed. This will enable borrowing to be managed holistically and to focus on reducing interest costs. It can be misleading to link the cost of borrowings to the acquisition of some assets and not to others; such an approach is arbitrary, illusory and distracting. Local Governments need to manage their total expenses, total assets and total liabilities.

7.4 Intergenerational Inequality



















One of the problems with quick repayment terms is that it puts the burden of payment on existing ratepayers whereas future ratepayers enjoy the benefit of the asset. To improve intergenerational equality a longer repayment term in line with the life of the asset/project (e.g. 40 years) could be considered. However loans that are too long are inefficient because the costs of interest end up being higher than the principal. Indeed a 20 year repayment term is considered to be inefficient but for comparative purposes is included in this evaluation.

Future ratepayers will have the burden of capital replacement and the ongoing operational subsidy from a new project/facility.

8 NON FINANCIAL EVALUATION

8.1 RAG

The table compares each of the 3 options in a simplified RAG format. The scoring is made with comparison to the other options i.e. where an option is shown as red this just means it is not as good as the other options but this does not necessarily mean that that particular metric is a major concern. In summary this shows that there are dis/advantages with the different options, Option appears to be an arrangement that provides more certainty but has significant disadvantages to the other methods.

<u>Issue</u>			<u>Option 1</u>	<u>Option 2</u>	<u>Option 3</u>	<u>Comments</u>
<u>Issue</u>	<u>Description</u>		Fixed Interest Fixed Term	Variable Interest Fixed Term	Interest Only	Reason for different scores
1	TRANSPARANCY	How easy is it to identify the exact repayments for each project ?				The existing method of setting up and monitoring repayments is extremely transparent and can be clearly identified to each project that the borrowings are set up for. If the City moved to an Interest only arrangement it would make the cashflows attributable to each project slightly more tricky to identify.
2	MANAGEMENT	Ensure that payments are made accurately in accordance with contract and on time.				Similar to above, Option 2 would be slightly more cumbersome to manage than Option 1 (but not that much more difficult). Option 3 would require a set of new actions and monitoring processes to manage the risks.
3	RISK / CERTAINTY	Could the City be subject to unforeseen external economic impacts that result in significant impacts to long term plans.				Existing method (Option 1) provides great certainty and minimises risk because if Interest Rates were to unexpectedly to increase the borrowing terms would be fixed. Option 2 would be subject to fluctuations in interest rates. Option 3 is also assumed to be variable
4	LOST OPPORTUNITY	Does the option limit the ability to have lower repayment costs?				Fixed Interest Rates provide little opportunity to take advantage of lower rates. Existing arrangements can be amended, but this comes with a cost.
5	SPECULATING	Is the method used a form of speculating that the City will beat the Market				Option 1 provides certainty but is a form of speculating because the City is speculating that it is better to have a fixed rate rather than go with market rates (variable rates). There is normally a premium to pay for Fixed Interest Rates. Options 2 and Options 3 would take advantage of the market rates and are NOT speculative.
6	FLEXIBILITY	Ability to react to changing circumstances				Option 3 would be able to react more quickly to changing circumstances

SENSITIVITY ANALYSIS

9 ECONOMIC CLIMATE

9.1 Global & National

The Global economy is arguably in a worse position than it was at the time of the GFC. There is a huge amount of uncertainty, and there are growing concerns from many parties that the next global financial crisis is looming. Some of the danger signs regarding the global economy are:

- China – slowdown of growth.
- Quantitative Easing – financial institutions around the globe (US, Japan, Europe, UK) have printed money with the aim of the keeping their economies afloat. They can't keep printing forever.
- Oversupply - It is now confirmed also that there is an oversupply of many items, for example apartment units in Australian Cities. The low supply of money has fed the production and growth without this being backed up by demand.
- Interest Rates are at an unprecedented level. Indeed in some economies (e.g. Japan), there are negative rates on govt bonds. Meanwhile the UK recently reduced their rates from 0.5% to 0.25%
- Inflation – under any normal circumstances the vast amount of printing money would have resulted in inflation but it hasn't. It is possible at some stage that there could be high inflation (and potentially much higher interest rates).
- Overpriced stock markets – most major stock markets are generally accepted as being overpriced. The principal measure for this is the Price/Earnings ratio which compares the price of a share to the earnings (dividends) received. The overall average in Australia is much higher than the long term average which indicates that stocks are offering a very low rate of return compared to their price

The above issues are not necessarily issues that the City of Joondalup can be overly concerned about, after all the City is not an investor. However there is a risk of volatility in the future which could have a significant impact on interest rates and depending on the arrangements in place for repayments could have a major impact. Whilst the issues regarding a potential further collapse may appear to be scaremongering one should remember the catastrophic impacts that one would not have thought possible in 2007 (major investment houses going bust and banks bailed out by governments).

9.2 West Australia

The West Australian economy has also suffered from slower growth in the past couple of years and is in a period of transition from a resources boom. Some key impacts have been

- Property market slowdown, causing a reduction in the Tamala Park proceeds
- Unemployment increases
- Wages increase are much smaller
- Rates revenue increases smaller
- Closure of some major retail enterprises (e.g. Masters, Dick Smith). Whilst the business model for these businesses may have had an impact, the slowing economy also contributed.

9.3 OECD (22nd September 2016)

The OECD (Organisation for Economic Co-operation and Development) issued a global economic warning on 22nd September 2016, saying conditions are worsening with low interest rates threatening the future of the entire banking system. The OECD referred to risks growing in China and continuing problems in the US, Europe, Britain and Japan.

The report said that the world appeared trapped in a cycle of low growth, stagnant wages and ebbing productivity and that lower interest rates could not solve the global economy's woes. Whilst the Reserve Bank in Australia has taken interest rates to a record low, government debt in 35 per cent of the developed world is being sold at negative rates.

10 SENSITIVITY ANALYSIS (1) – CHANGES IN INTEREST RATES

10.1 Overview

The sensitivity analysis is arguably more important than the evaluation in the earlier section. The projected values are only estimates based on assumptions, and the final outcome will be different for one reason or another. The interest rate assumptions shown in Appendix 1 will not come to pass exactly as stated; they will either be higher or lower.

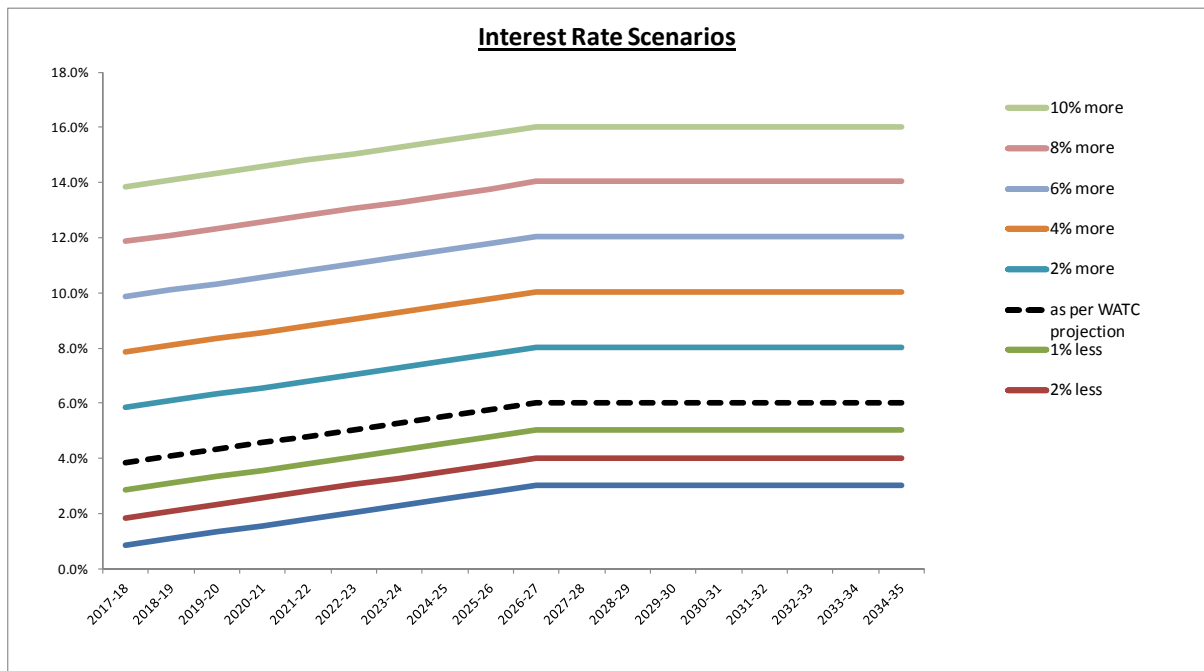
The key issue is to consider how much higher or lower the rates could be and what the impacts could be for each option. The next few paragraphs will provide analysis of some of the key metrics, based upon the scenario of the interest rates being lower or being higher than projected. This information must be assessed just as importantly as the projections in section 7.

10.2 Scenario Analysis – 8 Interest Rate Scenarios

There are 8 scenarios applied for the 3 options (Fixed, Variable or Flexible) across a range of different metrics. The 8 scenarios are all based on the interest rate projections being lower or higher than the projections in Appendix 1 and used in earlier evaluation. The 8 scenarios are explained as follows

- Scenarios 1 to 3 - The first 3 scenarios all consider the impact if the interest rate were lower than the projected interest rates. The sensitivity analysis has only went as far as considering a reduction of 1%, 2% or 3% because the interest rates in the early years are already low
- Scenarios 4 to 8 then evaluate the costs of interest rate rises, in 2 per cent increments i.e. 2%, 4%, 6%, 8%, 10%. There are more scenarios for interest rate increases just so the magnitude of the risk can be considered in more depth than the opportunity. It is not suggested that it is more likely that interest rates will increase, indeed in the short-term (next 2 to 5 years) it is generally accepted that interest rates will reduce further.

The graph below shows the interest rate scenarios applied to Option 1 (Fixed). The dashed line is the assumption used earlier. The graph shows the 3 scenarios considered where interest rates are lower than the projections and then the 5 scenarios where interest rates are higher.



10.3 Interest Expense on Borrowings – Sensitivity Analysis

The first metric considered in the Sensitivity Analysis shows the overall 20 year cost of the interest expense on borrowings. This shows similar trend for each option, with reduced interest costs for Scenarios 1 to 3 and higher interest payments for Scenarios 4 to 8. Option 3 has the better results for all scenarios, and the worse the interest rate becomes the better it is compared to the other options.

Interest Expense on Borrowings - Sensitivity Analysis	Option 1 - Fixed Interest	Option 2 - Variable Interest	Option 3 - Flexible
<u>Interest Rate LESS than projected</u>			
1 3% less	(\$9)	(\$17)	(\$2)
2 2% less	(\$16)	(\$23)	(\$5)
3 1% less	(\$22)	(\$30)	(\$7)
Interest Rate as projected	(\$29)	(\$37)	(\$10)
<u>Interest Rate MORE than projected</u>			
4 2% more	(\$44)	(\$53)	(\$16)
5 4% more	(\$60)	(\$69)	(\$22)
6 6% more	(\$76)	(\$86)	(\$30)
7 8% more	(\$94)	(\$105)	(\$40)
8 10% more	(\$115)	(\$130)	(\$51)

10.4 Borrowings – Sensitivity Analysis

The table below shows the projected 20 year borrowings for each scenario and option. There is little variation between the scenarios because most of the borrowings are in the early years of the plan and the scenarios have less impact in the earlier years.

Borrowings 20 Year Total Sensitivity Analysis	Option 1 - Fixed Interest	Option 2 - Variable Interest	Option 3 - Flexible
<u>Interest Rate LESS than projected</u>			
1 3% less	\$89	\$89	\$51
2 2% less	\$90	\$90	\$51
3 1% less	\$90	\$90	\$52
<u>Interest Rate as projected</u>	\$91	\$91	\$52
<u>Interest Rate MORE than projected</u>			
4 2% more	\$92	\$92	\$52
5 4% more	\$92	\$92	\$53
6 6% more	\$93	\$93	\$53
7 8% more	\$94	\$94	\$56
8 10% more	\$95	\$95	\$60

10.5 Net Cash – Sensitivity Results

The difference between Option 3 and the others below is much more profound with the Net Cash results summarised below. Options 1 and 2 would have significantly lower net cash at year 20 due to the prolonged (15 year) term of high interest rates, whereas Option 3 would pay off principal as quickly as possible and negates the higher rates as much as possible

Net Cash Sensitivity Analysis	Option 1 - Fixed Interest	Option 2 - Variable Interest	Option 3 - Flexible
<u>Interest Rate LESS than projected</u>			
1 3% less	\$259	\$248	\$292
2 2% less	\$250	\$239	\$291
3 1% less	\$241	\$229	\$289
<u>Interest Rate as projected</u>	\$231	\$219	\$288
<u>Interest Rate MORE than projected</u>			
4 2% more	\$210	\$200	\$285
5 4% more	\$194	\$182	\$283
6 6% more	\$172	\$158	\$277
7 8% more	\$150	\$139	\$264
8 10% more	\$131	\$117	\$249

10.6 Debt Service Coverage Ratio

The table below shows that Option 1 and Option 2 would be more exposed to failures in the Debt Service Coverage Ratio as a result of higher interest costs. Option 3 would only fail the ratio under Scenario 3.

Treasury Borrowings Criteria Number of Years Failed out of 20	Option 1 - Fixed Interest	Option 2 - Variable Interest	Option 3 - Flexible
<u>Interest Rate LESS than projected</u>			
1 3% less	0	0	2
2 2% less	0	0	2
3 1% less	0	0	2
Interest Rate as projected	0	1	2
<u>Interest Rate MORE than projected</u>			
4 2% more	1	2	2
5 4% more	2	3	3
6 6% more	3	3	3
7 8% more	3	3	3
8 10% more	5	5	4

10.7 Total Ratios

The table below shows that Option 3 achieves fewer ratios than Option 1 and 2.

Total Ratios Number Achieved out of 100	Option 1 - Fixed Interest	Option 2 - Variable Interest	Option 3 - Flexible
<u>Interest Rate LESS than projected</u>			
1 3% less	86	86	84
2 2% less	85	85	84
3 1% less	85	85	83
Interest Rate as projected	85	85	82
<u>Interest Rate MORE than projected</u>			
4 2% more	84	81	82
5 4% more	81	80	81
6 6% more	79	79	81
7 8% more	78	76	80
8 10% more	76	75	75

10.8 Summary Sensitivity Analysis

In summary, the sensitivity analysis indicates that Option 3 is more responsive to higher interest rates than Option 1 and Option 2. This is demonstrated in lower interest costs, higher net cash and better Debt Service Coverage Ratio. The only metric where Option 3 is worse off is the Total Ratios, due to the Asset Sustainability Ratio.

10.9 Likelihood of Interest Rate Changes

It is expected that there will be further reductions in the RBA rate (currently at 1.5%) and therefore further reductions in the cost of borrowings. However it is impossible to predict with any great certainty where the rates may go and taking account of the economic climate, there is also a possibility that rates will increase. Either way the scenarios show that Option 3 provides a better outcome than Option 1 or Option 2 because of the quicker repayment of principal.

11 SENSITIVITY ANALYSIS (2) – GENERAL RATES

11.1 Current Assumptions

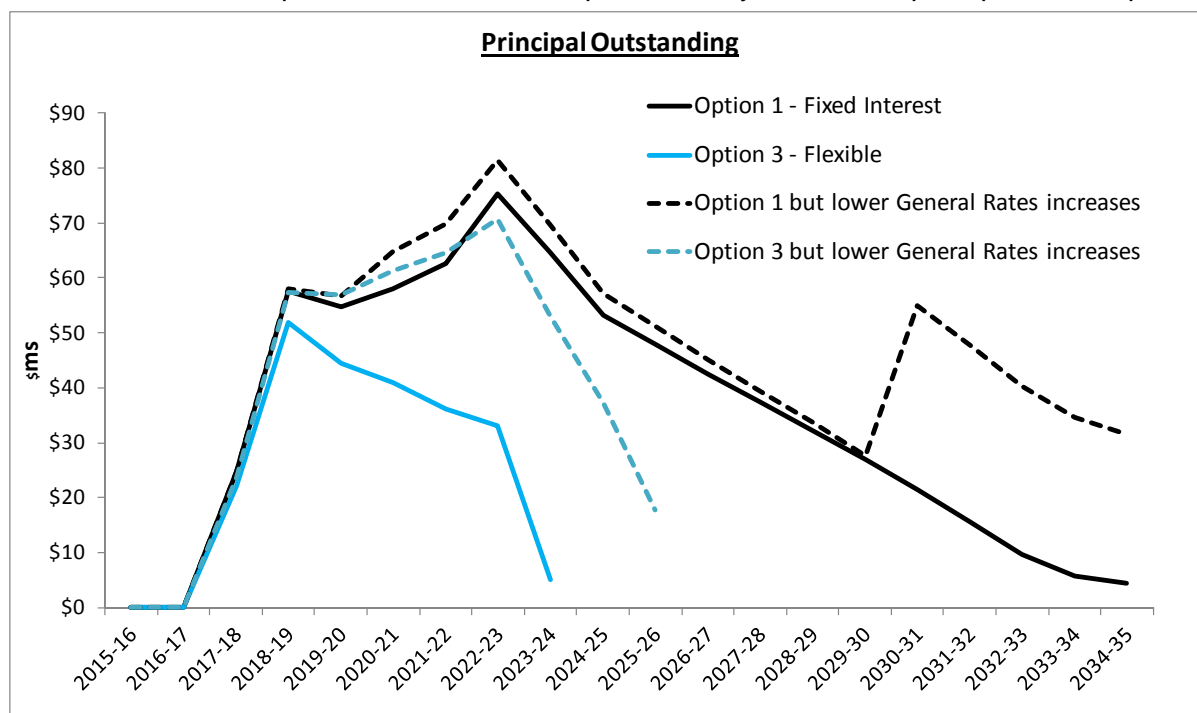
All of the options evaluated previously, and all of the scenarios above, all assume the same Rates % Increases as per the Adopted SFP. The SFP has assumed rates increases of between 4% to 5% for future years. Increases of 4% to 5% for the next few years appear high because the rate increase for 2016/17 was 2.5% and also because the next few years are forecast to be low inflation. Meanwhile the SFP has already included low increases for costs (2% for Employment Costs in next few year and 2% to 2.5% for Materials & Contracts), and therefore the income projections appear to be out of step with the cost increases.

11.2 Lower Rates Increases

It is therefore worth considering the impact on borrowings if there were lower General Rates increases. The graph below shows the current assumptions within the adopted SFP and the alternative scenario of having a 2.5% increase for the next 3 years.

11.3 Longer to Repay Principal

The graph below compares the impacts for Option 1 and 3 of having lower increases in General Rates. Also shown on the graph is the projections based on the earlier analysis. This shows that for Option 3 it will take a couple of more years for the principal to be repaid.



11.4 Impact on 3 Options

The table below summarises the impact of the lower General Rates increases on each option. Net Cash would be much worse off for all options, but Option 3 would still have the higher outcome.

Sensitivity Analysis (2)		Option 1	Option 2	Option 3	
General Rate Increases Lower than planned		Fixed Interest	Variable Interest	Flexible	Best
<u>Borrowings</u>					
1	New Borrowings Year 3 to Year 20 \$m	\$132	\$137	\$80	Option3
2	Maximum Amount Owed Maximum Principal Owing	(\$83)	(\$83)	(\$73)	Option3
3	Principal owing at Year 20 Principal Owing at 2034-35	(\$31)	(\$35)	\$0	Option3
4	Year that Borrowings paid off What year paid off ?	2037-38	2037-38	2026-27	Option3
5	Repayments Total (P+I) 20 Year Total (\$m)	(\$140)	(\$150)	(\$101)	Option3
6	Interest Expense on Borrowings Total 20 Year Costs \$m	(\$39)	(\$48)	(\$21)	Option3
<u>Cash</u>					
7	Interest Earned Total Earned \$m	\$84	\$83	\$82	Option4
8	Capital Renewal 20 Year Total \$m	(\$710)	(\$707)	(\$689)	Option1
9	Reserves Cash Reserves 2034-35 \$m	\$79	\$76	\$84	Option3
10	Net Cash less Borrowings \$m at 2034-35	\$47	\$40	\$84	Option3
<u>Key Ratios</u>					
11	Rate % Increase Increase 5% or less	20	20	20	Same
12	Balanced Cash Budget Balanced Budget	19	19	20	Option3
13	Operating Surplus Ratio % 5 Year Average > 2%	8	8	8	Same
14	Asset Sustainability Ratio % Between 90% and 110%	10	10	8	Option1
15	Debt Service Coverage Ratio Ratio not below 5 for 5 yrs	17	16	20	Option3
16	Total Total out of 100	74	73	76	Option3
17	Treasury Borrowings Criteria No of Years Failed	3	3	4	Option1
18	Financial Health Indicator Year 1 to 10	66	64	64	Option1

12 SENSITIVITY ANALYSIS (3) – HIGHER INTEREST RATES 2020

12.1 Increase in 2020

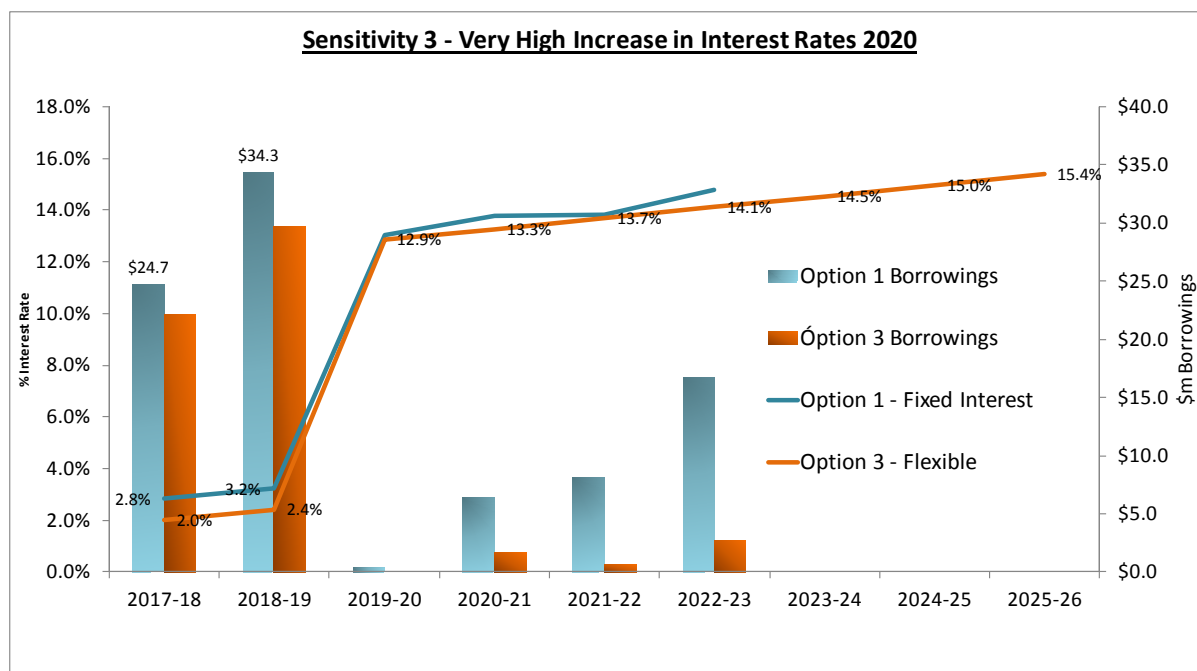
The scenarios in Sensitivity Analysis (1) assumed that the interest rates would vary equally for all scenarios from 2017/18. The majority of the borrowings are for the JPACF in 2017/18 and 2018/19 and it is therefore worth considering the impacts if there were a large increase (e.g. 10%) in Interest Rates from 2019/20, after the JPACF had been constructed. Whilst a 10% increase in one year is of course highly unlikely it is worth evaluating because it tests the extremes of Option 1 and Option 3.

So if there were a 10% increase in 2019/20 for Option 1 (Fixed Rates) the majority of the borrowings would be locked down at a lower rate in 2017/18 and 2018/19. Meanwhile for Option 3 the higher variable rates from 2019/20 would be applicable to the JPACF borrowings and the principal would be more exposed.

This analysis helps to evaluate the higher risk that Option 3 may be perceived to have compared to option 1. This sensitivity analysis only compares Option 1 and Option 3 so that it is easier to review.

12.2 Summary of Options

The Chart below summarises the assumptions for this analysis. This shows that for Option 1 the large JPACF borrowings in 2017/18 and 2018/19 are secured at a low rate of 2.8% and 3.2%. Meanwhile Option 3 is exposed to the higher rates on borrowings from 2019/20 onwards. Option 1 becomes exposed to the higher rates when it has to borrow in the 3 years 2020/21 to 2022/23, but the size of the borrowings are much smaller than the JPACF borrowings.



12.3 Summary Impacts

The table below summarises the impact of the sensitivity analysis. The impacts have a mixed set of results. Option 3, whilst exposed to much higher interest rates than Option 1, still has lower borrowings than Option 1 and is still able to repay all borrowings by 2025-26. The impacts on cash are mostly beneficial for Option 3 with more reserves at Year 20, albeit there is \$47.9m less spent on Capital Renewal. The Key Ratios are much more of a concern for Option 3, with 9 fewer ratios achieved; this is driven by the assumptions in Option 3 to repay debt as quickly as possible whilst still achieving a balanced budget. There are 3 years where the Debt Service Coverage Ratio fails for Option 3 compared to just one for Option 1, but this is actually driven by large loan repayments and a failure of the ratio to take account of the one-off large repayments.

Sensitivity Analysis (3) Very large increase in Interest Rates from 2020		Option 1	Option 3	Difference	
		Fixed Interest	Flexible	Opt 3 vs Opt 1	Best
Borrowings					
1	New Borrowings Year 3 to Year 20 \$m	\$91	\$57	(\$34)	Option3
2	Maximum Amount Owed Maximum Principal Owing	(\$77)	(\$63)	\$15	Option3
3	Principal owing at Year 20 Principal Owing at 2034-35	(\$6)	\$0	\$6	Option3
4	Year that Borrowings paid off What year paid off ?	2037-38	2025-26	12 yrs	Option3
5	Repayments Total (P+I) 20 Year Total (\$m)	(\$132)	(\$102)	\$30	Option3
6	Interest Expense on Borrowings Total 20 Year Costs \$m	(\$47)	(\$45)	\$2	Option3
Cash					
7	Interest Earned Total Earned \$m	\$118	\$116	(\$1)	Option1
8	Capital Renewal 20 Year Total \$m	(\$742)	(\$694)	\$48	Option1
9	Reserves Cash Reserves 2034-35 \$m	\$214	\$256	\$42	Option3
10	Net Cash less Borrowings \$m at 2034-35	\$207	\$256	\$49	Option3
Key Ratios					
11	Rate % Increase Increase 5% or less	20	20	0	Same
12	Balanced Cash Budget Balanced Budget	20	20	0	Same
13	Operating Surplus Ratio % 5 Year Average > 2%	12	10	-2	Option1
14	Asset Sustainability Ratio % Between 90% and 110%	13	9	-4	Option1
15	Debt Service Coverage Ratio Ratio not below 5 for 5 yrs	20	17	-3	Option1
16	Total Total out of 100	85	76	-9	Option1
17	Treasury Borrowings Criteria No of Years Failed	1	3	2	Option1
18	Financial Health Indicator Year 1 to 10	74	66	-8	Option1

13 FINANCING BY OTHER LOCAL GOVT

13.1 WATC Consultation

WATC have been informally consulted about some of the options in this paper. Whilst most Local Government tends to use Fixed Interest Fixed Term arrangements, WATC did suggest that alternative flexible arrangements could be put in place. For example to accommodate the JPACF loan of circa \$50m, rather than just put it on a 15 year repayment term it could be split up into different bundles with different repayment terms which allows the flexibility to repay the principal earlier if possible. If the surplus doesn't materialise (e.g. Tamala Park reduce their distributions yet again), the loan could just be refinanced using up-to-date market rates.

13.2 Financing by other Local Government

There are few examples of Local Government in WA doing anything different other than the standard fixed term fixed interest arrangements. The City of Cockburn recently completed the construction of a new sports facility and borrowings were used for a 10 year fixed interest fixed term with WATC. The City of Gosnells uses a short-term (3 years) overdraft arrangement to help with the construction of projects. Meanwhile the City of Wanneroo has taken on a \$60m loan at interest-only which will have to be repaid at an agreed point in time; this loan was linked to Developer contributions and quite unique to the growth in Wanneroo.

14 OTHER OPTIONS & ISSUES

14.1 Flexible with Balloon Payments

It is possible to set up Flexible arrangements without any principal repayments during the course of the loan and only paid at the end of the loan (referred to a 'balloon' payment). This type of mechanism can be useful for specific projects which have a certain event that is expected to provide funds to assist with the principal repayment, such as the Edgewater Quarry project which assumes land proceeds are received 3 years after construction and can be used to repay in full the borrowings.

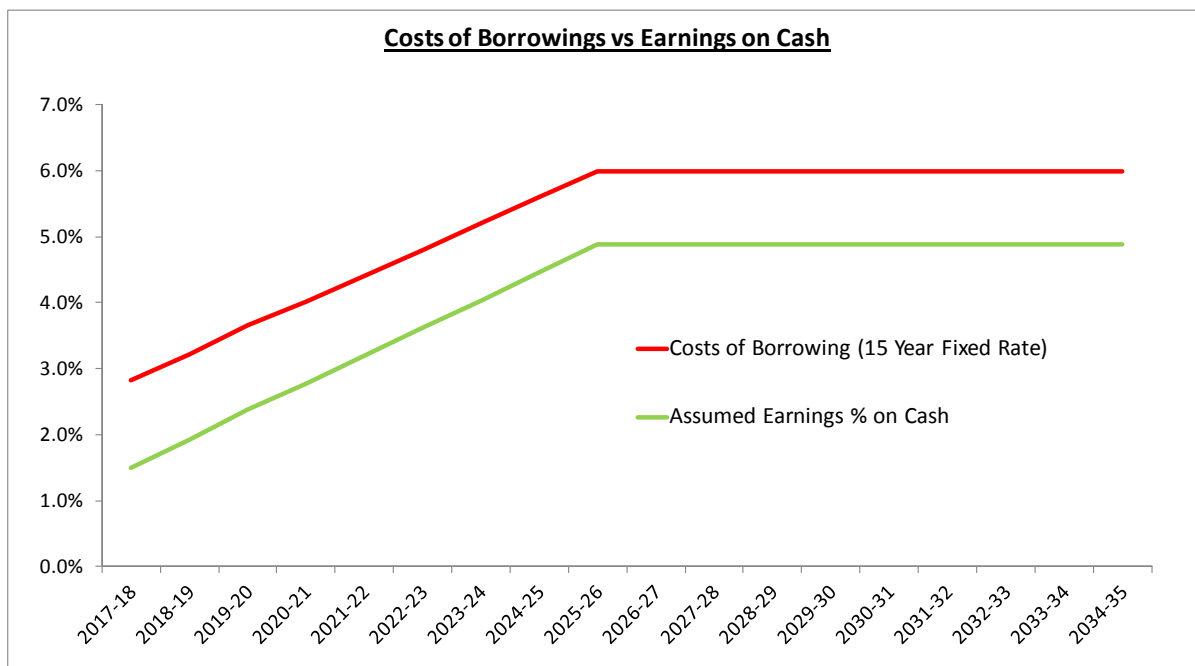
However balloon payment type structures should only be considered for projects that have a specific event. In the case of the JPACF there is no specific year where proceeds are received to assist with principal repayments. Also there is no timeframe in which the JPACF becomes profitable and should be used to repay principal. The key component for JPACF repayments is the Tamala Park proceeds, which are uneven and whose schedule changes each year due to property market conditions. Therefore for projects such as JPACF which can be regarded as traditional type borrowings which have to be honoured against general municipal funds, a balloon type structure is not viable.

14.2 Reserves Freed Up

There is a further opportunity the City could consider in the use of reserves. The graph below summarises the assumptions for costs of borrowings (15 year term) versus the expected % earnings on cash. This shows that the costs of borrowings are expected to be higher than cash reserves. In reality this is not always the case, but this is a reasonable assumption for this report and indeed for considering future borrowing arrangements.

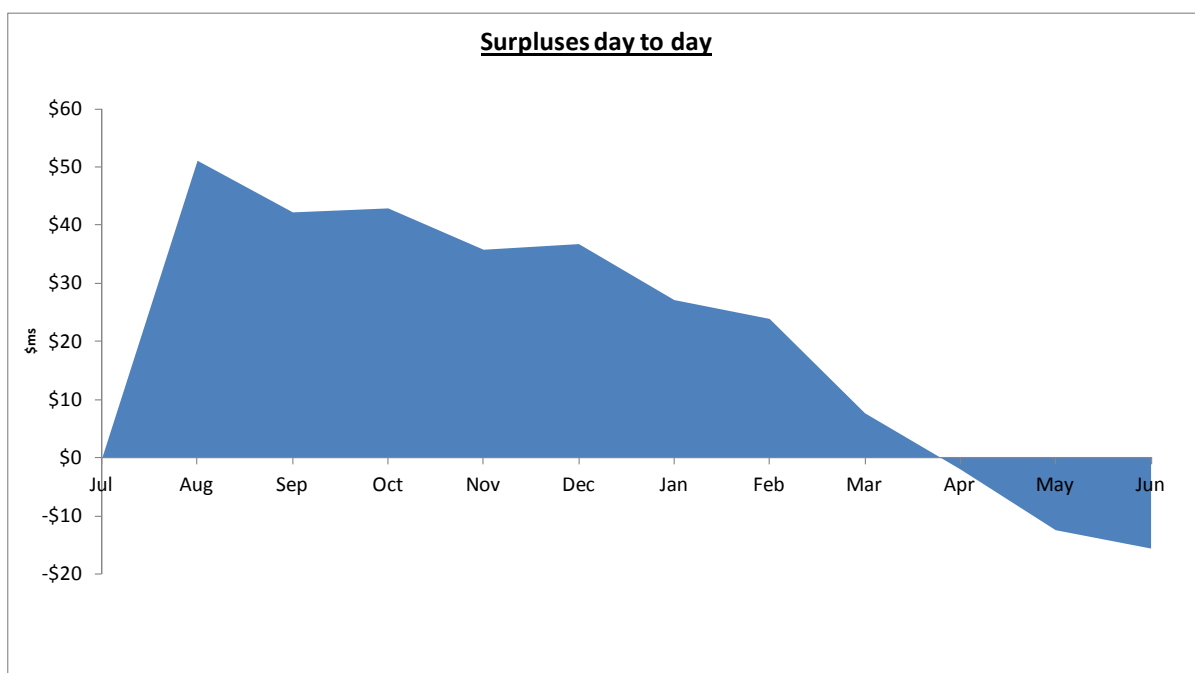
On this basis, the overall City cashflows would be better off by using cash to minimise interest costs rather than tied up in reserves. There are several reserves which cannot be considered in this way as they are tied up for legislative reasons (e.g. employee provisions), However where there are reserves established at the direction of Local Government (e.g. Parking Reserve) which are designated for a specific purpose, the funds could be freed up (on Local Government approval) to reduce borrowings.

This option has been modelled (Option 3c) and was combined with other features of Option 3b (i.e. repay principal as quickly as possible) – there were marginal benefits and it is worth considering at a later point in time. There is enough to consider in this report with interest-only borrowings without complicating the scenarios further with changing the use of reserves.



14.3 Day to Day Surpluses Could Reduce Costs of Borrowing

Following on from above there is yet another scenario that could potentially be evaluated. On a day to day basis short-term surpluses could be used to offset (reduce) the costs of borrowing rather than banked. This facility could operate in the same way as an offset account works for a household mortgage. The graph below shows the surplus funds that are available to the City during the year as General Rates are received in advance of expenditure during the year. This option has not been explored in detail and is potentially an issue for future consideration.



14.4 Existing Borrowings Refinanced and/or use existing Reserves to pay off

As explained in Section 3, the analysis in this report has simply assumed that the cashflows for all existing borrowings will continue as they are, and are therefore treated equally in all options. However the existing borrowings were set up on Fixed Interest Rate arrangements, which are higher than the current prevailing rate and much higher than the interest being earned on cash reserves. If the City did adopt a more holistic approach to financing and the use of reserves, then it could re-evaluate the existing borrowings by reviewing the use of all existing reserves.

14.5 Market Options instead of WATC

WATC is the primary provider of borrowings to Local Government. It is highly unlikely the City would want to consider alternative forms of finance from other providers. In any case, other lenders would expect borrowings to be secured against assets, whereas WATC borrowings are simply secured against general municipal funds.

14.6 Lock in Low Fixed Interest Rates Now

A potential option for the City if it is intent on the continued use of Fixed Interest is to lock in a rate in advance of needing it. For example if the JPACF was approved then the borrowings could be secured 2 or 3 years ahead of when the final construction payments are made. This option is an extreme version of Option 1, it would provide great transparency/certainty to the City, but suffers even more from all of the other disadvantages of Option 1 (lack of flexibility, costs more in the long run compared to Option 3)./

14.7 Financing Increased Renewal Expenditure / Asset Renewal Reserve

The City is relatively young in terms of the age of its assets and infrastructure, most of which will not yet have required replacement. However the City will eventually need to increase the amount of Capital Renewal expenditure to ensure that the infrastructure provide the levels of service that the Community expects. The Adopted SFP has already built in estimated increases for several capital programs, and has identified potential additional expenditure to ensure that it can renew assets in line with consumption. The exact levels of capital renewals required for each program will be determined from detailed Asset Management Plans; these are in the process of being updated.

The City will need to assess how it plans and finances increased renewal expenditure. The City could just continue with the current default approach within the SFP where higher capital renewals are built into the projections in the year in which they are expected to be required and there are adequate municipal funds to finance the expenditure. Alternatively, the expenditure could be smoothed out to avoid large lumps of expenditure. Another financing approach is to set aside funds each year in advance into a reserve (e.g. an Asset Renewal Reserve) which is then built up and finances the expenditure when required.

This report does not seek to recommend the best approach for financing increased renewals. However the establishment of an Asset Renewal Reserve would be at odds to the recommendation for Option 3 where surplus funds are better used to repay borrowings, rather than build up reserve funds. At this stage the City has insufficient information regarding future renewal requirements to evaluate the optimum financing route, this will be

assessed each year as part of the updates to the SFP and as Asset Management Plans for each program are finalised. The key issue though is that the City must be aware of increased renewal expenditure in years ahead and that it will need to plan for this – at present the SFP and the various options evaluated in this report have included indicative estimates of increased renewal expenditure.

SUMMARY – RECOMMENDATION & NEXT STEPS

15 RECOMMENDATION

15.1 Repayment Terms – Maximum 15 years

The analysis in this report does not make a recommendation that there should be a standard term applied to all borrowings (5, 10, 15 or 20 years). The report finds that the current process of considering the term relative to the size of the borrowings is the most appropriate.

The analysis is conclusive in respect of a 20 year repayment term, this is inefficient due to the size of the interest payments and despite the intergenerational inequality that may appear to arise with shorter repayments, it is normally always better to repay borrowings as quickly as possible (depending on cash flow).

15.2 Recommendation - Flexible Arrangements with Flexible Repayment

With regards the type of arrangement (Fixed, Variable or Flexible) it is recommended that the City sets up borrowings from 2017/18 onwards on an interest only basis with flexible repayment terms. This recommendation is made taking account of all the information in this report, specifically that:

- Section 6 has assessed Option 1, 2 and 3 against a range of metrics. Option 3 (Flexible) comes out on top in most areas, only failing slightly with the Asset Sustainability Ratio.
- Borrowings could be repaid by 2024-25 (Option 3) rather than 2037/38 (Option 1 and Option 2)
- Sensitivity analysis also indicates that Options 1 and 2 would be worse for the City with higher rates. Option 3 provides the ability to repay much quicker and therefore mitigates this risk. This may appear to be at odds with normal understanding that Fixed Interest mitigates risk, but the risk is only mitigated after the borrowings are set up and only if the Variable rate increases much more than the Fixed Rate.
- RAG Analysis – Fixed Rates provide less flexibility

Option 3 is also better off when the Guiding Principles are considered because:

- Prudent – Option 3 pays off borrowings quicker which is a more prudent approach than a protracted 15 year repayment term
- Long Term approach – the analysis in this report has considered the long-term
- Flexibility

15.3 Additional Monitoring Processes for Flexible Repayment Arrangements

The traditional method of financing (Fixed Interest) provided a clear view of City cashflows that would provide certainty in the annual budget. There would be no issues during the financial year in terms of the amount to be repaid because it would be known. However with a Flexible Repayment arrangement there would need to be additional tasks to ensure the City was proactively managing the process. This could involve one or more of the following:

- Finance Committee – it may be useful for the City to prepare a bi-monthly report to the FC which provides details of:
 - Interest Rate currently applicable on borrowings ?
 - How is the interest rate compared to the budget ?

- When is next repayment of borrowings due, and is there capacity to pay more ?
- Mid Year Review – may also be a useful opportunity to review the current position with borrowings, risks and whether there is potential for more repayments than budgeted ?
- Report to Audit Committee to comment on the risks/sensitivity of the new approach

16 NEXT STEPS

16.1 Independent Review of this Report Required

Whilst it is recommended to move to a Flexible arrangement, it is recognised that this is a significant change to the apparently safe haven of fixed interest arrangements. It would be beneficial for the City and Elected Members to have an independent external review of this recommendation before it is accepted. An external consultant should be used to validate the evaluation in this report and to provide further commentary on the risks and issues of this approach. The review must be as objective as possible.

16.2 JPACF Business Case (October 2016)

There should not be any changes to the financing assumptions in the JPACF business case as the findings in this report need to be validated. The JPACF Financial Model should continue to assume a 15 year repayment term with Fixed Interest.

However the Business Case can mention that a detailed review of financing options is underway and that there is a potential for interest costs to be reduced significantly from circa \$23m to \$10m.

16.3 When Could New Arrangements be Implemented by?

The new approach should be aimed to be implemented by 2017/18, not 2016/17. The 2016/17 Budget has assumed that there would be new borrowings in the traditional format (Fixed Interest) for the Warwick Hockey Facility – as this has already been subject to the adopted budget by Local Government this arrangement should just be set up in this way. In 2017/18 there is supposed to be borrowings for the JPACF, however this was on the premise of construction commencing in 2017/18 which is highly unlikely. In any case there is already a large budget (\$11.4m) in 2016/17 a large part of which will be carried over to 2017/18 and there would be adequate reserves to manage any other costs in 2017/18. Therefore the earliest that any new arrangement would be required would be for financial year 2018/19 so there is plenty of time to consider this report, have the findings reviewed in more detail and implemented. Whilst there is plenty of time though, Elected Members should be briefed so that they are aware of the work to minimise the overall costs to the City of the JPACF borrowings.

16.4 Master Borrowing Agreement with WATC

The City currently has a master borrowing agreement with WATC, which only allows for Fixed Interest arrangements. This would have to be amended. In any case there would need to be more detailed discussions with WATC regarding the change in approach.

FINANCIAL ANALYSIS



APPENDIX 1 – INTEREST RATE ASSUMPTIONS

2017-18 2018-19 2019-20 2020-21 2021-22 2022-23 2023-24 2024-25 2025-26 2026-27 2027-28 2028-29 2029-30 2030-31 2031-32 2032-33 2033-34 2034-35

a) Earnings on Cash

Assumed to be 1% less than the Fixed 10 Year Term

Cash Reserves earnings	1.49%	1.92%	2.38%	2.77%	3.19%	3.62%	4.04%	4.46%	4.89%	4.89%	4.89%	4.89%	4.89%	4.89%	4.89%	4.89%	4.89%
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b) Length of Loans

Lower Limits	\$0	\$5,000	\$10,000	\$60,000
Higher Limits	\$5,000	\$10,000	\$60,000	
Length of Loan (Yrs)	5	10	15	20

c) External Funding Costs & Earnings - FIXED

Data highlighted in Yellow derives from WATC

Loan Term 1	5	2.14%	2.56%	3.02%	3.41%	3.83%	4.25%	4.67%	5.10%	5.52%	5.52%	5.52%	5.52%	5.52%	5.52%	5.52%	5.52%
Loan Term 2	10	2.49%	2.92%	3.38%	3.77%	4.19%	4.62%	5.04%	5.46%	5.89%	5.89%	5.89%	5.89%	5.89%	5.89%	5.89%	5.89%
Loan Term 3	15	2.82%	3.22%	3.65%	4.01%	4.41%	4.80%	5.20%	5.59%	5.99%	5.99%	5.99%	5.99%	5.99%	5.99%	5.99%	5.99%
Loan Term 4	20	2.97%	3.35%	3.77%	4.12%	4.51%	4.89%	5.28%	5.66%	6.05%	6.05%	6.05%	6.05%	6.05%	6.05%	6.05%	6.05%

Govt Guarantees on Loans	0.70%	0.70%	0.70%	0.70%	0.70%	0.70%	0.70%	0.70%	0.70%	0.70%	0.70%	0.70%	0.70%	0.70%	0.70%	0.70%	0.70%
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d) External Funding Costs & Earnings - VARIABLE

(0.5% less than Fixed)

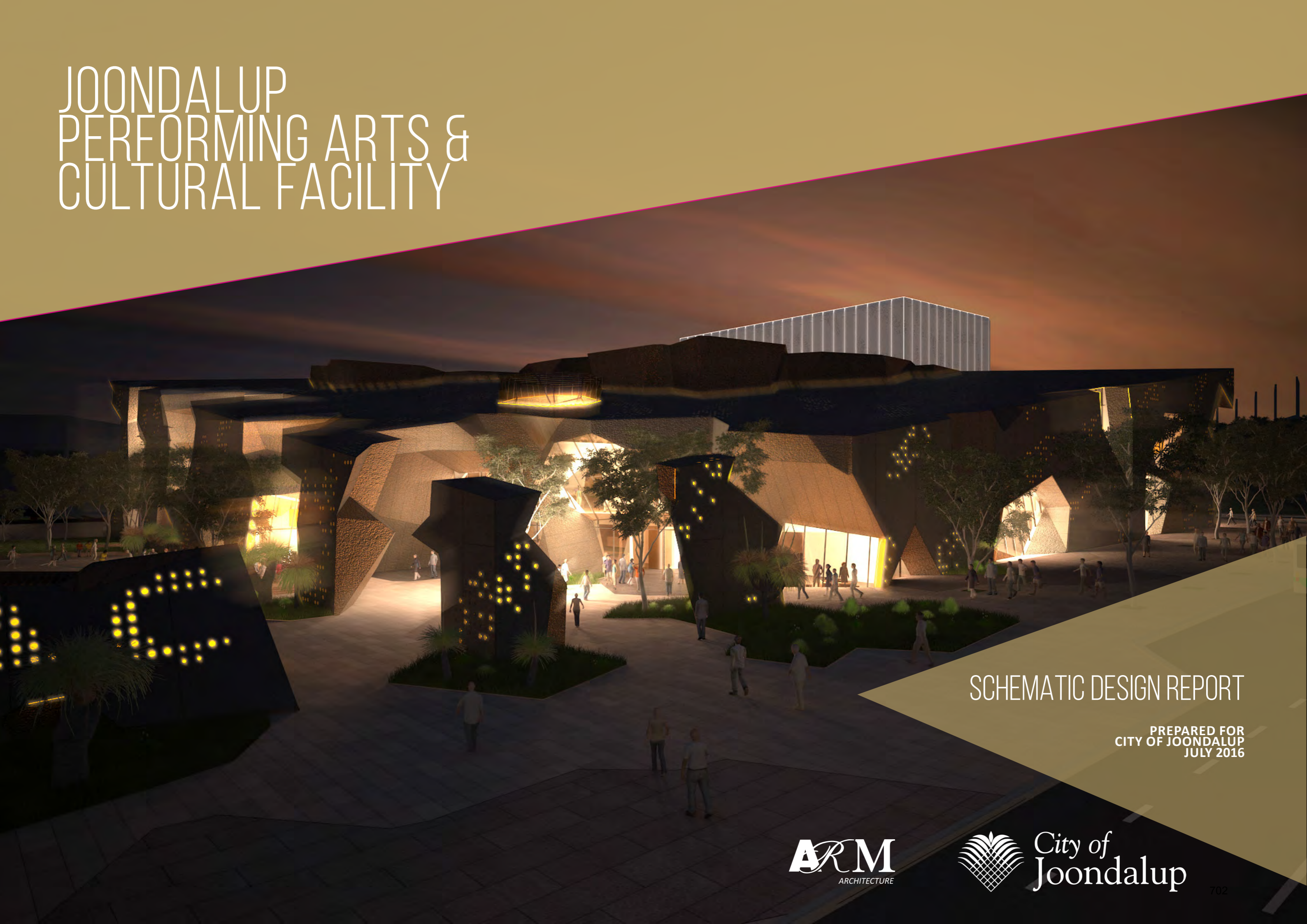
Loan Term 1	5	1.64%	2.06%	2.52%	2.91%	3.33%	3.75%	4.17%	4.60%	5.02%	5.02%	5.02%	5.02%	5.02%	5.02%	5.02%	5.02%
Loan Term 2	10	1.99%	2.42%	2.88%	3.27%	3.69%	4.12%	4.54%	4.96%	5.39%	5.39%	5.39%	5.39%	5.39%	5.39%	5.39%	5.39%
Loan Term 3	15	2.32%	2.72%	3.15%	3.51%	3.91%	4.30%	4.70%	5.09%	5.49%	5.49%	5.49%	5.49%	5.49%	5.49%	5.49%	5.49%
Loan Term 4	20	2.47%	2.85%	3.27%	3.62%	4.01%	4.39%	4.78%	5.16%	5.55%	5.55%	5.55%	5.55%	5.55%	5.55%	5.55%	5.55%

APPENDIX 2 – EXISTING BORROWINGS

Purpose	Year Drawn	Year Final	Borrowed	Balance 30 June 2016	Interest	Principal	Balance 30 June 2017
Aquatic Facilities Upgrade	2009-10	2019-20	5,800,000	2,730,654	166,775	624,200	2,106,454
West Coast Drive	2009-10	2019-20	885,000	416,660	25,418	95,244	321,413
Seacrest Sports Facility	2010-11	2020-21	841,320	463,584	29,861	86,735	376,848
Forrest park Sports Facility	2010-11	2020-21	553,500	304,989	19,646	57,063	247,926
Fleur Frame Pavilion Upgrade	2010-11	2020-21	1,529,180	842,609	54,277	157,652	684,958
Multi Storey Car Park	2014-15	2024-25	8,500,000	7,754,454	263,585	767,022	6,987,432
Bramston Park	2015-16	2020-21	1,769,000	1,686,388	54,889	336,375	1,350,013
SES Facility Upgrade	2015-16	2020-21	729,000	694,956	22,407	138,619	556,337
Warwick Hockey Centre	2016-17	2021-22	4,545,423	0	0	0	4,545,423
				\$14,894,594	\$636,858	\$2,262,910	\$17,176,804

Appendix 13 - Joondalup Performing Art Centre Facility – Schematic Design Report: ARM Architecture (July, 2016)

JOONDALUP PERFORMING ARTS & CULTURAL FACILITY



SCHEMATIC DESIGN REPORT

PREPARED FOR
CITY OF JOONDALUP
JULY 2016

REVISION/ D
PROJECT NO./ 0836
DATE/ 28-JUL-2016



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JOONDALUP PERFORMING ARTS AND CULTURAL FACILITY / 0836 / SCHEMATIC DESIGN REPORT



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EXECUTIVE SUMMARY





EXECUTIVE SUMMARY

This document is the Schematic Design Report for the new Joondalup Performing Arts and Cultural Facility – an important step in the realisation of this new public facility. The document covers the overarching strategy for the project from its initial design inception, as well as the detailed planning and technical specifics of all aspects of the brief. It’s the culmination of work from a skilled team of consultants and specialist sub-consultants.

The development of the Schematic Design has evolved from the original business case provided by Pracsys (with Peter Hobbs Architects feasibility study) for the venue, in January 2013. The design has gone through various reviews and consultation processes, including regular review by the Project Control Group – comprising Blignault Olivier (Manager City Projects), Scott Collins (Project Officer), Rod Mollett (architectural advisor) and Guy Boyce (operational advisor). There has also been regular review by Garry Hunt (CEO) and Alan Ellingham (Senior Financial Analyst).

The need for a performing arts facility in the Joondalup region was defined in the 1992 Joondalup Cultural Plan. Numerous studies and reports have further identified the need for a performing arts and cultural facility in Joondalup. In 2006 the purchase of the site (Lot 1001 Kendrew Crescent) for the proposed facility was finalised with the Department of Education and Training. In June 2010, Council endorsed the Project Philosophy and Parameters for the JPACF.

Named the World’s Most Liveable City of 2011, Joondalup is a rapidly growing area in the northwest corridor, around 25kms from the central business district of Perth. The City is one of the largest local governments in Western Australia by population.

The JPACF project represents a significant milestone in the development of the City and will follow other significant infrastructure including the Joondalup Health Campus, Edith Cowan University, North Metropolitan TAFE (formerly the West Coast Institute of Training), WA Police Academy, Arena Joondalup and the City Administration, Civic Centre and Library. The JPACF will add a new dimension to the city centre and become a key cultural destination for Perth.

The facility supports the City’s role as a Strategic Metropolitan Centre (Directions 2031 and Beyond, Department of Planning and WA Planning Commission, August 2010), whilst re-activating its surrounds, giving people an extra reason to visit, stay, live, and work in the city centre. The development of the JPACF is part of a broader initiative within the City’s Strategic Community Plan 2012-2022 (Joondalup 2022), aiming to contribute by:

- Providing art and cultural experiences that develop a community’s identity, diversity, heritage and tourism activity;
- Offering a range of engaging and innovative cultural activities for residents.

ARM Architecture has worked on a number of major performing arts centres across Australia. We know the importance of delivering these facilities to a high standard, and the resulting impact that they have on cities and regional centres. Performing arts centres are important gathering spaces for locals and visitors, and become known destinations and places for the city, gaining national and international reputations for performance. They increase visitor attendance in their immediate area, creating potential revenue spill-over for supporting retail and other cultural facilities which contribute to further development. All of these benefits ultimately contribute to building better cities, and fostering social cohesion and community spirit.

1. INTRODUCTION

1.1 BRIEF

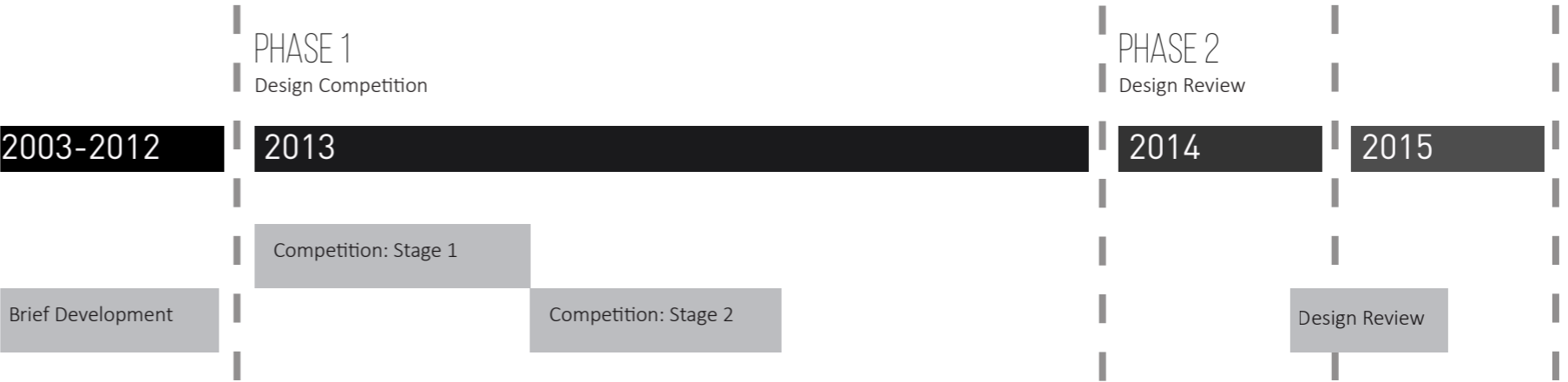
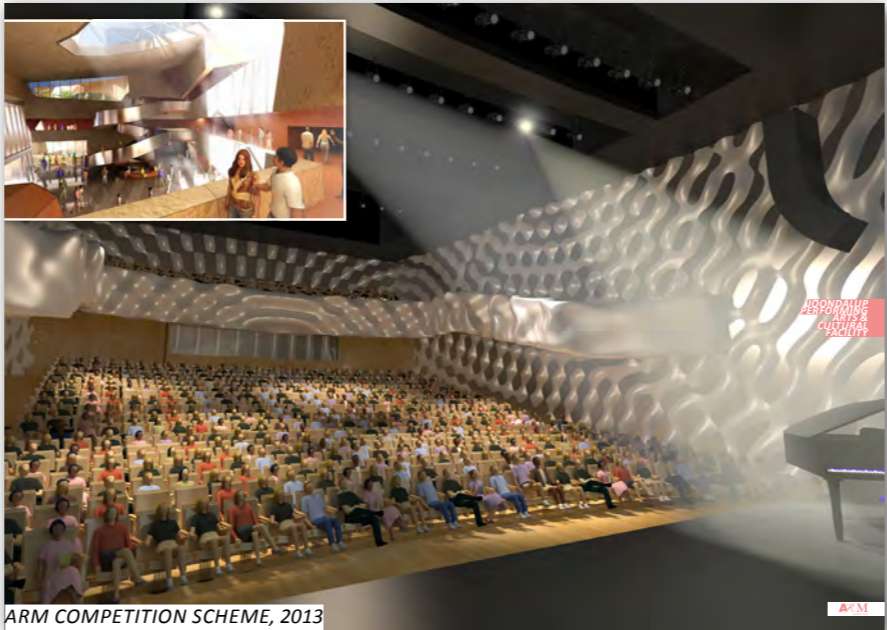
In 2012 the City of Joondalup engaged Pracsys to perform a market analysis study, which was developed into a brief for a two-stage architectural competition ultimately won by the ARM Architecture team in 2013. It sets out the core project philosophy of this development as an ‘art box’ – a place for the pursuit of performing arts, visual arts and crafts, film and media, writing and cultural events for Perth’s northern population. The facility also aspires to creating meaningful connections beyond its site.

PROJECT OBJECTIVES

- Together with the surrounding educational institutions, reinforce the Joondalup City Centre as the creative and educational centre of the northern corridor.
- Provide a world class, state of the art centre incorporating innovative and sustainable design that is architecturally symbiotic with the existing natural and built environment.
- Project a place of cultural significance, providing a landmark entry statement to the City that creates strong visual and physical linkages to existing and future civic buildings, educational precinct, green areas and transport hub.
- Become a place to celebrate imagination and creativity, inspiring individuals and the community to take part in culture and the arts and raise the aspirations of all users.
- Create an inclusive environment where people of all ages and levels of cultural awareness can develop and nurture a strong sense of the possibilities that the arts can provide.
- Provide a facility that can host a mixture of commercial and community activities that supports the viability and attraction of the venue.



JPACF MARKET ANALYSIS AND FEASIBILITY STUDY, 2012



1.2 DESIGN REVIEW PHASE

The ARM competition scheme was selected by the project jury and endorsed following a design presentation to the JPACF Steering Committee and Council. The scheme captured the aspiration of the project brief, creating a design for Joondalup based around the concept of a limestone block, inhabited with unique internal spaces for performance. The ARM scheme was also voted the People's Choice by a public vote.

Since the competition process, the project design has gone through various discussions and reviews culminating in the work completed for this Schematic Design report. The reviews have included:

- Project review 1 (31 Oct 2014)
- Independent review and report study completed by AEG Ogden and Guy Boyce (Jan-Feb 2015)
- Project review 2 (11 Feb 2015)
- Steering Committee presentation (12 March 2015)
- Reduced scheme design options and reviews (11 June 2015)
- Steering Committee presentation (24 June 2015)
- Business Case (ongoing)
- Project Control Group – fortnightly meetings since 21 February 2016
- City of Joondalup CEO reviews (23 March and 29 June 2016)
- Major Projects Committee (4 April 2016)
- Consultation with City and State Authorities, including DFES and City of Joondalup Building Services and Cultural Services (April-May 2016)

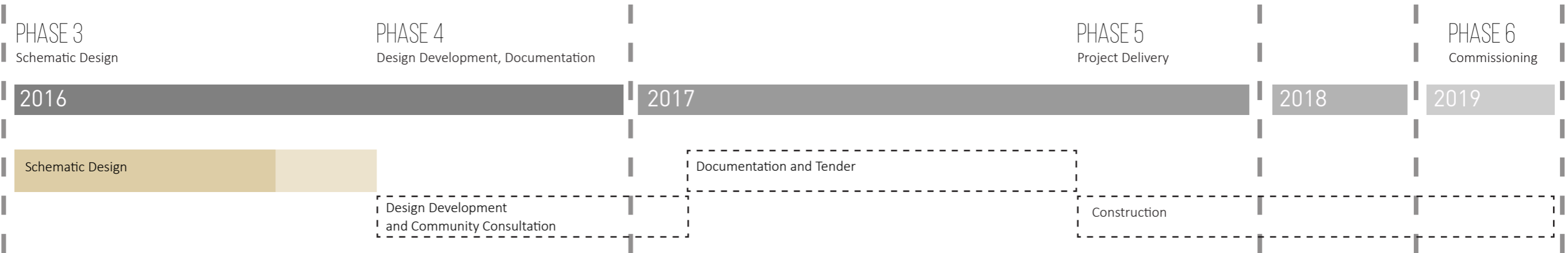
1.3 DESIGN REVIEW OUTCOMES

The outcomes from this process have been a review of various functional and planning requirements, as well as a review of the project brief. Items that were investigated included:

- Foyers – Investigated better separation and flexibility for performances and other events, resulting in revised layout. Refer to 4.2 Front of House for more detail.
- Lyric Theatre – Investigated impacts and viability of increasing from 850 seats to 1000 seats, resulting in retaining the original design requirement for 850 seats. Investigated changes to auditorium layout to improve intimacy and sightlines – refer to 4.3 Lyric Theatre for more detail.
- Art Gallery – Investigated prominence to both the interiors and the street, resulting in relocation of the gallery to ground level. Refer to 4.5 Art Gallery for more detail.
- Back of House – General review resulting in increased efficiency for BOH operations. Refer to 4.7 Back of House for more detail.
- Food & Beverage – Investigated viability of on-site catering from an independent kitchen, resulting in maintaining the original design requirement for an independent cafe, and a separate warming kitchen for function & conference rooms.
- Function & conference rooms – More flexible use by a bigger market, resulting in revised layout. Refer to 4.6 Community Studios for more detail.
- Exteriors – Investigated integration of weather protection and signage.
- External works – Included redevelopment of adjacent carpark into a landscape plaza for outdoor performances and events, and re-cladding of the existing services building on Grand Boulevard, into the scope of the project. Refer to 2.2 Urban Design and 4.1 Entry Forecourt and Plaza for more detail.

- Masterplan – Included integration of Jinan Gardens into the scope of the project. Refer to 2.2 Urban Design for more detail.

The resolution of these issues has been incorporated into the project design within this report.



1.4 BUDGET

A summary of the current Cost Plan is included below. Some items are outside the scope of this report (eg. Jinan Gardens), but are included on advice from the City.

The basis of the costing is current market rates, internal benchmark information and supplier/contractor advice.

Element	Elemental Total \$
SUBSTRUCTURE	\$ 3,554,600
SUPERSTRUCTURE	\$ 34,993,400
FINISHES	\$ 4,858,400
FFE	\$ 4,314,400
SERVICES	\$ 20,577,000
THEATRE NORTH - INDICATIVE	\$ 1,768,000
TOTAL BUILDING WORKS	\$ 68,297,800
EXTERNAL WORKS	\$ 2,577,000
EXTERNAL SERVICES	\$ 1,175,000
MAIN CONTRACTOR PRELIMS	\$ 9,257,100
CURRENT DAY BUILD COSTS	\$ 79,529,800
DESIGN CONTINGENCY	\$ 3,187,000
CONSTRUCTION CONTINGNECY	\$ 2,072,000
FURNITURE, FITMENTS AND EQUIP.	\$ 750,000
THEATRE TECHNICAL EQUIP.	\$ 3,500,000
PROFESSIONAL FEES	\$ 7,500,000
May 2016 PROJECT COSTS (incl Client Change)	\$ 96,538,000
Jinan Gardens (Client Advised budget)	\$ 2,100,000
Project Management (Client Advised budget)	\$ 1,100,000
ESTIMATED TOTAL PROJECT COST	\$ 99,738,000

1.5 VALUE-ADD OPPORTUNITIES

During the Schematic Design phase, a number of value-add opportunities were identified, and are listed in the table below.

Opportunity	Estimated Capital Cost	Included in Costing?	Positives	Negatives
Photovoltaic cells on roof	\$0.35m – \$0.45m	No	<ul style="list-style-type: none">Operational savings – potential to provide day-to-day power to carpark and admin officesSustainability initiativeCan be added at any time during the project, including after opening, with minimal impact	<ul style="list-style-type: none">Additional capital cost
Rainwater harvesting and recycling	\$0.15m	Yes	<ul style="list-style-type: none">Operational savings – potential to service toilets and irrigation. (Use for irrigation provides less savings as water is mainly needed during dry months.)Sustainability initiative	<ul style="list-style-type: none">Additional capital costDifficult to add after Schematic Design stage, hence inclusion in current design
Art Gallery humidity control	\$0.18m	No	<ul style="list-style-type: none">'Premium' gallery able to host significant touring exhibitions, in line with AGWA, Lawrence Wilson Gallery and John Curtin Gallery	<ul style="list-style-type: none">Additional capital costAdditional operational cost of the mechanical, staffing, curatorial and programming needs of running a 'premium' galleryFurther investigation would be required to determine if there is demand for a 'premium' gallery in JoondalupDifficult to retrofit
Electronic enhancement system for lyric theatre	\$1.00m	No	<ul style="list-style-type: none">An electronic enhancement system is a system of speakers located throughout the auditorium and flytower, which can be tailored to each performance to produce different acoustic environments. It provides a higher level of quality for orchestral and chamber music events.	<ul style="list-style-type: none">The project's operational advisor notes that this is a 'nice-to-have', but is not supported by audience demandsCan be retrofitted, as part of a Design & Construct contract that locks in a particular provider

2. SITE

2.1 CONTEXT

The proposed Joondalup Performing Arts and Cultural Facility is located at 3 Teakle Court in Joondalup, Western Australia, approximately 400m south of the Joondalup City Centre. The site is 7,998sqm and has street frontages to Teakle Court to the south and Grand Boulevard to the west. It abuts Central Park to the north and the North Metropolitan TAFE (formerly West Coast Institute of Training) to the east. The site is currently intact natural scrubland with an unpaved access track to the site's centre. There is a fall of approximately 2.6m across the site from Teakle Court down to Central Park.

The site is bound by wide, brick-paved footpaths along the west and south sides, adjacent to the roads. To the east there is a dirt track that runs between the existing bushland and the North Metropolitan TAFE Hospitality and Culinary Arts building. This area is used as a short-cut through to Central Park. To the north of the site there is a small car park area associated with Central Park.

EXISTING INFRASTRUCTURE

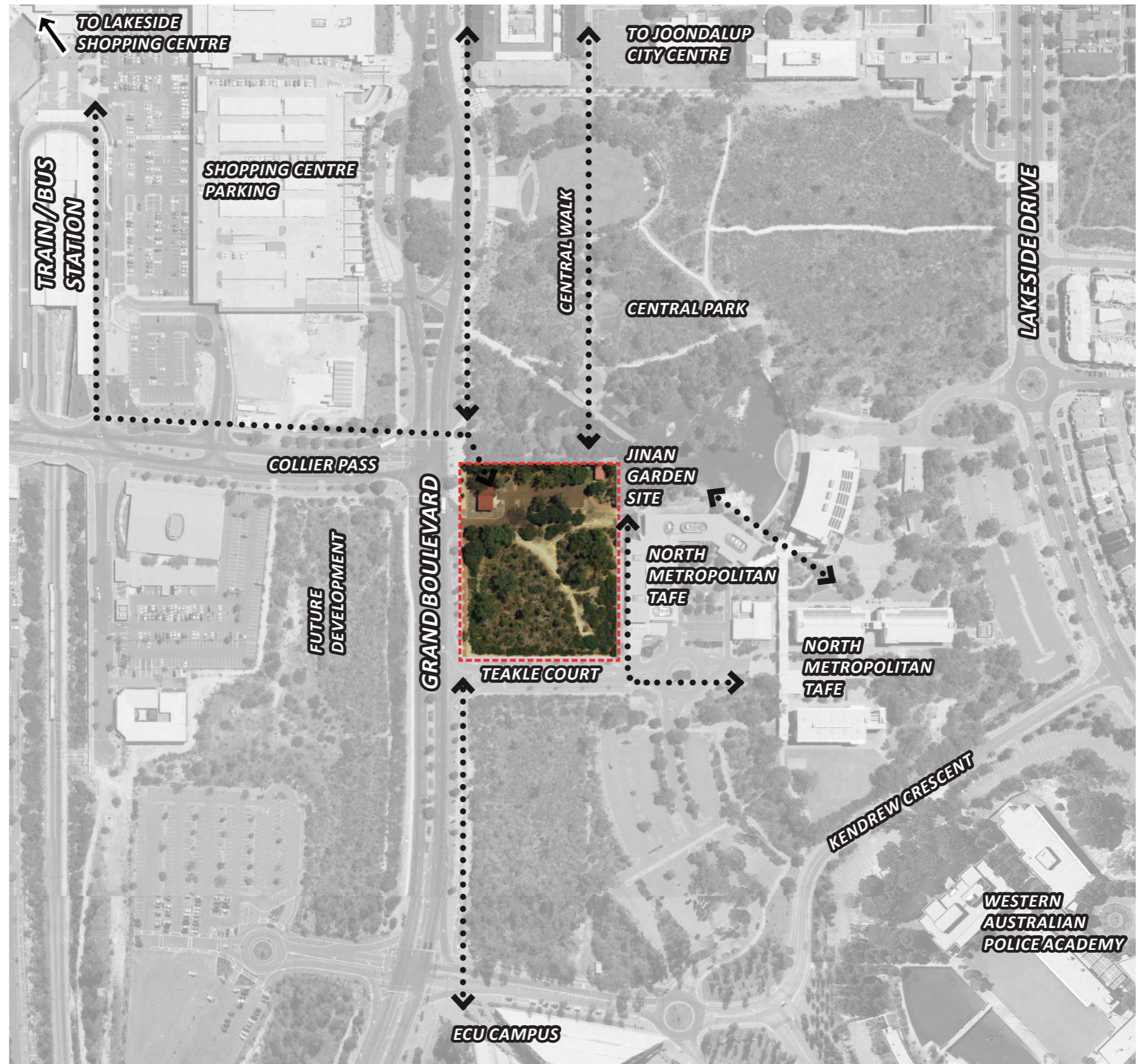
The area to the north of the site includes a services building, a toilet block and a drainage sump.

The services building houses the irrigation pump for the water feature in Central Park and an electrical substation. The relocation of the irrigation pump and substation has been reviewed as part of the schematic design process and has been found to be financially prohibitive.

CONNECTIONS

As well as close proximity to the City Centre, the site has excellent pedestrian connections to the Joondalup Train Station, and Central Park to the north, with Lakeside Shopping Centre located 400m to the north-west. The site benefits from passing foot traffic from those locations to the TAFE, the WA Police Academy and ECU.

Central Walk is a north-south pathway running from the Joondalup Health Campus in the north, through the City Centre and Central Park, and terminating at the JPACF site in the south. It incorporates a series of separate landscape spaces and public art. As well as an important pedestrian connection, this axis is a significant view corridor, offering a framed glimpse of the JPACF site from the other side of the city.



2.2 URBAN DESIGN

The JPACF is designed as an inclusive experience that opens onto and embraces its surrounds. Early on in the development process the decision was made to orientate the public spaces of the project towards the north of the site. This allowed the creation of a large public plaza flanked by Central Park to the north, Jinan Gardens to the east, Grand Boulevard to the west and JPACF to the south.

This plaza replaces the existing Central Park carpark and provides a landscaped area suitable for large scale outdoor events of approximately 1,000 patrons. The existing services building is retained in its current location but reimagined as part of the eroded form of the JPACF, and incorporates a temporary stage area into its eastern facade.

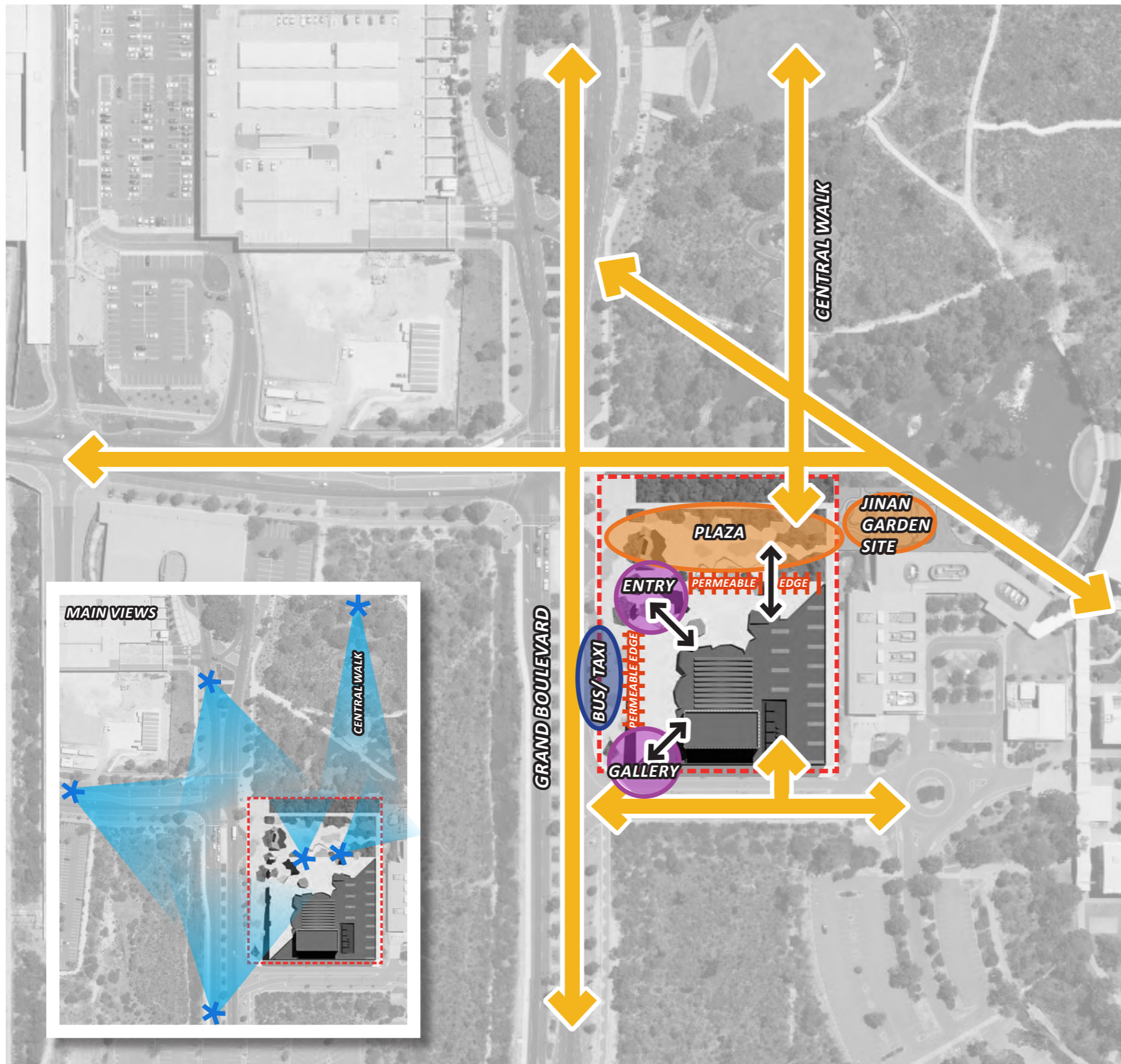
The built form of the JPACF forms the southern edge of the plaza. It provides a civic presence to all sides appropriate to its importance within the cultural landscape. The mass of the building is an open one, imagined as an eroded limestone block emerging from the surrounding landscape, which provides views in and out, creating a compelling invitation to its surrounds.

An expansive entry courtyard at the intersection of Grand Boulevard and the plaza axis forms the main entry to the foyers and the cafe. A dedicated entry to the community studios is located to the east and is accessed off the plaza, ensuring activation within the plaza. The form and dimensions of courtyard make it ideal for use as an external exhibition or event space when required.

The Grand Boulevard façade balances openings and openness with protection and privacy from both pedestrian and vehicle environments. This facade is bookended with the main forecourt to the north and the art gallery/stage door entry to the south. Between these two points the ground level gallery and Level 2 rehearsal rooms provide passive surveillance and street level activation through carefully considered visual connections to the street. A double row of trees provide shade for pedestrians, and a new coach and taxi dropoff area is located adjacent to this facade.

The corner of the Grand Boulevard and Teakle Court is defined by an eroded form which creates the entry area for the art gallery and the stage door. This overhanging form offers glimpses into the building beyond and is complimented by the architectural treatment to the flytower beyond. When combined these two features provide a striking introduction to the JPACF for drivers moving north along Grand Boulevard.

In order to minimise the impact on the existing vehicular movements within the area and to prioritise pedestrian access, all vehicle access to the site is provided from Teakle Court, with the loading dock and carpark entries located at the eastern end of the site. This allows for suitable distances for turning and queuing, and avoids unnecessary congestion and unsightly infrastructure within the plaza area.



VEHICLE ACCESS ANALYSIS

All vehicle access is off Teakle Court, keeping the front of the building free from unsightly loading and service areas.

Service Vehicle Access

Modifications to the median on Teakle Court allow two 19m articulated trucks to reverse into the theatre loading dock. The loading dock has space for the full length of the trailer to be undercover, without impinging on the footpath or road.

Service access for food & beverage is adjacent but separate to the theatre loading area, with access provided via a separate internal path through the carpark. Refer to 4.7 Back of House Facilities for more detail.

Drop-off zone

A drop-off zone for taxis and coaches is integrated into Grand Boulevard adjacent to the building. This avoids the complications associated with bringing vehicles into the forecourt area of the building, and provides clearly demarcated zones for pedestrians and vehicular traffic. Vehicle access to the plaza is still possible for special events such as red-carpet dropoff, and for service/maintenance access. As the project develops further, the opportunity for a CAT bus stop in this area can be investigated.

Carpark access and egress

The carpark is designed primarily to function on event nights, with large numbers of patrons arriving and leaving together. The queuing distances, entry and exit widths, and number of boom gates have been designed to deal efficiently with this volume of traffic.

Pedestrian access to the carpark is independent from the main building, to allow use as public short-term parking. There is also an internal access to the main foyer at each level, which can be utilised during building operating hours.

Road Modifications

As part of the 2015 project review, traffic analysis was undertaken and a number of possible road modification options considered. The City’s preferred option is to maintain the existing left-in-left-out arrangement of the Grand Boulevard and Teakle Court intersection. Traffic modelling undertaken as part of the Schematic Design phase indicates that this will not have a significant effect on the surrounding traffic network.

Modifications are required to the Teakle Court median to allow truck movements to the loading dock, and access to the carpark.

While a right turn out of the carpark onto Teakle Court may be possible, having a left-only turn out has the benefit of requiring vehicles to use the roundabout, which in turn creates a longer queuing capacity for vehicles exiting onto Grand Boulevard. As the project develops further traffic analysis would be required to test the feasibility for the right-hand turn from the carpark, especially when considering use by heavy vehicles.

