

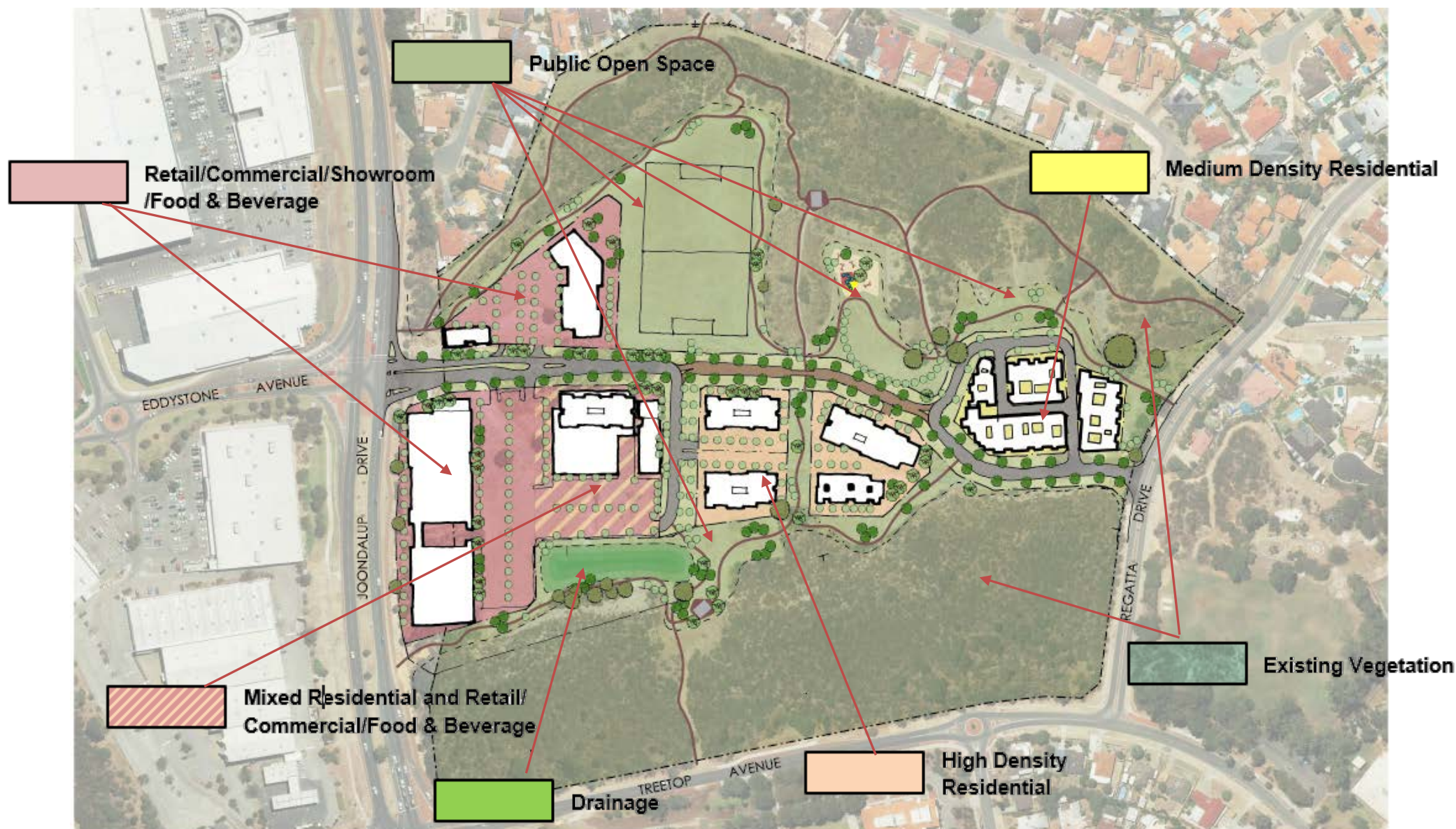


Land Tenure



October 2018

EDGEWATER QUARRY MASTERPLAN – DRAFT PREFERRED CONCEPT PLAN



EDGEWATER QUARRY MASTERPLAN



HISTORICAL INFORMATION

- Limestone was quarried at the Edgewater Quarry from 1961 to 1976. When the suburb Edgewater was developed in 1975, the site was set aside for deferred urban development.
- Since the 1970's there have been a number of proposals for intensive development of the site.
- In 1996 a survey of Edgewater residents was conducted resulting in the overall preference being passive recreation amenities with the following uses identified:

amphitheatre	botanic golf
arboretum	golf driving range
mountain bike track	botanical garden – walk trails, miniature
rugby league sporting complex	railway, water gardens.
- A Steering Committee was established in 2001 however the project was not progressed.
- The City reinitiated the Edgewater Quarry Masterplan project in 2008 and community survey was undertaken. Most of the support was for the development of passive recreation facilities.
- Following consideration of the results of the survey, in 2009 May 2009 Council requested the preparation of a concept plan with the inclusion of:
 - Native flora botanic garden with linkages to the adventure playground.
 - Highly visible and well shaded picnic, BBQ and grassed areas.
 - Dual use walking trails.
 - Amphitheatre and greenroom facilities.
 - Adventure playground.
 - Supporting infrastructure: parking, lighting, multi-purpose facility.
 - Restaurant and café node to complement site use.
 - Consideration of traffic and noise impacts to residents.
 - Consideration of the provision of commercial developments.
- A number of draft concept plan options, a commercial analysis and financial projects for the project were developed. This information was presented to Elected Members via a several Strategy Session meetings over the following three years.
- An environmental assessment of the site was submitted to a Strategy Session held in April 2013 and Elected Members required that, based on the significance of the vegetation on the southern portion of the site, two further concept plans were prepared.
- In April 2014 a preferred option was identified, and further assessments were undertaken including a retail needs assessment, traffic impact study, geotechnical study and a revised acoustic study.

EDGEWATER QUARRY MASTERPLAN



- Following consideration of the above analyses, in March 2016 further concept plan options were requested that included the following:
 - removal of the proposed amphitheatre – a feature of previous plans
 - inclusion of an adventure playground
 - residential development along the eastern end of the site
 - commercial development along the western end of the site.
- The project was put on hold until 2017 when Council decided to establish the Edgewater Quarry Community Reference Group.

EDGEWATER QUARRY MASTERPLAN



DRAFT PREFERRED CONCEPT PLAN – INDICATIVE IMAGES



Traffic calming example



EDGEWATER QUARRY MASTERPLAN

DRAFT PREFERRED CONCEPT PLAN – INDICATIVE IMAGES

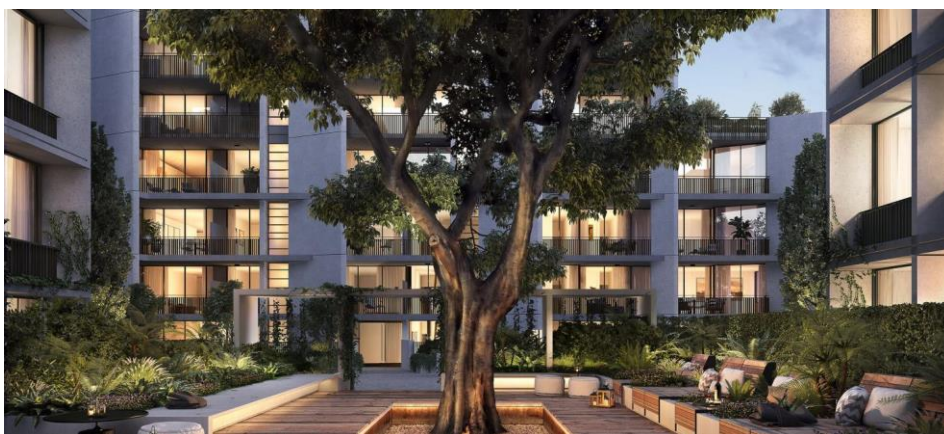


Built Form – Mixed Use



EDGEWATER QUARRY MASTERPLAN

DRAFT PREFERRED CONCEPT PLAN – INDICATIVE IMAGES



Built Form - Residential



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DRAFT PREFERRED CONCEPT PLAN – INDICATIVE IMAGES



Playgrounds / public open space



EDGEWATER QUARRY MASTERPLAN

DRAFT PREFERRED CONCEPT PLAN – INDICATIVE IMAGES



Adventure – public space



EDGEWATER QUARRY MASTERPLAN



DRAFT PREFERRED CONCEPT PLAN – INDICATIVE IMAGES

LANDSCAPING



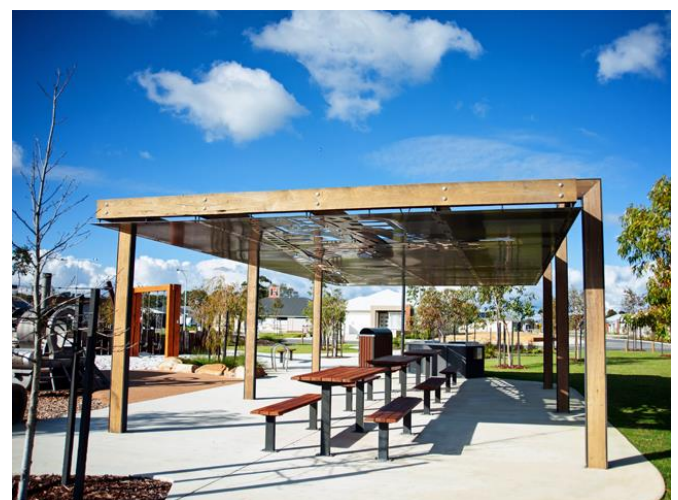
High quality urban streetscape



Stormwater retention drainage



*Multi-use pedestrian
thoroughfares*



Public open space amenities

EDGEWATER QUARRY MASTERPLAN

DRAFT PREFERRED CONCEPT PLAN – INDICATIVE IMAGES

LANDSCAPING



*Fully accessible residential
path network*



*Seal adventure path
network*



Training field

EDGEWATER QUARRY REDEVELOPMENT

PRELIMINARY FINANCIAL ANALYSIS – PREFERRED OPTION

SUMMARY REPORT

City of Joondalup



June 2020

Document Information

Issue Date: 16 June 2020

Client

Taylor Burrell Barnett

Record of Issue

Revision	Date	Comments
1	05/06/2020	Issued for review and feedback
2	16/06/2020	Incorporating minor amendment

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INTRODUCTION

This report provides a summary of the preliminary financial analysis undertaken for the preferred redevelopment Option for Edgewater Quarry within the City of Joondalup. This report and associated preliminary financial analysis represent the further refinement of three alternative options that were considered during 2019/2020.

The redevelopment of Edgewater Quarry, including the establishment and improvement of recreational amenity, is premised on the integration of commercial and residential components that will support the site works and infrastructure upgrades required to deliver the project. The purpose of the preliminary financial modelling is to determine if redevelopment of the site under the preferred redevelopment scenario is likely to be financially feasible for the City, and to inform the City's decision to progress with further consultation and whether to proceed to the next level of design, analysis, planning, business case and approval phases. It will also assist the City to refine the preferred redevelopment Option, identify and manage potential risk and to rationalise the financial and project assumptions.

A preliminary plan for the preferred redevelopment Option (refer **Appendix 1**) has been developed and refined in consultation with the City and stakeholder reference groups to provide a potential development scenario for the site. The Option includes land designated as medium density residential (lots in the order of 250-270m²), high density residential (low-rise apartments), a commercial/mixed use precinct, public open space and drainage, conservation open space and roads. **Table 1** provides a summary of the proposed land use outcomes.

Land Use Summary	Preferred Option
Medium Density Residential	
Area (ha)	0.4542
Dwelling yield	20
High Density Residential	
Area (ha)	0.8858
Dwelling yield	144
Commercial/Mixed Use	
Area (ha)	2.0602
Public Open Space, Conservation & Drainage	
Area (ha)	12.1319
Road Reserve	
Area (ha)	1.4228
TOTAL (ha)	16.9549

Table 1: Land use summary

PRELIMINARY FINANCIAL ANALYSIS - SUMMARY

A ten year discounted cashflow model (DCM) has been constructed for the preliminary financial analysis. This modelling approach allows the initial investment and development costs to be considered alongside the land sale revenue, ongoing rates revenue and operational/maintenance costs, to identify a potential return on investment over this timeframe. The analysis seeks to evaluate the overall attractiveness of the redevelopment project (for investment purposes) as well as test the on-going financial sustainability of the proposal in terms of annual operating results.

The results of the preliminary financial analysis of the preferred redevelopment Option are summarised in **Appendix 2** and recapped in **Table 2**, below:

Preliminary Financial Analysis Summary	Preferred Option
Project Costs	(\$13.4m)
Project Revenue	\$16.3m
Peak Debt	(\$6.0m)
Total interest repayments	(\$721K)
Annual rates income (est. @ completion)	\$286K
Annual landscape maintenance cost	(\$286K)
Annual Depreciation	(\$61K)
Annual Operating Results	(\$61K)
Internal Rate of Return (IRR)	Positive
Net Present Value (NPV)	Neutral (small positive)

Table 2: Preliminary Financial Analysis Summary

Variations from the original preliminary financial analysis of the 3 alternative Options to the subject preferred Option are summarised as follows:

- There is a reduction in forecast sales revenue associated with a decrease in the net developable area to accommodate the sporting field and/or a decrease in medium density residential lots in favour of higher density lots.
- There is a significant increase in the landscaping allowance, following feedback from stakeholders in respect to the landscape amenity outcome, to reflect a higher landscape specification including the creation of the sporting field, an additional BBQ and seating area/structure, an increased budget for the nature play equipment (now \$600K), an additional bore and improved streetscape treatment.
- There is an increased landscape maintenance cost to reflect the higher landscape specification.
- The civil engineering cost estimate has increased to include the introduction of a new brick-paved 'traffic calmed' road.
- The increased landscaping and road costs have increased the depreciation cost and this, together with the increase landscape maintenance cost, results in an annual operating deficit.

- The project Internal Rate of Return (IRR) and Net Present Value (NPV) have decreased. The NPV is a small positive, however, is effectively neutral. This indicates that the projected earnings generated by the redevelopment project effectively equal the anticipated costs.

The preliminary financial analysis suggests that after applying the current assumptions, the preferred redevelopment Option is effectively cost neutral. It will be important to ensure that the relationship between projects costs and sales revenue, including project risk, is carefully managed as small changes will impact the financial feasibility of the project.

As with all financial modelling, the NPV and IRR results provide a guide as to whether there is a financial basis to proceed with a project, however, each methodology has limitations and they aren't in themselves a determinant of whether or not to proceed with a particular project. They do, however, provide an industry recognised standard and methodology for assessing project feasibility.

The preliminary financial analysis is limited to an assessment of project costs and revenue. It does not represent a cost benefit analysis of the proposed redevelopment and it makes no assessment of non-financial incentives, including social or community benefit such as remediation of the site, establishment of formal recreation space, provision of alternative local traffic access or the provision of complimentary landuses for the locality.

ASSUMPTIONS

The formulation of the preferred Option and the accompanying financial analysis incorporate assumptions based on historic site investigations and background reports, accepted industry standards, market evidence, feedback from the City and the project team's land development and commercial knowledge and experience. As such, the financial projections are best estimates based on (and limited by) existing information.

The assumptions are deemed the most suitable at this point in time, however, they require further evaluation, testing and refinement as the project evolves. Key assumptions are detailed below.

Financial Analysis

The cashflow assumes that annual income and expenditure occurs at the end of each year. Financial calculations are undertaken in present value figures and as such do not incorporate escalation/inflation. A discount rate of 5% has been applied at the request of the City to reflect the discount rate that is currently utilised in its municipal finance models.

Project Schedule

The cashflow assumes that detailed design, planning and approvals will take two and a half years to complete from project initiation. This includes the further investigations required to inform detailed engineering design, the site remediation strategy, the Crown land exchange, MRS and LPS rezoning and subdivision approvals, and servicing authority approvals. Where practical, it is expected these processes will run in parallel and that the City will fast-track internal processes/approvals. The schedule assumes a 6-month civil construction implementation program, including subdivision clearances. It is assumed landscaping is

staged, with half of the forecast landscaping works occurring immediately following civil construction with the balance being implemented over the following 2 years. Consultant fees are expended equally over the first 3 years of the project. Sales, settlement and built form construction is staged over a further 6-7 year timeframe following completion of civil construction.

Land Assembly

The analysis assumes that the Crown land exchange required to deliver the land identified for commercial/residential purposes, including the portion of Joondalup Drive utilised for a drainage basin, is treated as a like-for-like land exchange at no cost to the City. It assumes that the City will be required to undertake any necessary planning, site remediation, servicing and civil works to deliver the project. This is a key assumption. If the City is required to purchase the Crown land the redevelopment project, as analysed, will have a negative return (ie. net cost).

Sales Revenue and Timing

In order to mitigate any built form construction risk to the City, it is assumed that the residential and commercial lots are sold to the market. The City retains the management and maintenance of the balance of the Quarry site, including public open space, conservation areas, roads, drainage and associated infrastructure. It is assumed that the land identified for medium density housing is subdivided into 20 individual lots with street frontage and lot connection to essential services and the high density housing and commercial/mixed use land are each subdivided into 3 sub-lots and sold as large serviced lots to builders and/or commercial developers for further development on a staged basis. Sales revenue figures are supported by sales evidence (sourced from RP Data) and current market activity. The feasibility assumes that there will be a demand for the proposed commercial and residential components within the assumed divestment timeframes. Given the preliminary nature of the project, no direct enquiries have been made with 3rd party agents or developers.

The preliminary feasibility analysis assumes that a 7292m² commercial/mixed-use site, a 4376m² high density residential site and five medium density lots are presold prior to the commencement of civil works and settled upon the creation of titles. This is an important premise and settlement of these presold lots to reduce debt, as forecast, underpins the initial project cashflow. A decision to commence civil works without this level of presales will impact the financial viability and increase risk to the City. The analysis assumes that one medium density lot is sold per month thereafter and that the two high density and two commercial lots are sold at three- and six-year intervals post construction. The analysis also assumes that the mixed use site is developed for a commercial landuse – the inclusion of a residential component this is likely to have a positive impact on sales and annual rates revenue.

A market needs analysis is required to establish the level of demand for high density and commercial/mixed use lots and the landuse configuration and will inform a further review of forecast sales rates and total revenue.

Finance

The analysis assumes the project is debt funded. The Western Australian Treasury Corporation specialise in lending to local governments a medium-term interest rate of below 2.0%. Historical interest rates have been higher and in acknowledgement the City has

requested the application of 3.0% interest rate which is adopted for the purpose of the preliminary financial analysis. Notwithstanding, it should be noted that there are a range of alternative project delivery methodologies with a variety of funding options that would be available to the City, including potentially drawing on the City's reserves or under a joint venture arrangement.

Civil Engineering and Construction Costs

Stantec Australia Pty Ltd (formerly Wood and Grieve Engineers) has prepared an order of probable cost for the preferred Option (refer **Appendix 3**). The preliminary feasibility analysis assumes that the civil construction works will be delivered in a single stage. The most significant cost element is site geotechnical and environmental rehabilitation associated with the uncontrolled fill material that exists within the site. The civil works component includes a 10% contingency, the preliminary financial analysis omits contingency for authority and professional fees that are considered industry standard and are calculated on the contract works value (including contingency). The City's standard development fees/bonds are excluded in the preliminary financial analysis. It is assumed that any GST payments are reimbursed and as such, these are also omitted from the analysis. The cost breakdown and assumptions for the civil construction costs is provided in Appendix 3.

Landscape Costs

EPCAD Pty Ltd landscape architects have prepared a cost breakdown for the construction and annual maintenance costs associated with the preferred Option (refer **Appendix 4**). For the purposes of the preliminary feasibility analysis, the landscape cost component assumes a quality landscape specification for the public realm and open space areas, generally comprising irrigated turf (with an allowance for 2 bores), sporting oval including goals, native planting (mulched), irrigated street trees, an allowance of \$600K for a nature playground, some incidental recreation elements, two BBQ/seating structures, red asphalt paths; vegetation remediation and fencing where appropriate. The landscape estimates do not include any allowance for toilets, change room facilities or sports lighting. There is no contingency included in the analysis for landscape costs. As requested by the City, the landscape maintenance costs also incorporate the City's incurred costs for Tom Simpson Park, Mullaloo (\$8.54/m²) where relevant. The cost breakdown and assumptions for the civil construction costs is provided in Appendix 4.

Annual Operating Results

Rates revenue for medium and high density lots are based on dwelling yield and comparable rates earned elsewhere in the City. As the commercial landuses are not yet defined, rates revenue from this component is calculated using an average area rate based on other commercial sites in the locality. The analysis assumes initial rates income is received a year after settlement. Depreciation is calculated as a combination of the 'Roadworks' and 'Footpaths and DUPS' cost elements from the engineering cost estimates depreciated at 1.5% and the total 'Landscape' construction cost estimates depreciated at 1.8%, to reflect the depreciation rates that the City currently applies in its municipal finance models. As forecast annual rates revenue at project completion is equivalent to forecast landscape maintenance costs (ie. they are effectively cost neutral), the annual operating results effectively reflect the depreciation calculation.

SENSITIVITY ANALYSIS

A sensitivity analysis was undertaken to determine the sensitivity of the preliminary financial analysis to various project assumptions. Given the cost neutral outcome of the analysis, changes to either sales revenue or project costs will have a discernible impact on the financial modelling.

As these are the largest financial variables, it further reinforces the importance of managing project costs and sales revenue by mitigating project risks.

PROJECT RISKS

A summary of the identified project risks (in no particular order) relating to key assumptions associated with the preliminary financial analysis and including possible mitigation strategies, is provided below:

Assumption	Risk	Possible Mitigation Strategies
State Government land exchange (incl. Joondalup Drive road reserve basin) is at no cost to the City	If the State Government requires remuneration for the required land exchange, this will adversely impact project feasibility	Consultation with State government early in the project design phase; Staged process to close Joondalup Drive road reserve & incorporate into quarry site (if required); LGA-State Government Joint-Venture development arrangement
Timing of Revenue	A delay to the forecast land sales/settlement will defer project revenue and adversely impact project feasibility	Maximise the number of land presales prior to commencement of civil work; Diversification, optimisation & flexibility of lot/landuse product (eg. a change of some high density to medium density may positively affect revenue)
Magnitude of Revenue	The sensitivity analysis confirms that sales revenue is one of the most important factors impacting the project feasibility. A decrease in developable area or reduction in the assumed sales rate will adversely impact the project feasibility	Further market analysis to confirm market demand and optimal product mix; Limit the City's financial exposure through a development Joint-Venture arrangement or alternative structure
Civil Costs, including the Cost of Site Remediation	Site remediation is a significant civil cost component and the assumed cost is currently based on preliminary geotechnical investigations	Commencement of design and early engagement with service authorities will confirm/refine civil cost assumptions; Further geotechnical and environmental testing; Early consultation with contaminated site auditor to confirm efficacy of remediation approach

CONCLUSION

The preliminary financial analysis provides sufficient financial evidence to support the further investigations and refinement required to proceed with the Edgewater Quarry redevelopment project. It does not, however, contend that the numbers projected will come to pass exactly as stated.

It is acknowledged that the redevelopment project is in the preliminary stages of the project design process that will include further stakeholder and community consultation and additional investigations to refine the preferred redevelopment Option (including mitigation strategies to address project risks). As such, it is reasonable to expect that the final redevelopment Option will not be identical to the preferred redevelopment Option considered in this analysis. The preliminary financial analysis should be used as a baseline to refine the forecasts and re-evaluate the financials during the formulation of the final redevelopment Option.

APPENDIX 1 – PREFERRED REDEVELOPMENT PLAN

LEGEND

	Subject Site	16.9549ha
	Medium-density Residential	0.4542ha
	High-density Residential (Including Aged Care Development)	0.8858ha
	Retail/ Commercial/ Showroom/ Food & Beverage	1.3359ha
	Mixed Residential and Retail/Commercial/Food & Beverage	0.7243ha
	Public Open Space	12.1319ha
	Road Reserve	1.4228ha



DRAFT PREFERRED CONCEPT PLAN

Edgewater Quarry
A City of Joondalup Project

DRAFT

0m 10 20 30m
S: 1:1000@A1
d: 12 Mar 2020
p: 19/039/008

Taylor Burrell Barnett
Town Planning and Design
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p: (08) 9226 4276

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APPENDIX 2 – PRELIMINARY FINANCIAL ANALYSIS - SUMMARY TABLE

PREFERRED OPTION - EDGEWATER REDEVELOPMENT - PRELIMINARY FINANCIAL ANALYSIS

FINANCIAL ANALYSIS INPUTS

Project Costs (incl. 10% contingency)		
	Unit	Value
Professional Consultant Fees - Project Design, Approvals & Site Supervision	\$	1,668,860
Civil Construction Works Contract Price	\$	8246500
Servicing Authority Fees & Charges	\$	556,500
Landscaping	\$	2,953,500
Total Project Cost		13,425,360
Annual Costs		
	Unit	Value
Finance interest rate	%	3.00
Landscape maintenance	\$	286,503
Project Revenue (Land Sales)		
	Unit	Value
Medium Density Residential (20 lots)	\$	3,860,700
High Density Residential (3 lots)	\$	5,314,800
Commercial/Mixed Use (3 lots)	\$	7,210,700
Total Sales Revenue		16,386,200
Annual Income (Rates) @ project completion		
	Unit	Value
Medium Density Residential (20 dwellings)	\$	26,160
High Density Residential (144 apartments)	\$	146,880
Commercial/Mixed Use	\$	113,311
Total Rates Income		286,351

SUMMARY OF DEVELOPMENT OPTION 1

Land use		
	Unit	Value
Medium Density Residential	m2	4,542
High Density Residential	m2	8,858
Commercial/Mixed Use	m2	20,602
Dwelling Yield		
	Unit	Value
Medium Denisty Residential	No. of lots	20
High Density Residential	No. of apts	144
Sales Revenue		
	Unit	Value
Medium Density Residential	\$/m2	850
High Density Residential	\$/m2	600
Commercial/Retail/Mixed Use	\$/m2	350
Rates Revenue		
	Unit	Value
Medium Density Residential	\$	1,308
High Density Residential	\$	1,020
Commercial/Retail/Mixed Use	\$/m2	5.50

FINANCIAL ANALYSIS OUTPUTS

Financial Output		
	Unit	Value
Real Discount Rate	%	5.00%
Net Present Value (NPV)	\$	POSITIVE
Internal Rate of Return) (IRR)	%	POSITIVE

PROJECT SCHEDULE (over 10 year project lifecycle)			
	Project Initiation	Project Design, Planning & Approvals	Civil Works & Landscaping
			Staged sale of residential and commercial lots

CASHFLOW

YEAR	0	1	2	3	4	5	6	7	8	9	10	Total
Project Cost												
Professional Consultant Fees - Project Design, Approvals & Site Supervision		(556,287)	(556,287)	(556,287)								(1,668,860)
Civil Construction Works Contract Price				(8,246,500)								(8,246,500)
Servicing Authority Fees & Charges				(556,500)								(556,500)
Landscaping				(1,476,750)	(738,375)	(738,375)						(2,953,500)
Annual Cost												
Interest			(16,689)	(33,878)	(179,984)	(140,913)	(154,467)	(60,985)	(65,088)	(69,315)		(721,318)
Landscape Maintenance				(143,252)	(214,877)	(286,503)	(286,503)	(286,503)	(286,503)	(286,503)	(286,503)	(2,077,147)
Sales Revenue												
Medium Density Residential (20 lots)				965,175	2,316,420	579,105						3,860,700
High Density Residential (3 lots)				2,625,600			1,294,800			1,394,400		5,314,800
Commercial/Mixed Use (3 lots)				2,552,200			2,123,450			2,535,050		7,210,700
Rates Income												
Cumulative rates income					119,174	134,870	138,794	210,715	210,715	210,715	286,351	1,311,333
Annual Total Cashflow												
	0	(556,287)	(572,975)	(4,870,191)	1,302,358	(451,816)	3,116,074	(136,773)	(140,877)	3,784,347	(152)	1,473,708
Cumulative Cashflow												
	0	(556,287)	(1,129,262)	(5,999,453)	(4,697,095)	(5,148,911)	(2,032,837)	(2,169,610)	(2,310,487)	1,473,860	1,473,708	

APPENDIX 3 – CIVIL CONSTRUCTION COST ESTIMATES

26 May 2020

Enquiries: Jermayne Fabling
Project No: 43677

City of Joondalup
C/- Taylor Burrell Barnett
PO Box 7130
Cloisters Square WA 6850

Attention: Mr Ben De Marchi

Dear Ben

**RE: EDGEWATER QUARRY
PREFERRED OPTION
ESTIMATE OF DEVELOPMENT COSTS**

Please find attached our estimate of development costs for the above property. This estimate is based on the Draft Preferred Concept Plan, prepared by Taylor Burrell Barnett, dated 12 March 2020, Plan No 19/039/008.

We highlight some points of which you need to be aware when using this estimate as follows:

Staging

It is assumed that the development will be constructed in 1 stage in order to facilitate servicing of the medium density residential lots as early as possible while making the commercial and high density lots ready for market. Utility servicing is driven by constructing and connection of gravity wastewater and drainage from downstream to upstream, from west to east through the site.

Groundwater Levels

This land is in an area where groundwater is not expected to have an effect on earthworks levels and drainage infrastructure. The Perth Groundwater Map (Department of Water) which indicates historical maximum groundwater levels 35m below the site levels.

Site Geotechnical Conditions

A comprehensive Geotechnical Investigation was prepared for the City of Joondalup by Douglas Partners in October 2014. This report being Douglas Partners, Project No 82311, Document No 1, Revision 3, dated 20 October 2014 has been relied upon for the purposes of this cost estimate.

We strongly recommend that this Geotechnical Investigation is read in conjunction with this cost estimate, however we very briefly summarise the critical outcomes as follows:

- The proposed development area portion of the site typically consists of uncontrolled fill material of varying depths, containing deleterious material and in an inconsistent state of compaction, which will require substantial rehabilitation to provide for residential and commercial development 'market acceptable' site classifications in accordance with AS2870-2011.
- Existing limestone cuttings (cliff faces) about the site are currently unsafe and will require remediation works.

Site Environmental Conditions

A Preliminary Site Investigation for Contamination was prepared for the City of Joondalup by Douglas Partners in September 2014. This report being Douglas Partners, Project No 82311.01, Document No 1, Revision 1, dated 23 September 2014 has been relied upon for the purposes of this cost estimate.

We are not an environmental consultant and strongly recommend that specialist advice is sought in this regard. However for the purposes of this cost estimate we have assumed that a Detailed Site Investigation (DSI) and Rehabilitation Action Plan (RAP) endorsed by an accredited Contaminated Sites Auditor will be required and that the physical works are completed in conjunction with the geotechnical rehabilitation works.

Due to the presence of asbestos containing material and the general unknown origin and status of the uncontrolled fill material on the site, we have assumed the geotechnical and environmental rehabilitation works are undertaken with full time site based environmental consultant supervision.

Geotechnical & Environmental Remediation Works

For the purposes of this cost estimate we have made a number of assumptions to form the basis of a scope of work in order to generate costings for feasibility purposes. We summarise these assumptions as follows:

- All proposed green title lot areas and road reserves are fully rehabilitated to the full depth of uncontrolled fill identified with the Douglas Partners Geotechnical Investigation.
- The quantum of material has been estimated by applying the depth of uncontrolled fill interpolated from the test pit depth data applied to the respective site areas.
- Uncontrolled fill is excavated and passed through a screening plant fitted with a grizzly and smaller 37.5mm screen to sort larger deleterious material and building rubble from sand and finer material. Larger +100mm material is generally disposed as General Waste, material passing 100mm but not 37.5 mm is generally dealt with as building waste and disposed at a recycling facility. It is assumed that asbestos material is hand picked as encountered. Material passing 37.5mm is reused onsite and placed as engineered fill.
- We have assumed the breakdown of uncontrolled fill material types for the purposes of costing is 10% by volume of deleterious inclusions of which 80% of this is recycled, 19.5% is general waste and 0.5% is considered asbestos containing material.
- This results in an overall assumed breakdown of uncontrolled material as follows:

Engineered Fill	90%
Recycled Building Waste	8%
General Waste	1.95%
Asbestos containing material	0.05%
Total	100%

- These works are assumed to be completed and signed off by a contaminated sites auditor prior to civil construction works proceeding onsite.
- Published Mindarie Regional Council tip fees for the disposal of general waste and asbestos containing material plus a contractor's margin have been utilised within the costing.

Earthworks and Retaining Walls

We confirm our cost estimate makes the following allowances:

- Medium Density Residential Lots - flat lots with retaining walls on the cell perimeter where required. Small internal lot level differences are assumed to be accommodated within the built form structure, as per current industry practise.
- High Density Residential Lots – Flat lots, but with batters at the perimeter as required. Retaining is assumed to be dealt with as part of the built form structure.
- Large Commercial Lots – Flat but slightly graded lots, with no retaining on the perimeter. From our experience a small grade on larger commercial lots provides for the falls required to make carpark drainage function.
- POS Spaces – cut to fill to provide an evenly graded surface with a layer of site sourced clean sand. No active earthworks remediation below the existing surface has been allowed for.

Fencing

We have allowed for uniform fencing to single medium density lot boundaries adjacent to POS. We have not allowed for fencing of commercial or high density residential lots to POS. No allowance has been made for any other estate fencing, front fencing to laneway lots or noise attenuation fencing.

Sewer Reticulation

Our costs allow for a connection to existing DN225 PVC gravity sewer located in Honeybush Drive, which is at a suitable invert level to service the project. Other gravity sewers in closer proximity are not at a suitable invert level to provide a gravity connection to the site.

We have allowed for open cut excavation and reinstatement along a route from Honeybush Drive and along Eddystone Avenue. We have allowed to utilise trenchless methods to cross the intersection of Joondalup Drive and Eddystone Avenue.

Stormwater Drainage

Our stormwater estimate allows for the disposal of lot stormwater by onsite soakage. We have allowed for roads to be drained via a pit and pipe system connecting to a relocated fenced drainage sump at the south west corner of the site.

We have allowed for existing drainage lines connecting to the Joondalup Drive sump to be diverted to the new drainage sump location. This will enable the existing drainage sump to be filled and developed.

We note the City of Joondalup's advice that their monitoring of the existing sump flood levels indicates that it currently has excess capacity. Refinement of the new sump size incorporating additional flow from the proposed development would be required as part of a Local Water Management Strategy.

Water Reticulation

Our costs allow for connection to an existing DN205 steel water reticulation main located north of the site within the Joondalup Drive road reserve and to connect to the an existing DN200 AC water reticulation main located at the corner of Treetop Avenue and Regatta Drive. This will require the extension of a DN200 main along Regatta Drive

Roadworks

Our roadworks estimate includes the provision of standard black asphalt roads with grey concrete kerbing, together with a central brick paved “traffic calmed” section.

Allowance has been made for asphalt parking bays to all POS and laneway serviced lots. We have assumed that any bollards and specific treatments at interface to POS areas would be included in the landscaping package.

We have separately allowed for the upgrade of the Eddystone Avenue/Joondalup Drive Traffic Light controlled intersection, including the construction of a right turn lane from Eddystone Avenue into Joondalup Drive to allow the current right turn lane to become the through lane.

Footpaths

Allowance has been made for Dual Use Paths to link roads, and 1.5m wide concrete footpaths to connecting roads throughout the development.

Underground Power

Our underground power estimate assumes that supply to the development will come from an existing HV feeder in the vicinity of the project on Joondalup Drive with a backup connection to existing HV cables in Regatta Drive.

We have assumed the installation of HV and LV infrastructure together with contiguous supplies to the commercial sites and larger high-density residential site due to the anticipated power load.

Unfortunately, this cannot be confirmed until the development formally proceeds and we request a Design Information Package from Western Power.

An allowance has been made for the HV Systems Charge, based on the expected kVA requirement for the development. Any HV Pool rebate will be assessed by Western Power and included in the quote. We are unable to provide an indication of any rebate.

Standard Western Power Streetlights spaced in accordance with Australian Standards have been allowed for.

National Broadband Network Co.

In accordance with the recently legislated National Broadband Network (NBN), Developers are required to fund the design and installation of “pit and pipe” infrastructure suitable for handover to NBN Co, for their installation of an optic fibre network. An allowance has been made within the Contract works under National Broadband Network Co.

Ethnographic Issues

It is possible there may be ethnographic issues associated with Aboriginal Heritage sites and we suggest you engage a specialist consultant to advise in this regard.

Acid Sulphate Issues

The Douglas Partners PSI details the site is located within an area of ‘no known risk of acid sulphate soils with 3m of the natural soil surface’.

Scheme Fees

We have assumed that no scheme fees would be applicable for this project.

Planning & Development Act 2005 - Section 159 Claims

We have assumed that no claims for the previous construction of adjacent roads by others would be applicable to this project, however we recommend that specialist legal advice be sought in this regard.

Landscaping

Our estimate includes allowance for landscaping costs as provided by Epcad for the Preferred Option.

Design and Approvals

Our cost estimate is based on preliminary, notional designs. These are subject to change due to local and other authorities' requirements and conditions, detailed design and formal approvals.

Construction Costs

Our estimate has been prepared using current construction rates for similar works. We do not have any information regarding the future movement of rates and these may change due to changed material or labour prices and conditions at the time of tender.

Professional Fees

We have made notional allowance for consultant fees as detailed within our estimate and recommend you confirm these with the relevant consultants.

GST

Our estimate makes allowance for the effects of a goods and services tax.

Risks

An estimate of engineering costs is based on a number of assumptions at the time of preparation. As such, a number of inherent risks which may change the estimate exist. Some of these may include the following:

- Changes to the planning approval of the subdivision may change the layout, stage timing or number of lots to be developed.
- Proceeding through the design process may entail changes to the nature and scope of elements required from the initial preliminary designs assumed here.
- Authorities may impose additional requirements or change design parameters from those assumed.
- Construction rates and material costs at the time of tender may be different to rates assumed.
- Infrastructure requirements or design parameters may change.
- The geotechnical nature of the site may prove to be different than assumed.
- Issues regarding groundwater, contamination, or the environment may change assumptions or add additional elements to the works.
- Other normal commercial and/or legislative risks exist.

General

The estimate makes no allowance for the following:

- acquisition cost of the land
- holding costs
- legal costs
- marketing and selling costs
- cost escalation
- cash contributions in lieu of public open space should there be a shortfall.

We understand you intend to use this estimate for the purposes of checking the feasibility of purchasing and developing the land in your own right, if the estimate is used for purposes other than this without our knowledge, then we cannot accept responsibility for any claims or actions which may arise as a result.

This estimate has been completed in accordance with the terms of our engagement for the project. Please ensure that a copy of this letter is always attached to the estimates.

Please do not hesitate to contact the undersigned if you have any queries.

Yours sincerely

Stantec Australia Pty Ltd



Jermayne Fabling
Principal

Encl (Estimate of Development Costs, TBB Preferred Option Plan)

ESTIMATE OF ENGINEERING COSTS

Client Name: City of Joondalup
Project Name: Edgewater Quarry - Preferred Option
Project No: 43677
Land usage: Residential/Commercial
No of Lots: 25
Location: Edgewater

	\$	\$/Lot
1. Preliminaries and Establishment	145,000	5,800
2. Siteworks and Dust Control	175,000	7,000
3. Earthworks	956,500	38,260
4. Site Geotechnical & Environmental Rehabilitation	3,249,500	129,980
5. Retaining Walls	42,000	1,680
6. Fencing	24,000	960
7. Sewer Reticulation	127,000	5,080
8. Stormwater Drainage	242,000	9,680
9. Water Reticulation	130,500	5,220
10. Roadworks	470,500	18,820
11. Footpaths and DUPS	103,000	4,120
12. Underground Power Supply & Installation	576,500	23,060
13. Telecommunications	50,000	2,000
14. Offsite Works		
14.1 Cliff Rehabilitation Works	182,500	7,300
14.2 Stormwater Drainage	95,500	3,820
14.3 Joondalup Drive/Eddystone Avenue Intersection Upgrade	370,000	14,800
14.4 Offsite Sewer Reticulation	257,000	10,280
15. Provisional Sums	300,000	12,000
16. Contract Contingency (10%)	750,000	30,000
Sub Total Contract Works (Value)	8,246,500	329,860
GST	824,650	32,986
Total Contract Works (Price)	9,071,150	362,846
17. Headworks Valid to 30th Jun 2021		
17.1 Sewer Reticulation	78,000	3,120
17.2 Water Reticulation	62,000	2,480
18. Landscaping Allowance	2,953,500	118,140
19. Local Authority Charges		
19.1 Supervision Fee at 1.5%	21,000	840
19.2 Maintenance Bond at 5%	68,500	2,740

ESTIMATE OF ENGINEERING COSTS

Client Name: City of Joondalup
Project Name: Edgewater Quarry - Preferred Option
Project No: 43677
Land usage: Residential/Commercial
No of Lots: 25
Location: Edgewater

	\$	\$/Lot
20. Water Corporation Fee	16,500	660
21. Western Power Fees	400,000	16,000
22. Professional Fees		
21.1 Project Management	329,860	13,194
21.2 Planning	150,000	6,000
21.3 Retail Consultant	15,000	600
21.4 Engineering	624,000	24,960
21.5 Surveying	125,000	5,000
21.6 Environmental	250,000	10,000
21.7 Geotechnical	75,000	3,000
21.8 Hydrological	75,000	3,000
21.9 Landscape Architect	236,280	9,451
21.10 Bushfire Consultant	10,000	400
21.11 Traffic Signal Consultant	5,000	200
21.12 Traffic Engineering	10,000	400
23. Project Contingency (10%)	550,500	22,020
Sub Total (Value)	14,301,640	572,066
GST (excluding headworks)	1,416,164	56,647
Sub Total (Price)	15,717,804	628,712
24. POS cash in lieu (Estimated by Developer)		
25. Potential Reimbursement - Excludes GST		
25.1 GST Reimbursement	-1,416,164	-56,647
25.2 Maintenance Bond at 5%	-68,500	-2,740
26. Cost escalation (Estimated by developer)		








This estimate must be read in conjunction with Stantec's
 covering letter dated 26/05/2020

Signed :



Date : 26/5/2020

LEGEND

	Subject Site	16.9549ha
	Medium-density Residential	0.4542ha
	High-density Residential (Including Aged Care Development)	0.8858ha
	Retail/ Commercial/ Showroom/ Food & Beverage	1.3359ha
	Mixed Residential and Retail/Commercial/Food & Beverage	0.7243ha
	Public Open Space	12.1319ha
	Road Reserve	1.4228ha



DRAFT PREFERRED CONCEPT PLAN

Edgewater Quarry
A City of Joondalup Project

DRAFT

0m 10 20 30m
S: 1:1000@A1
d: 12 Mar 2020
p: 19/039/008

Taylor Burrell Barnett
Town Planning and Design
Level 7, 160 St Georges Terrace, Perth WA 6000
e: admin@tbbp.com.au
p: (08) 9226 4276

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APPENDIX 4 – LANDSCAPE COST ESTIMATES

Project: Edgewater Quarry
Landscape and Irrigation Works



Cost Estimate

Date: 19th May 2020

	ITEM				TOTAL (\$)
1.0	PRECINCT 1				
1.1	Street Tree Planting (Various Sizes) inc. Protective Bollards				83,000.00
1.2	Street Shrub Planting & Mulch to Verges / Medians				85,000.00
1.3	Non-Irrigated Tubestock Rehabilitation Planting & Mulch				10,000.00
1.5	Street Furniture				14,000.00
	Sub Total				192,000.00
2.0	PRECINCT 2				
2.1	Sporting Field inc. Goals				120,000.00
2.2	POS Tree Planting (Various Sizes)				18,000.00
2.3	POS Turf Areas, Shrub Planting & Mulch (inc. Kerbing)				52,000.00
2.4	Non-Irrigated Tubestock Rehabilitation Planting & Mulch				12,000.00
2.5	Sealed Walking Trails (e.g. Red Asphalt) & Interpretive Signage				35,000.00
2.6	Street Furniture				30,000.00
	Sub Total				267,000.00
3.0	PRECINCT 3				
3.1	Adventure Playground				600,000.00
3.2	Seating Area with Shade Structure & Amenities (e.g. BBQ, Drink Fountain, Rubbish Bin etc.)				115,000.00
3.3	POS Tree Planting (Various Sizes)				85,000.00
3.4	POS Turf Areas, Shrub Planting & Mulch (inc. Kerbing)				145,000.00
3.5	Street Tree Planting (Various Sizes) inc. Protective Bollards				23,000.00
3.6	Street Shrub Planting & Mulch to Verges / Medians				14,000.00
3.7	Sealed Walking Trails (e.g. Red Asphalt) & Interpretive Signage				45,000.00
3.8	Street Furniture				24,000.00
	Sub Total				1,051,000.00
4.0	PRECINCT 4				
4.1	POS Tree Planting (Various Sizes)				30,000.00
4.2	POS Turf Areas, Shrub Planting & Mulch (inc. Kerbing)				69,000.00
4.3	Sealed Walking Trails (e.g. Red Asphalt) & Interpretive Signage				26,000.00
4.4	Non-Irrigated Tubestock Rehabilitation Planting & Mulch				19,000.00
4.5	Street Furniture				18,000.00
	Sub Total				162,000.00
5.0	PRECINCT 5				
5.1	POS Tree Planting (Various Sizes)				24,000.00
5.2	POS Turf Areas, Shrub Planting & Mulch (inc. Kerbing)				43,000.00
5.3	Street Tree Planting (Various Sizes) inc. Protective Bollards				29,000.00
5.4	Street Shrub Planting & Mulch to Verges / Medians				19,000.00
5.5	Sealed Walking Trails (e.g. Red Asphalt) & Interpretive Signage				24,000.00
5.6	Non-Irrigated Tubestock Rehabilitation Planting & Mulch				22,000.00
5.7	Non-Irrigated Tubestock Planting to Drainage Basin				3,500.00
5.8	Street Furniture				18,000.00
	Sub Total				182,500.00
6.0	PRECINCT 6				
6.1	Interface Turf Areas, Shrub Planting & Mulch (inc. Kerbing)				43,000.00
6.2	Tree Planting (Various Sizes)				28,000.00
	Sub Total				71,000.00

7.0	PRECINCT 7				
7.1	Non-Irrigated Tubestock Rehabilitation Planting & Mulch				115,000.00
7.2	Sealed Walking Trails (e.g. Red Asphalt) & Interpretive Signage				58,000.00
7.3	POS Tree Planting (Various Sizes)				7,000.00
7.4	POS Turf Areas, Shrub Planting & Mulch (inc. Kerbing)				15,000.00
	Sub Total				195,000.00
8.0	PRECINCT 8				
8.1	Non-Irrigated Tubestock Rehabilitation Planting & Mulch				15,000.00
	Sub Total				15,000.00
9.0	PRECINCT 9				
9.1	Seating Area with Shade Structure & Amenities (e.g. BBQ, Drink Fountain, Rubbish Bin etc.)				115,000.00
9.2	Sealed Walking Trails (e.g. Red Asphalt) & Interpretive Signage				14,000.00
9.3	POS Tree Planting (Various Sizes)				7,000.00
9.4	POS Turf Areas, Shrub Planting & Mulch (inc. Kerbing)				16,000.00
9.5	Non-Irrigated Tubestock Rehabilitation Planting & Mulch				35,000.00
	Sub Total				187,000.00
10.0	OVERALL				
10.1	Earthworking / Fine Grading to Achieve Design				100,000.00
10.2	Irrigation				300,000.00
10.3	Bores (2No)				156,000.00
10.4	Consolidation Maintenance				75,000.00
	Sub Total				631,000.00
14.0	Total Landscape Works				2,953,500.00
15.0	GST	10	%	10	295,350.00
16.0	TOTAL inc GST				3,248,850.00

EXCLUSIONS

- 1 Bulk Earthworks (by Civil)
- 2 Clearing (by Civil)
- 3 Roads inc. Kerbs & On-street Carbays (by Civil)
- 4 Street Lighting
- 5 Drainage Infrastructure (by Civil)
- 6 Power Domes / Transformers (by Civil)
- 7 Mains Water Connection Points (by Civil)
- 8 Concrete Paths within Road Reserve (by Civil)
- 9 Retaining Walls (by Civil)
- 10 All Internal Landscaping to Lots (by Others)

Project: Edgewater Quarry
Landscape and Irrigation Works



Maintenance Per Annum Cost Estimate

Date: 3rd June 2020

	ITEM	QTY	UNIT	RATE (\$)
1.0	PRECINCT 1			
1.1	Street Tree Planting (Various Sizes) inc. Protective Bollards			
1.2	Street Shrub Planting & Mulch to Verges / Medians			
1.3	Non-Irrigated Tubestock Rehabilitation Planting & Mulch			
1.5	Street Furniture			
	Retained Vegetation	528	m2	2.80
	Streetscape (Primary Street)	3,088	m2	8.54
	Sub Total	3,616	m2	
2.0	PRECINCT 2			
2.1	Sporting Field inc. Goals			
2.2	POS Tree Planting (Various Sizes)			
2.3	POS Turf Areas, Shrub Planting & Mulch (inc. Kerbing)			
2.4	Non-Irrigated Tubestock Rehabilitation Planting & Mulch			
2.5	Sealed Walking Trails (e.g. Red Asphalt) & Interpretive Signage			
2.6	Street Furniture			
	Retained Vegetation	699	m2	2.80
	POS	2,642	m2	5.50
	Oval	9,679	m2	8.54
	Sub Total	13,020	m2	
3.0	PRECINCT 3			
3.1	Adventure Playground			
3.2	Seating Area with Shade Structure & Amenities (e.g. BBQ, Drink Fountain, Rubbish Bin etc.)			
3.3	POS Tree Planting (Various Sizes)			
3.4	POS Turf Areas, Shrub Planting & Mulch (inc. Kerbing)			
3.5	Street Tree Planting (Various Sizes) inc. Protective Bollards			
3.6	Street Shrub Planting & Mulch to Verges / Medians			
3.7	Sealed Walking Trails (e.g. Red Asphalt) & Interpretive Signage			
3.8	Street Furniture			
	Retained Vegetation	1,844	m2	2.80
	POS & Streetscape (Secondary Street)	8,377	m2	5.50
	Playground	764	m2	8.54
	Sub Total	10,985	m2	
4.0	PRECINCT 4			
4.1	POS Tree Planting (Various Sizes)			
4.2	POS Turf Areas, Shrub Planting & Mulch (inc. Kerbing)			
4.3	Sealed Walking Trails (e.g. Red Asphalt) & Interpretive Signage			
4.4	Non-Irrigated Tubestock Rehabilitation Planting & Mulch			
4.5	Street Furniture			
	Retained Vegetation	537	m2	2.80
	POS	5,318	m2	5.50
	Sub Total	5,855	m2	
5.0	PRECINCT 5			
5.1	POS Tree Planting (Various Sizes)			
5.2	POS Turf Areas, Shrub Planting & Mulch (inc. Kerbing)			
5.3	Street Tree Planting (Various Sizes) inc. Protective Bollards			
5.4	Street Shrub Planting & Mulch to Verges / Medians			
5.5	Sealed Walking Trails (e.g. Red Asphalt) & Interpretive Signage			
5.6	Non-Irrigated Tubestock Rehabilitation Planting & Mulch			
5.7	Non-Irrigated Tubestock Planting to Drainage Basin			
5.8	Street Furniture			

	Retained Vegetation	500	m2	2.80
	POS and Streetscape (Secondary Street)	5,497	m2	5.50
	Sub Total	5,997	m2	
6.0	PRECINCT 6			
6.1	Interface Turf Areas, Shrub Planting & Mulch (inc. Kerbing)			
6.2	Tree Planting (Various Sizes)			
	Retained Vegetation	68	m2	2.80
	POS & Streetscape	1,597	m2	5.50
	Sub Total	1,665	m2	
7.0	PRECINCT 7			
7.1	Non-Irrigated Tubestock Rehabilitation Planting & Mulch			
7.2	Sealed Walking Trails (e.g. Red Asphalt) & Interpretive Signage			
7.3	POS Tree Planting (Various Sizes)			
7.4	POS Turf Areas, Shrub Planting & Mulch (inc. Kerbing)			
	Retained Vegetation	3,942	m2	2.80
	POS	2,306	m2	5.50
	Sub Total	6,248	m2	
8.0	PRECINCT 8			
8.1	Non-Irrigated Tubestock Rehabilitation Planting & Mulch			
	Retained Vegetation	278	m2	2.80
	Sub Total	278	m2	
9.0	PRECINCT 9			
9.1	Seating Area with Shade Structure & Amenities (e.g. BBQ, Drink Fountain, Rubbish Bin etc.)			
9.2	Sealed Walking Trails (e.g. Red Asphalt) & Interpretive Signage			
9.3	POS Tree Planting (Various Sizes)			
9.4	POS Turf Areas, Shrub Planting & Mulch (inc. Kerbing)			
9.5	Non-Irrigated Tubestock Rehabilitation Planting & Mulch			
	Retained Vegetation	466	m2	2.80
	POS	597	m2	5.50
	Seating Node	152	m2	8.54
	Sub Total	1,215	m2	
10.0	OVERALL			
10.1	Earthworking / Fine Grading to Achieve Design			
10.2	Irrigation			
10.3	Bores (2No)			
10.4	Consolidation Maintenance			
	Sub Total	0	m2	-
11.0	Total Landscape Works			
12.0	GST	10	%	10
13.0	TOTAL inc GST			