



Byford Traditional Infrastructure DCP Report Revision 8

Revision Schedule:

Report No	Revision Date	Planning Scheme	Amendment	Report Status	Author
1	21/01/2014	TPS2	168	Final	John Ellis
2	13/04/2015	TPS2	168	Final	John Ellis
3	9/06/2016	TPS2	168	Final	John Ellis
4	6/07/2017	TPS2	168	Final	John Ellis
5	27/07/2020	TPS2	168	Final	John Ellis
6	26/09/2021	TPS2	168	Final	Sally Murphy
7	17/07/2023	TPS2	208	Final	Sally Murphy
8	10/02/2025	LPS3	208	Final	Sally Murphy

Table of Contents:

1. Purpose	4
2. Development Contribution Area	4
3. Period of the Plan	4
4. Operation of the DCP	4
5. Application Requirements	4
6. Estimated Costs	4
7. Items Included in the Plan	5
8. Non-Infrastructure Items Included within the DCP	5
9. Land Valuation	6
10. Method of Calculating Contributions	7
11. Payment of Contributions	8
12. DCP Credits	9
13. DCP Reviews	10
14. Cost Review Reconciliation	10
15. Priority and timing of infrastructure delivery	10
16. Reporting	11
17. Figures	12

Appendices

- A - Need and Nexus
- B - Cost Apportionment Schedule
- C - Capital Expenditure Plan
- D - Lots/m2 area to be developed
- E - Cost Reconciliation
- F - Administration costs
- G - Infrastructure Cost Summary
- H - Infrastructure Land
- I - POS/COS/Drainage Land
- J - Infrastructure Designs
- K - Infrastructure Cost Detail

1 Purpose

This Development Contribution Plan (DCP) report outlines the framework for applying infrastructure contributions to support new development and upgrade existing infrastructure within the Development Contribution Area (DCA). These contributions are essential to address the increased demand generated by development in the DCA.

The DCP ensures equitable cost sharing among landowners, with contributions reasonably required as a result of subdivision or land development. It also facilitates the timely provision of necessary infrastructure.

Relevant documents guiding infrastructure delivery include:

- Community Infrastructure Implementation Plan
- Corporate Business Plan
- Long Term Financial Plan
- LPS3
- Byford District Structure Plan

2 Development Contribution Area

The Development Contribution Area covered by this DCP is **DCA1**, as shown on the scheme map and in "**Figure 1 - DCA Boundary**".

3 Period of the Plan

This DCP operates for 20 years, from **21/01/2014** to **21/01/2034**.

4 Operation of the DCP

The DCP and this accompanying report are prepared in accordance with **State Planning Policy 3.6 - Infrastructure Contributions** (SPP 3.6) and operate under the provisions of LPS3.

5 Application Requirements

For applications involving subdivision, strata subdivision, development, or land use extensions within the DCA, the local government will consider this DCP Report when making recommendations or decisions.

6 Estimated Costs

The costs in this DCP Report are based on the capital investment required for infrastructure necessitated by new development in the DCA. These costs are:

- Initially estimated and reviewed by qualified professionals during each **Major Review**.
- Indexed during **Minor Reviews** using rates from the **WALGA Quarterly Economic Briefing**.

Exclusions from DCP Report costs include:

- Ongoing maintenance.
- Demand generated by the existing population.
- External usage demand.
- Future usage beyond the DCP timeframe.

Where applicable, costs are allocated to specific **Precincts** within the DCA, as shown in "**Figure 2 - Precincts**". A detailed cost breakdown is provided in the Appendices, with secured grants or external funding reflected as deductions in the Cost Apportionment Schedule within the Appendices.

7 Items Included in the Plan

All cost items included for within this DCP Report, and for which contributions will be collected in the DCA, are detailed in the Appendices to this report. These items reflect the provisions of the latest Structure Plan(s) where applicable to the lifespan of the DCP, the need and nexus for inclusion, and the associated scope of each item that the DCP will fund.

Facilities

This DCP covers **at/below surface works for facilities**. For example, drainage, irrigation, grassing. This DCP also includes costs for land acquisition for facilities (often identified as "Community Open Space"). See "**Figure 3 - Facilities**" for details.

Further above ground works may be included within the Shire's Community Infrastructure Development Contribution Plan (CIDCP).

The **Community Infrastructure and Public Open Space Strategy (CIPOS)** provides a comprehensive guide for planning community infrastructure and open space in the Shire.

Roads

Road infrastructure costs are divided into:

- **Construction:** New or upgraded roads.
- **Land acquisition.**

See "**Figure 4 - Roads**" for details.

Excluded items:

- Landscaping and design enhancements in road reserves.
- Urban amenity improvements such as vegetation, public art, and high-standard design.
- Minor intersections treatments into the adjoining subdivisional road network.

Although some excluded items are noted to enhance the urban environment, they lack a direct nexus to the development's demand for such improvements.

8 Non-Infrastructure Items Included within the DCP

Administration Costs

- Preparation and administration of the DCP.
- Annual review of cost estimates and land development reviews.
- Valuations and professional fees linked to DCP implementation.
- Software/hardware upgrades for DCP preparation.
- Proportional staff salaries and loan interest related to DCP administration.

Land for infrastructure

- Land for district open spaces, road reserves, and community facilities.
- Land for road reserves that exceed standard requirements (e.g., road widths above 20m).

Land for Public Open Space and Drainage

- Land for Public Open Space
- Land for drainage only
- Land for Multiple-use corridors serving a dual drainage and recreation function.

Excludes:

- Development and maintenance of POS.
- Conservation lands, e.g., Bush Forever sites and Conservation Category Wetlands, including any associated buffer.
- Drainage works.

Land for POS and Drainage is shared equally across the Development Contribution Area (DCA) except for Byford "Old Quarter" (Precinct C). This is due to the absence of a Public Open Space strategy or LSP identifying strategic locations for additional recreation land, and the difficulty in achieving reasonably sized and consolidated areas of Public Open Space in the context of small and fragmented landholdings.

Water Monitoring

- Funded by the DCP to address water quality and quantity through monitoring and management plans.
- Ensures compliance with water-sensitive urban design principles.

The Water Monitoring Programme is underpinned by the Shire's Drainage and Water Management Plans (DWMPs), which establish the framework for water management in the new urban development areas.

9 Land Valuation

There are two separate rates for land value, one for Residential land and one for Non-Residential/Mixed-Use land. The land value applies to all land catered for within this DCP; i.e. the same m2 rate applies to POS, land for infrastructure and road widening.

The land value is indexed daily from the starting date of the DCP Report, based on the Land Value Escalation rate provided with the independent valuation. The land value plus indexation is calculated at the date the subdivision clearance which cedes the land is accepted by the Shire.

The land valuation is based on typical parcel characteristics and reviewed annually according to market value, and is determined having general regard to the International Valuation Standards Committee's definition of market value as adopted by the Australian Property Institute. To account for the direct transfer of land, the fair market value does not include for standard marketing costs such as fees, commissions, and advertising cost.

Residential (Standard and Non-Standard)

Based on an indicative residential zoned 5-hectare lot typical for the DCA, with no servicing constraints.

Non-Residential and/or Mixed Use

Based on a Mixed Use R60 zoned land parcel of a regular shaped 5-hectare area typical for the DCA, with no major servicing constraints and no major geotechnical/environmental issues.

The starting land values for this Report Revision are shown at the top of the Cost Apportionment Schedule within the Appendices.

10 Method of Calculating Contributions

Calculating the developable potential of each Precinct

Estimations are based on Local Structure Plans (LSPs) where available. Otherwise, calculations based on spatial data are used as follows:

- Greenfield: Total site area less 40% (to account for subdivisional roads and POS/Drainage)
- Infill: Manual yield calculations less 50% (recognising existing lots may not be redeveloped)
- Mixed-use: 15 lots per Ha, or 20 lots per Ha where no land is required by state/local government.
- Non-Residential: Lot area (m²)*.
- Residential lot calculations are based on an average R Code density of R20.

*To calculate a square metre (m²) rate for non-residential development, the total m² area is converted into a proportion of a standard lot, where a standard lot is defined as R20m². This proportional value is then used to determine the cost per m² by translating the cost per lot into the corresponding rate.

Contribution liability

- Proportional to the remaining developable Lots/Dwellings within a Precinct:

Formula: ***{Remaining Cost / Remaining Lots/Dwellings = \$ contribution rate per Lots/Dwellings}***

Contribution Rate Adjustments

The Contribution Rate is escalated daily based on the days since the last cost review, using a weighted annual escalation rate (ER):

Formula for ER: ***{(%IC/TC x IER) + (%LV/TC x LVER) + (%AC/TC x AER)}*** where IC: Infrastructure Cost, LV: Land Value, AC: Administration Cost.

- Daily Escalation Rate (DER): ***{ER / 365}***
- Adjusted Contribution Rate: ***{Starting Rate x (D x DER) = Escalated Rate}***

The annual escalation rates for Administration and Infrastructure reflect the forecasts in latest WALGA Quarterly Economic Briefing (the LGCI Forecasts table) available at the time the DCP Report is adopted:

- The Administration index reflects the LGCI Component “Employee Costs”
- The Infrastructure index reflects the LGCI Component “Road & Bridge Construction”.
- The Land Value index (where applicable) is provided as part of the independent Land Valuation.

The daily indexing of costs described above, means that at any point in time, the Precinct contribution per Lot/Dwelling value will vary according to the number of days since the last Cost Review (the starting date of the latest revision to the DCP Report).

Residential Contributions

- Based on additional Lots/Dwellings created (less the Parent Lot where not previously deducted).

Formula: ***{Precinct rate per lot x DER x D x additional lots/dwellings = Required contribution}***

Contributions are required for post-initial development (e.g., increased density or residential development above a non-residential footprint).

Non-standard residential development (such as Lifestyle village, retirement village, caravan park, park home estate or similar) is treated the same as standard residential development, where each dwelling, residential unit or similar, is deemed to be a residential lot/dwelling.

Mixed Use development Contributions

Contributions are based on either the R20 **subdivision/development potential** or the **actual number of lots/dwellings created**, whichever is greater.

Formulas:

- **Dwelling Potential:** {Precinct contribution rate×DER×D×Subdivision/development potential of the site}

Or

- **Actual Dwellings:** {Precinct contribution rate×DER×D×Actual number of lots/dwellings created}

Non-Residential Development Contributions

Based on the size of the lot created (under subdivision) **or** the size of the development footprint (under a development application), multiplied by the applicable development contribution rate.

Formula: *{Square metre rate × square metre size of land being developed = Required development contribution (less a one-time, one-lot discount for the Parent Lot)}*.

Exemptions and Limits

- The floor area of any **existing, approved** non-residential development is removed from the calculation.
- Contributions are required only if the development results in **increased traffic**.
- Contributions apply only once per **land footprint** and are based on full development potential. For example, multi-level developments **beyond the first floor** are exempt from additional contributions as the liability is based on the land footprint.

Private Educational Establishments

Private educational establishments are subject to the same principles as Non-Residential Development described above.

Where a **shared use agreement** for public access to the school's district level sporting space is agreed upon, the Contribution rate will instead be based on **0.3% of the value of each building licence** application for the site, as agreed with the Local Government.

11 Payment of Contributions

Triggers for Payment

The earlier of either:

- Application for subdivision/strata clearance, or
- Application for Building Permit for new development, or change/extension of use.

Clause 36A 6(a) of LPS3 details **specific exemptions** for which a development contribution is not required.

Payment Methods

- Cheque or cash.
- Land transfer.
- Physical infrastructure provision.
- Other methods acceptable to the Shire.

In the case of staged subdivisions, development contributions are payable only for the stages being cleared. Contributions are triggered only once per lot, unless subsequent development creates additional demand beyond the initial trigger.

Example

If a residential lot is created and cleared during a subdivision, the contribution is triggered for that single lot. When a Building Permit is subsequently issued for the first dwelling on the newly created lot, no additional contribution is required, as the lot's contribution has already been accounted for (the "Parent Lot" offsets the first dwelling). However, if a Building Permit is issued for three dwellings on a single lot, contributions would be triggered for the two additional dwellings beyond the Parent Lot's coverage.

This ensures contributions fairly reflect the actual development impact at each stage.

12 DCP Credits**DCP Credits**

Credits for Land and Infrastructure (where included for within the DCP):

- Land ceded for POS/Drainage or Infrastructure based on indexed land value at the date of subdivision clearance.
- Pre-funding infrastructure earns credits based on actual costs expended, as approved/verified by the Shire.

Use of Credits:

- Credits offset contributions within the same Development Contribution Area (DCA).
- Credits remain with the landowner unless a legal agreement transfers them upon sale.

Repayment of Credits:

- A record of all credit balances are kept by the Shire; balances are not subject to indexation or interest.
- Credits are repaid when DCP funds are sufficient, or within 90 days of the closure of the DCP.

Pre-Funding of DCP Infrastructure

The Shire supports pre-funding and delivery of infrastructure under the following conditions:

- The works are essential for the progression of an approved subdivision, or
- The Shire is prioritising DCP funds for other works.

The Shire and Developer will confirm via an exchange of letters, the scope, composition, and timing of the infrastructure works to be pre-funded. Once agreed, these works will be designated as *Approved Works*. The Approved Works must be clearly defined to enable accurate quantification of costs and quantities for both completed and remaining works. The value of DCP Credits allocated is exclusive of GST.

Temporary or sacrificial works are not creditable under the DCP.

Repayment of DCP Credit Balance

When a developer or landowner has completed all developments within a DCA and no longer holds any land within that DCA, the credited amount will be held until sufficient funds are available in the DCP fund to cover the balance, taking into account any planned or committed expenditure at that time.

Requests for repayment of credit balances during the operation of the DCP must meet the above conditions and will be determined by Council. Once approved, the value of credits will be reimbursed to the developer or landowner as soon as circumstances allow.

Developers or landowners wishing to request repayment of a credit balance after completing their developments and relinquishing landholdings in the DCA must submit their request in writing to:

developmentcontributions@sjshire.wa.gov.au

All outstanding credit balances will be repaid no later than 90 days after the DCP's closure.

13 DCP Reviews

Major Review (5 Yearly)

A Major Review is required to amend, exclude, or include any provision of the DCP, including infrastructure cost items. Once the Scheme Amendment is approved, a revised DCP Report will be produced within 90 days of the Amendment's gazettal, reflecting the updated provisions.

A Major Review is classed as a Complex Amendment to the Planning Scheme, and as such is required to be advertised, and submissions considered, prior to final submission of the Amendment to the WAPC for Ministerial approval.

Typically, development approvals will include a condition referencing the new Amendment only after it has been submitted to the WAPC for final approval. For approvals without a condition referencing the ungazetted Amendment, the prevailing DCP Report will apply, provided the standard DCP condition is included.

After the Amendment is gazetted and the revised DCP Report is finalized, all developments that trigger a DCP requirement will automatically be subject to the updated Amendment.

Minor Review (Annually)

The DCP Report which accompanies the Plan is updated at least annually. A Minor Review may update infrastructure costs, administrative expenses, developable areas/lot forecasts, and land acquisition costs.

A Minor review may not amend, add or remove any DCP scope items or provisions detailed within the current Scheme.

There is no statutory requirement to advertise or seek public comment on minor annual DCP Report updates, however the Shire will consult with the relevant Industry Reference Group(s) at each Annual Review when updates involve:

- Accounting for completed works
- Construction cost adjustments
- Changes in land values
- Revisions to undeveloped lot yields
- Other non-material changes.

14 Cost Review Reconciliation

Cost Review Reconciliation

The Cost Review Reconciliation is an adjustment performed during each DCP revision to account for the current DCP Fund Balance and any outstanding liabilities. Depending on whether liabilities exceed the fund balance, the reconciliation may result in either a surplus or a deficit. This process ensures that the DCP achieves its objective of breaking even by the time it concludes. During each Cost Review, the net balance of contributions received and expenditure incurred will be calculated and incorporated into the Cost Apportionment Schedule.

15 Priority and timing of infrastructure delivery

A Capital Expenditure Plan is included within the Appendices. Timelines are adjusted annually based on the rate of development and available funds.

16 Reporting

Annual Audit Results

SPP 3.6 requires the local government to undertake an external Financial Audit of each DCP. This report must be published on the local government's website within six months of the end of the financial year and is separate from the DCP Report.

The Annual Audit Report, will be available on the Shire's website by no later than December 31st of each financial year.

www.sjshire.wa.gov.au/development-services/planning/infrastructure-contributions/statements-of-income-and-expenditure.aspx

Annual Status Report

SPP 3.6 requires the local government to prepare an Annual Status Report, which provides an overview of the progress in delivering infrastructure specified in the DCP. This report must be published on the local government's website within six months of the end of the financial year and is separate from the DCP Report.

The Annual Status Report for each respective DCP, and the Annual Audit Report for all the Shire's operative DCPs, will be available within the respective DCP page/tile on the Shire's website by no later than December 31st of each financial year.

www.sjshire.wa.gov.au/development-services/planning/infrastructure-contributions

Figure 3: Facilities

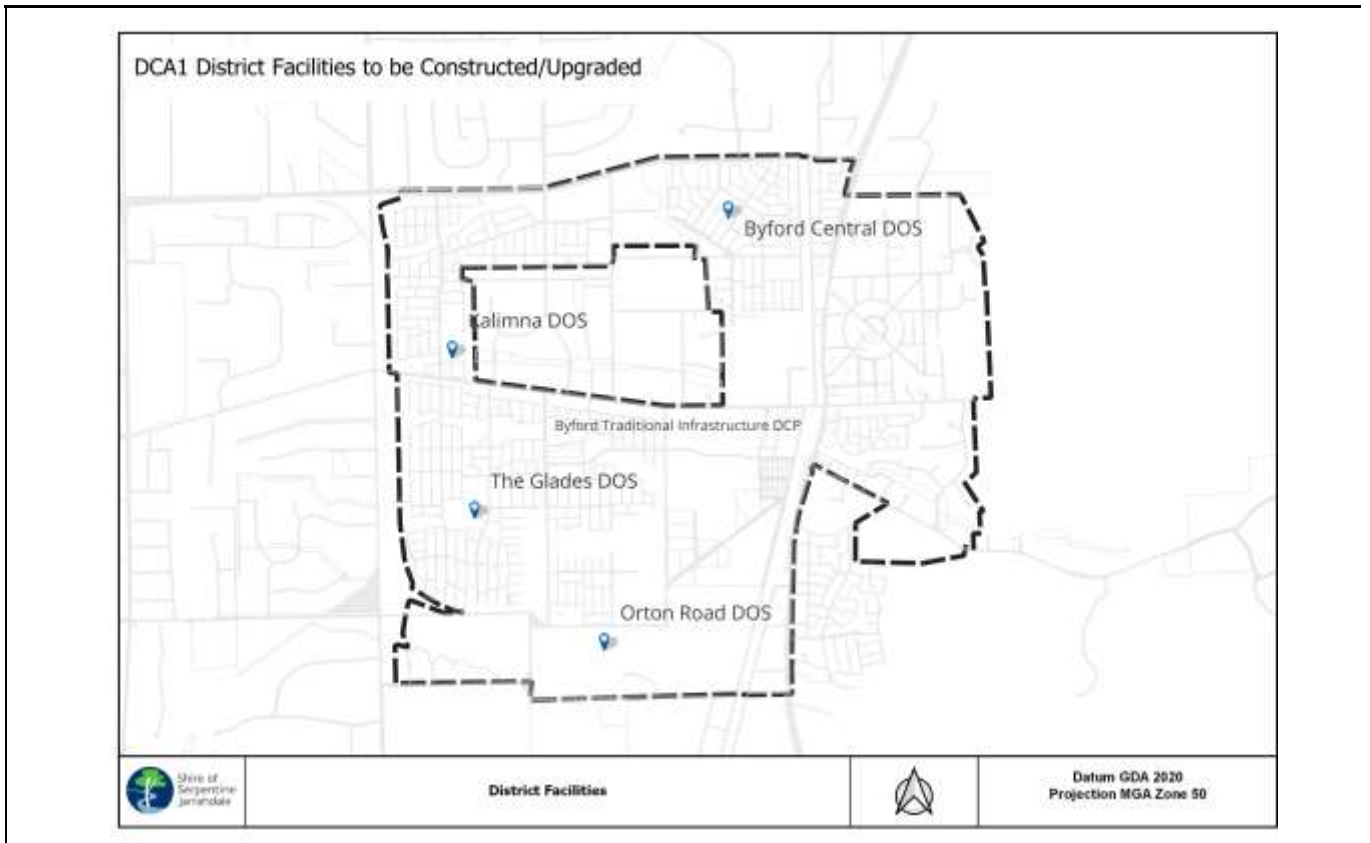
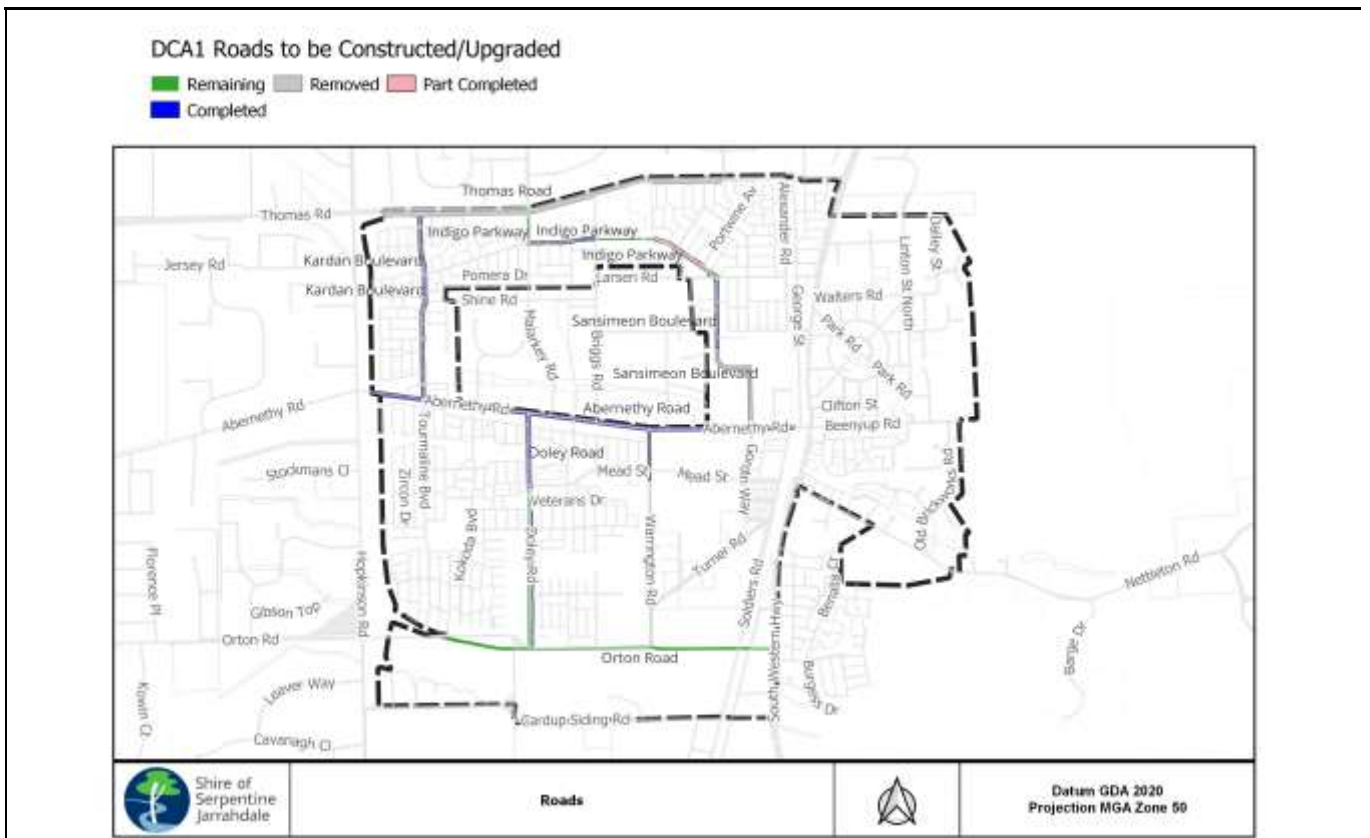


Figure 4: Roads



APPENDICES

Appendix A - Need and Nexus

DCA 1
Revision 8

Abernethy Road

Completed

Integrator A

Abernethy Road is located centrally within DCA1, providing an east-west connection and linking in with the proposed expansion of the Byford Town Centre. Abernethy Road is a Shire controlled road and is not reserved under the MRS. The existing state of Abernethy Road is rural in nature, with a narrow single carriageway allowing for one lane in either direction. The road is not proposed to provide a direct connection to the future extension of Tonkin Highway and will ultimately become a grade separated underpass beneath Tonkin Highway, once extended.

The width of Abernethy Road will generally be 30 metres and the upgrade will occur between the Tonkin Highway reserve to the west and the railway reserve to the east. The portion of Abernethy Road adjacent to the Byford Trotting Complex will have half the cost of road widening, construction and upgrade borne by the DCP. The portion of Abernethy Road between Kardan Boulevard and Hopkinson Road will be retained as a single carriageway. The overall portion of costs borne by the Byford Development Contribution Plan is 71.25%.

The following items are included in the Byford Development Contribution Plan for Abernethy Road:

- Land required in excess of a standard 20m reserve, to achieve a 30m wide road reserve
- Land to accommodate channelization and/or roundabout construction at the noted intersections
- Earthworks for the whole road reserve
- Complete road construction based on the Liveable Neighbourhoods Integrator A standard
- Intersection treatments and traffic control devices for:
 1. Kardan Boulevard (Roundabout)
 2. Doley Road (Roundabout)
 3. Briggs Road (Roundabout)
 4. Warrington Road (Roundabout)
 5. Sansimeon Boulevard (Roundabout)
- Associated drainage works including water sensitive urban design measures;
- Shared paths;
- Utility removal, relocation and insertion; and
- Associated costs including design and management.

The Byford Development Contribution Plan proportionate share is 71.25%, with the Shire's share being 28.75% of the full cost.

Byford Central DOS

Completed

1 x Senior Oval and Landscaping

The Byford Central District Open Space is too small for AFL competition (senior or junior) however; it is the correct size for Soccer. The District Open Space has been constructed and the following items were included in the Byford Development Contribution Plan:

- Earthworks
- Grassing
- Irrigation
- Associated costs relating to construction including design and management.

Doley Road (to Orton)

Completed

Neighbourhood Connector A

Doley Road is in the southern portion of DCA1, providing a north-south connection between Abernethy Road and Cardup Siding Road. The DCP funded upgrade of Doley Road will occur between Abernethy Road and Orton Road.

Doley Road will play an important district role by providing vehicle access into the proposed local centre, which will cater for a wide catchment population. Considering the function of Doley Road, the Shire requires a 30m road reserve between Abernethy Road and Orton Road.

The following items are included in the Byford Development Contribution Plan for Doley Road:

- Land required that is in excess of a standard 20m reserve, to achieve a 30-metre-wide road reserve
- Land to accommodate channelization and/or roundabout construction at the noted intersections.
- Earthworks for the whole road reserve.
- Complete road construction to a Liveable Neighbourhoods Neighbourhood Connector A standard
- Intersection treatments and traffic control devices for:
 1. Mead Street (Roundabout)
- Associated drainage works including water sensitive urban design measures.
- Shared paths.
- Utility removal, relocation, and insertion.
- Associated costs including design, management, and Shire internal costs.

Indigo Parkway

Completed

Integrator B

Indigo Parkway is in the northern portion of the DCA, providing a northwest- southeast connection between Connemara Street and Larsen Road. Originally part of the “Sansimeon Boulevard” upgrade in previous DCP revisions, this project is now identified separately, which reflects the correct road name, and which will allow Indigo Parkway and Sansimeon Boulevard to have different priority build status.

Ultimately, the Indigo-Sansimeon connector will be a key district level connection from Thomas Road to Abernethy Road and, with the additional inclusion of Clara Street, will provide a through route into Byford Town Centre. This connection will also assist in limiting vehicle movements through the Byford Trotting Complex.

The DCP funded portion of Indigo Parkway will occur between Thomas Road and Larsen Road. Indigo Parkway will have a width of 22.5 metres in areas adjacent to public open space, 30m width along the existing Malarkey Road, and 27.5 metres in the remaining areas.

The following items are included in the Byford Development Contribution Plan for Indigo Parkway:

- Land required that is in excess of a standard 20m reserve, to achieve a 30-metre-wide road reserve
- Land to accommodate channelization and/or roundabout construction at the noted intersections.
- Earthworks for the whole road reserve.
- One at-grade rail crossing.
- Complete road construction to a Liveable Neighbourhoods Integrator B standard
- Intersection treatments and traffic control devices for:
 1. Ballawarra Avenue (Roundabout)
 2. Briggs Road (Left In, Left Out)
 3. Caraway Avenue (Roundabout)
 4. Portwine Avenue (Left In, Left Out)
 5. Larsen Road (Roundabout)
- Associated drainage works including water sensitive urban design measures.
- Shared paths.
- Utility removal, relocation, and insertion.
- Associated costs including design, management, and Shire internal costs.

Kalimna DOS

Completed

1 x Senior Oval and Landscaping

This is a full-sized AFL Oval (165m x 135m) partially located on Department of Education land and subject to a SUA. The SUA shares the cost of developing the oval between the Shire and the Department of Education.

As with all clubs, the Centrals Senior and Junior Clubs are experiencing rapid growth in their playing membership due to the rapid population increase brought on by new developments. Based on figures provided by the club, the juniors are projected to add two new teams each year for the near future and the seniors will add an additional team each year. The Cricket clubs are also experiencing growth. It is because of this growth that these clubs are outgrowing their existing facilities and require new facilities to be able to keep up with demand from the increasing population. According to the Youth Strategy, almost a quarter (21%) of young people played football.

The following items were included in the Byford Development Contribution Plan:

- Earthworks
- Grassing
- Irrigation
- Associated costs relating to construction including design and management.

Kardan Boulevard

Completed

Neighbourhood Connector A

Kardan Boulevard is in the north-west portion of DCA1, providing a north-south connection between Thomas Road and Abernethy Road. Construction of the road provides an important connection for district traffic and public transport movements. Considering Kardan Boulevard's role, the Shire requires a road width of 25 metres from Abernethy Road to Fawcett Road, and a road width of 30 metres from Fawcett Road to Thomas Road.

The following items are included in the Byford Development Contribution Plan for Kardan Boulevard:

- Land required in excess of a standard 20m reserve as follows:
 - A 25m wide road reserve from Abernethy Road to Fawcett Road
 - A 30m wide road reserve from Fawcett Road to Thomas Road
- Land to accommodate channelization and/or roundabout construction at noted intersections
- Earthworks for the whole road reserve
- Complete road construction based on the Liveable Neighbourhoods Neighbourhood Connector A standard
- Intersection treatments as required for:
 1. Kalyang Loop/Pingaring Court (Roundabout)
 2. Ballawarra Avenue (Roundabout)
 3. Ethereal Road (Roundabout)
 4. Saintly Turn (Roundabout)
- Associated drainage works including water sensitive urban design measures;
- Shared paths;
- Utility removal, relocation and insertion; and
- Associated costs including design and management.

Orton Road

Completed

Integrator B

Orton Road is in the southern portion of the DCA, currently running east to west between Hopkinson Road and Warrington Road. Orton Road is a Shire controlled road and is not reserved under the MRS.

The existing state of Orton Road is rural in nature, with a narrow single carriageway allowing for one lane in either direction. The Byford District Structure Plan indicates that the road is to be realigned to the west of Doley Road and be extended from Warrington Road to the South Western Highway. Other changes to the alignment of the road are proposed towards Tonkin Highway where the road is proposed to connect into Tonkin Highway.

The width of Orton Road will be 30 metres. The upgrade and construction of Orton Road will occur between the Tonkin Highway reserve and the South Western Highway.

The following items are included in the Byford Development Contribution Plan for Orton Road:

- Land required that is in excess of a standard 20m reserve, to achieve a 30-metre-wide road reserve
- Land to accommodate channelization and/or roundabout construction at noted intersections.
- Earthworks for the whole road reserve.
- One at-grade rail crossing.
- Complete road construction to a Liveable Neighbourhoods Integrator B standard
- Intersection treatments and traffic control devices for:
 1. Kokoda Boulevard (Roundabout)
 2. Doley Road (Roundabout)
 3. Lawrence Way (Roundabout)
 4. Warrington Road (Roundabout)
 5. Soldiers Road (Roundabout)
 6. South Western Highway (Channelised Intersection)
- Associated drainage works including water sensitive urban design measures.
- Shared paths.
- Utility removal, relocation, and insertion.
- Associated costs including design and management.

Orton Road DOS & REW

Completed

Senior Oval and landscaping plus rehab of the REW

This is a shared project with the Community Infrastructure DCP to provide a District Open Space with one full sized AFL oval. The building and lights will be covered by the Community DCP and the oval and land will be provided through the Byford Traditional Infrastructure DCP. The DOS will be located to the south of Orton Road.

As part of this project, the buffer associated with the Cardup Brook Resource Enhancement Wetland (REW) which is considered a regionally valuable ecological and environmentally sensitive corridor, will be rehabilitated.

The following items are included in the Byford Traditional Infrastructure Development Contribution Plan:

- Earthworks
- Grassing
- Irrigation
- Associated costs including design, management.

Sansimeon Boulevard

Completed

Integrator B

Sansimeon Boulevard is in the central portion of DCA1, providing a northwest- southeast connection between Larsen Road and Abernethy Road.

The Indigo-Sansimeon connector will be a key district level connection from Thomas Road to Abernethy Road and, with the additional inclusion of Clara Street, will provide a through route into Byford Town Centre. This connection will also assist in limiting vehicle movements through the Byford Trotting Complex.

The following items are included in the Byford Development Contribution Plan for Sansimeon Boulevard:

- Land required in excess of a standard 20m reserve as follows:
 - A 22.5m wide road reserve between Larsen Road and Armadan Court
 - A 25m wide road reserve for the remaining areas
- Land to accommodate channelization and/or roundabout construction at noted intersections
- Earthworks for the whole road reserve
- Complete road construction based on the Liveable Neighbourhoods Integrator B standard
- Intersection treatments and traffic control devices for:
 1. Clara Street (Byford Town Centre Main Street) (Roundabout)
- Associated drainage works including water sensitive urban design measures;
- Shared paths;
- Utility removal, relocation and insertion; and
- Associated costs including design and management.

The Glades DOS

Completed

2 x Futsal Courts

A Futsal space (hardcourts) is a significant benefit to the Byford community as an alternative to a traditional football oval/grassed playing field. This site will be a district level Futsal space (2 hardcourts).

The following items are included in the Byford Development Contribution Plan

- Earthworks
- Grassing and/or Hard Landscaping
- Public Toilets
- Irrigation
- Associated costs including design, management.

Thomas Road

Completed

Primary Regional Road

Thomas Road borders a significant portion of the DCA1 area to the north. Under the Metropolitan Region Scheme (MRS), the road is reserved as an “Other Regional Road” and is identified as a district distributor. This road is being investigated for transfer to MRWA control. Until the transfer terms and timing are finalised, the Shire needs to make provision for the Thomas Road upgrade within the DCP.

The road currently exists but will require upgrades to future intersections and road widening for the future alignment and configuration, in order to support district development and increased regional traffic.

The width of the Thomas Road reserve will be 50 metres.

The upgrade of Thomas Road was originally planned to occur between the Tonkin Highway reserve to the west and the rail reserve to the east. With a grade separate bridge crossing over the rail reserve confirmed as being funded by the State Government, the bridge will reduce the planned upgrade length by circa 500m (to the west of the rail reserve). Therefore, this project will now occur between the Tonkin Highway Reserve to the west and the intersection with Wungong South Road to the east.

The following items are included within the Byford Development Contribution Plan for Thomas Road:

- Land required in excess of a standard 20m reserve, to achieve a 50m wide road reserve
- Land to accommodate channelization and/or roundabout construction at noted intersections;
- Earthworks
- The construction and upgrade of one carriageway to a Primary Regional Road standard
- Intersection treatments and traffic control devices for:
 1. Kardan Boulevard (Roundabout)
- Associated drainage works and water sensitive urban design measures
- Shared paths
- Utility removal, relocation and insertion
- Associated costs including design and management.

Warrington Road

Completed

Neighbourhood Connector B

Warrington Road is in the southern portion of the DCA area, providing a north-south connection between Abernethy Road and Orton Road. The road passes through an area of highly fragmented landownership. Warrington Road has been included within the Byford DCP to ensure a coordinated upgrade catering for increased traffic volumes. The width of Warrington Road will be 20 metres.

The following items are included in the Byford Development Contribution Plan for Warrington Road:

- Land required to accommodate channelization and/or roundabout construction at noted intersections
- Earthworks for the whole road reserve
- Complete road construction to a Liveable Neighbourhoods Neighbourhood Connector B standard
- Intersection treatments and traffic control devices for:
 1. Mead Street (Roundabout)
 2. Turner Road (Roundabout)
- Associated drainage works including water sensitive urban design measures.
- Shared paths.
- Utility removal, relocation, and insertion.
- Associated costs including design, management.

Water Monitoring

Completed

Water Monitoring

The Shire has in place Drainage and Water Management Plans (DWMPs) which establish the framework for water management in the new urban development areas. This ensures that water quantity and quality design objectives can be achieved and that concerns and risks identified by the Department of Water (DoW) and the Water Corporation can be addressed.

The DWMP reinforces the Shire's commitment to ensuring that water sensitive urban design principles are incorporated into new urban development.

The Shire will implement water quality and quantity monitoring within the DCA. The Sampling and Analysis Plan prepared for the Shire, identifies the sampling and analysis requirements and will allow term trends in water quality and quantity to be identified and monitored as the DCA is developed. Suitable remediation works or structural controls may be implemented to rectify any identified problems.

It is likely that subdivision and development would not be approved within the area without the approval and ongoing implementation of the DWMP. As such, it is considered reasonable that all costs of, and associated with, the required water monitoring be funded by developers within the DCA.

Appendix B - Cost Apportionment Schedule

Land Value Res \$69.31
 Land Value Non Res \$122.81
Area A \$16,915.22 **Area B \$11,759.23** **Area C \$5,445.67** **Area D \$11,759.23**
Daily Escalation \$1.35 \$0.96 \$0.53 \$0.96

DCA	Revision	Precinct	Total Cost	Grants	Shire %	DCP %	Shire Cost	DCP Cost	Shire Remaining	DCP Remaining	Area A	Area B	Area C	Area D
1	8													
Adjustment 0.00%			\$0	\$0			\$0	-\$6,501,600	\$0	-\$6,501,600	-\$1,397.70	-\$1,397.70	-\$1,397.70	-\$1,397.70
Cost Reconciliation		A,B,C,D	\$0	\$0	0%	100%	\$0	-\$6,501,600	\$0	-\$6,501,600	-\$1,397.70	-\$1,397.70	-\$1,397.70	-\$1,397.70
AER	3.80%		\$5,582,913	\$0			\$0	\$5,582,913	\$0	\$1,740,817	\$374.24	\$374.24	\$374.24	\$374.24
Administration		A,B,C,D	\$4,662,963	\$0	0%	100%	\$0	\$4,662,963	\$0	\$820,867	\$176.47	\$176.47	\$176.47	\$176.47
Water Monitoring		A,B,C,D	\$919,950	\$0	0%	100%	\$0	\$919,950	\$0	\$919,950	\$197.77	\$197.77	\$197.77	\$197.77
IER	2.80%		\$80,156,621	-\$7,611,807			\$5,089,262	\$67,455,551	\$0	\$42,960,917	\$10,544.24	\$5,554.74	\$5,554.74	\$5,554.74
Abernethy Road		A,B,C,D	\$18,830,750	-\$5,739,535	39%	61%	\$5,089,262	\$8,001,953	\$0	\$0	\$0.00	\$0.00	\$0.00	\$0.00
Byford Central DOS		A,B,C,D	\$953,532	\$0	0%	100%	\$0	\$953,532	\$0	\$0	\$0.00	\$0.00	\$0.00	\$0.00
Doley Road (to Orton)		A	\$8,330,357	\$0	0%	100%	\$0	\$8,330,357	\$0	\$3,425,918	\$998.33	\$0.00	\$0.00	\$0.00
Indigo Parkway		A	\$8,960,687	\$0	0%	100%	\$0	\$8,960,687	\$0	\$7,347,486	\$2,141.09	\$0.00	\$0.00	\$0.00
Kalimna DOS		A,B,C,D	\$585,808	\$0	0%	100%	\$0	\$585,808	\$0	\$0	\$0.00	\$0.00	\$0.00	\$0.00
Kardan Boulevard		A	\$4,729,636	\$0	0%	100%	\$0	\$4,729,636	\$0	\$0	\$0.00	\$0.00	\$0.00	\$0.00
Orton Road		A,B,C,D	\$16,006,637	\$0	0%	100%	\$0	\$16,006,637	\$0	\$16,006,637	\$3,441.07	\$3,441.07	\$3,441.07	\$3,441.07
Orton Road DOS & REW		A,B,C,D	\$7,714,521	\$0	0%	100%	\$0	\$7,714,521	\$0	\$7,714,521	\$1,658.45	\$1,658.45	\$1,658.45	\$1,658.45
Sansimeon Boulevard		A	\$2,298,307	\$0	0%	100%	\$0	\$2,298,307	\$0	\$0	\$0.00	\$0.00	\$0.00	\$0.00
The Glades DOS		A,B,C,D	\$2,117,554	\$0	0%	100%	\$0	\$2,117,554	\$0	\$2,117,554	\$455.23	\$455.23	\$455.23	\$455.23
Thomas Road		A,B,C,D	\$2,563,664	-\$1,872,272	0%	100%	\$0	\$691,392	\$0	\$0	\$0.00	\$0.00	\$0.00	\$0.00
Warrington Road		A	\$7,065,169	\$0	0%	100%	\$0	\$7,065,169	\$0	\$6,348,802	\$1,850.07	\$0.00	\$0.00	\$0.00
LVER	2.50%		\$81,815,673	\$0			\$0	\$81,815,673	\$0	\$31,105,918	\$7,394.45	\$7,227.95	\$914.39	\$7,227.95
Land For Infrastructure		A	\$2,985,040	\$0	0%	100%	\$0	\$2,985,040	\$0	\$571,371	\$166.50	\$0.00	\$0.00	\$0.00
Land For Infrastructure		A,B,C,D	\$10,597,899	\$0	0%	100%	\$0	\$10,597,899	\$0	\$4,253,405	\$914.39	\$914.39	\$914.39	\$914.39
Land For POS and Drainage		A,B,D	\$68,232,734	\$0	0%	100%	\$0	\$68,232,734	\$0	\$26,281,141	\$6,313.56	\$6,313.56	\$0.00	\$6,313.56
Totals			\$167,555,206	-\$7,611,807			\$5,089,262	\$148,352,537	\$0	\$69,306,051	\$16,915.22	\$11,759.23	\$5,445.67	\$11,759.23

Appendix C - Capital Expenditure Plan

DCA 1
Revision 8

ItemName	Precinct	Start Date	End Date	Delivered by the Shire
Administration	A,B,C,D			<input checked="" type="checkbox"/>
Byford Central DOS	A,B,C,D	27/07/2014	27/07/2014	<input type="checkbox"/>
Kalimna DOS	A,B,C,D	27/07/2015	27/07/2015	<input type="checkbox"/>
Kardan Boulevard	A	27/07/2014	27/07/2016	<input type="checkbox"/>
Abernethy Road	A,B,C,D	27/07/2017	27/07/2018	<input checked="" type="checkbox"/>
Thomas Road	A,B,C,D	27/07/2014	27/07/2023	<input checked="" type="checkbox"/>
Sansimeon Boulevard	A	27/07/2014	27/07/2023	<input type="checkbox"/>
The Glades DOS	A,B,C,D	27/07/2024	17/07/2026	<input type="checkbox"/>
Indigo Parkway	A	27/07/2019	27/07/2026	<input checked="" type="checkbox"/>
Orton Road DOS & REW	A,B,C,D	27/07/2025	27/07/2027	<input type="checkbox"/>
Doley Road (to Orton)	A	27/07/2014	27/07/2027	<input type="checkbox"/>
Warrington Road	A	27/07/2027	17/07/2029	<input type="checkbox"/>
Orton Road	A,B,C,D	27/07/2024	27/07/2032	<input type="checkbox"/>
Water Monitoring	A,B,C,D	27/07/2023	27/07/2034	<input checked="" type="checkbox"/>

Appendix D - Lots/m2 Area Report

DCA 1 Revision 8

ItemName	Parent Lots	Res Lots	Non Res m2	Non Res Lot Equivalent	Total Lots	Total Cleared	Remaining Lots
Precinct A							
Mead Street	1	74	0	0.00	73	6	67
Byford Central	2	769	0	0.00	767	767	0
Byford Meadows	1	350	4,000	8.89	358	234	124
Byford Town Centre	2	151	196,000	435.56	585	113	472
Byford West	1	376	0	0.00	375	375	0
Doley Road Precinct	5	1,926	671	1.49	1,922	537	1,385
Grange Meadows (Byford Green)	2	208	0	0.00	206	181	25
Kalimna Estate	1	409	0	0.00	408	408	0
Lots 59 - 62 Briggs Road	1	192	0	0.00	191	0	191
Briggs Road-Larsen Road Precinct	1	148	615	1.37	148	3	145
Marri Park	1	316	0	0.00	315	315	0
The Reserve	1	74	5,510	12.24	85	85	0
Redgum Brook	7	705	21,573	47.94	746	746	0
The Glades	19	3,159	65,712	146.03	3,286	2,263	1,023
Subtotal					9,466	6,034	3,432
Precinct B							
St Thomas Estate	4	64	0	0.00	60	60	0
Stanley Road North East	0	288	0	0.00	288	0	288
Stanley Road Precinct	1	283	1,718	3.82	286	3	283
Sunrays	1	83	0	0.00	82	82	0
Subtotal					716	145	571
Precinct C							
Old Quarter	50	630	620	1.38	581	92	489
Subtotal					581	92	489
Precinct D							
The Brook (Aspen) Lot 2 Nettleton Rd	5	425	0	0.00	420	420	0
Nettleton Road South	0	160	0	0.00	160	0	160
Subtotal					580	420	160
Totals	106	10,790	296,419	658.72	11,343	6,691	4,652

Appendix E - Cost Reconciliation Report

DCA 1

Revision 8

At close of previous revision	Gross Contributions	Interest Credited	Administration Costs	Works Settled	POS/Drainage Land Credited	Infra Land Credited	Cleared Lots	Surplus or Deficit
Cost Reconciliation	\$83,828,492	\$1,719,593	-\$3,842,095	-\$24,494,634	-\$41,951,593	-\$8,758,162	6,691	\$6,501,600

Appendix F - Administration Detail Report

DCA 1

Revision 8

Budget This FY	Legal Expenses	Loan Interest	Consultancy	Wages	Annual Forecast	Years Remaining	Total Future Cost	Completed Cost	Total Cost
Administration	\$4,000	\$0	\$3,000	\$84,820	\$91,820	8.94	\$820,867	\$3,842,095	\$4,662,963

Admin Spend to Date

DCAID	Revision	Order Date	Description	Amount
1	1	28/03/2014	Administration Costs	-\$1,600,226.00
1	2	28/03/2015	Administration Costs	-\$211,908.73
1	3	28/03/2016	Administration	-\$263,038.71
1	4	28/03/2017	Administration Costs 2017	-\$275,028.18
1	4	28/03/2018	Administration costs 2018	-\$204,172.21
1	4	28/03/2019	Administration costs 2019	-\$241,838.45
1	4	18/06/2020	Administration costs 2020	-\$208,983.56
1	5	27/07/2021	Auditing Adjustment	-\$144,597.66
1	5	27/07/2021	Administration costs 2021	-\$226,949.31
1	6	27/07/2022	Administration adjustment and drawdown	-\$153,007.04
1	7	27/07/2023	Administration	-\$31,951.65
1	6	27/07/2023	Administration	-\$136,375.00
1	7	30/06/2024	Administration and Indigo Parkway Tender	-\$87,668.93
1	7	9/02/2025	Estimated costs spent to date this FY	-\$56,349.81
				-\$3,842,095.24

Appendix G - Infrastructure Cost Summary Report

DCA 1
Revision 8

ItemName	Precinct	Total Cost	Grants	Shire %	DCP %	Shire Cost	DCP Cost	DCP Completed	DCP Remaining
Water Monitoring	A,B,C,D	\$919,950	\$0	0%	100%	\$0	\$919,950	\$0	\$919,950
Warrington Road	A	\$7,065,169	\$0	0%	100%	\$0	\$7,065,169	-\$716,367	\$6,348,802
Thomas Road	A,B,C,D	\$2,563,664	-\$1,872,272	0%	100%	\$0	\$691,392	-\$691,392	\$0
The Glades DOS	A,B,C,D	\$2,117,554	\$0	0%	100%	\$0	\$2,117,554	\$0	\$2,117,554
Sansimeon Boulevard	A	\$2,298,307	\$0	0%	100%	\$0	\$2,298,307	-\$2,298,307	\$0
Orton Road DOS & REW	A,B,C,D	\$7,714,521	\$0	0%	100%	\$0	\$7,714,521	\$0	\$7,714,521
Orton Road	A,B,C,D	\$16,006,637	\$0	0%	100%	\$0	\$16,006,637	\$0	\$16,006,637
Kardan Boulevard	A	\$4,729,636	\$0	0%	100%	\$0	\$4,729,636	-\$4,729,636	\$0
Kalimna DOS	A,B,C,D	\$585,808	\$0	0%	100%	\$0	\$585,808	-\$585,808	\$0
Indigo Parkway	A	\$8,960,687	\$0	0%	100%	\$0	\$8,960,687	-\$1,613,201	\$7,347,486
Doley Road (to Orton)	A	\$8,330,357	\$0	0%	100%	\$0	\$8,330,357	-\$4,904,440	\$3,425,918
Byford Central DOS	A,B,C,D	\$953,532	\$0	0%	100%	\$0	\$953,532	-\$953,532	\$0
Administration	A,B,C,D	\$4,662,963	\$0	0%	100%	\$0	\$4,662,963	-\$3,842,095	\$820,867
Abernethy Road	A,B,C,D	\$18,830,750	-\$5,739,535	39%	61%	\$5,089,262	\$8,001,953	-\$8,001,953	\$0
Totals		\$85,739,533	-\$7,611,807			\$5,089,262	\$73,038,464	-\$28,336,730	\$44,701,734

Appendix H - Infrastructure Land Detail Report

DCA 1
Revision 8

ItemName	Precinct	Res m2 Total	Non Res m2 Total	Res m2 Cleared	Non Res m2 Cleared	Res m2 Remaining	Non Res m2 Remaining	Total Cost Cleared Land	Total Cost Remaining	Total Cost All Land
Abernethy Road	A,B,C,D	35,596	2,746	35,596	2,746.00	0	0	-\$1,699,783	\$0	\$1,699,783
Byford Central DOS	A,B,C,D	24,979	0	24,979	0.00	0	0	-\$914,000	\$0	\$914,000
Doley Road (to Orton)	A	17,248	352	12,485	0.00	4,763	352	-\$689,736	\$373,353	\$1,063,089
Indigo Parkway	A	9,489	1,361	6,632	1,361.00	2,857	0	-\$1,080,896	\$198,019	\$1,278,914
Kalimna DOS	A,B,C,D	45,518	0	45,518	0.00	0	0	-\$1,869,215	\$0	\$1,869,215
Kardan Boulevard	A	11,098	0	11,098	0.00	0	0	-\$521,335	\$0	\$521,335
Orton Road	A,B,C,D	23,700	1,500	4,990	0.00	18,710	1,500	-\$295,627	\$1,481,005	\$1,776,632
Orton Road DOS & REW	A,B,C,D	40,000	0	0	0.00	40,000	0	\$0	\$2,772,400	\$2,772,400
Sansimeon Boulevard	A	2,592	0	2,592	0.00	0	0	-\$121,702	\$0	\$121,702
The Glades DOS	A,B,C,D	10,203	0	10,203	0.00	0	0	-\$597,000	\$0	\$597,000
Thomas Road	A,B,C,D	13,363	1,460	13,363	1,460.00	0	0	-\$968,870	\$0	\$968,870
Warrington Road	A	0	0	0	0.00	0	0	\$0	\$0	\$0
Water Monitoring	A,B,C,D	0	0	0	0.00	0	0	\$0	\$0	\$0
Totals		233,786	7,419	167,456	5,567.00	66,330	1,852	-\$8,758,162	\$4,824,776	\$13,582,939

Appendix I - Public Open Space and Drainage Land Detail Report

DCA	1	Revision	8								
ItemName		Precinct	Res m2 Total	Non Res m2 Total	Res m2 Cleared	Non Res m2 Cleared	Res m2 Remaining	Non Res m2 Remaining	Total Cost Cleared	Total Cost Remaining	Total Cost All Land
Briggs Road-Larsen Road Precinct		A	15,458	0	0	0.00	15,458	0	\$0	\$1,071,394	\$1,071,394
Byford Central		A	52,303	0	52,303	0.00	0	0	-\$1,817,118	\$0	\$1,817,118
Byford Meadows		A	47,425	0	37,064	0.00	10,361	0	-\$1,919,440	\$718,121	\$2,637,561
Byford Town Centre		A	51,544	34,069	1,006	18,197.00	50,538	15,872	-\$2,054,266	\$5,452,029	\$7,506,295
Byford West		A	36,254	0	36,254	0.00	0	0	-\$1,447,950	\$0	\$1,447,950
Doley Road Precinct		A	108,920	0	12,267	0.00	96,653	0	-\$656,285	\$6,699,019	\$7,355,304
Grange Meadows (Byford Green)		A	21,850	0	7,255	0.00	14,595	0	-\$310,514	\$1,011,579	\$1,322,093
Kalimna Estate		A	53,242	0	53,242	0.00	0	0	-\$2,094,000	\$0	\$2,094,000
Lots 59 - 62 Briggs Road		A	23,031	0	6,878	0.00	16,153	0	-\$420,590	\$1,119,564	\$1,540,154
Marri Park		A	58,494	0	58,494	0.00	0	0	-\$2,398,000	\$0	\$2,398,000
Mead Street		A	0	0	0	0.00	0	0	\$0	\$0	\$0
Nettleton Road South		D	13,718	0	0	0.00	13,718	0	\$0	\$950,795	\$950,795
Old Quarter		C	0	0	0	0.00	0	0	\$0	\$0	\$0
Redgum Brook		A	97,195	9,802	97,195	9,802.00	0	0	-\$6,185,521	\$0	\$6,185,521
St Thomas Estate		B	11,868	0	11,868	0.00	0	0	-\$781,000	\$0	\$781,000
Stanley Road North East		B	14,700	0	0	0.00	14,700	0	\$0	\$1,018,857	\$1,018,857
Stanley Road Precinct		B	27,000	0	0	0.00	27,000	0	\$0	\$1,871,370	\$1,871,370
Sunrays		B	4,236	0	4,236	0.00	0	0	-\$136,867	\$0	\$136,867
The Brook (Aspen) Lot 2 Nettleton		D	51,787	0	51,787	0.00	0	0	-\$2,136,311	\$0	\$2,136,311
The Glades		A	446,965	2,810	360,061	0.00	86,904	2,810	-\$18,490,212	\$6,368,412	\$24,858,625
The Reserve		A	0	9,196	0	9,196.00	0	0	-\$1,103,520	\$0	\$1,103,520
Totals			1,135,990	55,877	789,910	37,195.00	346,080	18,682	-\$41,951,593	\$26,281,141	\$68,232,734

Appendix J - Infrastructure Designs

To reduce file size, only designs for uncompleted infrastructure projects will be shown, where available.

Schedule taken from successful tender RFT 05/2024. Costs redacted for confidentiality.

WATER MONITORING COSTS

Description	Hours Qty	People Qty	Salary \$/hr	Sample No. Qty	Sample runs/yr Qty	Cost Per Sample \$	Sites Qty	Years
Sampling Program Management								
Preparation of Sample and Analysis Plan (SAP)	10	1	\$140					1
	2	1	\$295					1
Program management (incl updates to SAP as required)	7.5	1	\$140					10
Data Management (site and program registration, data entry, validation)	30	1	\$110					10
Preparation / assistance with report (Annual and Final Report)	60	1	\$110					10
	2	1	\$295					10
Total - Sampling Program Management								
Water Analysis (12 GW & 12 SW sites)								
Groundwater Quarterly Analysis								
Nitrogens (TN, TKN, NH4, NOx-N (NO3+NO2)) + TP + FRP				13	4	70.59		10
Dissolved Organic Nitrogen, DON								
Groundwater Annual Analysis								
Heavy Metals (Al, As, Cd, Cr, Cu, Fe, Pb, Ni, Zn & Hg)				13	1	117.27		10
Total Recoverable Hydrocarbons (TRH)								
Polycyclic Aromatic Hydrocarbons and BTEX								
Surface Water Quarterly Analysis								
Nitrogens (TN, TKN, NH4, NOx-N (NO3+NO2)) + TP + FRP				13	4	81.97		10
Dissolved Organic Nitrogen, DON								
Metals Set-up (Filtered)								
Total Dissolved Solids, TDS								
Surface Water Annual Analysis								
Heavy Metals (Al, As, Cd, Cr, Cu, Fe, Pb, Ni, Zn & Hg)				13	1	117.27		10
Total Recoverable Hydrocarbons (TRH)								
Polycyclic Aromatic Hydrocarbons and BTEX								
Total - Water Analysis								
Sediment Analysis (10 sites)								
Sediment Annual Analysis								
Heavy Metals (Al, As, Cd, Cr, Cu, Fe, Pb, Ni, Zn & Hg)	10	1	110	11	1	110.43		10
Total Recoverable Hydrocarbons (TRH)								
Total - Sediment Analysis								
Analysis - Other								
Consumables (incl. nitrile Gloves, filters, tubing, ice)								10
Total - Analysis - Other								
Superficial Groundwater Monitoring (12 sites)								
Installation of monitoring wells for superficial aquifer monitoring (average 3m depth, includes survey & development)	22.5	1	140					1
Monitor local superficial aquifer groundwater levels (Monthly) - Labour incl travel between sites	5	1	110		12			1
Dip Meter (Groundwater Levels)					12			1
Travel (km)					12			1
Monitor local superficial aquifer groundwater quality (Quarterly) - Labour incl travel between sites	15	1	110		4			10
YSI Quattro Pro Plus (in-situ analysis)					4			10
Travel (km)					4			10
Courier fees					4			10
Monitor local superficial aquifer groundwater levels (Quarterly) - Labour incl travel between sites	5	1	110		4			9
Dip Meter (Groundwater Levels)					4			9
QA/OHS management	1	1	295		4			10
Total - Superficial Groundwater Monitoring								
Surface Water Monitoring								
Purchase & installation of surface water level loggers - 10 sites (Plus 1 barometric sensor)	15	1	140				11	1
Monitor flows in Multiple Use Corridors - 10 sites (Quarterly) - Labour incl travel between sites	7.5	1	110		4			10
Travel (km)					4			10
Monitor quality in Multiple Use Corridors - 12 sites (Quarterly) - Labour incl travel between sites	7.5	1	110		4			10
YSI Quattro Pro Plus (in-situ analysis)					4			10
Travel (km)					4			10
Courier fees					4			10
QA/OHS management	1	1	295		4			10
Total - Surface Water Level Monitoring								
Contingency								
Equipment failure/theft requiring replacement	7.5	1	140				1	10
Total - Contingency								
Total - Water Quality Management								

Appendix K - Detailed Infrastructure Costings

These costings are current at the last date they were independently reviewed by an external QS. At each DCP Report Revision, only the remaining cost value is indexed, based on the latest WALGA index available at the time the report is produced.

**Shire of Serpentine Jarrahdale DCP
DCA 1 - Byford Traditional Infrastructure**

Our Ref: E22/14029

Summary of Costs:	Costed by	Date	Cost
Orton Road New – Integrator B	Rawlinsons	Jun-23	\$15,677,411
Indigo Parkway – Integrator B	Rawlinsons	Jun-23	\$7,898,777
Doley Road – Neighbourhood Connector A	Rawlinsons	Jun-23	\$3,355,453
Warrington Road – Neighbourhood Connector B	Rawlinsons	Jun-23	\$6,218,219
The Glades District Open Space	Rawlinsons	Jun-23	\$2,074,000
Orton Road District Open Space	Rawlinsons	Jun-23	\$4,146,000
Orton Road REW	Rawlinsons	Jun-23	\$3,409,848
TOTAL (excl. GST)			\$42,779,708

For each DCP revision since the last independent cost assessment, the remaining value has been indexed using the most recent WALGA Economic Briefing rates available for the previous year at the time of the DCP Annual Update.

**Shire of Serpentine Jarrahdale DCP
 DCA 1 - Byford Traditional Infrastructure - Update**

Code	Description	Quantity	UOM	Rate	Subtotal	Sub Section Total	Section Total	Road/ DOS Total
A	ROAD - ORTON ROAD NEW							
A.A	Road Construction							
A.A.A	Road Works							
	Earthworks and Site Preparation				\$0			
A.A.A.1	Site Clearance (based on light shrubs)	49,223	m2	\$4	\$173,265			
A.A.A.2	Extra over for removal of trees		item		\$64,485			
A.A.A.3	Remove existing structures along Orton Road		item		\$23,420			
A.A.A.4	Removal of topsoil 150mm and stockpile for later re-use	49,223	m2	\$2	\$79,249			
A.A.A.5	Cut to Fill - General Earthworks	19,560	m3	\$8	\$160,979			
A.A.A.6	Detailed excavation - mill and profile	6,984	m2	\$19	\$132,556			
A.A.A.7	Imported Fill		m3	\$30	\$0			
A.A.A.8	Form swale	8,993	m2	\$4	\$34,083			
	Subgrade Preparation				\$0			
A.A.A.9	Preparation, trim and compact	56,206	m2	\$6	\$309,133			
	Sub Base and Base Course				\$0			
A.A.A.10	100mm thick crushed rock base course	33,499	m2	\$8	\$275,362			
	200mm thick compacted limestone sub base		m2	\$14				
A.A.A.11	250mm thick compacted limestone sub base	33,499	m2	\$17	\$585,563			
A.A.A.12	300mm thick compacted limestone sub base		m2	\$21	\$0			
	Road Paving				\$0			
A.A.A.13	50mm thick (AC14)	28,103	m2	\$31	\$877,938			
A.A.A.14	Extra over for 2% red oxide	12,366	m2	\$6	\$77,040			
A.A.A.15	Primer seal	28,103	m2	\$4	\$113,536			
	Kerbing				\$0			
A.A.A.16	Mountable Kerb (MK)	4,497	m	\$25	\$114,404			
A.A.A.17	Kerb openings	225	no	\$350	\$78,750			
A.A.A.18	Semi Mountable Kerb (SMK)	4,497	m	\$30	\$133,336			
A.A.A.19	Concrete flush edge beam	2,249	m	\$67	\$150,795			
	Line Marking and Furniture				\$0			
A.A.A.20	Line marking	4,497	m	\$6	\$28,511			
A.A.A.21	Street sign post	0	no	\$122	\$0			
A.A.A.22	Street name plate	0	no	\$199	\$0			
A.A.A.23	Chevron sign	0	no	\$613	\$0			
A.A.A.24	Traffic sign	0	no	\$450	\$0			
	Landscaping							
A.A.A.25	Mulch to planter boxes (2m x 2m)	0	m2	\$16	\$0			
A.A.A.26	Trees (100l)	0	no	\$506	\$0			
A.A.A.27	Soft landscaping	12,740	m2	\$0	\$0			
A.A.A.28	Landscape mix	3,185	m3	\$90	\$286,650			
A.A.A.29	Rock pitching	750	m2	\$155	\$116,438			
A.A.A.30	Drainage layer	13,490	m2	\$0	\$0			
	TOTAL Road Works		Item			\$3,815,493		
A.A.B	Shared Paths							
	Earthworks and Site Preparation							
A.A.B.1	Site Clearance (based on light shrubs)	10,118	m2	\$4	\$35,615			
A.A.B.2	Removal of topsoil 150mm and stockpile for later re-use	10,118	m2	\$2	\$16,290			
A.A.B.3	Cut to Fill - General Earthworks	3,036	m3	\$8	\$24,986			
A.A.B.4	Imported Fill	0	m3	\$30	Excl.			
	Subgrade Preparation							
A.A.B.5	Preparation, trim and compact	10,118	m2	\$6	\$55,649			
	Pathway							
A.A.B.6	100 thick concrete footpath with broomed finish	10,118	m2	\$71	\$716,759			
A.A.B.7	Sand fill below concrete footpath (100mm)	10,118	m2	\$5	\$55,244			
A.A.B.8	Pram ramp	0	no	\$670	Included with intersections			
	TOTAL Shared Paths		Item			\$904,544		
A.A.C	Street Lighting							
A.A.C.1	6.5 SOR Street Light Pole incl. all conduits, light cabling, excavation, and related overheads	129	no	\$3,442	\$443,982			
A.A.C.2	6.5 DOR Street Light Pole incl. all conduits, light cabling, excavation, and related overheads	65	no	\$5,111	\$332,214			
	TOTAL Street Lighting		Item			\$776,196		
A.A.D	Road Drainage							
A.A.D.1	450dia reinforced concrete pipe including excavation and backfill	2,249	m	\$233	\$524,129			
A.A.D.2	150dia slotted PVC subsoil drainage pipe including aggregate, geofabric and porous sand	2,249	m	\$189	\$424,161			
A.A.D.3	Side entry pits including liner, cover, excavation, and associated works	0	no	\$2,667	CESP measured at intersections, RAB's			

**Shire of Serpentine Jarrahdale DCP
 DCA 1 - Byford Traditional Infrastructure - Update**

Code	Description	Quantity	UOM	Rate	Subtotal	Sub Section Total	Section Total	Road/ DOS Total
A.A.D.4	Raised gully / bubble up pits including liner, cover, grate, excavation, rock pitching, and associated works	75	no	\$3,021	\$226,544			
	TOTAL Road Drainage		Item			\$1,174,834		
<u>A.A.E</u>	<u>Preliminaries and Project Costs</u>							
A.A.E.1	Traffic Management	5.0000	%	\$6,671,067	\$333,553			
A.A.E.2	Project Overheads and Preliminaries (Indirect Construction Costs)	15.0000	%	\$6,671,067	\$1,000,660			
A.A.E.3	Project Owner's Cost (Planning and Design Costs)	7.5000	%	\$6,671,067	\$500,330			
A.A.E.4	Risk Contingency Allowance	10.0000	%	\$8,505,610	\$850,561			
	TOTAL Preliminaries and Project Costs		Item			\$2,685,104		
	TOTAL Road Construction		Item				\$9,356,171	
<u>A.B</u>	<u>Tourmaline Boulevard (Left In Left out Intersection)</u>							
<u>A.B.A</u>	<u>Road Works</u>							
	Earthworks and Site Preparation					Excl.		
A.B.A.1	Site Clearance (based on light shrubs)	966	m2	\$4		Excl.		
A.B.A.2	Removal of topsoil 150mm and stockpile for later re-use	966	m2	\$2		Excl.		
A.B.A.3	Cut to Fill - General Earthworks	290	m3	\$8		Excl.		
A.B.A.4	Imported Fill	0	m3	\$30		Excl.		
	Subgrade Preparation							
A.B.A.5	Preparation, trim and compact	966	m2	\$6		Excl.		
	Sub Base and Base Course					Excl.		
A.B.A.6	100mm thick crushed rock base course	786	m2	\$8		Excl.		
A.B.A.7	250mm thick compacted limestone sub base	786	m2	\$17		Excl.		
	Road Paving					Excl.		
A.B.A.8	50mm thick (AC14)	516	m2	\$31		Excl.		
A.B.A.9	Extra over for 2% red oxide	90	m2	\$6		Excl.		
A.B.A.10	Primer seal	516	m2	\$4		Excl.		
	Kerbing							
A.B.A.11	Mountable Kerb (MK)	60	m	\$25		Excl.		
A.B.A.12	Semi Mountable Kerb (SMK)	71	m	\$30		Excl.		
	Line Marking and Furniture							
A.B.A.13	Line marking	80	m	\$6		Excl.		
A.B.A.14	Street sign post	1	no	\$122		Excl.		
A.B.A.15	Street name plate	2	no	\$199		Excl.		
A.B.A.16	Traffic sign	2	no	\$450		Excl.		
	Landscaping							
A.B.A.17	Soft landscaping	180	m2	\$0		Excl.		
A.B.A.18	Landscape mix	42	m3	\$90		Excl.		
A.B.A.19	Rock pitching	8	m2	\$155		Excl.		
A.B.A.20	Drainage layer	180	m2	\$0		Excl.		
	TOTAL Road Works		Item			\$0		
<u>A.B.B</u>	<u>Shared Paths</u>							
	Earthworks and Site Preparation							
A.B.B.1	Site Clearance (based on light shrubs)	150	m2	\$4		Excl.		
A.B.B.2	Removal of topsoil 150mm and stockpile for later re-use	150	m2	\$2		Excl.		
A.B.B.3	Cut to Fill - General Earthworks	45	m3	\$8		Excl.		
A.B.B.4	Imported Fill	0	m3	\$30		Excl.		
	Subgrade Preparation							
A.B.B.5	Preparation, trim and compact	150	m2	\$6		Excl.		
	Pathway							
A.B.B.6	100 thick concrete footpath with broomed finish	150	m2	\$71		Excl.		
A.B.B.7	Sand fill below concrete footpath (100mm)	150	m2	\$5		Excl.		
A.B.B.8	Pram ramp	0	no	\$670		Excl.		
A.B.B.9	Pram ramp including tactile	2	no	\$973		Excl.		
	Line Marking and Furniture							
A.B.B.10	Traffic sign	2	no	\$450		Excl.		
	TOTAL Shared Paths		Item			\$0		
<u>A.B.C</u>	<u>Street Lighting</u>							
A.B.C.1	6.5 SOR Street Light Pole incl. all conduits, light cabling, excavation, and related overheads	2	no	\$3,442		Excl.		
	TOTAL Street Lighting		Item			\$0		
<u>A.B.D</u>	<u>Road Drainage</u>							
A.B.D.1	450dia reinforced concrete pipe including excavation and backfill	65	m	\$233		Excl.		
A.B.D.2	Side entry pits including liner, cover, excavation, and associated works	2	no	\$2,667		Excl.		
	TOTAL Road Drainage		Item			\$0		
<u>A.B.E</u>	<u>Preliminaries and Project Costs</u>							
A.B.E.1	Traffic Management	5.0000	%	\$105,821		Excl.		

**Shire of Serpentine Jarrahdale DCP
 DCA 1 - Byford Traditional Infrastructure - Update**

Code	Description	Quantity	UOM	Rate	Subtotal	Sub Section Total	Section Total	Road/ DOS Total
A.B.E.2	Project Overheads and Preliminaries (Indirect Construction Costs)	15.0000	%	\$105,821	Excl.			
A.B.E.3	Project Owner's Cost (Planning and Design Costs)	7.5000	%	\$105,821	Excl.			
A.B.E.4	Risk Contingency Allowance	10.0000	%	\$134,922	Excl.			
	TOTAL Preliminaries and Project Costs		Item			\$0		
	TOTAL Tourmaline Boulevard (Left In Left out Intersection)		Item				\$0	
A.C	<u>Kokoda Boulevard (Roundabout)</u>							
A.C.A	<u>Road Works</u>							
A.C.A.1	Earthworks and Site Preparation Site Clearance (based on light shrubs)	2,504	m2	\$4	\$8,814			
A.C.A.2	Removal of topsoil 150mm and stockpile for later re-use	2,504	m2	\$2	\$4,031			
A.C.A.3	Cut to Fill - General Earthworks	752	m3	\$8	\$6,189			
A.C.A.4	Imported Fill	0	m3	\$30	Excl.			
A.C.A.5	Subgrade Preparation Preparation, trim and compact Sub Base and Base Course	2,504	m2	\$6	\$13,772			
A.C.A.6	100mm thick crushed rock base course	1,983	m2	\$8	\$16,300			
A.C.A.7	250mm thick compacted limestone sub base	1,983	m2	\$17	\$34,663			
A.C.A.8	Road Paving 50mm thick (AC14)	1,518	m2	\$31	\$47,422			
A.C.A.9	Primer seal	1,518	m2	\$4	\$6,133			
A.C.A.10	Brick Paving 80 thick brick pavers	333	m2	\$100	\$33,333			
A.C.A.11	30 thick compacted sand bed	180	m2	\$2	\$295			
A.C.A.12	40 thick compacted sand bed (RAB)	153	m2	\$2	\$335			
A.C.A.13	170mm thick compacted limestone	180	m2	\$11	\$2,047			
A.C.A.14	250mm thick compacted limestone sub base	153	m2	\$17	\$2,674			
A.C.A.15	Kerbing Mountable Kerb (MK)	70	m	\$25	\$1,781			
A.C.A.16	Semi Mountable Kerb (SMK)	143	m	\$30	\$4,240			
A.C.A.17	Barrier Kerb (BK)	54	m	\$53	\$2,869			
A.C.A.18	Line Marking and Furniture Line marking	53	m	\$6	\$336			
A.C.A.19	Street sign post	1	no	\$122	\$122			
A.C.A.20	Street name plate	2	no	\$199	\$398			
A.C.A.21	Chevron sign	1	no	\$613	\$613			
A.C.A.22	Traffic sign	3	no	\$450	\$1,350			
A.C.A.23	Landscaping Landscape mix	57	m3	\$90	\$5,130			
	TOTAL Road Works		Item			\$192,847		
A.C.B	<u>Shared Paths</u>							
A.C.B.1	Earthworks and Site Preparation Site Clearance (based on light shrubs)	356	m2	\$4	\$1,253			
A.C.B.2	Removal of topsoil 150mm and stockpile for later re-use	356	m2	\$2	\$573			
A.C.B.3	Cut to Fill - General Earthworks	107	m3	\$8	\$881			
A.C.B.4	Imported Fill	0	m3	\$30	Excl.			
A.C.B.5	Subgrade Preparation Preparation, trim and compact Pathway	356	m2	\$6	\$1,958			
A.C.B.6	100 thick concrete footpath with broomed finish	356	m2	\$71	\$25,219			
A.C.B.7	Sand fill below concrete path (100mm)	356	m2	\$5	\$1,944			
A.C.B.8	Pram ramp	0	no	\$670	\$0			
A.C.B.9	Pram ramp including tactile	6	no	\$973	\$5,836			
A.C.B.10	Tactile paving	10	m2	\$325	\$3,250			
A.C.B.11	Line Marking and Furniture Traffic sign	2	no	\$450	\$900			
	TOTAL Shared Paths		Item			\$41,814		
A.C.C	<u>Street Lighting</u>							
A.C.C.1	6.5 SOR Street Light Pole incl. all conduits, light cabling, excavation, and related overheads	4	no	\$3,442	\$13,767			
	TOTAL Street Lighting		Item			\$13,767		
A.C.D	<u>Road Drainage</u>							
A.C.D.1	450dia reinforced concrete pipe including excavation and backfill	130	m	\$233	\$30,297			
A.C.D.2	Side entry pits including liner, cover, excavation, and associated works	4	no	\$2,667	\$10,666			
	TOTAL Road Drainage		Item			\$40,963		
A.C.E	<u>Preliminaries and Project Costs</u>							
A.C.E.1	Traffic Management	5.0000	%	\$289,390	\$14,470			
A.C.E.2	Project Overheads and Preliminaries (Indirect Construction Costs)	15.0000	%	\$289,390	\$43,409			

**Shire of Serpentine Jarrahdale DCP
 DCA 1 - Byford Traditional Infrastructure - Update**

Code	Description	Quantity	UOM	Rate	Subtotal	Sub Section Total	Section Total	Road/ DOS Total
A.C.E.3	Project Owner's Cost (Planning and Design Costs)	7.5000	%	\$289,390	\$21,704			
A.C.E.4	Risk Contingency Allowance	10.0000	%	\$368,973	\$36,897			
	TOTAL Preliminaries and Project Costs		Item			\$116,480		
	TOTAL Kokoda Boulevard (Roundabout)		Item				\$405,870	
A.D	<u>Doley Road (Roundabout)</u>							
A.D.A	<u>Road Works</u>							
	Earthworks and Site Preparation							
A.D.A.1	Site Clearance (based on light shrubs)	2,504	m2	\$4	\$8,814			
A.D.A.2	Removal of topsoil 150mm and stockpile for later re-use	2,504	m2	\$2	\$4,031			
A.D.A.3	Cut to Fill - General Earthworks	752	m3	\$8	\$6,189			
A.D.A.4	Imported Fill	0	m3	\$30	Excl.			
	Subgrade Preparation							
A.D.A.5	Preparation, trim and compact	2,504	m2	\$6	\$13,772			
	Sub Base and Base Course							
A.D.A.6	100mm thick crushed rock base course	1,983	m2	\$8	\$16,300			
A.D.A.7	250mm thick compacted limestone sub base	1,983	m2	\$17	\$34,663			
	Road Paving							
A.D.A.8	50mm thick (AC14)	1,518	m2	\$31	\$47,422			
A.D.A.9	Primer seal	1,518	m2	\$4	\$6,133			
	Brick Paving							
A.D.A.10	80 thick brick pavers	333	m2	\$100	\$33,333			
A.D.A.11	30 thick compacted sand bed	180	m2	\$2	\$295			
A.D.A.12	40 thick compacted sand bed (RAB)	153	m2	\$2	\$335			
A.D.A.13	170mm thick compacted limestone	180	m2	\$11	\$2,047			
A.D.A.14	250mm thick compacted limestone sub base	153	m2	\$17	\$2,674			
	Kerbing							
A.D.A.15	Mountable Kerb (MK)	70	m	\$25	\$1,781			
A.D.A.16	Semi Mountable Kerb (SMK)	143	m	\$30	\$4,240			
A.D.A.17	Barrier Kerb (BK)	54	m	\$53	\$2,869			
	Line Marking and Furniture							
A.D.A.18	Line marking	53	m	\$6	\$336			
A.D.A.19	Street sign post	1	no	\$122	\$122			
A.D.A.20	Street name plate	2	no	\$199	\$398			
A.D.A.21	Chevron sign	1	no	\$613	\$613			
A.D.A.22	Traffic sign	3	no	\$450	\$1,350			
	Landscaping				\$0			
A.D.A.23	Landscape mix	57	m3	\$90	\$5,130			
	Other							
A.D.A.24	Allow for connection to existing Doley Road		Item		\$10,000			
	TOTAL Road Works		Item			\$202,847		
A.D.B	<u>Shared Paths</u>							
	Earthworks and Site Preparation							
A.D.B.1	Site Clearance (based on light shrubs)	356	m2	\$4	\$1,253			
A.D.B.2	Removal of topsoil 150mm and stockpile for later re-use	356	m2	\$2	\$573			
A.D.B.3	Cut to Fill - General Earthworks	107	m3	\$8	\$881			
A.D.B.4	Imported Fill	0	m3	\$30	Excl.			
	Subgrade Preparation							
A.D.B.5	Preparation, trim and compact	356	m2	\$6	\$1,958			
	Pathway							
A.D.B.6	100 thick concrete footpath with broomed finish	356	m2	\$71	\$25,219			
A.D.B.7	Sand fill below concrete path (100mm)	356	m2	\$5	\$1,944			
A.D.B.8	Pram ramp	0	no	\$670	\$0			
A.D.B.9	Pram ramp including tactile	6	no	\$973	\$5,836			
A.D.B.10	Tactile paving	10	m2	\$325	\$3,250			
	Line Marking and Furniture							
A.D.B.11	Traffic sign	2	no	\$450	\$900			
	Landscaping							
A.D.B.12	Mulch to planter boxes (2m x 2m)	0	m2	\$16	Excl.			
A.D.B.13	Trees (100l)	0	no	\$506	Excl.			
A.D.B.14	Soft landscaping	0	m2	\$0	Excl.			
	Other							
A.D.B.15	Allow for connecting into existing footpath		item		\$2,500			
	TOTAL Shared Paths		Item			\$44,314		
A.D.C	<u>Street Lighting</u>							
A.D.C.1	6.5 SOR Street Light Pole incl. all conduits, light cabling, excavation, and related overheads	4	no	\$3,442	\$13,767			
	TOTAL Street Lighting		Item			\$13,767		
A.D.D	<u>Road Drainage</u>							
A.D.D.1	450dia reinforced concrete pipe including excavation and backfill	130	m	\$233	\$30,297			
A.D.D.2	Side entry pits including liner, cover, excavation, and associated works	4	no	\$2,667	\$10,666			
	TOTAL Road Drainage		Item			\$40,963		

**Shire of Serpentine Jarrahdale DCP
 DCA 1 - Byford Traditional Infrastructure - Update**

Code	Description	Quantity	UOM	Rate	Subtotal	Sub Section Total	Section Total	Road/ DOS Total
A.D.E	Preliminaries and Project Costs							
A.D.E.1	Traffic Management	5.0000	%	\$301,890	\$15,095			
A.D.E.2	Project Overheads and Preliminaries (Indirect Construction Costs)	15.0000	%	\$301,890	\$45,284			
A.D.E.3	Project Owner's Cost (Planning and Design Costs)	7.5000	%	\$301,890	\$22,642			
A.D.E.4	Risk Contingency Allowance	10.0000	%	\$384,910	\$38,491			
	TOTAL Preliminaries and Project Costs		Item			\$121,511		
	TOTAL Doley Road (Roundabout)		Item				\$423,401	
A.E	Lawrence Way (Roundabout)							
A.E.A	Road Works							
	Earthworks and Site Preparation							
A.E.A.1	Site Clearance (based on light shrubs)	2,504	m2	\$4	\$8,814			
A.E.A.2	Removal of topsoil 150mm and stockpile for later re-use	2,504	m2	\$2	\$4,031			
A.E.A.3	Cut to Fill - General Earthworks	752	m3	\$8	\$6,189			
A.E.A.4	Imported Fill	0	m3	\$30	Excl.			
	Subgrade Preparation							
A.E.A.5	Preparation, trim and compact Sub Base and Base Course	2,504	m2	\$6	\$13,772			
A.E.A.6	100mm thick crushed rock base course	1,983	m2	\$8	\$16,300			
A.E.A.7	250mm thick compacted limestone sub base	1,983	m2	\$17	\$34,663			
	Road Paving							
A.E.A.8	50mm thick (AC14)	1,518	m2	\$31	\$47,422			
A.E.A.9	Primer seal	1,518	m2	\$4	\$6,133			
	Brick Paving							
A.E.A.10	80 thick brick pavers	333	m2	\$100	\$33,333			
A.E.A.11	30 thick compacted sand bed	180	m2	\$2	\$295			
A.E.A.12	40 thick compacted sand bed (RAB)	153	m2	\$2	\$335			
A.E.A.13	170mm thick compacted limestone	180	m2	\$11	\$2,047			
A.E.A.14	250mm thick compacted limestone sub base	153	m2	\$17	\$2,674			
	Kerbing							
A.E.A.15	Mountable Kerb (MK)	70	m	\$25	\$1,781			
A.E.A.16	Semi Mountable Kerb (SMK)	143	m	\$30	\$4,240			
A.E.A.17	Barrier Kerb (BK)	54	m	\$53	\$2,869			
	Line Marking and Furniture							
A.E.A.18	Line marking	53	m	\$6	\$336			
A.E.A.19	Street sign post	1	no	\$122	\$122			
A.E.A.20	Street name plate	2	no	\$199	\$398			
A.E.A.21	Chevron sign	1	no	\$613	\$613			
A.E.A.22	Traffic sign	3	no	\$450	\$1,350			
	Landscaping							
A.E.A.23	Mulch to planter boxes (2m x 2m)	0	m2	\$16	Excl.			
A.E.A.24	Trees (100l)	0	no	\$506	Excl.			
A.E.A.25	Soft landscaping	227	m2	\$0	Excl.			
A.E.A.26	Landscape mix	57	m3	\$90	\$5,130			
	Other							
A.E.A.27	Allow for connection to existng Lawrence Way		item		\$10,000			
	TOTAL Road Works		Item			\$202,847		
A.E.B	Shared Paths							
	Earthworks and Site Preparation							
A.E.B.1	Site Clearance (based on light shrubs)	356	m2	\$4	\$1,253			
A.E.B.2	Removal of topsoil 150mm and stockpile for later re-use	356	m2	\$2	\$573			
A.E.B.3	Cut to Fill - General Earthworks	107	m3	\$8	\$881			
A.E.B.4	Imported Fill	0	m3	\$30	Excl.			
	Subgrade Preparation							
A.E.B.5	Preparation, trim and compact Pathway	356	m2	\$6	\$1,958			
A.E.B.6	100 thick concrete footpath with broomed finish	356	m2	\$71	\$25,219			
A.E.B.7	Sand fill below concrete path (100mm)	356	m2	\$5	\$1,944			
A.E.B.8	Pram ramp	0	no	\$670	\$0			
A.E.B.9	Pram ramp including tactile	6	no	\$973	\$5,836			
A.E.B.10	Tactile paving	10	m2	\$325	\$3,250			
	Line Marking and Furniture							
A.E.B.11	Line marking	0	m	\$6	Excl.			
A.E.B.12	Street sign post	0	no	\$122	Excl.			
A.E.B.13	Street name plate	0	no	\$199	Excl.			
A.E.B.14	Chevron sign	0	no	\$613	Excl.			
A.E.B.15	Traffic sign	2	no	\$450	\$900			
	Landscaping							
A.E.B.16	Mulch to planter boxes (2m x 2m)	0	m2	\$16	Excl.			
A.E.B.17	Trees (100l)	0	no	\$506	Excl.			
A.E.B.18	Soft landscaping	0	m2	\$0	Excl.			
	TOTAL Shared Paths		Item			\$41,814		
A.E.C	Street Lighting							

**Shire of Serpentine Jarrahdale DCP
 DCA 1 - Byford Traditional Infrastructure - Update**

Code	Description	Quantity	UOM	Rate	Subtotal	Sub Section Total	Section Total	Road/ DOS Total
A.E.C.1	6.5 SOR Street Light Pole incl. all conduits, light cabling, excavation, and related overheads	4	no	\$3,442	\$13,767			
	TOTAL Street Lighting		Item			\$13,767		
<u>A.E.D</u>	<u>Road Drainage</u>							
A.E.D.1	450dia reinforced concrete pipe including excavation and backfill	130	m	\$233	\$30,297			
A.E.D.2	Side entry pits including liner, cover, excavation, and associated works	4	no	\$2,667	\$10,666			
	TOTAL Road Drainage		Item			\$40,963		
<u>A.E.E</u>	<u>Preliminaries and Project Costs</u>							
A.E.E.1	Traffic Management	5.0000	%	\$299,390	\$14,970			
A.E.E.2	Project Overheads and Preliminaries (Indirect Construction Costs)	15.0000	%	\$299,390	\$44,909			
A.E.E.3	Project Owner's Cost (Planning and Design Costs)	7.5000	%	\$299,390	\$22,454			
A.E.E.4	Risk Contingency Allowance	10.0000	%	\$381,723	\$38,172			
	TOTAL Preliminaries and Project Costs		Item			\$120,505		
	TOTAL Lawrence Way (Roundabout)		Item				\$419,895	
<u>A.F</u>	<u>Warrington Road (Roundabout)</u>							
<u>A.F.A</u>	<u>Road Works</u>							
A.F.A.1	Earthworks and Site Preparation							
A.F.A.1	Site Clearance (based on light shrubs)	2,504	m2	\$4	\$8,814			
A.F.A.2	Removal of topsoil 150mm and stockpile for later re-use	2,504	m2	\$2	\$4,031			
A.F.A.3	Cut to Fill - General Earthworks	752	m3	\$8	\$6,189			
A.F.A.4	Imported Fill	0	m3	\$30	Excl.			
A.F.A.5	Subgrade Preparation							
A.F.A.5	Preparation, trim and compact Sub Base and Base Course	2,504	m2	\$6	\$13,772			
A.F.A.6	100mm thick crushed rock base course	1,983	m2	\$8	\$16,300			
A.F.A.7	250mm thick compacted limestone sub base	1,983	m2	\$17	\$34,663			
A.F.A.8	Road Paving							
A.F.A.8	50mm thick (AC14)	1,518	m2	\$31	\$47,422			
A.F.A.9	Primer seal	1,518	m2	\$4	\$6,133			
A.F.A.10	Brick Paving							
A.F.A.10	80 thick brick pavers	333	m2	\$100	\$33,333			
A.F.A.11	30 thick compacted sand bed	180	m2	\$2	\$295			
A.F.A.12	40 thick compacted sand bed (RAB)	153	m2	\$2	\$335			
A.F.A.13	170mm thick compacted limestone	180	m2	\$11	\$2,047			
A.F.A.14	250mm thick compacted limestone sub base	153	m2	\$17	\$2,674			
A.F.A.15	Kerbing							
A.F.A.15	Mountable Kerb (MK)	70	m	\$25	\$1,781			
A.F.A.16	Semi Mountable Kerb (SMK)	143	m	\$30	\$4,240			
A.F.A.17	Barrier Kerb (BK)	54	m	\$53	\$2,869			
A.F.A.18	Concrete flush edge beam	0	m	\$67	\$0			
A.F.A.19	Line Marking and Furniture							
A.F.A.19	Line marking	53	m	\$6	\$336			
A.F.A.20	Street sign post	1	no	\$122	\$122			
A.F.A.21	Street name plate	2	no	\$199	\$398			
A.F.A.22	Chevron sign	1	no	\$613	\$613			
A.F.A.23	Traffic sign	3	no	\$450	\$1,350			
A.F.A.24	Landscaping							
A.F.A.24	Mulch to planter boxes (2m x 2m)	0	m2	\$16	Excl.			
A.F.A.25	Trees (100l)	0	no	\$506	Excl.			
A.F.A.26	Soft landscaping	227	m2	\$0	Excl.			
A.F.A.27	Landscape mix	57	m3	\$90	\$5,130			
	TOTAL Road Works		Item			\$192,847		
<u>A.F.B</u>	<u>Shared Paths</u>							
A.F.B.1	Earthworks and Site Preparation							
A.F.B.1	Site Clearance (based on light shrubs)	356	m2	\$4	\$1,253			
A.F.B.2	Removal of topsoil 150mm and stockpile for later re-use	356	m2	\$2	\$573			
A.F.B.3	Cut to Fill - General Earthworks	107	m3	\$8	\$881			
A.F.B.4	Imported Fill	0	m3	\$30	\$0			
A.F.B.5	Subgrade Preparation							
A.F.B.5	Preparation, trim and compact Pathway	356	m2	\$6	\$1,958			
A.F.B.6	100 thick concrete footpath with broomed finish	356	m2	\$71	\$25,219			
A.F.B.7	Sand fill below concrete path (100mm)	356	m2	\$5	\$1,944			
A.F.B.8	Pram ramp							
A.F.B.8	Pram ramp including tactile	6	no	\$973	\$5,836			
A.F.B.9	Tactile paving	10	m2	\$325	\$3,250			
A.F.B.10	Line Marking and Furniture							
A.F.B.10	Line marking	0	m	\$6	Excl.			
A.F.B.11	Street sign post	0	no	\$122	Excl.			
A.F.B.12	Street name plate	0	no	\$199	Excl.			

**Shire of Serpentine Jarrahdale DCP
 DCA 1 - Byford Traditional Infrastructure - Update**

Code	Description	Quantity	UOM	Rate	Subtotal	Sub Section Total	Section Total	Road/ DOS Total
A.F.B.13	Chevron sign	0	no	\$613	Excl.			
A.F.B.14	Traffic sign	2	no	\$450	\$900			
	Landscaping							
A.F.B.15	Mulch to planter boxes (2m x 2m)	0	m2	\$16	Excl.			
A.F.B.16	Trees (100l)	0	no	\$506	Excl.			
A.F.B.17	Soft landscaping	0	m2	\$0	Excl.			
	TOTAL Shared Paths		Item			\$41,814		
A.F.C	Street Lighting							
A.F.C.1	6.5 SOR Street Light Pole incl. all conduits, light cabling, excavation, and related overheads	4	no	\$3,442	\$13,767			
	TOTAL Street Lighting		Item			\$13,767		
A.F.D	Road Drainage							
A.F.D.1	450dia reinforced concrete pipe including excavation and backfill	130	m	\$233	\$30,297			
A.F.D.2	Side entry pits including liner, cover, excavation, and associated works	4	no	\$2,667	\$10,666			
	TOTAL Road Drainage		Item			\$40,963		
A.F.E	Preliminaries and Project Costs							
A.F.E.1	Traffic Management	5.0000	%	\$289,390	\$14,470			
A.F.E.2	Project Overheads and Preliminaries (Indirect Construction Costs)	15.0000	%	\$289,390	\$43,409			
A.F.E.3	Project Owner's Cost (Planning and Design Costs)	7.5000	%	\$289,390	\$21,704			
A.F.E.4	Risk Contingency Allowance	10.0000	%	\$368,973	\$36,897			
	TOTAL Preliminaries and Project Costs		Item			\$116,480		
	TOTAL Warrington Road (Roundabout)		Item				\$405,870	
A.G	Soldiers Road (Roundabout)							
A.G.A	Road Works							
A.G.A.1	Earthworks and Site Preparation Site Clearance (based on light shrubs)	2,728	m2	\$4	\$9,603			
A.G.A.2	Removal of topsoil 150mm and stockpile for later re-use	2,728	m2	\$2	\$4,392			
A.G.A.3	Cut to Fill - General Earthworks	819	m3	\$8	\$6,740			
A.G.A.4	Imported Fill	0	m3	\$30	Excl.			
	Subgrade Preparation							
A.G.A.5	Preparation, trim and compact Sub Base and Base Course	2,728	m2	\$6	\$15,004			
A.G.A.6	100mm thick crushed rock base course	2,139	m2	\$8	\$17,583			
A.G.A.7	250mm thick compacted limestone sub base	2,139	m2	\$17	\$37,390			
	Road Paving							
A.G.A.8	50mm thick (AC14)	1,672	m2	\$31	\$52,233			
A.G.A.9	Primer seal	1,672	m2	\$4	\$6,755			
	Brick Paving		Item					
A.G.A.10	80 thick brick pavers	393	m2	\$100	\$39,339			
A.G.A.11	30 thick compacted sand bed	240	m2	\$2	\$394			
A.G.A.12	40 thick compacted sand bed (RAB)	153	m2	\$2	\$335			
A.G.A.13	170mm thick compacted limestone	240	m2	\$11	\$2,729			
A.G.A.14	250mm thick compacted limestone sub base	153	m2	\$17	\$2,674			
	Kerbing							
A.G.A.15	Mountable Kerb (MK)	70	m	\$25	\$1,781			
A.G.A.16	Semi Mountable Kerb (SMK)	146	m	\$30	\$4,329			
A.G.A.17	Barrier Kerb (BK)	54	m	\$53	\$2,869			
	Concrete flush edge beam		m	\$67				
	Line Marking and Furniture							
A.G.A.18	Line marking	70	m	\$6	\$444			
A.G.A.19	Street sign post	1	no	\$122	\$122			
A.G.A.20	Street name plate	2	no	\$199	\$398			
A.G.A.21	Chevron sign	0	no	\$613	\$0			
A.G.A.22	Traffic sign	4	no	\$450	\$1,800			
	Landscaping							
A.G.A.23	Mulch to planter boxes (2m x 2m)	0	m2	\$16	Excl.			
A.G.A.24	Trees (100l)	0	no	\$506	Excl.			
A.G.A.25	Soft landscaping	227	m2	\$0	Excl.			
A.G.A.26	Landscape mix	57	m3	\$90	\$5,130			
	Other							
A.G.A.27	Allowance to tie in to existing Soldiers Road (in No 2 locations)		item		\$20,000			
	TOTAL Road Works		Item			\$232,043		
A.G.B	Shared Paths							
A.G.B.1	Earthworks and Site Preparation Site Clearance (based on light shrubs)	364	m2	\$4	\$1,281			
A.G.B.2	Removal of topsoil 150mm and stockpile for later re-use	364	m2	\$2	\$586			
A.G.B.3	Cut to Fill - General Earthworks	110	m3	\$8	\$905			
A.G.B.4	Imported Fill	0	m3	\$30	Excl.			

**Shire of Serpentine Jarrahdale DCP
 DCA 1 - Byford Traditional Infrastructure - Update**

Code	Description	Quantity	UOM	Rate	Subtotal	Sub Section Total	Section Total	Road/ DOS Total
A.G.B.5	Subgrade Preparation Preparation, trim and compact Pathway	364	m2	\$6	\$2,002			
A.G.B.6	100 thick concrete footpath with broomed finish	364	m2	\$71	\$25,786			
A.G.B.7	Sand fill below concrete path (100mm) Pram ramp	364	m2	\$5	\$1,987			
A.G.B.8	Pram ramp including tactile	8	no	\$670	\$7,781			
A.G.B.9	Tactile paving	13	m2	\$973	\$7,781			
A.G.B.10	Line Marking and Furniture Traffic sign	4	no	\$325	\$4,225			
A.G.B.11	Landscaping Mulch to planter boxes (2m x 2m)	0	m2	\$450	\$1,800			
A.G.B.12	Trees (100l)	0	no	\$16	Excl.			
A.G.B.13	Soft landscaping	0	m2	\$506	Excl.			
	TOTAL Shared Paths		Item			\$46,354		
A.G.C	Street Lighting							
A.G.C.1	6.5 SOR Street Light Pole incl. all conduits, light cabling, excavation, and related overheads	4	no	\$3,442	\$13,767			
	TOTAL Street Lighting		Item			\$13,767		
A.G.D	Road Drainage							
A.G.D.1	450dia reinforced concrete pipe including excavation and backfill	130	m	\$233	\$30,297			
A.G.D.2	Side entry pits including liner, cover, excavation, and associated works	4	no	\$2,667	\$10,666			
	TOTAL Road Drainage		Item			\$40,963		
A.G.E	Preliminaries and Project Costs							
A.G.E.1	Traffic Management	5.0000	%	\$333,126	\$16,656			
A.G.E.2	Project Overheads and Preliminaries (Indirect Construction Costs)	15.0000	%	\$333,126	\$49,969			
A.G.E.3	Project Owner's Cost (Planning and Design Costs)	7.5000	%	\$333,126	\$24,984			
A.G.E.4	Risk Contingency Allowance	10.0000	%	\$424,736	\$42,474			
	TOTAL Preliminaries and Project Costs		Item			\$134,083		
	TOTAL Soldiers Road (Roundabout)		Item				\$467,210	
A.H	South Western Highway (Channelised Intersection)							
A.H.A	Road Works							
A.H.A.1	Earthworks and Site Preparation Site Clearance (based on light shrubs)	2,550	m2	\$4	\$8,976			
A.H.A.2	Removal of topsoil 150mm and stockpile for later re-use	2,550	m2	\$2	\$4,106			
A.H.A.3	Cut to Fill - General Earthworks	765	m3	\$8	\$6,296			
A.H.A.4	Detailed excavation - mill and profile	1,800	m2	\$19	\$34,164			
A.H.A.5	Imported Fill	0	m3	\$30	Excl.			
A.H.A.6	Subgrade Preparation Preparation, trim and compact Sub Base and Base Course	2,550	m2	\$6	\$14,025			
A.H.A.7	100mm thick crushed rock base course	2,466	m2	\$8	\$20,271			
A.H.A.8	250mm thick compacted limestone sub base	2,466	m2	\$17	\$43,106			
A.H.A.9	Road Paving 50mm thick (AC14)	1,980	m2	\$31	\$61,855			
A.H.A.10	Extra over for 2% red oxide	90	m2	\$6	\$561			
A.H.A.11	Primer seal	1,980	m2	\$4	\$7,999			
A.H.A.12	Kerbing Mountable Kerb (MK)	60	m	\$25	\$1,526			
A.H.A.13	Semi Mountable Kerb (SMK)	80	m	\$30	\$2,372			
A.H.A.14	Line Marking and Furniture Line marking	660	m	\$6	\$4,184			
A.H.A.15	Street sign post	1	no	\$122	\$122			
A.H.A.16	Street name plate	2	no	\$199	\$398			
A.H.A.17	Chevron sign	1	no	\$613	\$613			
A.H.A.18	Traffic sign	3	no	\$450	\$1,350			
A.H.A.19	Landscaping Mulch to planter boxes (2m x 2m)	0	m2	\$0	Excl.			
A.H.A.20	Trees (100l)	0	no	\$506	Excl.			
A.H.A.21	Soft landscaping	180	m2	\$0	Excl.			
A.H.A.22	Landscape mix	42	m3	\$90	\$3,780			
A.H.A.23	Rock pitching	8	m2	\$155	\$1,242			
A.H.A.24	Drainage layer	180	m2	\$0	Excl.			
A.H.A.25	Other Allow for connection to SWH		item		\$20,000			
	TOTAL Road Works		Item			\$236,945		
A.H.B	Shared Paths							
A.H.B.1	Earthworks and Site Preparation Site Clearance (based on light shrubs)	150	m2	\$4	\$528			

**Shire of Serpentine Jarrahdale DCP
 DCA 1 - Byford Traditional Infrastructure - Update**

Code	Description	Quantity	UOM	Rate	Subtotal	Sub Section Total	Section Total	Road/ DOS Total
A.H.B.2	Removal of topsoil 150mm and stockpile for later re-use	150	m2	\$2	\$242			
A.H.B.3	Cut to Fill - General Earthworks	45	m3	\$8	\$370			
A.H.B.4	Imported Fill	0	m3	\$30	\$0			
A.H.B.5	Subgrade Preparation Preparation, trim and compact Pathway	150	m2	\$6	\$825			
A.H.B.6	100 thick concrete footpath with broomed finish	150	m2	\$71	\$10,626			
A.H.B.7	Sand fill below concrete footpath (100mm)	150	m2	\$5	\$819			
A.H.B.8	Pram ramp		no	\$670	\$0			
A.H.B.9	Pram ramp including tactile Line Marking and Furniture	2	no	\$973	\$1,945			
A.H.B.10	Traffic sign Landscaping	2	no	\$450	\$900			
A.H.B.11	Mulch to planter boxes (2m x 2m)	0	m2	\$16	Excl.			
A.H.B.12	Trees (100l)	0	no	\$506	Excl.			
A.H.B.13	Soft landscaping	0	m2	\$0	Excl.			
	TOTAL Shared Paths		Item			\$16,255		
A.H.C	Street Lighting							
A.H.C.1	6.5 SOR Street Light Pole incl. all conduits, light cabling, excavation, and related overheads TOTAL Street Lighting	2	no Item	\$3,442	\$6,883		\$6,883	
A.H.D	Road Drainage							
A.H.D.1	450dia reinforced concrete pipe including excavation and backfill	90	m	\$233	\$20,975			
A.H.D.2	Side entry pits including liner, cover, excavation, and associated works TOTAL Road Drainage	2	no Item	\$2,667	\$5,333		\$26,308	
A.H.E	Preliminaries and Project Costs							
A.H.E.1	Traffic Management	5.0000	%	\$286,391	\$14,320			
A.H.E.2	Project Overheads and Preliminaries (Indirect Construction Costs)	15.0000	%	\$286,391	\$42,959			
A.H.E.3	Project Owner's Cost (Planning and Design Costs)	7.5000	%	\$286,391	\$21,479			
A.H.E.4	Risk Contingency Allowance	10.0000	%	\$365,148	\$36,515			
	TOTAL Preliminaries and Project Costs		Item			\$115,272		
	TOTAL South Western Highway (Channelised Intersection)		Item				\$401,663	
A.I	At-Grade Rail Crossing							
A.I.A	Road Works							
A.I.A.1	Earthworks and Site Preparation Site Clearance (based on light shrubs)	1,063	m2	\$4	\$3,742			
A.I.A.2	Removal of topsoil 150mm and stockpile for later re-use	1,063	m2	\$2	\$1,711			
A.I.A.3	Cut to Fill - General Earthworks	532	m3	\$8	\$4,378			
A.I.A.4	Dispose of material off site	532	cum	\$10	\$5,320			
A.I.A.5	Imported Fill	0	m3	\$30	Excl.			
A.I.A.6	Subgrade Preparation Preparation, trim and compact Sub Base and Base Course	1,063	m2	\$6	\$5,847			
A.I.A.7	100mm thick crushed rock base course	740	m2	\$8	\$6,083			
A.I.A.8	250mm thick compacted limestone sub base Road Paving	740	m2	\$17	\$12,935			
A.I.A.9	50mm thick (AC14)	995	m2	\$31	\$31,084			
A.I.A.10	Primer seal	995	m2	\$4	\$4,020			
A.I.A.11	Kerbing Semi Mountable Kerb (SMK) Line Marking and Furniture	65	m	\$30	\$1,927			
A.I.A.12	Line marking	106	m	\$6	\$672			
A.I.A.13	Line marking at crossing	995	sqm	\$10	\$9,950			
A.I.A.14	Traffic sign Landscaping	4	no	\$450	\$1,800			
A.I.A.15	Mulch to planter boxes (2m x 2m)		m2	\$16	Excl.			
A.I.A.16	Trees (100l)		no	\$506	Excl.			
A.I.A.17	Soft landscaping		m2	\$0	Excl.			
A.I.A.18	Landscape mix Other TOTAL Road Works		m3 Item	\$90	Excl.	\$89,469		
A.I.B	Shared Paths							
A.I.B.1	Earthworks and Site Preparation Site Clearance (based on light shrubs)	213	m2	\$4	\$750			
A.I.B.2	Removal of topsoil 150mm and stockpile for later re-use	213	m2	\$2	\$343			
A.I.B.3	Cut to Fill - General Earthworks	107	m3	\$8	\$881			
A.I.B.4	Dispose of material off site	107	m3	\$10	\$1,070			

**Shire of Serpentine Jarrahdale DCP
 DCA 1 - Byford Traditional Infrastructure - Update**

Code	Description	Quantity	UOM	Rate	Subtotal	Sub Section Total	Section Total	Road/ DOS Total
A.I.B.5	Imported Fill	0	m3	\$30	Excl.			
	Subgrade Preparation							
A.I.B.6	Preparation, trim and compact Pathway	213	m2	\$6	\$1,172			
A.I.B.7	100 thick concrete footpath with broomed finish	213	m2	\$71	\$15,089			
A.I.B.8	Sand fill below concrete path (100mm)	213	m2	\$5	\$1,163			
	Pram ramp		no	\$670				
A.I.B.9	Pram ramp including tactile Line Marking and Furniture	4	no	\$973	\$3,891			
A.I.B.10	Traffic sign	4	no	\$450	\$1,800			
	Landscaping							
A.I.B.11	Mulch to planter boxes (2m x 2m)		m2	\$16	Excl.			
A.I.B.12	Trees (100l)		no	\$506	Excl.			
A.I.B.13	Soft landscaping		m2	\$0	Excl.			
	TOTAL Shared Paths		Item			\$26,157		
A.I.C	Street Lighting							
A.I.C.1	6.5 SOR Street Light Pole incl. all conduits, light cabling, excavation, and related overheads (provisional allowance)	4	no	\$3,442	\$13,767			
	TOTAL Street Lighting		Item			\$13,767		
A.I.D	Road Drainage							
A.I.D.1	450dia reinforced concrete pipe including excavation and backfill	115	m	\$233	\$26,801			
A.I.D.2	Side entry pits including liner, cover, excavation, and associated works (provisional allowance)	4	no	\$2,667	\$10,666			
	TOTAL Road Drainage		Item			\$37,467		
A.I.E	Level crossing at Orton Road							
A.I.E.1	Level crossing							
	Allow for new level crossing at Orton Road	1	no	\$632,500	\$632,500			
	TOTAL Level crossing at Orton Road		item			\$632,500		
A.I.F	Preliminaries and Project Costs							
A.I.F.1	Traffic Management	10.0000	%	\$799,360	\$79,936			
A.I.F.2	Project Overheads and Preliminaries (Indirect Construction Costs)	15.0000	%	\$799,360	\$119,904			
A.I.F.3	Project Owner's Cost (Planning and Design Costs)	7.5000	%	\$799,360	\$59,952			
A.I.F.4	Risk Contingency Allowance	10.0000	%	\$1,059,152	\$105,915			
	TOTAL Preliminaries and Project Costs		Item			\$365,707		
	TOTAL At-Grade Rail Crossing		Item				\$1,165,067	
A.J	Utilities							
A.J.A	Power and Lighting (Western Power)							
A.J.A.1	Relocate 920m of Overhead Power underground - Provisional Sum	1	PS	\$1,439,038	\$1,439,038			
	TOTAL Power and Lighting (Western Power)		Item			\$1,439,038		
A.J.B	Communications (NBN / Telstra / Westnet / etc.)							
A.J.B.1	Relocate 920m road length of communications related infrastructure about 10m from the current location - Provisional Sum	1	PS	\$301,521	\$301,521			
	TOTAL Communications (NBN / Telstra / Westnet / etc.)		Item			\$301,521		
A.J.C	Water and Sewer (Water Corporation)							
	No allowance has been made for Water Corporation diversions as we do not see existing valves from our desktop study		Note					
	TOTAL Water and Sewer (Water Corporation)		Item			\$0		
A.J.D	Gas (ATCO)							
	No allowance has been made for ATCO diversions as we do not see existing valves from our desktop study		Note					
	TOTAL Gas (ATCO)		Item			\$0		
A.J.E	Preliminaries and Project Costs							
A.J.E.1	Traffic Management	10.0000	%	\$1,740,559	\$174,056			
A.J.E.2	Project Overheads and Preliminaries (Indirect Construction Costs)	15.0000	%	\$1,740,559	\$261,084			
A.J.E.3	Project Owner's Cost (Planning and Design Costs)	5.0000	%	\$1,740,559	\$87,028			
A.J.E.4	Risk Contingency Allowance	10.0000	%	\$2,262,727	\$226,273			
	TOTAL Preliminaries and Project Costs		Item			\$748,440		
	TOTAL Utilities		Item				\$2,488,999	
A.A.A.7	Estimated Imported Fill	33,521	m3					
A.A.A.5	Total m3 of Cut to Fill - General Earthworks	28,745	m3					

**Shire of Serpentine Jarrahdale DCP
DCA 1 - Byford Traditional Infrastructure - Update**

Code	Description	Quantity	UOM	Rate	Subtotal	Sub Section Total	Section Total	Road/ DOS Total	
	Less Cut to Fill costed	4,776	m3	\$30	\$143,265				
	Total Adjustment for Imported Fill (less Cut to Fill)	<i>See "Imported Fill" sheet at the end of these costings.</i>						\$143,265	
	TOTAL Road - Orton Road New		Item					\$15,677,411	

**Shire of Serpentine Jarrahdale DCP
 DCA 1 - Byford Traditional Infrastructure - Update**

Code	Description	Quantity	UOM	Rate	Subtotal	Sub Section Total	Section Total	Road/ DOS Total
B	ROAD - INDIGO PARKWAY							
B.A	Road Construction							
B.A.A	Road Works							
	Earthworks and Site Preparation							
B.A.A.1	Site Clearance (based on light shrubs)	31,628	m2	\$4	\$111,331			
B.A.A.2	Removal of topsoil 150mm and stockpile for later re-use	31,628	m2	\$2	\$50,921			
B.A.A.3	Cut to Fill - General Earthworks	11,233	m3	\$8	\$92,448			
B.A.A.4	Imported Fill	0	m3	\$30	Excl.			
B.A.A.5	Form swale	5,816	m2	\$4	\$22,043			
	Subgrade Preparation							
B.A.A.6	Preparation, trim and compact Sub Base and Base Course	31,628	m2	\$6	\$173,954			
B.A.A.7	100mm thick crushed rock base course	19,304	m2	\$8	\$158,679			
B.A.A.8	250mm thick compacted limestone sub base	19,304	m2	\$17	\$337,434			
	Road Paving							
B.A.A.9	50mm thick (AC14)	15,814	m2	\$31	\$494,029			
B.A.A.10	Extra over for 2% red oxide	4,362	m2	\$6	\$27,175			
B.A.A.11	Primer seal	15,814	m2	\$4	\$63,889			
	Kerbing							
B.A.A.12	Mountable Kerb (MK)	2,908	m	\$25	\$73,980			
B.A.A.13	Kerb openings	146	no	\$350	\$51,100			
B.A.A.14	Semi Mountable Kerb (SMK)	2,908	m	\$30	\$86,222			
	Barrier Kerb (BK)							
B.A.A.15	Concrete flush edge beam	646	m	\$67	\$43,314			
	Line Marking and Furniture							
B.A.A.16	Line marking	2,908	m	\$6	\$18,437			
	Landscaping							
B.A.A.17	Mulch to planter boxes (2m x 2m)	0	m2	\$16	Excl.			
B.A.A.18	Trees (100l)	0	no	\$506	Excl.			
B.A.A.19	Soft landscaping	8,245	m2	\$0	Excl.			
B.A.A.20	Landscape mix	2,062	m3	\$90	\$185,580			
B.A.A.21	Rock pitching	485	m2	\$155	\$75,296			
B.A.A.22	Drainage layer	8,723	m2	\$0	Excl.			
	Other							
B.A.A.23	Allow for tie in to existing Indigo Parkway		item		\$10,000			
	TOTAL Road Works		Item			\$2,075,831		
B.A.B	Shared Paths							
	Earthworks and Site Preparation							
B.A.B.1	Site Clearance (based on light shrubs)	8,445	m2	\$4	\$29,726			
B.A.B.2	Removal of topsoil 150mm and stockpile for later re-use	8,445	m2	\$2	\$13,596			
B.A.B.3	Cut to Fill - General Earthworks	2,534	m3	\$8	\$20,855			
B.A.B.4	Imported Fill	0	m3	\$30	\$0			
	Subgrade Preparation							
B.A.B.5	Preparation, trim and compact Pathway	8,445	m2	\$6	\$46,448			
B.A.B.6	100 thick concrete footpath with broomed finish	8,445	m2	\$71	\$598,244			
B.A.B.7	Sand fill below concrete footpath (100mm)	8,445	m2	\$5	\$46,110			
B.A.B.8	Pram ramp	0	no	\$670	Included with intersections			
	TOTAL Shared Paths		Item			\$754,979		
B.A.C	Street Lighting							
B.A.C.1	6.5 SOR Street Light Pole incl. all conduits, light cabling, excavation, and related overheads	20	no	\$3,442	\$68,834			
B.A.C.2	6.5 DOR Street Light Pole incl. all conduits, light cabling, excavation, and related overheads	36	no	\$5,111	\$183,995			
	TOTAL Street Lighting		Item			\$252,830		
B.A.D	Road Drainage							
B.A.D.1	450dia reinforced concrete pipe including excavation and backfill	1,244	m	\$233	\$289,914			
B.A.D.2	150dia slotted PVC subsoil drainage pipe including aggregate, geofabric and porous sand	1,244	m	\$189	\$234,618			
B.A.D.3	Side entry pits including liner, cover, excavation, and associated works	0	no	\$2,667	CESP measured at intersections, RAB's			
B.A.D.4	Raised gully / bubble up pits including liner, cover, grate, excavation, rock pitching, and associated works	42	no	\$3,021	\$126,864			
	TOTAL Road Drainage		Item			\$651,397		

**Shire of Serpentine Jarrahdale DCP
 DCA 1 - Byford Traditional Infrastructure - Update**

Code	Description	Quantity	UOM	Rate	Subtotal	Sub Section Total	Section Total	Road/ DOS Total
<u>B.A.E</u>	<u>Preliminaries and Project Costs</u>							
B.A.E.1	Traffic Management	5.0000	%	\$3,735,036	\$18,675			
B.A.E.2	Project Overheads and Preliminaries (Indirect Construction Costs)	15.0000	%	\$3,735,036	\$560,255			
B.A.E.3	Project Owner's Cost (Planning and Design Costs)	7.5000	%	\$3,735,036	\$280,128			
B.A.E.4	Risk Contingency Allowance	10.0000	%	\$4,594,094	\$459,409			
	TOTAL Preliminaries and Project Costs		Item			\$1,318,468		
	TOTAL Road Construction						\$5,053,504	
<u>B.B</u>	<u>Ballawarra Avenue (Roundabout)</u>							
<u>B.B.A</u>	<u>Road Works</u>							
B.B.A.1	Earthworks and Site Preparation Site Clearance (based on light shrubs)	368	m2	\$4	\$1,295			
B.B.A.2	Removal of topsoil 150mm and stockpile for later re-use	368	m2	\$2	\$592			
B.B.A.3	Cut to Fill - General Earthworks	111	m3	\$8	\$914			
B.B.A.4	Imported Fill	0	m3	\$30	Excl.			
B.B.A.5	Subgrade Preparation Preparation, trim and compact Sub Base and Base Course	368	m2	\$6	\$2,024			
B.B.A.6	100mm thick crushed rock base course	198	m2	\$8	\$1,628			
B.B.A.7	250mm thick compacted limestone sub base	198	m2	\$17	\$3,461			
B.B.A.8	Road Paving 50mm thick (AC14)	156	m2	\$31	\$4,873			
B.B.A.9	Primer seal	156	m2	\$4	\$630			
B.B.A.10	Brick Paving 80 thick brick pavers	60	m2	\$100	\$6,006			
B.B.A.11	30 thick compacted sand bed	60	m2	\$2	\$98			
B.B.A.12	170mm thick compacted limestone	60	m2	\$11	\$682			
B.B.A.13	Kerbing Semi Mountable Kerb (SMK)	71	m	\$30	\$2,105			
B.B.A.14	Line Marking and Furniture Line marking	18	m	\$6	\$114			
B.B.A.15	Traffic sign	1	no	\$450	\$450			
B.B.A.16	Landscaping Mulch to planter boxes (2m x 2m)	0	m2	\$16	Excl.			
B.B.A.17	Trees (100l)	0	no	\$506	Excl.			
B.B.A.18	Soft landscaping	227	m2	\$0	Excl.			
B.B.A.19	Landscape mix	57	m3	\$90	\$5,130			
B.B.A.20	Other Remove existing SMK	30	m	\$10	\$300			
B.B.A.21	Allow for connection to existing RAB asphalt		item		\$5,000			
B.B.A.22	Allow for connection to existing footpath		item		\$2,500			
	TOTAL Road Works		Item			\$37,804		
<u>B.B.B</u>	<u>Shared Paths</u>							
B.B.B.1	Earthworks and Site Preparation Site Clearance (based on light shrubs)	178	m2	\$4	\$627			
B.B.B.2	Removal of topsoil 150mm and stockpile for later re-use	178	m2	\$2	\$287			
B.B.B.3	Cut to Fill - General Earthworks	54	m3	\$8	\$444			
B.B.B.4	Imported Fill	0	m3	\$30	Excl.			
B.B.B.5	Subgrade Preparation Preparation, trim and compact Pathway	178	m2	\$6	\$979			
B.B.B.6	100 thick concrete footpath with broomed finish	178	m2	\$71	\$12,610			
B.B.B.7	Sand fill below concrete path (100mm)	178	m2	\$5	\$972			
B.B.B.8	Pram ramp	0	no	\$670	\$0			
B.B.B.9	Pram ramp including tactile	2	no	\$973	\$1,945			
B.B.B.10	Tactile paving	4	m2	\$325	\$1,300			
B.B.B.11	Line Marking and Furniture Traffic sign	2	no	\$450	\$900			
B.B.B.12	Landscaping Mulch to planter boxes (2m x 2m)	0	m2	\$16	Excl.			
B.B.B.13	Trees (100l)	0	no	\$506	Excl.			
B.B.B.14	Soft landscaping	0	m2	\$0	Excl.			
	TOTAL Shared Paths		Item			\$20,063		
<u>B.B.C</u>	<u>Street Lighting</u>							
B.B.C.1	6.5 DOR Street Light Pole incl. all conduits, light cabling, excavation, and related overheads (existing ROB, allowed for additional DOR)	1	no	\$5,111	\$5,111			
	TOTAL Street Lighting		Item			\$5,111		
<u>B.B.D</u>	<u>Road Drainage</u>							

**Shire of Serpentine Jarrahdale DCP
 DCA 1 - Byford Traditional Infrastructure - Update**

Code	Description	Quantity	UOM	Rate	Subtotal	Sub Section Total	Section Total	Road/ DOS Total
B.B.D.1	450dia reinforced concrete pipe including excavation and backfill (for new SEP's)	20	m	\$233	\$4,661			
B.B.D.2	150dia slotted PVC subsoil drainage pipe including aggregate, geofabric and porous sand	0	m	\$189	\$0			
B.B.D.3	Side entry pits including liner, cover, excavation, and associated works at new turning points	2	no	\$2,667	\$5,333			
	TOTAL Road Drainage		Item			\$9,994		
B.B.E	Preliminaries and Project Costs							
B.B.E.1	Traffic Management	5.0000	%	\$72,972	\$3,649			
B.B.E.2	Project Overheads and Preliminaries (Indirect Construction Costs)	15.0000	%	\$72,972	\$10,946			
B.B.E.3	Project Owner's Cost (Planning and Design Costs)	7.5000	%	\$72,972	\$5,473			
B.B.E.4	Risk Contingency Allowance	10.0000	%	\$93,039	\$9,304			
	TOTAL Preliminaries and Project Costs		Item			\$29,371		
	TOTAL Ballawarra Avenue (Roundabout)						\$102,343	
B.C	Briggs Road (Left in left out intersection)							
B.C.A	Road Works							
	Earthworks and Site Preparation				\$0			
B.C.A.1	Site Clearance (based on light shrubs)	1,931	m2	\$4	\$6,797			
B.C.A.2	Removal of topsoil 150mm and stockpile for later re-use	1,931	m2	\$2	\$3,109			
B.C.A.3	Cut to Fill - General Earthworks	580	m3	\$8	\$4,773			
B.C.A.4	Imported Fill	966	m3	\$30	\$28,980			
	Subgrade Preparation							
B.C.A.5	Preparation, trim and compact	1,931	m2	\$6	\$10,621			
	Sub Base and Base Course				\$0			
B.C.A.6	100mm thick crushed rock base course	1,572	m2	\$8	\$12,922			
B.C.A.7	250mm thick compacted limestone sub base	1,572	m2	\$17	\$27,479			
	Road Paving				\$0			
B.C.A.8	50mm thick (AC14)	1,031	m2	\$31	\$32,208			
B.C.A.9	Extra over for 2% red oxide	180	m2	\$6	\$1,121			
B.C.A.10	Primer seal	1,031	m2	\$4	\$4,165			
	Kerbing							
B.C.A.11	Mountable Kerb (MK)	120	m	\$25	\$3,053			
B.C.A.12	Semi Mountable Kerb (SMK)	141	m	\$30	\$4,181			
	Line Marking and Furniture							
B.C.A.13	Line marking	160	m	\$6	\$1,014			
B.C.A.14	Street sign post	2	no	\$122	\$244			
B.C.A.15	Street name plate	4	no	\$199	\$795			
B.C.A.16	Traffic sign	4	no	\$450	\$1,800			
	Landscaping							
B.C.A.17	Soft landscaping	360	m2	\$0	Excl.			
B.C.A.18	Landscape mix	83	m3	\$90	\$7,470			
B.C.A.19	Rock pitching	15	m2	\$155	\$2,329			
B.C.A.20	Drainage layer	360	m2	\$0	Excl.			
	Other							
B.C.A.21	Allow for connection to existing Briggs Road		item		\$10,000			
	TOTAL Road Works		Item			\$163,061		
B.C.B	Shared Paths							
	Earthworks and Site Preparation							
B.C.B.1	Site Clearance (based on light shrubs)	300	m2	\$4	\$1,056			
B.C.B.2	Removal of topsoil 150mm and stockpile for later re-use	300	m2	\$2	\$483			
B.C.B.3	Cut to Fill - General Earthworks	90	m3	\$8	\$741			
B.C.B.4	Imported Fill	150	m3	\$30	\$4,500			
	Subgrade Preparation							
B.C.B.5	Preparation, trim and compact	300	m2	\$6	\$1,650			
	Pathway							
B.C.B.6	100 thick concrete footpath with broomed finish	300	m2	\$71	\$21,252			
B.C.B.7	Sand fill below concrete footpath (100mm)	300	m2	\$5	\$1,638			
B.C.B.8	Pram ramp	0	no	\$670	\$0			
B.C.B.9	Pram ramp including tactile	4	no	\$973	\$3,891			
	Line Marking and Furniture							
B.C.B.10	Traffic sign	4	no	\$450	\$1,800			
	TOTAL Shared Paths		Item			\$37,010		
B.C.C	Street Lighting							
B.C.C.1	6.5 SOR Street Light Pole incl. all conduits, light cabling, excavation, and related overheads	4	no	\$3,442	\$13,767			
	TOTAL Street Lighting		Item			\$13,767		
B.C.D	Road Drainage							
B.C.D.1	450dia reinforced concrete pipe including excavation and backfill	115	m	\$233	\$26,801			

**Shire of Serpentine Jarrahdale DCP
 DCA 1 - Byford Traditional Infrastructure - Update**

Code	Description	Quantity	UOM	Rate	Subtotal	Sub Section Total	Section Total	Road/ DOS Total
B.C.D.2	Side entry pits including liner, cover, excavation, and associated works	4	no	\$2,667	\$10,666			
	TOTAL Road Drainage		Item			\$37,467		
B.C.E	Preliminaries and Project Costs							
B.C.E.1	Traffic Management	5.0000	%	\$251,305	\$12,565			
B.C.E.2	Project Overheads and Preliminaries (Indirect Construction Costs)	15.0000	%	\$251,305	\$37,696			
B.C.E.3	Project Owner's Cost (Planning and Design Costs)	7.5000	%	\$251,305	\$18,848			
B.C.E.4	Risk Contingency Allowance	10.0000	%	\$320,414	\$32,041			
	TOTAL Preliminaries and Project Costs		Item			\$101,150		
	TOTAL Briggs Road (Left in left out intersection)						\$352,455	
B.D	Caraway (Roundabout)							
B.D.A	Road Works							
	Earthworks and Site Preparation							
B.D.A.1	Site Clearance (based on light shrubs)	2,504	m2	\$4	\$8,814			
B.D.A.2	Removal of topsoil 150mm and stockpile for later re-use	2,504	m2	\$2	\$4,031			
B.D.A.3	Cut to Fill - General Earthworks	752	m3	\$8	\$6,189			
B.D.A.4	Detailed excavation - mill and profile	0	m3	\$19		Measured elsewhere		
B.D.A.5	Imported Fill	1,252	m3	\$30	\$37,560			
	Subgrade Preparation							
B.D.A.6	Preparation, trim and compact Sub Base and Base Course	2,504	m2	\$6	\$13,772			
B.D.A.7	100mm thick crushed rock base course	1,983	m2	\$8	\$16,300			
B.D.A.8	200mm thick compacted limestone sub base		m2	\$14	\$0			
B.D.A.9	250mm thick compacted limestone sub base	1,983	m2	\$17	\$34,663			
	Road Paving							
	30mm thick (AC10)		m2	\$18				
B.D.A.10	50mm thick (AC14)	1,518	m2	\$31	\$47,422			
	Extra over for 2% red oxide		m2	\$6				
B.D.A.11	Primer seal	1,518	m2	\$4	\$6,133			
	Brick Paving		Item		\$0			
B.D.A.12	80 thick brick pavers	333	m2	\$100	\$33,333			
B.D.A.13	30 thick compacted sand bed	180	m2	\$2	\$295			
B.D.A.14	40 thick compacted sand bed (RAB)	153	m2	\$2	\$335			
B.D.A.15	170mm thick compacted limestone	180	m2	\$11	\$2,047			
B.D.A.16	250mm thick compacted limestone sub base	153	m2	\$17	\$2,674			
	Concrete Paving							
B.D.A.17	100 thick concrete paving with broomed finish	0	m2	\$71	\$0			
B.D.A.18	Sand fill below concrete paving (100mm)	0	m2	\$5	\$0			
	Kerbing							
B.D.A.19	Mountable Kerb (MK)	70	m	\$25	\$1,781			
B.D.A.20	Semi Mountable Kerb (SMK)	143	m	\$30	\$4,240			
B.D.A.21	Barrier Kerb (BK)	54	m	\$53	\$2,869			
B.D.A.22	Concrete flush edge beam	0	m	\$67	\$0			
	Line Marking and Furniture							
B.D.A.23	Line marking	53	m	\$6	\$336			
B.D.A.24	Street sign post	1	no	\$122	\$122			
B.D.A.25	Street name plate	2	no	\$199	\$398			
B.D.A.26	Chevron sign	1	no	\$613	\$613			
B.D.A.27	Traffic sign	3	no	\$450	\$1,350			
	Landscaping				\$0			
B.D.A.28	Mulch to planter boxes (2m x 2m)	0	m2	\$16	\$0			
B.D.A.29	Trees (100l)	0	no	\$506	\$0			
B.D.A.30	Soft landscaping	227	m2	\$0	\$0			
B.D.A.31	Landscape mix	57	m3	\$90	\$5,130			
	Other							
B.D.A.32	Allow for connection to existing Caraway Avenue		item		\$5,000			
	TOTAL Road Works		Item			\$235,407		
B.D.B	Shared Paths							
	Earthworks and Site Preparation							
B.D.B.1	Site Clearance (based on light shrubs)	356	m2	\$4	\$1,253			
B.D.B.2	Removal of topsoil 150mm and stockpile for later re-use	356	m2	\$2	\$573			
B.D.B.3	Cut to Fill - General Earthworks	107	m3	\$8	\$881			
	Detailed excavation - mill and profile		m3	\$19				
B.D.B.4	Imported Fill	178	m3	\$30	\$5,340			
	Subgrade Preparation							
B.D.B.5	Preparation, trim and compact Pathway	356	m2	\$6	\$1,958			
B.D.B.6	100 thick concrete footpath with broomed finish	356	m2	\$71	\$25,219			
B.D.B.7	Sand fill below concrete path (100mm)	356	m2	\$5	\$1,944			

**Shire of Serpentine Jarrahdale DCP
 DCA 1 - Byford Traditional Infrastructure - Update**

Code	Description	Quantity	UOM	Rate	Subtotal	Sub Section Total	Section Total	Road/ DOS Total
	Pram ramp		no	\$670				
B.D.B.8	Pram ramp including tactile	6	no	\$973	\$5,836			
B.D.B.9	Tactile paving	10	m2	\$325	\$3,250			
	Line Marking and Furniture							
B.D.B.10	Line marking	0	m	\$6	\$0			
B.D.B.11	Street sign post	0	no	\$122	\$0			
B.D.B.12	Street name plate	0	no	\$199	\$0			
B.D.B.13	Chevron sign	0	no	\$613	\$0			
B.D.B.14	Traffic sign	2	no	\$450	\$900			
	Landscaping							
B.D.B.15	Mulch to planter boxes (2m x 2m)	0	m2	\$16	\$0			
B.D.B.16	Trees (100l)	0	no	\$506	\$0			
B.D.B.17	Soft landscaping	0	m2	\$0	\$0			
	TOTAL Shared Paths		Item			\$47,154		
B.D.C	Street Lighting							
B.D.C.1	6.5 SOR Street Light Pole incl. all conduits, light cabling, excavation, and related overheads	4	no	\$3,442	\$13,767			
	TOTAL Street Lighting		Item			\$13,767		
B.D.D	Road Drainage							
B.D.D.1	450dia reinforced concrete pipe including excavation and backfill	130	m	\$233	\$30,297			
B.D.D.2	150dia slotted PVC subsoil drainage pipe including aggregate, geofabric and porous sand	0	m	\$189	\$0			
B.D.D.3	Side entry pits including liner, cover, excavation, and associated works	4	no	\$2,667	\$10,666			
	Drainage layer measured with landscaping		Note					
	TOTAL Road Drainage		Item			\$40,963		
B.D.E	Preliminaries and Project Costs							
B.D.E.1	Traffic Management	5.0000	%	\$337,290	\$16,865			
B.D.E.2	Project Overheads and Preliminaries (Indirect Construction Costs)	15.0000	%	\$337,290	\$50,594			
B.D.E.3	Project Owner's Cost (Planning and Design Costs)	7.5000	%	\$337,290	\$25,297			
B.D.E.4	Risk Contingency Allowance	10.0000	%	\$430,045	\$43,005			
	TOTAL Preliminaries and Project Costs		Item			\$135,759		
	TOTAL Caraway (Roundabout)						\$473,050	
B.E	Portwine Avenue (Left in left out intersection)							
B.E.A	Road Works							
	Earthworks and Site Preparation				\$0			
B.E.A.1	Site Clearance (based on light shrubs)	816	m2	\$4	\$2,872			
B.E.A.2	Removal of topsoil 150mm and stockpile for later re-use	816	m2	\$2	\$1,314			
B.E.A.3	Cut to Fill - General Earthworks	245	m3	\$8	\$2,016			
B.E.A.4	Imported Fill	408	m3	\$30	\$12,240			
	Subgrade Preparation							
B.E.A.5	Preparation, trim and compact	816	m2	\$6	\$4,488			
	Sub Base and Base Course				\$0			
B.E.A.6	100mm thick crushed rock base course	1,041	m2	\$8	\$8,557			
B.E.A.7	250mm thick compacted limestone sub base	1,041	m2	\$17	\$18,197			
	Road Paving				\$0			
B.E.A.8	50mm thick (AC14)	516	m2	\$31	\$16,120			
B.E.A.9	Extra over for 2% red oxide	90	m2	\$6	\$561			
B.E.A.10	Primer seal	516	m2	\$4	\$2,085			
	Kerbing							
B.E.A.11	Mountable Kerb (MK)	60	m	\$25	\$1,526			
B.E.A.12	Semi Mountable Kerb (SMK)	71	m	\$30	\$2,105			
	Line Marking and Furniture							
B.E.A.13	Line marking	80	m	\$6	\$507			
B.E.A.14	Street sign post	1	no	\$122	\$122			
B.E.A.15	Street name plate	2	no	\$199	\$398			
B.E.A.16	Traffic sign	2	no	\$450	\$900			
	Landscaping							
B.E.A.17	Soft landscaping	180	m2	\$0	Excl.			
B.E.A.18	Landscape mix	42	m3	\$90	\$3,780			
B.E.A.19	Rock pitching	8	m2	\$155	\$1,242			
B.E.A.20	Drainage layer	180	m2	\$0	Excl.			
	TOTAL Road Works		Item			\$79,030		
B.E.B	Shared Paths							
	Earthworks and Site Preparation							
B.E.B.1	Site Clearance (based on light shrubs)	150	m2	\$4	\$528			
B.E.B.2	Removal of topsoil 150mm and stockpile for later re-use	150	m2	\$2	\$242			

**Shire of Serpentine Jarrahdale DCP
DCA 1 - Byford Traditional Infrastructure - Update**

Code	Description	Quantity	UOM	Rate	Subtotal	Sub Section Total	Section Total	Road/ DOS Total
B.E.B.3	Cut to Fill - General Earthworks	45	m3	\$8	\$370			
B.E.B.4	Imported Fill	0	m3	\$30	Excl.			
B.E.B.5	Subgrade Preparation Preparation, trim and compact Pathway	150	m2	\$6	\$825			
B.E.B.6	100 thick concrete footpath with broomed finish	150	m2	\$71	\$10,626			
B.E.B.7	Sand fill below concrete footpath (100mm)	150	m2	\$5	\$819			
B.E.B.8	Pram ramp	0	no	\$670	\$0			
B.E.B.9	Pram ramp including tactile Line Marking and Furniture	2	no	\$973	\$1,945			
B.E.B.10	Traffic sign TOTAL Shared Paths	2	no Item	\$450	\$900		\$16,255	
B.E.C	Street Lighting							
B.E.C.1	6.5 SOR Street Light Pole incl. all conduits, light cabling, excavation, and related overheads TOTAL Street Lighting	2	no Item	\$3,442	\$6,883		\$6,883	
B.E.D	Road Drainage							
B.E.D.1	450dia reinforced concrete pipe including excavation and backfill	65	m	\$233	\$15,148			
B.E.D.2	Side entry pits including liner, cover, excavation, and associated works TOTAL Road Drainage	2	no Item	\$2,667	\$5,333		\$20,481	
B.E.E	Preliminaries and Project Costs							
B.E.E.1	Traffic Management	5.0000	%	\$122,649	\$6,132			
B.E.E.2	Project Overheads and Preliminaries (Indirect Construction Costs)	15.0000	%	\$122,649	\$18,397			
B.E.E.3	Project Owner's Cost (Planning and Design Costs)	7.5000	%	\$122,649	\$9,199			
B.E.E.4	Risk Contingency Allowance TOTAL Preliminaries and Project Costs	10.0000	% Item	\$156,378	\$15,638		\$49,366	
	TOTAL Portwine Avenue (Left in left out intersection)						\$172,016	
B.F	Larsen Road (Roundabout)							
B.F.A	Road Works							
B.F.A.1	Earthworks and Site Preparation Site Clearance (based on light shrubs)	2,728	m2	\$4	\$9,603			
B.F.A.2	Removal of topsoil 150mm and stockpile for later re-use	2,728	m2	\$2	\$4,392			
B.F.A.3	Cut to Fill - General Earthworks	819	m3	\$8	\$6,740			
B.F.A.4	Detailed excavation - mill and profile	900	m2	\$19	\$17,082			
B.F.A.5	Imported Fill Subgrade Preparation	1,316	m3	\$30	\$39,480			
B.F.A.6	Preparation, trim and compact Sub Base and Base Course	2,728	m2	\$6	\$15,004			
B.F.A.7	100mm thick crushed rock base course	2,139	m2	\$8	\$17,583			
B.F.A.8	250mm thick compacted limestone sub base Road Paving	2,139	m2	\$17	\$37,390			
B.F.A.9	50mm thick (AC14)	1,672	m2	\$31	\$52,233			
B.F.A.10	Primer seal Brick Paving	1,672	m2 Item	\$4	\$6,755			\$0
B.F.A.11	80 thick brick pavers	393	m2	\$100	\$39,339			
B.F.A.12	30 thick compacted sand bed	240	m2	\$2	\$394			
B.F.A.13	40 thick compacted sand bed (RAB)	153	m2	\$2	\$335			
B.F.A.14	170mm thick compacted limestone	240	m2	\$11	\$2,729			
B.F.A.15	250mm thick compacted limestone sub base Concrete Paving	153	m2	\$17	\$2,674			
B.F.A.16	100 thick concrete paving with broomed finish	0	m2	\$71	\$0			
B.F.A.17	Sand fill below concrete paving (100mm) Kerbing	0	m2	\$5	\$0			
B.F.A.18	Mountable Kerb (MK)	70	m	\$25	\$1,781			
B.F.A.19	Semi Mountable Kerb (SMK)	146	m	\$30	\$4,329			
B.F.A.20	Barrier Kerb (BK) Concrete flush edge beam Line Marking and Furniture	54	m m	\$53 \$67	\$2,869			
B.F.A.21	Line marking	70	m	\$6	\$444			
B.F.A.22	Street sign post	1	no	\$122	\$122			
B.F.A.23	Street name plate	2	no	\$199	\$398			
B.F.A.24	Chevron sign	0	no	\$613	\$0			
B.F.A.25	Traffic sign Landscaping	4	no	\$450	\$1,800			\$0
B.F.A.26	Mulch to planter boxes (2m x 2m)	0	m2	\$16	\$0			
B.F.A.27	Trees (100l)	0	no	\$506	\$0			
B.F.A.28	Soft landscaping	227	m2	\$0	\$0			
B.F.A.29	Landscape mix	57	m3	\$90	\$5,130			

**Shire of Serpentine Jarrahdale DCP
DCA 1 - Byford Traditional Infrastructure - Update**

Code	Description	Quantity	UOM	Rate	Subtotal	Sub Section Total	Section Total	Road/ DOS Total
B.F.A.30	Other Allow for connection to existing Larsen Road		item		\$15,000			
	TOTAL Road Works		Item			\$283,605		
B.F.B	Shared Paths							
	Earthworks and Site Preparation							
B.F.B.1	Site Clearance (based on light shrubs)	364	m2	\$4	\$1,281			
B.F.B.2	Removal of topsoil 150mm and stockpile for later re-use	364	m2	\$2	\$586			
B.F.B.3	Cut to Fill - General Earthworks	110	m3	\$8	\$905			
	Detailed excavation - mill and profile		m3	\$19				
B.F.B.4	Imported Fill	182	m3	\$30	\$5,460			
	Subgrade Preparation							
B.F.B.5	Preparation, trim and compact	364	m2	\$6	\$2,002			
	Pathway							
B.F.B.6	100 thick concrete footpath with broomed finish	364	m2	\$71	\$25,786			
B.F.B.7	Sand fill below concrete path (100mm)	364	m2	\$5	\$1,987			
	Pram ramp		no	\$670				
B.F.B.8	Pram ramp including tactile	8	no	\$973	\$7,781			
B.F.B.9	Tactile paving	13	m2	\$325	\$4,225			
	Line Marking and Furniture							
B.F.B.10	Line marking	0	m	\$6	\$0			
B.F.B.11	Street sign post	0	no	\$122	\$0			
B.F.B.12	Street name plate	0	no	\$199	\$0			
B.F.B.13	Chevron sign	0	no	\$613	\$0			
B.F.B.14	Traffic sign	4	no	\$450	\$1,800			
	Landscaping							
B.F.B.15	Mulch to planter boxes (2m x 2m)	0	m2	\$16	\$0			
B.F.B.16	Trees (100l)	0	no	\$506	\$0			
B.F.B.17	Soft landscaping	0	m2	\$0	\$0			
	TOTAL Shared Paths		Item			\$51,814		
B.F.C	Street Lighting							
B.F.C.1	6.5 SOR Street Light Pole incl. all conduits, light cabling, excavation, and related overheads	4	no	\$3,442	\$13,767			
	TOTAL Street Lighting		Item			\$13,767		
B.F.D	Road Drainage							
B.F.D.1	450dia reinforced concrete pipe including excavation and backfill	130	m	\$233	\$30,297			
B.F.D.2	150dia slotted PVC subsoil drainage pipe including aggregate, geofabric and porous sand	0	m	\$189	\$0			
B.F.D.3	Side entry pits including liner, cover, excavation, and associated works	6	no	\$2,667	\$15,999			
	Drainage layer measured with landscaping		Note					
	TOTAL Road Drainage		Item			\$46,296		
B.F.E	Preliminaries and Project Costs							
B.F.E.1	Traffic Management	5.0000	%	\$395,481	\$19,774			
B.F.E.2	Project Overheads and Preliminaries (Indirect Construction Costs)	15.0000	%	\$395,481	\$59,322			
B.F.E.3	Project Owner's Cost (Planning and Design Costs)	7.5000	%	\$395,481	\$29,661			
B.F.E.4	Risk Contingency Allowance	10.0000	%	\$504,239	\$50,424			
	TOTAL Preliminaries and Project Costs		Item			\$159,181		
	TOTAL Larsen Road (Roundabout)						\$554,663	
B.G	Utilities							
B.G.A	Power and Lighting (Western Power)							
B.G.A.1	Relocate 228m of inground Power underground about 20m - Provisional Sum	1	PS	\$206,441	\$206,441			
B.G.A.2	Relocate one Overhead Power Pole on Thomas Road - Provisional Sum	1	PS	\$46,501	\$46,501			
B.G.A.3	Relocate two Overhead Power Poles on Larsen Road - Provisional Sum	1	PS	\$93,002	\$93,002			
	TOTAL Power and Lighting (Western Power)		Item			\$345,944		
B.G.B	Communications (NBN / Telstra / Westnet / etc.)							
B.G.B.1	Relocate 228m road length of communications related infrastructure about 20m from the current location - Provisional Sum	1	PS	\$112,098	\$112,098			
B.G.B.2	Relocate approximately 60m of communications related infrastructure about 20m from the current location at Larsen Road - Provisional Sum	1	PS	\$71,673	\$71,673			
	TOTAL Communications (NBN / Telstra / Westnet / etc.)		Item			\$183,771		
B.G.C	Water and Sewer (Water Corporation)							

**Shire of Serpentine Jarrahdale DCP
 DCA 1 - Byford Traditional Infrastructure - Update**

Code	Description	Quantity	UOM	Rate	Subtotal	Sub Section Total	Section Total	Road/ DOS Total
B.G.C.1	Relocate 228m road length of water and sewer about 20m from the current location - Provisional Sum	1	PS	\$229,023	\$229,023			
B.G.C.2	Relocate 60m of water and sewer about 20m from the current location and relocate existing mahole at Larsen Road - Provisional Sum	1	PS	\$107,260	\$107,260			
	TOTAL Water and Sewer (Water Corporation)		Item			\$336,282		
B.G.D	<u>Gas (ATCO)</u>							
	No allowance has been made for ATCO diversions as we do not see existing valves from our desktop study		Note					
	TOTAL Gas (ATCO)		Item			\$0		
B.G.E	<u>Preliminaries and Project Costs</u>							
B.G.E.1	Traffic Management (Road not constructed but may require minor management at Thomas Road)	5.0000	%	\$865,997	\$43,300			
B.G.E.2	Project Overheads and Preliminaries (Indirect Construction Costs)	15.0000	%	\$865,997	\$129,900			
B.G.E.3	Project Owner's Cost (Planning and Design Costs)	5.0000	%	\$865,997	\$43,300			
B.G.E.4	Risk Contingency Allowance	10.0000	%	\$1,082,497	\$108,250			
	TOTAL Preliminaries and Project Costs		Item			\$324,749		
	TOTAL Utilities						\$1,190,746	
A.A.A.7	Estimated Imported Fill	7,487	m3					
A.A.A.5	Total m3 of Cut to Fill - General Earthworks	16,680	m3					
	Less Cut to Fill costed	0	m3	\$30	\$0			
	Total Adjustment for Imported Fill (less Cut to Fill)						\$0	
				<i>See "Imported Fill" sheet at the end of these costings.</i>				
	TOTAL Road - Indigo Parkway		Item					\$7,898,777

**Shire of Serpentine Jarrahdale DCP
 DCA 1 - Byford Traditional Infrastructure - Update**

Code	Description	Quantity	UOM	Rate	Subtotal	Sub Section Total	Section Total	Road/ DOS Total
C	ROAD – DOLEY ROAD							
C.A	Road Construction							
C.A.A	Road Works							
	Earthworks and Site Preparation				\$0			
C.A.A.1	Site Clearance (based on light shrubs)	18,431	m2	\$4	\$64,877			
C.A.A.2	Extra over for removal of trees		item		\$20,704			
C.A.A.3	Removal of topsoil 150mm and stockpile for later re-use	18,431	m2	\$2	\$29,674			
C.A.A.4	Cut to Fill - General Earthworks	6,956	m3	\$8	\$57,248			
C.A.A.5	Imported Fill	0	m3	\$30	Excl			
C.A.A.6	Form swale	4,757	m2	\$4	\$18,029			
	Subgrade Preparation							
C.A.A.7	Preparation, trim and compact Sub Base and Base Course	18,431	m2	\$6	\$101,371			
C.A.A.8	100mm thick crushed rock base course	10,345	m2	\$8	\$85,036			
C.A.A.9	200mm thick compacted limestone sub base	10,345	m2	\$14	\$144,727			
	Road Paving							
C.A.A.10	30mm thick (AC10)	8,918	m2	\$18	\$162,218			
C.A.A.11	Extra over for 2% red oxide	8,918	m2	\$6	\$55,559			
C.A.A.12	Primer seal	8,918	m2	\$4	\$36,029			
	Kerbing				\$0			
C.A.A.13	Mountable Kerb (MK)	2,379	m	\$25	\$60,522			
C.A.A.14	Kerb openings	67	no	\$350	\$23,450			
C.A.A.15	Semi Mountable Kerb (SMK)	1,336	m	\$30	\$39,612			
	Barrier Kerb (BK)		m	\$53				
C.A.A.16	Concrete flush edge beam	1,190	m	\$67	\$79,790			
	Line Marking and Furniture							
C.A.A.17	Line marking	2,379	m	\$6	\$15,083			
	Landscaping							
C.A.A.18	Soft landscaping	6,738	m2	\$0	Excl.			
C.A.A.19	Landscape mix	1,685	m3	\$90	\$151,650			
C.A.A.20	Rock pitching	397	m2	\$155	\$61,634			
C.A.A.21	Drainage layer	7,135	m2	\$0	Excl.			
	Other							
C.A.A.22	Allow for connection to existing Mead RAB asphalt		item		\$5,000			
C.A.A.23	Remove existing median and kerbing		item		\$5,000			
C.A.A.24	Allow for making good existing asphalt as required		item		\$20,000			
	TOTAL Road Works		Item			\$1,237,212		
C.A.B	Shared Paths							
	Earthworks and Site Preparation							
C.A.B.1	Site Clearance (based on light shrubs)	2,973	m2	\$4	\$10,465			
C.A.B.2	Removal of topsoil 150mm and stockpile for later re-use	2,973	m2	\$2	\$4,787			
C.A.B.3	Cut to Fill - General Earthworks	892	m3	\$8	\$7,341			
C.A.B.4	Imported Fill	0	m3	\$30	Excl.			
	Subgrade Preparation							
C.A.B.5	Preparation, trim and compact Pathway	2,973	m2	\$6	\$16,352			
C.A.B.6	100 thick concrete footpath with broomed finish	2,973	m2	\$71	\$210,607			
C.A.B.7	Sand fill below concrete footpath (100mm)	2,973	m2	\$5	\$16,233			
C.A.B.8	Pram ramp	0	no	\$670	Included with intersections			
	TOTAL Shared Paths		Item			\$265,784		
C.A.C	Street Lighting							
C.A.C.1	6.5 SOR Street Light Pole incl. all conduits, light cabling, excavation, and related overheads (allowed for one side from Orton to Kinsella as other side already included)	23	no	\$3,442	\$79,160			
	TOTAL Street Lighting		Item			\$79,160		
C.A.D	Road Drainage							
C.A.D.1	450dia reinforced concrete pipe including excavation and backfill (assuming Orton to Kinsella Ave already has the provisions based on aerial view)	147	m	\$233	\$34,258			
C.A.D.2	150dia slotted PVC subsoil drainage pipe including aggregate, geofabric and porous sand (assuming Orton to Kinsella Ave do not have the subsoil provisions)	1,190	m	\$189	\$224,434			

**Shire of Serpentine Jarrahdale DCP
 DCA 1 - Byford Traditional Infrastructure - Update**

Code	Description	Quantity	UOM	Rate	Subtotal	Sub Section Total	Section Total	Road/ DOS Total
C.A.D.3	Side entry pits including liner, cover, excavation, and associated works	0	no	\$2,667	CESP measured at intersections, RAB's			
C.A.D.4	Raised gully / bubble up pits including liner, cover, grate, excavation, rock pitching, and associated works (assuming Orton to Kinsella Ave already has the provisions based on aerial view)	5	no	\$3,021	\$15,103			
	TOTAL Road Drainage		Item			\$273,795		
<u>C.A.E</u>	<u>Preliminaries and Project Costs</u>							
C.A.E.1	Traffic Management	5.0000	%	\$1,855,951	\$92,798			
C.A.E.2	Project Overheads and Preliminaries (Indirect Construction Costs)	15.0000	%	\$1,855,951	\$278,393			
C.A.E.3	Project Owner's Cost (Planning and Design Costs)	7.5000	%	\$1,855,951	\$139,196			
C.A.E.4	Risk Contingency Allowance	10.0000	%	\$2,366,337	\$236,634			
	TOTAL Preliminaries and Project Costs		Item			\$747,020		
	TOTAL Road Construction						\$2,602,971	
<u>C.B</u>	<u>Mead Street (Roundabout) - already constructed</u>							
<u>C.B.A</u>	<u>Road Works</u>							
C.B.A.1	Already Constructed				\$0			
	TOTAL Road Works		Item			\$0		
<u>C.B.B</u>	<u>Shared Paths</u>							
C.B.B.1	Already Constructed				\$0			
	TOTAL Shared Paths		Item			\$0		
<u>C.B.C</u>	<u>Street Lighting</u>							
C.B.C.1	Already Constructed				\$0			
	TOTAL Street Lighting		Item			\$0		
<u>C.B.D</u>	<u>Road Drainage</u>							
C.B.D.1	Already Constructed				\$0			
	TOTAL Road Drainage		Item			\$0		
<u>C.B.E</u>	<u>Preliminaries and Project Costs</u>							
C.B.E.1	Already Constructed				\$0			
	TOTAL Preliminaries and Project Costs		Item			\$0		
	TOTAL Mead Street (Roundabout) - already constructed						\$0	
<u>C.C</u>	<u>Utilities</u>							
C.C.A	Power and Lighting (Western Power)							
	No allowance has been made for Power diversions as it seems that the overhead lines have already been relocated underground from our desktop study		Note					
	TOTAL Power and Lighting (Western Power)		Item			\$0		
<u>C.C.B</u>	<u>Communications (NBN / Telstra / Westnet / etc.)</u>							
C.C.B.1	Relocate 1189 m road length of communications related infrastructure about 20m from the current location - Provisional Sum	1	PS	\$358,231	\$358,231			
	TOTAL Communications (NBN / Telstra / Westnet / etc.)		Item			\$358,231		
<u>C.C.C</u>	<u>Water and Sewer (Water Corporation)</u>							
C.C.C.1	Relocate 147m road length of water and sewer about 20m from the current location - Provisional Sum	1	PS	\$167,981	\$167,981			
	TOTAL Water and Sewer (Water Corporation)		Item			\$167,981		
<u>C.C.D</u>	<u>Gas (ATCO)</u>							
	No allowance has been made for ATCO diversions as we do not see existing valves from our desktop study		Note					
	TOTAL Gas (ATCO)		Item			\$0		
<u>C.C.E</u>	<u>Preliminaries and Project Costs</u>							
C.C.E.1	Traffic Management	10.0000	%	\$526,212	\$52,621			
C.C.E.2	Project Overheads and Preliminaries (Indirect Construction Costs)	15.0000	%	\$526,212	\$78,932			
C.C.E.3	Project Owner's Cost (Planning and Design Costs)	5.0000	%	\$526,212	\$26,311			

**Shire of Serpentine Jarrahdale DCP
DCA 1 - Byford Traditional Infrastructure - Update**

Code	Description	Quantity	UOM	Rate	Subtotal	Sub Section Total	Section Total	Road/ DOS Total
C.C.E.4	Risk Contingency Allowance TOTAL Preliminaries and Project Costs TOTAL Utilities	10.0000	% Item	\$684,075	\$68,408	\$226,271	\$752,483	
A.A.A.7	Estimated Imported Fill	5,940	m3					
A.A.A.5	Total m3 of Cut to Fill - General Earthworks	7,848	m3					
	Less Cut to Fill costed	0	m3	\$30	\$0			
	Total Adjustment for Imported Fill (less Cut to Fill)	<i>See "Imported Fill" sheet at the end of these costings.</i>					\$0	
	TOTAL Road – Doley Road		Item					\$3,355,453

Shire of Serpentine Jarrahdale DCP DCA 1 - Byford Traditional Infrastructure - Update

Code	Description	Quantity	UOM	Rate	Subtotal	Sub Section Total	Section Total	Road/ DOS Total
D	ROAD – WARRINGTON ROAD							
D.A	Road Construction							
<u>D.A.A</u>	<u>Road Works</u>							
	Earthworks and Site Preparation				\$0			
D.A.A.1	Site Clearance (based on light shrubs)	12,898	m2	\$4	\$45,401			
D.A.A.2	Removal of topsoil 150mm and stockpile for later re-use	12,898	m2	\$2	\$20,766			
D.A.A.3	Cut to Fill - General Earthworks	5,897	m3	\$8	\$48,532			
D.A.A.4	Detailed excavation - mill and profile	6,756	m2	\$19	\$128,229			
D.A.A.5	Imported Fill	0	m3	\$30	Excl.			
	Subgrade Preparation							
D.A.A.6	Preparation, trim and compact Sub Base and Base Course	19,654	m2	\$6	\$108,097			
D.A.A.7	100mm thick crushed rock base course	17,689	m2	\$8	\$145,404			
D.A.A.8	200mm thick compacted limestone sub base	17,689	m2	\$14	\$247,469			
	Road Paving							
D.A.A.9	30mm thick (AC10)	14,741	m2	\$18	\$268,139			
D.A.A.10	Primer seal	14,741	m2	\$4	\$59,554			
	Kerbing							
D.A.A.11	Mountable Kerb (MK)	2,457	m	\$25	\$62,506			
	Line Marking and Furniture				\$0			
D.A.A.12	Line marking	2,457	m	\$6	\$15,577			
	Other							
D.A.A.13	Allow to connect to existng asphalt		item		\$5,000			
	TOTAL Road Works		Item			\$1,154,674		
<u>D.A.B</u>	<u>Shared Paths</u>							
	Earthworks and Site Preparation							
D.A.B.1	Site Clearance (based on light shrubs)	6,142	m2	\$4	\$21,620			
D.A.B.2	Removal of topsoil 150mm and stockpile for later re-use	6,142	m2	\$2	\$9,889			
D.A.B.3	Cut to Fill - General Earthworks	1,843	m3	\$8	\$15,168			
D.A.B.4	Imported Fill	0	m3	\$30	Excl.			
	Subgrade Preparation							
D.A.B.5	Preparation, trim and compact Pathway	6,142	m2	\$6	\$33,781			
D.A.B.6	100 thick concrete footpath with broomed finish	6,142	m2	\$71	\$435,099			
D.A.B.7	Sand fill below concrete footpath (100mm)	6,142	m2	\$5	\$33,535			
D.A.B.8	Pram ramp	0	no	\$670	Included with intersections			
	TOTAL Shared Paths		Item			\$549,092		
<u>D.A.C</u>	<u>Street Lighting</u>							
D.A.C.1	6.5 SOR Street Light Pole incl. all conduits, light cabling, excavation, and related overheads (allowed for one side only as per already constructed portion of road)	27	no	\$3,442	\$92,926			
	TOTAL Street Lighting		Item			\$92,926		
<u>D.A.D</u>	<u>Road Drainage</u>							
D.A.D.1	450dia reinforced concrete pipe including excavation and backfill	1,169	m	\$233	\$272,435			
D.A.D.2	Side entry pits including liner, cover, excavation, and associated works (to one side only at 30m spacings)	39	no	\$2,667	\$103,997			
	TOTAL Road Drainage		Item			\$376,432		
<u>D.A.E</u>	<u>Preliminaries and Project Costs</u>							
D.A.E.1	Traffic Management	5.0000	%	\$2,173,124	\$108,656			
D.A.E.2	Project Overheads and Preliminaries (Indirect Construction Costs)	15.0000	%	\$2,173,124	\$325,969			
D.A.E.3	Project Owner's Cost (Planning and Design Costs)	7.5000	%	\$2,173,124	\$162,984			
D.A.E.4	Risk Contingency Allowance	10.0000	%	\$2,770,733	\$277,073			
	TOTAL Preliminaries and Project Costs		Item			\$874,682		
	TOTAL Road Construction						\$3,047,806	
D.B	Mead Street (Roundabout) - already constructed							
<u>D.B.A</u>	<u>Road Works</u>							
D.B.A.1	Already Constructed				\$0			

Shire of Serpentine Jarrahdale DCP DCA 1 - Byford Traditional Infrastructure - Update

Code	Description	Quantity	UOM	Rate	Subtotal	Sub Section Total	Section Total	Road/ DOS Total
	TOTAL Road Works		Item			\$0		
<u>D.B.B</u>	<u>Shared Paths</u>							
D.B.B.1	Already Constructed				\$0			
	TOTAL Shared Paths		Item			\$0		
<u>D.B.C</u>	<u>Street Lighting</u>							
D.B.C.1	Already Constructed				\$0			
	TOTAL Street Lighting		Item			\$0		
<u>D.B.D</u>	<u>Road Drainage</u>							
D.B.D.1	Already Constructed				\$0			
	TOTAL Road Drainage		Item			\$0		
<u>D.B.E</u>	<u>Preliminaries and Project Costs</u>							
D.B.E.1	Already Constructed				\$0			
	TOTAL Preliminaries and Project Costs		Item			\$0		
	TOTAL Mead Street (Roundabout) - already constructed						\$0	
<u>D.C</u>	<u>Turner Road (Roundabout)</u>							
<u>D.C.A</u>	<u>Road Works</u>							
	Earthworks and Site Preparation							
D.C.A.1	Site Clearance (based on light shrubs)	2,504	m2	\$4	\$8,814			
D.C.A.2	Removal of topsoil 150mm and stockpile for later re-use	2,504	m2	\$2	\$4,031			
D.C.A.3	Cut to Fill - General Earthworks	752	m3	\$8	\$6,189			
D.C.A.4	Imported Fill	0	m3	\$30	Excl.			
	Subgrade Preparation							
D.C.A.5	Preparation, trim and compact Sub Base and Base Course	2,504	m2	\$6	\$13,772			
D.C.A.6	100mm thick crushed rock base course	1,983	m2	\$8	\$16,300			
D.C.A.7	250mm thick compacted limestone sub base	1,983	m2	\$17	\$34,663			
	Road Paving							
D.C.A.8	50mm thick (AC14)	1,518	m2	\$31	\$47,422			
D.C.A.9	Primer seal	1,518	m2	\$4	\$6,133			
	Brick Paving					\$0		
D.C.A.10	80 thick brick pavers	333	m2	\$100	\$33,333			
D.C.A.11	30 thick compacted sand bed	180	m2	\$2	\$295			
D.C.A.12	40 thick compacted sand bed (RAB)	153	m2	\$2	\$335			
D.C.A.13	170mm thick compacted limestone	180	m2	\$11	\$2,047			
D.C.A.14	250mm thick compacted limestone sub base	153	m2	\$17	\$2,674			
	Kerbing							
D.C.A.15	Mountable Kerb (MK)	70	m	\$25	\$1,781			
D.C.A.16	Semi Mountable Kerb (SMK)	143	m	\$30	\$4,240			
D.C.A.17	Barrier Kerb (BK)	54	m	\$53	\$2,869			
	Line Marking and Furniture							
D.C.A.18	Line marking	53	m	\$6	\$336			
D.C.A.19	Street sign post	1	no	\$122	\$122			
D.C.A.20	Street name plate	2	no	\$199	\$398			
D.C.A.21	Chevron sign	1	no	\$613	\$613			
D.C.A.22	Traffic sign	3	no	\$450	\$1,350			
	Landscaping				\$0			
D.C.A.23	Soft landscaping	227	m2	\$0	Excl.			
D.C.A.24	Landscape mix	57	m3	\$90	\$5,130			
	TOTAL Road Works		Item			\$192,847		
<u>D.C.B</u>	<u>Shared Paths</u>							
	Earthworks and Site Preparation							
D.C.B.1	Site Clearance (based on light shrubs)	356	m2	\$4	\$1,253			
D.C.B.2	Removal of topsoil 150mm and stockpile for later re-use	356	m2	\$2	\$573			
D.C.B.3	Cut to Fill - General Earthworks	107	m3	\$8	\$881			
D.C.B.4	Imported Fill	0	m3	\$30	Excl.			
	Subgrade Preparation							
D.C.B.5	Preparation, trim and compact Pathway	356	m2	\$6	\$1,958			
D.C.B.6	100 thick concrete footpath with broomed finish	356	m2	\$71	\$25,219			
D.C.B.7	Sand fill below concrete path (100mm)	356	m2	\$5	\$1,944			
D.C.B.8	Pram ramp including tactile	6	no	\$973	\$5,836			
D.C.B.9	Tactile paving	10	m2	\$325	\$3,250			
	Line Marking and Furniture							
D.C.B.10	Traffic sign	2	no	\$450	\$900			
	TOTAL Shared Paths		Item			\$41,814		

**Shire of Serpentine Jarrahdale DCP
 DCA 1 - Byford Traditional Infrastructure - Update**

Code	Description	Quantity	UOM	Rate	Subtotal	Sub Section Total	Section Total	Road/ DOS Total
<u>D.C.C</u>	<u>Street Lighting</u>							
D.C.C.1	6.5 SOR Street Light Pole incl. all conduits, light cabling, excavation, and related overheads	4	no Item	\$3,442	\$13,767	\$13,767		
	TOTAL Street Lighting							
<u>D.C.D</u>	<u>Road Drainage</u>							
D.C.D.1	450dia reinforced concrete pipe including excavation and backfill	130	m	\$233	\$30,297			
D.C.D.2	Side entry pits including liner, cover, excavation, and associated works	4	no Item	\$2,667	\$10,666	\$40,963		
	TOTAL Road Drainage							
<u>D.C.E</u>	<u>Preliminaries and Project Costs</u>							
D.C.E.1	Traffic Management	5.0000	%	\$289,390	\$14,470			
D.C.E.2	Project Overheads and Preliminaries (Indirect Construction Costs)	15.0000	%	\$289,390	\$43,409			
D.C.E.3	Project Owner's Cost (Planning and Design Costs)	7.5000	%	\$289,390	\$21,704			
D.C.E.4	Risk Contingency Allowance	10.0000	%	\$368,973	\$36,897			
	TOTAL Preliminaries and Project Costs		Item			\$116,480		
	TOTAL Turner Road (Roundabout)						\$405,870	
<u>D.D</u>	<u>Utilities</u>							
<u>D.D.A</u>	<u>Power and Lighting (Western Power)</u>							
D.D.A.1	Relocate 1213m of Overhead Power underground - Provisional Sum	1	PS Item	\$1,600,386	\$1,600,386	\$1,600,386		
	TOTAL Power and Lighting (Western Power)							
<u>D.D.B</u>	<u>Communications (NBN / Telstra / Westnet / etc.)</u>							
D.D.B.1	Relocate 1213m road length of communications related infrastructure about 10m from the current location - Provisional Sum	1	PS Item	\$332,861	\$332,861	\$332,861		
	TOTAL Communications (NBN / Telstra / Westnet / etc.)							
<u>D.D.C</u>	<u>Water and Sewer (Water Corporation)</u>							
	No allowance has been made for Water Corporation diversions as we do not see existing mains from our desktop study		Note Item			\$0		
	TOTAL Water and Sewer (Water Corporation)							
<u>D.D.D</u>	<u>Gas (ATCO)</u>							
	No allowance has been made for ATCO diversions as we do not see existing valves from our desktop study		Note Item			\$0		
	TOTAL Gas (ATCO)							
<u>D.D.E</u>	<u>Preliminaries and Project Costs</u>							
D.D.E.1	Traffic Management	10.0000	%	\$1,933,247	\$193,325			
D.D.E.2	Project Overheads and Preliminaries (Indirect Construction Costs)	15.0000	%	\$1,933,247	\$289,987			
D.D.E.3	Project Owner's Cost (Planning and Design Costs)	5.0000	%	\$1,933,247	\$96,662			
D.D.E.4	Risk Contingency Allowance	10.0000	%	\$2,513,221	\$251,322			
	TOTAL Preliminaries and Project Costs		Item			\$831,296		
	TOTAL Utilities						\$2,764,543	
A.A.A.7	Estimated Imported Fill	0	m3					
A.A.A.5	Total m3 of Cut to Fill - General Earthworks	8,599	m3					
	Less Cut to Fill costed	0	m3	\$30	\$0			
	Total Adjustment for Imported Fill (less Cut to Fill)						\$0	
	TOTAL Road – Warrington Road		Item					\$6,218,219

Shire of Serpentine Jarrahdale DCP DCA 1 - Byford Traditional Infrastructure - Update

Code	Description	Quantity	UOM	Rate	Subtotal	Sub Section Total	Section Total	Road/ DOS Total
E	DISTRICT OPEN SPACE – THE GLADES (FUTSAL COURTS)							
E.A	Siteworks & Earthworks							
E.A.A	Site Clearance (based on light scrub)	10,992	m2	\$4		\$40,451		
E.A.B	Removal of topsoil 150mm and remove off-site	10,992	m2	\$2		\$18,456		
E.A.C	Cut to Fill - General Earthworks of 300mm across site	3,298	m3	\$8		\$27,118		
E.A.D	Excavation to 350 below finished levels to playing courts	688	m3	\$14		\$9,494		
E.A.E	Levelling, grading and compaction to final design levels	10,992	m2	\$3		\$36,274		
E.A.F	Weed eradication	10,086	m2	\$1		\$5,900		
E.A.G	Gypsum soil conditioner	10,086	m2	\$2		\$17,045		
E.A.H	15 deep C-Wise Horticulture soil conditioner	10,086	m2	\$5		\$55,070		
E.A.I	100 thick imported turf sand	5,080	m2	\$5		\$25,095		
E.A.J	Organic fertilizer to turf	5,080	m2	\$1		\$5,944		
E.A.K	Protect and retain existing trees	28	no	\$190		\$5,320		
E.A.L	Forming batter using existing soil on site	1,333	m2	\$6		\$8,331		
E.A.M	Drainage swale including excavation, drainage cells and matting	771	m3	\$50		\$38,550		
E.A.N	Adjust existing fence for carpark entry	1	Item	\$2,780		\$2,780		
	TOTAL Siteworks & Earthworks						\$296,000	
E.B	Grassing & Irrigation							
E.B.A	Supply and lay roll on turf including maintaining	5,080	m2	\$25		\$127,000		
E.B.B	Ground cover including planting	5,006	m2	\$15		\$75,090		
E.B.C	Trees medium including irrigation	12	no	\$520		\$6,240		
E.B.D	Trees large including irrigation	4	no	\$1,080		\$4,320		
E.B.E	Irrigation	10,086	m2	\$10		\$100,860		
E.B.F	Provisional sum allowance for pumps, bores and controls - no allowance for storage tank	1	Item	\$50,000		\$50,000		
	TOTAL Grassing & Irrigation						\$364,000	
E.C	Courts							
	Sub Base and Base Course							
E.C.A	100mm thick crushed rock base course	1,226	m2	\$8		\$10,067		
E.C.B	250mm thick compacted limestone sub base	1,226	m2	\$17		\$21,430		
	Playing surface							
E.C.C	Sports surface on prepared surface	1,226	sqm	\$155		\$190,030		
E.C.D	Court linemarking	353	m	\$10		\$3,530		
	Fencing & Gates							
E.C.E	3600 high chainlink fence with tubular posts	237	m	\$150		\$35,550		
E.C.F	1000 wide gate	2	no	\$480		\$960		
	TOTAL Courts						\$262,000	
E.D	Landscaping & Equipment							
	Equipment							
E.D.A	Futsal goals including net	4	no	\$3,432		\$13,727		
E.D.B	Basketball post including ring and backboard	4	no	\$4,482		\$17,927		
E.D.C	Stainless steel bin enclosures	2	no	\$7,236		\$14,472		
E.D.D	Drinking fountain stainless steel including water supply	1	no	\$10,120		\$10,120		
E.D.E	Continuous seating fixed to ground	41	m	\$1,364		\$55,904		
E.D.F	Individual bench seats 3000 long fixed to ground	2	no	\$3,182		\$6,363		
E.D.G	Timber Bollards @1200 spacing	159	no	\$121		\$19,239		
E.D.H	Lighting poles for paths	16	no	\$5,500		\$88,000		
E.D.I	Lighting for courts	4	no	\$20,000		\$80,000		
E.D.J	Stainless steel bike rack to suit 5 bikes fixed to ground	1	no	\$3,000		\$3,000		
	Provisional Sums							
E.D.K	Provisional sum allowance for shade structures comprising metal roof similar to a gazebo	2	no	\$20,000		\$40,000		
E.D.L	Provisional sum allowance for K9700 Parkland automated public toilets including full fitout and installation	1	no	\$80,000		\$80,000		
E.D.M	Provisional sum allowance for signage	1	item	\$5,000		\$5,000		
	TOTAL Landscaping & Equipment						\$434,000	
E.E	Roadworks & Pavings							
	Subgrade Preparation							
E.E.A	Preparation, trim and compact	793	m2	\$8		\$6,566		
	Sub Base and Base Course							

**Shire of Serpentine Jarrahdale DCP
 DCA 1 - Byford Traditional Infrastructure - Update**

Code	Description	Quantity	UOM	Rate	Subtotal	Sub Section Total	Section Total	Road/ DOS Total
E.E.B	100mm thick crushed rock base course	518	m2	\$8		\$4,253		
E.E.C	250mm thick compacted limestone sub base	518	m2	\$17		\$9,055		
	Asphalt Paving							
E.E.D	30mm thick (AC10)	518	m2	\$19		\$9,847		
E.E.E	Primer seal	518	m2	\$4		\$2,186		
	Concrete Paving							
E.E.F	100 thick grey concrete footpath with broomed finish	1,446	m2	\$74		\$106,888		
E.E.G	Sand fill below concrete footpath (100mm)	276	m2	\$6		\$1,574		
E.E.H	Pram ramp	1	no	\$670		\$670		
	Kerbing							
E.E.I	Mountable Kerb (MK)	126	m	\$50		\$6,300		
E.E.J	Mowing kerb	62	m	\$50		\$3,100		
	Miscellaneous							
E.E.K	Line marking	60	m	\$6		\$380		
	Crossovers							
E.E.L	Public crossovers to carpark including additional traffic management	2	no	\$10,000		\$20,000		
	TOTAL Roadworks & Pavings						\$171,000	
E.F	Drainage							
E.F.A	150 diameter pipe including excavation and backfill	399	m	\$143		\$56,858		
E.F.B	Buried flushing points	2	no	\$500		\$1,000		
E.F.C	Headwall, rock pitching, and associated works	1	no	\$3,021		\$3,021		
E.F.D	Stormwater drainage to carpark including excavation, backfill, pits, grates and pipework	518	m2	\$30		\$15,540		
	TOTAL Drainage						\$77,000	
E.G	Preliminaries & Project Costs							
E.G.A	Traffic Management	0.0000	%	\$1,604,000		\$0		
E.G.B	Project Overheads and Preliminaries (Indirect Construction Costs)	10.0000	%	\$1,604,000		\$160,400		
E.G.C	Project Owner's Cost (Planning and Design Costs)	7.5000	%	\$1,604,000		\$120,300		
E.G.D	Risk Contingency Allowance	10.0000	%	\$1,884,700		\$188,470		
	TOTAL Preliminaries & Project Costs						\$470,000	
	TOTAL District Open Space – The Glades (Futsal courts)		Item					\$2,074,000

**Shire of Serpentine Jarrahdale DCP
DCA 1 - Byford Traditional Infrastructure - Update**

Code	Description	Quantity	UOM	Rate	Subtotal	Sub Section Total	Section Total	Road/ DOS Total
F	DISTRICT OPEN SPACE – ORTON ROAD OVAL							
F.A	Siteworks & Earthworks							
F.A.A	Site Clearance (based on light shrubs)	43,875	m2	\$4		\$161,460		
F.A.B	Removal of topsoil 150mm and remove off-site	43,875	m2	\$2		\$73,666		
F.A.C	Cut to Fill - General Earthworks of 300mm across site	13,163	m3	\$8		\$108,233		
F.A.D	Levelling, grading and compaction to final design levels	43,875	m2	\$3		\$144,788		
F.A.E	Weed eradication	43,875	m2	\$1		\$25,667		
F.A.F	Excavation to 300 below finished levels	13,163	m2	\$14		\$181,649		
F.A.G	Clean sand fill to oval	13,163	m3	\$30		\$394,890		
F.A.H	Gypsum soil conditioner	43,875	m2	\$2		\$74,149		
F.A.I	15 deep C-Wise Horticulture soil conditioner	43,875	m2	\$5		\$239,558		
F.A.J	100 thick imported turf sand	43,875	sqm	\$5		\$216,743		
F.A.K	Organic fertilizer to turf	43,875	sqm	\$1		\$51,334		
	TOTAL Siteworks & Earthworks						\$1,673,000	
F.B	Grassing & Irrigation							
F.B.A	Supply and lay roll on turf including maintaining	43,875	sqm	\$20		\$877,500		
F.B.B	Irrigation	43,875	sqm	\$8		\$351,000		
F.B.C	Provisional sum allowance for pumps, bores and controls - no allowance for storage tank	1	Item	\$80,000		\$80,000		
	TOTAL Grassing & Irrigation						\$1,309,000	
F.C	Landscaping & Equipment							
	Equipment							
F.C.A	AFL goal posts (set of 8) including sleeves, footings, cages and post padding	1	no	\$7,406		\$7,406		
F.C.B	Timber Bollards @1200 spacing	188	no	\$121		\$22,748		
F.C.C	<u>Line marking to oval</u>							
F.C.C.1	Allow 2 guys 1 day	16	hrs	\$100	\$1,600			
F.C.C.2	Equipment	1	no	\$1,000	\$1,000			
F.C.C.3	Profit				\$260			
	TOTAL Line marking to oval	710	m	\$4		\$2,860		
F.C.D	Provisional Sums Provisional sum allowance for signage	1	item	\$5,000		\$5,000		
	TOTAL Landscaping & Equipment						\$39,000	
F.D	Drainage							
F.D.A	150 diameter pipe including excavation and backfill	1,300	m	\$143		\$185,250		
	TOTAL Drainage						\$186,000	
F.E	Preliminaries & Project Costs							
F.E.A	Traffic Management	0.0000	%	\$3,207,000		\$0		
F.E.B	Project Overheads and Preliminaries (Indirect Construction Costs)	10.0000	%	\$3,207,000		\$320,700		
F.E.C	Project Owner's Cost (Planning and Design Costs)	7.5000	%	\$3,207,000		\$240,525		
F.E.D	Risk Contingency Allowance	10.0000	%	\$3,768,225		\$376,823		
	TOTAL Preliminaries & Project Costs						\$939,000	
	TOTAL District Open Space – Orton Road Oval		Item					\$4,146,000

**Shire of Serpentine Jarrahdale DCP
 DCA 1 - Byford Traditional Infrastructure - Update**

Code	Description	Quantity	UOM	Rate	Subtotal	Sub Section Total	Section Total	Road/ DOS Total
DISTRICT OPEN SPACE – ORTON ROAD WETLAND REHABILITATION								
G.A Siteworks & Earthworks								
G.A.A	Site Clearance (based on light shrubs)	69,716	m2	\$4		\$256,555		
G.A.B	Removal of topsoil 150mm and remove off-site	69,716	m2	\$2		\$117,053		
G.A.C	Cut to Fill - General Earthworks of 300mm across site	20,915	m3	\$8		\$171,974		
G.A.D	Levelling, grading and compaction to final design levels	69,716	m2	\$3		\$230,063		
G.A.E	Allow for 50 deep mulch	60,623	m2	\$12		\$727,476		
G.A.F	Allow for wetland vegetation planting	60,623	m2	\$8		\$484,984		
	TOTAL Siteworks & Earthworks						\$1,988,104	
G.B Roadworks & Pavings								
Subgrade Preparation								
G.B.A	Preparation, trim and compact	9,094	m2	\$8		\$75,298		
Paving								
G.B.B	25 thick red asphalt paving	9,094	m2	\$58		\$522,905		
G.B.C	Sand fill below footpath (100mm)	9,094	m2	\$6		\$51,872		
	TOTAL Roadworks & Pavings						\$650,075	
G.C Preliminaries & Project Costs								
G.C.A	Traffic Management	0.0000	%	\$2,638,180		\$0		
G.C.B	Project Overheads and Preliminaries (Indirect Construction Costs)	10.0000	%	\$2,638,180		\$263,818		
G.C.C	Project Owner's Cost (Planning and Design Costs)	7.5000	%	\$2,638,180		\$197,863		
G.C.D	Risk Contingency Allowance	10.0000	%	\$3,099,861		\$309,986		
	TOTAL Preliminaries & Project Costs						\$771,668	
	TOTAL District Open Space – Orton Road Wetland Rehabilitation		Item					\$3,409,848

DCP Roads - Imported Fill inputs		Average fill depth required before topsoil removal (mm)	Topsoil removal (mm)	Total Sand depth reqd (mm)	Length	Width	Vol	Total m3	Notes
DCA1	Orton Road New – Integrator B	300	150	450	2483	30	0.45	33,520.5	300mm fill required to lift full length
	Indigo Parkway – Integrator B	300	150	450	605	27.5	0.45	7,486.9	First 375m length (Larsen to Caraway), No fill required. 605m length (Caraway Ave to Briggs Rd) - 300mm fill required for full road reserve width
	Doley Road – Neighbourhood Connector A	300	150	450	880	15	0.45	5,940.0	Existing Eastern carriageway to be upgraded, No fill required. 320m of Western Carriageway Mead St to Allanson Road, No fill Required. 880m of Eastern Carriageway (1/2 road reserve Allanson Rd to Orton Road) 300mm fill required
	Warrington Road – Neighbourhood Connector B	0	0	0	0	0	0	-	Road upgrade only, No fill or top soil removal required.

This information has been internally generated by the Shire in order to calculate Fill volumes to inform the costings provided by Rawlinsons. These calculations are reflected at the bottom of each costing sheet as supplementary to the information Rawlinson's has provided.