

10.1.2. Forrestdfield / High Wycombe Stage 1 Industrial Area - Development Contribution Plan Report: Annual Review - Consideration of Submissions and Final Approval

The Presiding Member adjourned the meeting from 7:32pm to 7:37pm following the adjournment the Council agreed to go behind closed doors to receive a confidential briefing from the City's Legal Advisor.

RESOLVED OCM 135/2020

That the meeting be closed to the public to enable a confidential briefing.

Move: **Cr John Giardina**

Seconded: **Cr Janelle Sewell**

Vote: **CARRIED UNANIMOUSLY (12/0)**

The meeting closed to the public at 7:37pm.

RESOLVED OCM 139/2020

That the meeting be reopened to the public.

Move: **Cr Geoff Stallard**

Seconded: **Cr Dylan O'Connor**

Vote: **CARRIED UNANIMOUSLY (12/0)**

The meeting reopened to the public at 8:13pm. All Councillors, Staff and members of the public returned to the meeting. No vote occurred behind closed doors.

Declaration of financial / conflict of interests to be recorded prior to dealing with each item.

Previous Items	SCM 230/2018, OCM 27/2020
Directorate	Development Services
Business Unit	Strategic Planning
File Reference	PG-STU-028
Applicant	City of Kalamunda
Owner	Various

Attachments	1.	Development Contribution Plan Report 2020 [10.1.2.1 - 134 pages]
	2.	Consulting Engineers Summary Report - Infrastructure Cost Estimates [10.1.2.2 - 193 pages]
	3.	Submission Table [10.1.2.3 - 46 pages]
	4.	Additional Information Sincen Publishing the Draft Agenda at the 14 July 2020 Public Agenda Briefing Forum [10.1.2.4 - 3 pages]
Confidential Attachments	1.	Confidential Submitters List
	2.	Senior Counsel – Legal Advice
	3.	McLeods – Legal Advice

TYPE OF REPORT

- | | | |
|-------------------------------------|-------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <input type="checkbox"/> | Advocacy | When Council is advocating on behalf of the community to another level of government/body/agency |
| <input type="checkbox"/> | Executive | When Council is undertaking its substantive role of direction setting and oversight (eg accepting tenders, adopting plans and budgets) |
| <input type="checkbox"/> | Information | For Council to note |
| <input checked="" type="checkbox"/> | Legislative | Includes adopting Local Laws, Town Planning Schemes and Policies. When Council determines a matter that directly impacts a person's rights and interests where the principles of natural justice apply. Examples include town planning applications, building licences, other permits or licences issued under other Legislation or matters that could be subject to appeal to the State Administrative Tribunal |

STRATEGIC PLANNING ALIGNMENT

Kalamunda Advancing Strategic Community Plan to 2027

Priority 3: Kalamunda Develops

Objective 3.1 - To plan for sustainable population growth.

Strategy 3.1.1 - Plan for diverse and sustainable housing, community facilities and industrial development to meet changing social and economic needs.

EXECUTIVE SUMMARY

1. The purpose of this report is for the Council to consider submissions received during advertising and final adoption of the Forrestfield / High Wycombe Industrial Area Stage 1 (FF/HW Stage 1) – Development Contribution Plan Report (DCP Report) annual review (Attachment 1).

2. At its Ordinary Meeting held 25 February 2020, the Council resolved to adopt the DCP Report and an interim Cost Contribution rate of \$23/m² for the purposes of public advertising. The interim rate was also adopted to be used immediately as the applicable rate for new developments being approved within the DCP area.
3. The DCP Report was advertised to landowners within the FF/HW Stage 1 area during March and April 2020. At the conclusion of the public advertising period, a total of eight submissions were received, comprising six objections and two comments. Further discussion regarding the nature of objections and comments is provided in the Details and Analysis section of this report.
4. A memorandum has been included at Attachment 4 of the report and outlines additional information, details and analysis that has been received since the Public Agenda Briefing Forum (PABF) on 14 July 2020. This additional information has resulted in some amendments to the DCP Report and attachments between the PABF and the Ordinary Council Meeting. Accordingly, the recommended Cost Contribution Rate reflects these amendments.
5. It is recommended that the Council adopt the DCP Report and the Cost Contribution rate of \$22.30/m².

BACKGROUND

6. **Locality Plan:**



7. The Scheme Amendment to include the DCP Scheme within the City's Local Planning Scheme No.3 (LPS3) was gazetted in May 2013. This allowed the City to place on development and subdivision approvals, the obligation to pay a Cost Contribution for common infrastructure and administration costs to manage the DCP.
8. Following the gazettal of the DCP, the Council was required to adopt a DCP Report and cost apportionment schedule. The DCP Report and the associated cost apportionment schedule sets out, in detail, the calculation of cost contributions for development in accordance with the methodology shown in the DCP.
9. The DCP Report needs to be a dynamic document to maintain the currency of the cost of infrastructure, land and other DCP items. The DCP Report does not form part of LPS3 but, once adopted by the Council, is required by Clause 6.5.11.2 of LPS3 to be reviewed at least annually.

10. **Previous Reviews**

Historical rates for the DCP Report review are as follows:

Date Adopted	Cost Contribution Rate
December 2012	\$23.03/m ²
December 2013	\$28.49/m ²
June 2015	\$31.23/m ² Reduced to \$29.66/m ² to account for only 50% of the cost of Sultana Road West.
December 2016	\$29.79/m ²
December 2018	\$17.01/m ² Comprehensive review of utility cost estimates and reduced land value resulting in significant reduction in cost.
February 2020	\$23/m ² interim rate (for advertising and immediate application). Included a review of calculation to ensure consistent with SPP3.6 and LPS3.

11. At its Special Meeting held 3 December 2018, the Council resolved to adopt the DCP Report and the Cost Contribution rate of \$17.01/m².
12. As a consequence of matters arising from the 2018 DCP Report annual review, the City of Kalamunda (City) undertook a thorough review and analysed the DCP to determine compliance with relevant LPS3 provisions and the requirements established through State Planning Policy 3.6 – Development Contributions for Infrastructure (SPP3.6).

13. Prior to undertaking the most recent annual review, the City sought advice on the interpretation of the provisions of the LPS3 and SPP 3.6 relating to the calculation and application of the DCP rate. The confidential advices are comprehensive and provide for a way forward which meets the intent and principles of the DCP, LPS3 and SPP3.6. The advices are included as a Confidential Attachment for the benefit of Council.
14. The most recent DCP review and procedural adjustments to the operation of the DCP have been undertaken having regard to the advices received.

DETAILS AND ANALYSIS

15. Method for Calculating Contributions

Prior to the DCP Report considered by the Council on 25 February 2020, the Cost Contribution was calculated using the whole of the Method for Calculating Contributions (Method) as contained within Schedule 12 of LPS3. This section contains an equation and supplementary notes used for calculating the Cost Contribution Rate as follows:

$\frac{\text{Contribution Rate} = \text{Cost of infrastructure items} + \text{cost of administrative items (\$)}}{\text{Net lot area (m}^2\text{)}}$	<div style="font-size: 3em; line-height: 1;">}</div>	EQUATION
$\text{Net lot area} = \text{Contribution Area} - (\text{Area of Road Reserve} + \text{Developed Area})$	<div style="font-size: 3em; line-height: 1;">}</div>	NOTES
Cost Contribution Schedule adopted by the local government for DCA 1 which will be reviewed annually.		
Cost of infrastructure items = remaining infrastructure costs – funds held as money		

16. As outlined in the report to OCM on 25 February 2020, as a consequence of the application of the above equation in its entirety, together with the supplementary notes, as each landowner makes their cost contribution over time, the developed area is deducted from the 'net lot area' and the constructed infrastructure and money collected is also removed from the equation, leaving only the remaining (estimated) infrastructure and administrative costs to be divided by the net lot area of undeveloped land.
17. That approach has resulted in some landowners who had developed early, with a rate based on preliminary cost estimates, contributing at a higher rate than landowners who have developed at a later time and with a rate based on the actual cost of infrastructure or more refined estimates. The inclusion of contributions collected, based on higher estimates, as part of the equation also reduced the cost contributions of later landowners, raising issues of equity to those early contributors.
18. In addition, the calculation method resulted in the landowners, who are yet to contribute, only making a contribution towards infrastructure that is yet to be built, and not infrastructure that has already been built, and to which the landowner and the development receives a benefit.

19. In summary, the cost of all infrastructure required to be delivered by the DCP has not been fairly distributed amongst all landowners over the course of the DCP's operation.
20. The approach has resulted in a situation that is inconsistent with the overarching principles of determining infrastructure contributions (outlined in SPP3.6) and specifically the principle of equity.
21. In order to comply with the requirements of LPS3 and SPP3.6, and to proceed with the operation of the DCP in a practical and equitable manner, the equation included in the above method will still be used, but the City has been advised that it should not have regard to the supplementary notes included below the equation (in particular the use of 'funds held as money' or contributions collected).
22. This will result in all infrastructure and administrative costs (based on both estimates and on actual costs) being divided by the net lot area (all developable area minus road reserves) and will address the equity issues.
23. A key area of concern raised through submissions received during advertising of the DCP Report, was that the City's interpretation of LPS3, to disregard certain words in the 'Method for Calculating Contributions' (refer to discussion above) would require; an amendment to the LPS3, public advertising, and ultimately the approval of the Minister for Planning through a scheme amendment.
24. In this regard, the City has been advised that the approach adopted does not constitute or require an amendment to LPS 3. Further detail on this aspect are contained within the confidential attachment for the benefit of Council.
25. The objections also refer to the City not undertaking prior advertising before the immediate application of the interim \$23/m² contribution rate. It is argued in Submissions 3 that this process is in breach of the landowners' and developers' rights of consultation and arbitration, as well as accountability in the process of determining the immediate interim rate, in breach of SPP3.6 and the City's LPS 3.

26. It is noted that the City is not required to undertake advertising prior to adopting a DCP Report and a new cost contribution rate. However, the City does in practice advertise during a DCP review to ensure good governance and transparent decision making. It was necessary to apply the interim rate immediately following the Council's consideration on 25 February 2020 to ensure the timely determination of development approvals and building permits and to ensure that any new approvals and consequent cost contributions would be based on the appropriate calculation method and rate.
27. Previous DCP reviews did not highlight the issue in relation to the use of contributions collected in the equation. Based on the City's review, the use of contributions collected in the calculation of the contribution rate occurs in several other DCPs within the metropolitan area. However, what is evident in these DCPs is that there have not been any significant variances in infrastructure estimates as has occurred in this instance.
28. **Reconciliation of Interim Cost Contributions**
The major infrastructure items within the DCP have been constructed, including the Ashby / Nardine Close connection, Stage 1 of the Nardine Close extension, and major intersection upgrades for Restricted Access Vehicle Classification (RAV) 7 and Bonser Road has recently reached practical completion.
29. There are some infrastructure items (ie. Stage 2 of the Nardine Close extension, Milner Road, Sultana Road West, Berkshire Road and the bush forever fencing) that are yet to be constructed. These items will progressively be constructed as priorities in the DCP are reviewed and funds become available.
30. In addition, there are some other infrastructure items that have either been previously removed or modified (ie. Dundas Road, the Berkshire / Milner intersection and widening to Berkshire Road) as part of reviews to the planning framework for the broader area, or that may no longer be required, resulting in changes to the infrastructure items within DCP over time.
31. The changes over time have impacted the contribution rates that have applied over the same period, along with the transition from estimated costs to actual costs as the rate is continuously reviewed and infrastructure is progressively delivered.

32. LPS3 and SPP3.6 establishes that the contributions that have been paid, or the initial contributions to be paid, when based on estimated costs or a combination of estimated and actual costs, is not final unless pursuant to Clause 6.5.11.4 of LSP3, the City enters into a specific agreement with the owner stipulating the payment based on estimates is a final payment.
33. In the absence of a specific agreement, it is only once all the final infrastructure costs have been established (constructed and paid for) can a final contribution rate for all landowners be determined.
34. In the report to Council on 25 February 2020, it was suggested that the final cost contribution rate could potentially be ascertained in approximately three years (at the conclusion of the 10-year DCP operative timeframe outlined in Schedule 12 of LPS 3). However, in the context of the economic impacts likely to be experienced in the property and development sector because of the COVID-19 pandemic, the take up of development may not occur at the rate previously expected.
35. While it may be possible to ascertain with some certainty and accuracy the estimated costs of outstanding infrastructure items by 2023, it is highly unlikely that all land will be developed and infrastructure items will be constructed by the end of the DCP's operative life.
36. If there is a need to extend the timeframe for the DCP, an amendment to the LPS3 will be required. The City will need to further consider the need for an amendment to extend the timeframe of the DCP having regard to the take up of development over the next three years.
37. Once a final cost contribution rate is known, final invoices or credits for the interim Cost Contributions made will need to be issued. This will mean that some landowners who have paid higher amounts will be provided a credit and some landowners who have paid lower amounts may be required to make an additional contribution.
38. In relation to the landowners who have paid a lower amount, this matter will be considered by the Council at the conclusion of the operation of the DCP when all infrastructure costs and the final financial position of the DCP is known.
39. At the conclusion of the DCP, there may still be some landowners who have not yet developed. The City will have to establish a separate agreement with those landowners to ensure contributions are collected at a future time when they, or a future owner of the land, decide to develop.

40. As part of the review, it has been identified that the landowners of any proposed development will be required to enter into an agreement with the City as a condition of development approval.
41. The agreement will be to formalise the contribution process and ensure security over future payments, as well as providing certainty for any potential credits that may be due at the end of the operation of the DCP.
42. The costs for preparing these agreements have been estimated and are included as an administrative cost within the DCP. It is noted that the estimated costs presented to the OCM on 25 February 2020 was for approximately \$5,000 per agreement (totalling \$150,000 for 31 landowners yet to develop), however this has been revised to approximately \$3,000 (totalling \$90,000) upon further review and in response to submissions received.
43. Initial versions of the DCP calculated contributions based on a gross area (calculated based on total land area) and collected on a net area (deducting areas for road reservations). This resulted in a short fall of contributions of approximately \$195,463. Under the previous DCP calculation methodology, the short fall was proposed to be reconciled at the end of the DCP. As a result of the most recent review, and with payments being considered interim until the conclusion of the DCP, the shortfall will no longer occur as all contributions will be reconciled to the final DCP amount. In this context, the deduction that was previously included has been removed from the calculation of the DCP rate.
44. In summary, based on the requirements of LPS3 and SPP3.6, Cost Contributions that have been made to date are considered interim payments (in the absence of any formal agreement). Furthermore, all future contributions will be considered interim payments until the end of the DCP.
45. At the conclusion of the DCP, when the final contribution rate is known (based on actual costs of all infrastructure), all previous interim contributions made will need to be reconciled against the final rate based on actual costs of the final list of infrastructure items delivered.
46. Five of the submissions received during advertising of the DCP Report raise concern with the approach taken by the City to deem all cost contributions based on estimated costs as 'interim' until actual costs are known (infrastructure is completed) or ascertained with certainty, and to reconcile costs at the end of the DCP's operative life. It is argued that this process is not provided for, or allowed, under the provisions of LPS 3 and is in breach of the principles underlying DCPs, principally transparency and certainty.

47. To summarise the City's approach and the relevant provisions of LPS3 in arriving at this approach, the following is noted:
- a) Clause 6.5.11.4 provides that where any cost contribution has been calculated on the basis of an estimated cost, the local government is to adjust the cost contribution of any owner in accordance with the revised estimated costs. The City may also accept a cost contribution, based upon estimated costs, as a final cost contribution and enter into an agreement with the owner accordingly to settle the acceptance of the final cost contribution and the terms of acceptance.
 - b) Under Clause 6.5.14.1, the owner, with the agreement of the local government, is to pay the Owner's cost contribution by a list of different methods, including "some other method acceptably to the local government" or "any combination of these methods".
 - c) Clause 6.5.14.2 provides that an owner, with the agreement of the local government, may pay the Owner's cost contribution in a lump sum, by instalments or in such other manner acceptable to the local government.
 - d) Clause 6.5.14.3 provides that payment by an Owner of the cost contribution, including a cost contribution based upon estimated costs, in a manner acceptable to the local government, constitutes full and final discharge of the owner's liability under the DCP and in that event, the local government is required to provide certification in writing to the owner of such discharge if requested.
 - e) Clause 6.5.14.3 is clear that an owner only receives a final discharge if a contribution is paid 'in a manner acceptable to the local government'. As outlined above, the City will deem a cost contribution as full and final discharge of the Owner's liability only once all the final infrastructure costs have been established (constructed and paid for) and, a final contribution rate is determined and costs are reconciled to the satisfaction of the City.
 - f) It is noted that the local government may accept a cost contribution based upon estimated costs as a final cost contribution but for it to be a final contribution, this is required to be settled through an agreement between the local government and the owner.
 - g) An agreement would provide for an adjustment of the owner's cost contribution, being a refund by the City to the owner if the owner's interim cost contribution exceeds the final cost contribution, or alternatively an additional contribution by the owner if the final cost contribution rate exceeds the interim cost contribution.

48. Having regard to the above, it is clear that the LPS3 provisions enable the City to revise the estimate of an owner's cost contribution from time to time, to receive initial payment of a cost contribution, and to make agreements with an owner as to the payment of the whole or any balance of a cost contribution.

49. **DCP Review**

At each DCP Report review, all factors contributing to the contribution rate must be revised. The significant factors reviewed are as follows:

- a) Remaining developable land;
- b) Land requiring acquisition;
- c) Land valuation;
- d) Estimated and actual costs of infrastructure works;
- e) Administration costs; and
- f) Priority of infrastructure works.

Further discussion regarding these factors are provided below.

50. **Remaining developable land**

As of the end of March 2020, 31 of the 52 lots (approx. 60% of all lots) within the Development Contribution Area were undeveloped equating to approximately 328,715m² of 662,344.4m² (approx. 50% of land area).

51. Based on the rate of development occurring since the DCP was established in May 2013, the DCP has developed at approximately 50,000m² per year, equivalent to five one-hectare lots which are commonly found in the FF/HW Stage 1 area.

52. **Land Requiring Acquisition**

As of the end of March 2020, 16,277.5m² has been acquired. To facilitate the delivery of infrastructure in the FF/HW Stage 1 area. Approx. 11,789.06m² is required to be acquired, representing approximately 42% of all land required for road construction.

Acquired Area (m ²)	Cost
16,277.5m ²	\$4,225,510
Requiring Acquisition (m ²)	Cost
11,789.06	\$2,947,265

53. It is noted that the detailed designs prepared for Milner Road and Sultana Road West has confirmed that the 93m² land acquisition is no longer required on Lot 200 (103) Milner Road. However, the design process has identified a need for an area to accommodate Western Power switchgear and low voltage kiosk to the northern side of the intersection requiring

18.06m² of land to be acquired, as a result of the removal of a power pole to facilitate intersection works.

54. A breakdown of the land areas acquired and yet to be acquired is provided in the Section 2.3 of the DCP report (Attachment 1).

55. **Land Valuation**

Historical land values that have informed the previous DCP reviews are as follows:

Date DCP Review Adopted	Land Value
December 2012	\$250/m ²
December 2013	\$275/m ²
June 2015	\$260/m ²
December 2016	\$220/m ²
December 2018	\$220/m ²
February 2020	\$240/m ² interim rate (for advertising and immediate application).
June 2020	\$250/m ² (for adoption of the DCP Report)

56. It is noted that the land value presented to the Council on 25 February 2020 was \$240/m² based on a land valuation completed in July 2019. In March 2020, an updated land valuation was provided with a land value rate of \$250/m². The land valuation has been appended to the DCP report in Attachment 1.

57. **Estimated and Actual Costs of Infrastructure Works**

As at the end of March 2020, approximately \$3.06m is required to complete the remaining infrastructure works, with \$3.69m spent on infrastructure works to date. Details of these estimates are provided in Attachment 1.

58. The following is noted with regard to the key changes to infrastructure items since the Council's consideration on 25 February 2020 and which have informed the estimated costs in the draft DCP Report currently before the Council for adoption.

59. **Milner Road and Sultana Road West Designs**

In June 2020, the City received detailed designs for Milner Road and Sultana Road West to 85% status engineering drawings. The designs accommodate category Restricted Access Vehicle (RAV) 7 (36.5m long vehicles) for Milner Road between Berkshire Road and Nardine Close, and 'As of Right' (19m semi-trailer) vehicles for Milner Road between Nardine

Close and Sultana Road West. Sultana Road West has been designed with a 9m wide pavement for As of Right vehicles.

60. Regarding the designs prepared for the section of Milner Road between Nardine Close and Sultana Road West and the whole of Sultana Road West, prior to completing the 85% design process the City surveyed existing and approved industrial operators who front on to these sections of road. This process confirmed that none of the businesses currently require, or will require in the future, access for larger RAV vehicles beyond the 'As of Right' standard 19m semi-trailer. Accordingly, the design reflects the current and future access needs with a view of minimising unnecessary infrastructure costs.
61. It is important to note that this process has provided greater confidence in the designs, estimated costs and associated project risks. Accordingly, the contingency included in the DCP been reduced from the previous contingency of 10% for Milner Road and 20% for Sultana Road West to 5% for both items.
62. **Berkshire Road**
In January 2020, the City received State Government funding through the WA Bicycle Network (WABN) scheme to undertake a design for shared paths on Berkshire and Dundas Road. Subject to the designs and construction estimates being finalised in 2021, the City anticipates grant funding for this project to become available. At this stage, it is not certain that WABN funding for construction will be available. As a result, the DCP has been amended for Berkshire Road to remove the shared path item and instead include the completion and necessary upgrades to the existing 2m wide footpath on the northern side of Berkshire Road as the lowest cost / certainty item to facilitate pedestrian movements from the developments of the lots.
63. A clearance assessment has also been undertaken to all overhead services that cross Berkshire Road (Western Power consumer lines) to determine safe clearance requirements for Restricted Access Vehicle routes. This assessment noted that four overhead consumer lines are required to be undergrounded which is anticipated result in an estimated cost of \$60,000 (\$71,320 including allowances and charges).
64. As a result of a clearly defined scope for works and cost planning on Berkshire Road, the contingency included in the DCP is 5%.
65. **Stage 2 of the Nardine Close extension (Road 2A)**
With regard to Stage 2 of the Nardine Close extension (Road 2A), a development application was approved by the Joint Development Assessment Panel in May 2020 for a place of worship at Lot 50 Sultana Road West, that would utilise Sultana Road West as access entirely, and

would not require internal light industrial oriented access to the FF/HW Industrial area, via Nardine Close. Based on the information available to the City, Lot 50 Sultana Road West has been purchased with the intent of developing the site as a place of worship.



66. While the information currently available, and the development approval, indicates that the place of worship development will proceed, the place of worship development has not commenced construction. This leaves open the risk that the development will not proceed and the potential that the site could be developed and used for light industrial purposes. Accordingly, at this stage, the City cannot recommend to Council that Stage 2 of the Nardine Close extension be removed as an item from the DCP until there is certainty that the site does not require access from Nardine Close. To be certain, it is considered that the development should commence for the place of worship development, which generally means that construction has commenced.
67. While the removal of Stage 2 of the Nardine Close extension would reduce land acquisition and road construction costs to the DCP, the existing temporary cul-de-sac would be required to be brought up to a standard fit for a permanent road reserve.
68. The City sought an opinion on the construction requirements and estimated costs to formalise the temporary cul-de-sac in its current position. Due to concerns being raised by one landowner that the existing cul-de-sac arrangement will not provide adequate access to Lot 51, an alternative arrangement was also considered with the cul-de-sac being modified to be centrally located on the boundary dividing Lots 308 and 51.
69. The analysis, which is provided in Attachment 2 of this report, finds that the existing temporary cul-de-sac location would not detrimentally impact access to Lot 51 Sultana Road West and would allow for the installation of crossovers consistent with industrial sites in the area. Furthermore, the retention of the existing cul-de-sac location would result in construction cost savings of approximately \$56,000 and less land area to be acquired.

The retention of the existing cul-de-sac location would therefore be the preferred option in the event that Stage 2 of the Nardine Close extension is removed from the DCP.

70. Necessary works for the retention of the existing cul-de-sac include service relocations, fencing, footpath, a crash barrier to protect the existing dwelling adjacent to the cul-de-sac, and an emergency accessway linking Nardine Close to Sultana Road West for bushfire purposes. Construction costs are estimated to be approximately \$264,400 (ex GST) to make permanent the existing cul-de-sac.
71. On balance, if Stage 2 of the Nardine Close extension (Road 2a) is removed from the DCP, net infrastructure costs and land acquisition would reduce by approximately \$850,000 and the cost contribution rate would reduce to approximately \$21/m².
72. The City will consider, at the time the building has commenced construction, amending the Local Structure Plan and DCP to remove Stage 2.
73. Notwithstanding the City's recommendation in relation to Stage 2, should Council feel comfortable with the level of certainty regarding the place of worship, Council can determine to remove Stage 2 and reduce the DCP rate accordingly.
74. **Administrative Items**
As at the end of March 2020, \$573,912.89 of administrative costs have been spent from the DCP and an estimated \$345,000 is required to administer the DCP for the remaining 3 years, until the conclusion of the 10-year DCP operative timeframe under Schedule 12 of LPS3, unless this period is extended by the City through an LPS3 amendment. Details of these estimates are provided in Attachment 1.
75. As part of the administrative process adopted by the Council on 25 February 2020, the applicant/owner of any proposed development will be required to enter into an agreement with the City as a condition of development approval for the provision of cost contributions. The administrative costs have been reviewed to include the cost of the preparation of the agreement for the remaining properties to be developed within the DCP area. It is noted that the estimated costs presented to the OCM on 25 February 2020 was for approximately \$5,000 per agreement (totalling \$150,000 for 31 landowners yet to develop), however this has been amended to approximately \$3,000 per agreement (totalling \$90,000) upon further review and in response to submissions received.

76. **Priority of Infrastructure Works**

The following items were identified as priorities in the previous DCP reviews and are either completed works or under construction:

- a) Nardine / Ashby Close design, land acquisition and construction;
- b) Nardine Close / Milner Road intersection design and construction;
- c) Ashby Close / Berkshire Road intersection design and construction;
- d) Berkshire / Milner Road intersection design and construction; and
- e) Nardine Close Extension (Road 2A: Stage 1) design and construction.

77. Subject to the availability of funding, the following items are now considered current priority items (listed in order of priority):

- a) Ongoing administration costs, including designs to support detailed cost estimates;
- b) Bonser Road (previously referred to as Road 1) is being prefunded by the landowner of Lot 547 Berkshire Road, the road was completed in June 2020. Although the construction of Bonser Road is completed, this is included in the priority list as the DCP is yet to repay the land acquisition, design and construction costs. It is further noted that this item includes a second stage which will follow the acquisition of truncations from Lots 16 and 17 Berkshire Road, upgrades to bring the Bonser Road intersections up to a standard suitable for category RAV7 vehicles;
- c) Nardine Close Extension (Road 2A: Stage 2) design, land acquisition and construction. In the event that Stage 2 is not required given land use changes in the area, this item will be reprioritised ahead of Bonser Road and replaced with costs associated with bringing the temporary cul-de-sac up to a permanent standard, and design, land acquisition and construction of an emergency accessway on the north-west side of Lots 50 and 51 Sultana Road West;
- d) Berkshire Road foot path and utility adjustments;
- e) Milner Road construction;
- f) Sultana Road West construction; and
- g) Bush Forever Fencing.

78. Should Council decide to remove Stage 2 of the Nardine Close extension as an infrastructure item, the above list will be reprioritised to facilitate land acquisition and construction requirements to make good the temporary arrangements resulting from Stage 1 of the Nardine Close extension (the existing temporary cul-de-sac). In this regard, the priority of works and land acquisition will be included ahead of Bonser Road.

79. As noted above, development in the FF/HW Stage 1 area has occurred at a rate of approximately 50,000m² per year. At the recommended development contribution rate, and assuming development occurs at a rate consistent with previous years, it can be projected that \$1.1m of income will be provided per year to fund the above items. However, it is noted that the economic impacts of COVID-19 may slow rates of development.

APPLICABLE LAW

80. **Local Planning Scheme No. 3**
The Cost Contributions are administered and determined in accordance with the provisions of Clause 6.5 and Schedule 12 of LPS3.
81. Clause 6.5.11.2 of LPS3 requires the DCP cost estimates to be reviewed at least annually.
82. Clause 6.5.11.4 of LPS3 requires the adjustment of Cost Contributions that are calculated on the basis of an estimated cost (and revised estimated cost) and contemplates an agreement between the City and the landowners to establish a final Cost Contribution based on estimated costs.

APPLICABLE POLICY

83. The review of the DCP has been undertaken in accordance with the requirements of State Planning Policy 3.6 – Development Contributions for Infrastructure.

STAKEHOLDER ENGAGEMENT

84. Following the Council's adoption of the draft DCP Report and an interim Cost Contribution rate of \$23/m², advertising was undertaken with the landowners within the Development Contribution Area in accordance with *Local Planning Policy 11 – Public Notification of Planning Proposals*. Specific correspondence explaining the process was issued to landowners.
85. During the advertising period, a total of eight submissions were received, comprising six objections with comments and two submission commenting on the proposal (Attachment 3). The key comments raised are discussed under the Details and Analysis section of this report.

- 86. Consulting engineers were engaged to undertake an independent and comprehensive review of infrastructure cost estimates, these estimates have formed the basis of unconstructed works within the DCP Report. A copy of the report containing infrastructure cost estimates is provided in Attachment 2.
- 87. Prior to undertaking the most recent annual review, the City sought advice on the interpretation of the provisions of the LPS3 and SPP 3.6 relating to the calculation and application of the DCP rate. The confidential advices are comprehensive and provide for a way forward which meets the intent and principles of the DCP, LPS3 and SPP3.6. The advices are included as a Confidential Attachment for the benefit of Council.
- 88. The most recent DCP review and procedural adjustments to the operation of the DCP have been undertaken having regard to the advices received. The Council noted the advice at its Ordinary Meeting held 25 February 2020.

FINANCIAL CONSIDERATIONS

- 89. The operation of the DCP presents a major administrative responsibility for the City. While the DCP is self-funded, the City has an implicit obligation to manage the revenues and works.
- 90. The remaining developable area is reliant on the DCP to provide the necessary infrastructure to facilitate development. In particular, the timely provision of roads and drainage is critical for industrial precincts as most developments rely on these improvements for suitable access. Additionally, the area wouldn't have been rezoned for industrial purposes if the necessary infrastructure was provided.
- 91. As outlined in the Details and Analysis Section of this report, the reconciliation of costs will be required once a final cost contribution rate is known or ascertained with certainty. This process will involve a credit to those landowners who have paid at a higher rate, with the funds necessary to make this credit being available in the DCP reserve account.
- 92. Additional contributions may be required from those landowners who have paid at a lower rate. Based on the proposed rate, the anticipated payments would total approximately \$300,000.
- 93. The Council will consider the reconciliation of any possible future payment at the conclusion of the operation of the DCP.

SUSTAINABILITY

Social Implications

94. The provision of infrastructure in a timely, coordinated and responsible manner can have a significant impact on the quality of life for both existing and future occupiers.
95. Impacts on the quality of life need to be considered at both a micro and macro level, with infrastructure planning needing to deliver net community benefits and recognising that the expectations of not every single landowner will be able to be satisfied.

Economic Implications

96. The implementation of DCPs, as a basic principle, are not intended to deliver infrastructure, services or similar that would not ordinarily be provided through subdivision and development processes; as such, a DCP does not offer any direct economic benefits to an area. DCPs can, however, assist in the timely, efficient and equitable provision of infrastructure that may in turn facilitate economic growth and employment creation.

Environmental Implications

97. The proposed DCP infrastructure is identified in areas where vegetation is predominantly cleared. A portion of road reservation abuts a Bush Forever Reserve and during the construction phase, due consideration will have to be given to ensure impacts to this area are minimised.

RISK MANAGEMENT

- 98.
- | | | |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|---------------|
| Risk: The removal of Stage 2 of the Nardine Close extension before the City is certain that the place worship development at Lot 50 Sultana Road West will proceed, leaves open the possibility that the site will be developed for light industrial purposes without coordinated access to Nardine Close. The City would potentially, need to fund the road directly from Rates funding or re-introduce Stage 2 at a later review providing uncertainty in the rate and increasingly the number of landowners where additional funds would need to be collected. | | |
| Consequence | Likelihood | Rating |
| Major | Possible | High |
| Action/Strategy | | |
| It is recommended that Stage 2 of the Nardine Close extension remain in the DCP until development commences for the place of worship development at Lot 50 Sultana Road West. An amendment to the Local Structure Plan and DCP to remove Stage 2 can occur thereafter. | | |

99.

Risk: The retention of Stage 2 of the Nardine Close extension as an item in the DCP on the premise that the place worship development at Lot 50 Sultana Road West will proceed, results in the DCP continuing to collect funds for infrastructure that may not be required and result in a higher number of refunds at the conclusion of the operation of the DCP.

Consequence	Likelihood	Rating
Significant	Likely	High

Action/Strategy

The DCP is structured in a way that payments are interim until the conclusion of the DCP, and if the infrastructure costs reduce in the future through the removal of Stage 2 of the Nardine Close extension, this will be reconciled to the final DCP amount and repayments made accordingly.

100.

Risk: Not undertaking the review so the Development Contribution Plan is not in alignment with current infrastructure and administrative costs.

Consequence	Likelihood	Rating
Significant	Rare	Medium

Action/Strategy

Ensure the Council is aware that a DCP review is required to ensure the new rate is reflective of projected costs to deliver infrastructure works and land purchases. Additionally, Clause 6.5.11.2 of LPS3 states that reviews should occur at least annually.

101.

Risk: There is insufficient money collected in the DCP to fund infrastructure upgrades.

Consequence	Likelihood	Rating
Possible	Major	High

Action/Strategy

Ensure that the City enters into agreements with landowners to ensure the adjustment of Cost Contributions at the end of the DCP's operational life. Undertake annual reviews to ensure the scope of infrastructure remains relevant and to maintain the currency of the cost of infrastructure, land and other DCP items.

102.	Risk: The City may not be able to secure additional funds from landowners who have paid at a lower amount to the final cost contribution rate.		
	Consequence	Likelihood	Rating
	Significant	Possible	High
	Action/Strategy		
	Ensure landowners are advised that the cost contribution is not deemed to be final until a final cost contribution rate is known or ascertained with certainty.		

103.	Risk: Errors are contained within the DCP estimates and calculation.		
	Consequence	Likelihood	Rating
	Major	Possible	High
	Action/Strategy		
	Ensure figures are audited and sourced from financial statements. Ensure cost estimates are reviewed annually and provided by an independent consultant.		

CONCLUSION

104. The recommendations contained within this report regarding the interpretation of the method and establishing a Cost Contribution is necessary to ensure an equitable DCP for the remainder of the DCP's operative life (until approx. 2023) or until a final cost contribution rate is known or ascertained with certainty.
105. A process has been proposed to reconcile Cost Contributions only once a final cost contribution is established (i.e. when all the infrastructure is built, and the actual cost of the infrastructure is known). This exercise will involve credits being issued to some landowners who made a higher contribution, and the City may seek additional Cost Contributions from other landowners who contributed at a lower rate.
106. The Council will consider the reconciliation of any possible future payment from these owners at the conclusion of the operation of the DCP.

107. Based on the recommended method and inputs for establishing the Cost Contribution discussed earlier in this report and the costs outlined in the DCP Report, the Cost Contribution Rate is determined by dividing the total cost of infrastructure and administrative items by the net lot area of the DCA. The following formula has been used in this regard:

Cost of infrastructure items		Cost of administrative items
\$13,850,683.01	+	\$918,912.89
Net lot area of DCA 662,344.44 m ²		

- | | | | |
|--|--------------------------|----------|-------------------------------|
| | Contribution Rate | = | \$22.30 /m² |
|--|--------------------------|----------|-------------------------------|
108. Accordingly, it is recommended that the Council adopt the DCP Report and the interim Cost Contribution rate of \$22.30/m².
109. A memorandum has been included at Attachment 4 of the report and outlines additional information, details and analysis that has been received since the Public Agenda Briefing Forum (PABF) on 14 July 2020. This additional information has resulted in some amendments to the DCP Report and attachments between the PABF and the Ordinary Council Meeting. Accordingly, the recommended Cost Contribution Rate reflects these amendments.

Cr O'Connor proposed two alternative recommendations to the recommendation presented. The Recommendation as presented was put to the meeting and did not receive a mover and LAPSED.

The first motion proposed by Cr O'Connor received a seconder. Cr O'Connor provided rationale for the motion before it was put to a vote.

The second motion proposed by Cr O'Connor received a seconder. Cr O'Connor provided rationale for the motion before it was debated by Council before being put to a vote.

Voting Requirements: Simple Majority

RECOMMENDATION

That Council:

1. NOTE the submissions received during advertising of the Forrestfield / High Wycombe Industrial Area – Stage 1 Development Contribution Plan Report (Attachment 3).

2. ADOPT the Forrestfield / High Wycombe Industrial Area Development Contribution Plan Report (Attachment 1).
3. ADOPT the Cost Contribution Rate of \$22.30/m² effective immediately.
4. AUTHORISE the Chief Executive Officer to issue correspondence to landowners advising of the adopted Cost Contribution Rate.

Moved:

Seconded:

Vote: **LAPSED**

Voting Requirements: Simple Majority

RESOLVED OCM 136/2020

That Council:

1. NOTE the submissions received during advertising of the Forrestfield / High Wycombe Industrial Area – Stage 1 Development Contribution Plan Report (Attachment 3).
2. ADOPT the Forrestfield / High Wycombe Industrial Area Development Contribution Plan Report (Attachment 1), subject to the following modifications:
 - a) Stage 2 of the Nardine Close Extension being removed as an infrastructure item included in the Development Contribution Plan Report.
 - b) The Scheduled Priorities under Section 4 being amended as follows:
 - i. Priority 3 being deleted.
 - ii. A new priority 2 being inserted:

“Land acquisition and construction requirements associated with establishing the Nardine Close temporary cul-de-sac to a permanent standard and constructing an emergency accessway between the Nardine Close cul-de-sac and Sultana Road West.”
 - iii. The current priority 2 (Bonser Road) being moved to priority 3.

- c) Bush Forever Fencing being removed as an infrastructure item included in the Development Contribution Plan Report.
- d) Under Section 2.2.4 'Nardine / Ashby Close', update the phrasing regarding the left in, left out road modifications to Berkshire Road / Ashby Close intersection to state:

"The following road modifications are proposed to be completed on an as needs basis, on the advice of the City of Kalamunda's Asset Services and endorsement by Council:

- *Modifications to the Ashby Close and Berkshire Road intersection to restrict access to left in, left out only".*

- 3. ADOPT the Cost Contribution Rate of \$20.88 effective immediately.
- 4. AUTHORISE the Chief Executive Officer to issue correspondence to landowners advising of the adopted Cost Contribution Rate.

Moved: **Cr Dylan O'Connor**

Seconded: **Cr Lesley Boyd**

Vote: **CARRIED UNANIMOUSLY (12/0)**

RESOLVED OCM 137/2020

That Council:

- 1. REQUEST the Milner Road and Sultana Road West intersection and Sultana Road West design and estimated costs be updated to accommodate Restricted Access Vehicle 4 vehicles for inclusion in the Development Contribution Plan Report.
- 2. MODIFY the Cost Contribution Rate to \$20.97 accordingly.

Moved: **Cr Dylan O'Connor**

Seconded: **Cr Lesley Boyd**

Vote:	<u>For</u>	<u>Against</u>
	Cr Geoff Stallard	Cr Janelle Sewell
	Cr Lesley Boyd	Cr Lisa Cooper
	Cr John Giardina	Cr Margaret Thomas
	Cr Mary Cannon	Cr Brooke O'Donnell
	Cr Cameron Blair	Cr Sue Bilich
	Cr Kathy Ritchie	
	Cr Dylan O'Connor	

CARRIED (7/5)

Rationale:

1. There is a reasonable level of confidence that the owner of Lot 50 Sultana Road West will progress with the place of worship and community facility, and Stage 2 of the Nardine Close Extension will therefore not be required. As a result of removing Stage 2 of the Nardine Close extension, the schedule of priorities in the DCP should ensure that the existing temporary cul-de-sac is finalised and brought up to a permanent standard. There is also a need to construct an emergency access way between the Nardine Close cul-de-sac and Sultana Road West to facilitate emergency access to the industrial area.
2. The additional costs associated with providing RAV- 4 access to the Milner Road and Sultana Road West intersection and Sultana Road West is estimated to be relatively minor, however this will continue to provide greater opportunities and flexibility for future industrial operators with regard to heavy vehicle access and continue to be inline with what the stakeholders in the DCP requested and supported through historically higher contributions.
3. It should be recognised that the interaction between light industrial traffic and a new residential precinct will be addressed as the residential precinct begins to develop. There are a range of acceptable options to ensure the interaction has minimal to no impact on the residential precinct such as appropriate building setbacks and landscape buffers. These options will be a consideration for the City, regardless of whether it is a RAV-4 route or not due to the nature of the existing land use to the south – light industrial. Apart from an increased intersection truncation, there are no further requirements for a RAV-4 vehicle to use this road network.
4. It is also important to note that a RAV-4 vehicle is only at the very maximum, 8.5m longer than an 'as of right' vehicle. We are not talking road trains here, we are talking about a B-double. Which is a prime mover, short lead trailer and a normal semi-trailer behind.
5. To change the goal posts this late in the DCP is completely unfair to the landowners. They have made significant investment decisions based on the land and its associated uses. If we make this change, then I believe we expose the City to the risk of litigation and set a bad precedent as we

- approach the development of the High Wycombe South DCP. Just because the tenants aren't currently using B-doubles, it doesn't mean that industries such as the mining sector won't have a future need for these vehicles. We have a responsibility to provide a light industrial precinct that is in a prime location with respect to common freight routes and that can respond to changes in the transport and logistics sector.
6. The High Wycombe South residential precinct as I understand it, has only just been approved by the WAPC. The stage 1 development is nearing its seventh year with as the plan shows, less than three years to go. We cannot short change these landowners who put a lot on the line, who spent a lot of time making sure the risk of their investment stacked up. Their development is progressing and the residential one will in due course, and when it does, it will accommodate the light industrial traffic that will always be there.
 7. Fencing of a sufficient standard and quality is already provided around the Bush Forever site located within the Forrestfield / High Wycombe Industrial Area and with the site being bordered on three sides by industrial development, is more than adequate to protect native wildlife.
 8. The recommended left in, left out road modifications to Berkshire Road / Ashby Close intersection are currently proposed to occur immediately following the completion of Bonser Road to a Restricted Access Vehicle 7 standard. It is recommended that this should occur when the specific need for left in, left out modifications arise and on the advice of a suitably qualified traffic engineer and the City's Asset Services.
 9. In considering the method of calculation for the DCP, the City has, as a result of enquiries by a landowner, sought legal advice from separate, eminent legal practitioners who share the view that the City's revised approach to the calculation method is appropriate. Obviously, those are legal opinions and will remain that until they are tested in a court. At that point in time, I am confident that the City's new approach will be supported.

Forrestfield / High Wycombe
Industrial Area Stage 1 –
Development Contribution
Plan Report 2020

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1. Introduction

1.1 Background

The Forrestfield / High Wycombe development area is located within the City of Kalamunda (City) and is generally bounded by Maida Vale Road to the north, Roe Highway to the east, Berkshire Road to the south and Dundas Road to the west.

The Forrestfield / High Wycombe Local Structure Plan (the LSP) has been prepared to facilitate industrial subdivision and development within the area. Due to the nature of fragmented landownership a Development Contribution Plan (DCP) has been prepared to coordinate the provision of common infrastructure required to cater for development. The area affected by the DCP, adopted as Development Contribution Area 1 on the Local Planning Scheme No. 3 (LPS 3) map, is shown in Figure 1 below.



Figure 1 – Development Contribution Area 1 – Forrestfield Light Industrial Area – Stage 1

1.2 Purpose of Development Contribution Plan

This report has been prepared to set out in detail:

- a) The infrastructure, land and other items for which development contributions are to be collected;
- b) How land values are calculated, and the valuation methodology applied;
- c) A review of cost estimates of infrastructure and administrative items;
- d) A calculation of the cost contribution rate applicable;
- e) Principles for the priority and timing of infrastructure provision and land acquisition; and
- f) Various other operational matters.

1.3 Status

This DCP Report has been prepared pursuant to Clause 6.5.3 of the City's Local Planning Scheme No.3 (LPS3). The DCP Report should be read in conjunction with Clause 6.5 and Schedule 12 of LPS3 and the LSP.

This DCP Report does not form part of LPS3 but has been prepared generally in accordance with Schedule 12 of LPS3.

1.4 Infrastructure Changes in Forrestfield / High Wycombe Industrial Area Stage 1

Infrastructure included within the DCP is guided by Schedule 12 of the LPS 3 and the LSP. In previous reviews of the DCP there has been modifications made by the City to these instruments to respond to changes in the planning framework in the area, which has resulted in the modifications to relevant infrastructure items included in the DCP being adjusted at the annual DCP review. These modifications include:

- a) Modification of Berkshire / Milner / Dundas Road to a full movement intersection.
- b) Removal of upgrades to Dundas Road.
- c) Inclusion of the extension of Nardine Close (previously referred to as Road 2a) through to Lot 50 and 51 Sultana Road West.
- d) Demolition and compensation for garage on Lot 51 to facilitate the Nardine Close extension.
- e) Relocation of proposed Bonser Road to the southern boundary of Lot 547 (291) Berkshire Road, Forrestfield.
- f) Removal of an entry statement on Berkshire Road.
- g) Removal of carriageway widening to Berkshire Road.
- h) Updated administration costs.
- i) Revised utility relocation estimates (now within each relevant road cost estimate).
- j) Accounting for contributions received and land purchased.

2. Infrastructure, Land and Other Items

This section of the DCP Report identifies the infrastructure, land and other items for which development contributions will be collected. These items include:

- a) Land for roads and intersections;
- b) Roads and intersection construction requirements;
- c) Landscaping;
- d) Fencing treatment to Bush Forever; and
- e) Administration costs.

2.1 Land Value

Land is required to deliver the infrastructure outlined within the DCP. To determine the total cost of items, an estimate of land value needs to be identified. For the purposes of land acquisitions, the net land value is to be determined in accordance with the definition of "value" in LPS3 Clause 6.5.12.

LPS3 Amendment 88 introduced text into Clause 6.5.12 to read "Valuation methodology will be defined for each particular arrangement by the applicable Development Contribution Plan Report." In this case, the City has received advice that indicates that in the context of the nature of highly fragmented land ownership, static feasibility valuations will be undertaken for all land parcels; however, for the purposes of implementing a single land value for the DCP a combination of the comparative sales approach, piecemeal approach and an average rate approach will be utilised.

This approach is consistent with previous versions of the DCP and is the most appropriate methodology for the purposes of the ongoing administration of the DCP.

Valuation reports completed March 2020 indicate a land value rate of \$250/m². A copy of this valuation is provided in Appendix J.

2.2 Roads / Intersections

Note: All service and utility relocation cost estimates and street lighting have been included as part of road or intersection upgrade estimates.

2.2.1 Berkshire Road

Berkshire Road is an existing road and borders a significant portion of the LSP area. Berkshire Road is required to be upgraded to service the future development envisaged by the LSP.

The following items are included in the DCP for Berkshire Road:

- a) Completion, upgrade and repair of the 2m wide footpath along the north side of Berkshire Road to provide a continuous path between Milner Road and Roe Highway.
- b) Adjusting consumer lines crossing the road to provide unrestricted clearance for RAV7 vehicles.

In January 2020, the City received State Government funding through the WA Bicycle Network (WABN) scheme to undertake a design for shared paths on Berkshire and Dundas Road. Subject to the designs and construction estimates being finalised in 2021, the City anticipates grant funding for this project to become available. At this stage, it is not certain that WABN funding for construction will be available. As a result, the DCP has been amended for Berkshire Road to remove the shared path item and instead include the completion and necessary upgrades to the existing 2m wide footpath on the northern side of Berkshire Road as the lowest cost / certainty item to facilitate pedestrian movements from the developments of the lots.

The future development cost for Berkshire Road is estimated at \$150,693

A detailed breakdown of the cost is provided in Appendix A.

2.2.3 Milner Road

Milner Road is an existing road and borders the northern boundary of the LSP area. Milner Road is required to be upgraded to service the future development envisaged by the LSP.

The following items are included in the DCP for Milner Road:

- Widen the carriageway from 7.4m to achieve a 10m wide carriageway.
- Remove existing pedestrian paths and reinstate the verge area.
- Construction of a 2.5m shared path to provide a connection between Berkshire Road and Sultana Road West.
- Install street lighting between Berkshire Road and Sultana Road West to comply with Lighting standards.
- Road upgrades to accommodate category RAV7 vehicles between Berkshire Road and Nardine Close.
- Road upgrades to accommodate category "As of Right" vehicles between Nardine Close and Sultana Road West including the Milner Road / Sultana Road West intersection.

Regarding the designs prepared for the section of Milner Road between Nardine Close and Sultana Road West and the whole of Sultana Road West, prior to completing the 85% design process the City surveyed existing and approved industrial operators who front on to these sections of road. This process confirmed that none of the businesses currently require, or will require in the future, access for larger RAV vehicles beyond the 'As of Right' standard 19m semi-trailer. Accordingly, the design reflects the current and future access needs with a view of minimising unnecessary infrastructure costs.

The future development cost for Milner Road is estimated at \$856,900

A detailed breakdown of the cost is provided in Appendix B.

2.2.4 Nardine / Ashby Close

Nardine / Ashby Close are existing roads providing the primary connection through the industrial area from Berkshire Road to Milner Road. The following Nardine / Ashby Close upgrades were completed in July 2019:

- Creation of new road reserve section between existing cul-de-sac and Ashby Close alignment.
- Construction of a new 10-metre wide road section from the existing cul-de-sac south to provide connection to Ashby Close.
- Widen existing carriageway to provide a 10-metre-wide carriageway. Road and intersection upgrades to accommodate category RAV7 vehicles.
- Construction of drainage swales along the road verge sections in accordance with the LSP.
- Construction of a shared path to provide connection between Milner Road and Ashby Close.

The following road modifications are proposed to be completed when Bonser Road has been completed to a RAV7 standard:

- Modifications to the Ashby Close and Berkshire Road intersection to restrict access to left in, left out only.

The development cost for Nardine / Ashby Close is \$1,613,942

A summary of expenses for this project is provided in Appendix C.

2.2.5 Bonser Road (Previously known as Road 1)

Bonser Road is a new road providing a connection between Nardine Close and Berkshire Road. This road is required to be created to service the future development envisaged by the LSP.

The following items are included in the DCP for Bonser Road:

- Creation of new road reserve section between Berkshire Road and Nardine Close.
- Construction of a new 10-metre wide road Berkshire Road to Nardine Close.
- Construction of drainage swales along the road verge sections in accordance with the LSP.
- Construction of a footpath along the north side to provide connection between Nardine Close and Berkshire Road.
- Road and intersection upgrades to accommodate category RAV7 vehicles.
- Supply and installation of street trees.

Bonser Road construction will be divided into two stages:

- 1) The construction of Bonser Road the exception of road works (truncations) impacting Lots 16 and 17 Berkshire Road. This first stage would result in a road that is not to a standard suitable for a category RAV7 vehicle. The acquisition of truncations for Lots 16 and 17 Berkshire Road is required in order to facilitate the full construction of an intersection for RAV 7 vehicles. This stage was completed in
- 2) Following the acquisition of truncations from Lots 16 and 17 Berkshire Road, upgrades to bring the intersections up to a standard suitable for category RAV7 vehicles.

The total development cost for Bonser Road is \$587,657

Stage 1: \$510,966

Stage 2: \$76,691

A breakdown of expenses is provided in Appendix D.

2.2.6 Nardine Close Extension (Road 2A)

Nardine Close extension is a new road providing access to lots currently serviced by a series of battle-axe legs. Nardine Close extension is required to be created to service the future development envisaged by the LSP.

The following items are included in the DCP for the Nardine Close extension:

- Construction of a new 10-metre-wide section to service current battleaxe configured lots.
- Construction of drainage swales along the road verge sections in accordance with the Drainage Strategy.
- Roads will only be constructed to service current battleaxe configured lots if land assembly and consolidation processes do not provide the affected lands with access from gazetted and constructed public roads.
- Creation of a new 20 road reserve section as required.
- Associated service installation and relocation.

Nardine Close Extension is divided into two stages:

- Stage 1: The creation of a road reserve and road construction including a cul-de-sac up to the south-west boundary of Lot 51 (168) Sultana Road West. This stage was completed in July 2019.
- Stage 2: The creation of a road reserve and road construction including a cul-de-sac up to the south-west boundary of Lot 50 (170) Sultana Road West.

With regard to Stage 2 of the Nardine Close extension (Road 2A), in May 2020, Development Approval was granted for a place of worship at lot 50 Sultana Road West, that would utilise Sultana Road West as access entirely, and would not require internal light industrial oriented access to the Forrestfield / High Wycombe Industrial area, via Nardine Close. Therefore, the stage 2 extension works of Nardine Close may no longer be required if the place of worship development progresses as planned.

Given the place of worship development has not commenced construction there is currently a risk that the development will not proceed and the potential that the site could be developed and used for light industrial purposes. Accordingly, at this stage, the City does not recommend that Stage 2 of the Nardine Close extension be removed as an item from the DCP until there is certainty that the site does not require access from Nardine Close. To be certain, it is considered that the development should commence for the place of worship development, which generally means that construction has commenced.

The City will consider, at the time the building has commenced construction, amending the Local Structure Plan and DCP to remove Stage 2.

The development cost for Stage 1 and estimated costs for Stage 2 of Nardine Close Extension (Road 2A) is:

Stage 1: \$562,691 (Completed)

Stage 2: \$540,658 (Estimated)

Total: \$1,103,349

A detailed breakdown of the cost is provided in Appendix E.

2.2.7 Sultana Road West (50% contribution)

Sultana Road West is an existing road and borders a significant portion of the Forrestfield North Residential Precinct LSP area to the east. Sultana Road West is required to be upgraded to service the future development envisaged by the LSP. The DCP will fund 50% of any required modifications to Sultana Road.

The following items are included in the DCP for Sultana Road West:

- Carriageway widening between Milner Road and Lot 222 (128) Sultana Road West from 6m to achieve a 9-metre-wide carriageway.
- Construction of drainage swales along the road verge sections for stormwater disposal.
- Construction of a footpath along the west side to provide a connection between Milner Road and Lot 222 (128) Sultana Road West.
- Install street lighting to comply with lighting standards.

The original estimates had provision for a 2.5m wide path, however, the path does not form part of the City's overarching Bicycle Plan and therefore does not require a path wider than 1.8m. Therefore, allowance has now been made for a 1.8m wide path.

Regarding the designs prepared for the section of Milner Road between Nardine Close and Sultana Road West and the whole of Sultana Road West, prior to completing the 85% design process the City surveyed existing and approved industrial operators who front on to these sections of road. This process confirmed that none of the businesses currently require, or will require in the future, access for larger RAV vehicles beyond the 'As of Right' standard 19m semi-trailer. Accordingly, the design reflects the current and future access needs with a view of minimising unnecessary infrastructure costs.

The future development cost for Sultana Road West is estimated at:

Total: \$1,598,068

50% contribution from DCA1: \$799,034

A detailed breakdown of the estimated costs is provided in Appendix F.

2.2.8 Milner Road / Nardine Close Intersection

Milner Road and Nardine Close intersection is required to be upgraded to service the future development envisaged by the LSP. This intersection was completed in November 2019.

The development cost for Nardine Close / Milner Road intersection is \$300,076

A summary of expenses for this project is provided in Appendix G.

2.2.9 Berkshire Road / Ashby Close Intersection

Ashby Close / Berkshire Road intersection is required to be upgraded to service the future development envisaged by the LSP. The intersection construction works were completed in October 2019.

The development cost for Berkshire Road / Ashby Close intersection is \$276,771

A summary of expenses for this project is provided in Appendix G.

2.2.10 Milner / Berkshire Road Intersection

Milner / Berkshire Road intersection is required to be upgraded to service the future development envisaged by the LSP. The intersection construction works were completed in December 2019.

An \$80,000 contribution from the State Government to the upgrade of this intersection has been received, this has been accounted for in the costs included in the DCP.

The development cost for Milner Road / Berkshire Road intersection is \$960,233

A summary of expenses for this project is provided in Appendix G.

2.2.11 Bush Forever Fencing

The 'Bush Forever' site is located at the southern end of the site between Nardine Close and Sultana Road West. There is a requirement to fence off this section of 'Bush Forever'.

The Department of Planning, Lands and Heritage has previously outlined their expectation that the DCP cover the cost of the fencing. This infrastructure item is also included in Schedule 12 (k) of the Local Planning Scheme No. 3.

The future development cost for Bush Forever Fencing is estimated at \$105,875.33.

A detailed breakdown of the cost is provided in Appendix H.

2.3 Land for Road Reserve

The DCP takes responsibility for acquiring DCP road reserve land where the existing reserve is widened or where the road is a new road.

See Section 2.1 for information on land valuation methodology.

The following table summarises land acquisition that has occurred since the commencement of the DCP:

Property Address	Acquisition Area (m ²)	Purpose
Lot 303 (16) Ashby Close	2,022	Nardine/Ashby
Lot 305 (21) Ashby Close	3,292	Nardine/Ashby
Lot 306 (19) Ashby Close	1,311	Nardine/Ashby
Lot 307 (17) Ashby Close	799	Nardine/Ashby
Lot 304 (10) Ashby Close	302	Nardine/Ashby
Lot 1100 (7) Ashby Close	166	Berkshire / Ashby Intersection

Lot 302 (249) Berkshire Road	1,097	Nardine/Ashby
Lot 1015 (283) Berkshire Road	7	Nardine/Ashby
Lot 99 (271) Berkshire Road	2,443	Nardine/Ashby
Lot 301 (251) Berkshire Road	2,194	Nardine/Ashby
Lot 810 (137-151) Milner Road	95	Milner / Nardine Intersection
Lot 1218 (67) Nardine Close	180	Nardine/Ashby
Lot 308 (166) Sultana Road West	2,370	Nardine Close extension
Total	16,277.5m²	\$4,225,510

The following table summarises the remaining road reserve acquisitions:

Property Address	Remaining Acquisition Area (m²)	Remaining Acquisition Cost
Lot 16 (285) Berkshire Road	132	\$33,000
Lot 17 (287) Berkshire Road	76	\$19,000
Lot 547 (291) Berkshire Road	7,302	1,825,500
Lot 50 (170) Sultana Road West	670	\$167,500
Lot 51 (168) Sultana Road West	2,491	\$622,750
Lot 308 (166) Sultana Road West	1,100	\$275,000
Lot 7 (90) Milner Road	18.06	\$4,515
Total	11,789.06	\$2,947,265

2.4 Administrative Items

Administrative items include all expended and estimated future costs associated with administration, planning and development of the LSP, DCP and any technical documents necessary for the implementation of the above, including:

- Planning studies;
- Road design costs;
- Legal costs;
- Other related technical and professional studies; and
- Scheme Management Costs (including administration and management of the DCP).

The cost for administrative items is:

Administrative Costs to 31 March 2020: \$573,912.89

Future Administrative Costs: \$345,000

Total: \$918,912.89

A detailed breakdown of the costs is provided in Appendix H.

2.5 Estimated Cost

The following table provides a summary of the estimated cost for all infrastructure, land and other items within the DCP.

Item	Actual as at 31/3/2020	Remaining	Total
Berkshire Road	\$0	\$150,692.99	\$150,692.99
Milner Road	\$0	\$856,900.33	\$856,900.33
Nardine/Ashby Close	\$1,613,941.60	\$0	\$1,613,941.60
Bonser Road	\$0	\$587,657.45	\$587,657.45
Nardine Close Extension (Road 2A) Stage 1	\$562,691	\$0	\$562,691
Nardine Close Extension (Road 2A) Stage 2	\$0	\$540,658.08	\$540,658.08
Sultana Road West	\$0	\$799,034.06	\$799,034.06
Nardine Close/Milner Road Intersection	\$295,076	\$5,000	\$300,076
Ashby Close/Berkshire Road Intersection	\$268,042	\$8,729	\$276,771
Berkshire/Milner Road Intersection	\$955,233	\$5,000	\$960,233
Bush Forever Fencing	\$0	\$105,875.33	\$105,875.33
Land for Roads	\$4,225,510	\$2,947,265	\$7,172,775
State Government Contribution towards Berkshire/Milner Intersection – Forrestfield Airport Link	\$0	-\$80,000	-\$80,000
Subtotal – Infrastructure	\$7,920,493.60	\$6,006,812.23	\$13,847,305.83
Administration Items	\$573,912.89	\$345,000	\$918,912.89
Total			\$14,766,218.72
Gross / Net Variation**	\$0	-\$195,463.00	-\$195,463.00

***Initial versions of the DCP calculated contributions based on a gross area (calculated based on total land area) and collected on a net area (deducting areas for road reservations). This resulted in a short fall of contributions of approximately \$195,463. Under the previous DCP calculation methodology, the short fall was proposed to be dealt with by Council at the end of the DCP. As a result of the most recent review and with all payments being considered interim until the conclusion of the DCP, the shortfall will no longer occur as all contributions will be reconciled to the final DCP amount. In this context, the deduction that was previously included has been removed from the calculation of the DCP rate.*

A copy of the General Ledger account is contained in Appendix K.

A copy of the Financial Report for the Forrestfield Industrial Area Stage 1 Statement of Financial Position as at 31 March 2020 is contained in Appendix L.

3. Development Contribution Methodology

This section of the DCP Report sets out the methodology for determining the development contributions applicable. The development area is characterised by a single precinct and development contributions are made on a 'per square metre' basis.

Schedule 12 of LPS3 sets out the method for calculating contributions:

$$\text{Contribution rate} = \frac{\text{Cost of infrastructure items} + \text{cost of administrative items (\$)}}{\text{Net lot area of DCA (m}^2\text{)}}$$

In order to comply with the requirements of LPS3 and State Planning Policy 3.6, and to proceed with the operation of the DCP in a practical and equitable manner, the equation included in the above method will be used, but the City will not apply the supplementary notes included below the equation (in particular the use of 'funds held as money' or contributions collected) as outlined in Schedule 12 of LPS3.

3.1 Cost Inputs

Cost Input	\$/m ²
Cost of infrastructure items	\$13,847,305.83
Cost of administrative items	\$918,912.89

3.2 Area Inputs

Area Input	Area
Contribution Area	690,411m ²
Area of Road Reserve	28,066.56m ²
Net lot area	662,344.44m²

3.3 Calculation

Cost of infrastructure items			Cost of administrative items (\$)	
\$	13,847,305.83	+	\$	918,912.89
Net lot area of DCA (m²)				
662,344.44				
Contribution Rate	=	\$	22.29	

4. Priority and Timing of Provision

The following key principles are utilised to guide the identification of priorities for the provision of infrastructure and land acquisition, including:

- Ensuring a constant turnover of funds – By managing the cash flow of the DCP, the City can optimise the use of funds between land acquisition and civil works and recoupment of developer pre-funding.
- Prioritising the purchase of land identified for public purposes that encompasses all of, or a substantial portion of, one landholding – such landholdings are essentially “quarantined” from subdivision and/or development and would be difficult to sell to a private buyer.
- Constructing infrastructure on an “as needs” basis to facilitate development – This is especially apparent in the context of road upgrades.
- Undertaking works and land acquisition in areas of fragmented ownership – this assists in the successful and coordinated development of these areas. In areas of consolidated ownership, most infrastructure and land is provided by the developer as offsets to cost contributions.
- Grant funding opportunities – the City will actively seek grant funding to assist in the provision of DCP infrastructure. In most instances, the use of grant funding is reliant on the City providing a matching or partial contribution. The City may utilise DCP funds and elevate the priority and timing of an infrastructure item to capitalise on grant funding opportunities. This approach is beneficial to the long-term financial viability of the DCP.

Subject to the availability of funding, the following items have been determined by the City as current priority items:

Completed Priorities (or under construction):

- Nardine / Ashby Close design, land acquisition and construction;
- Nardine Close / Milner Road intersection design and construction;
- Ashby Close / Berkshire Road intersection design and construction;
- Berkshire / Milner Road intersection design and construction; and
- Nardine Close Extension (Road 2A: Stage 1) design and construction.

Scheduled Priorities:

1. Administration Costs, including designs to support detailed cost estimates (ongoing);
2. Bonser Road (previously referred to as Road 1) is being prefunded by the landowner of Lot 547 Berkshire Road, the road was completed in June 2020. Although the construction of Bonser Road is completed, this is included in the priority list as the DCP is yet to repay the land acquisition, design and construction costs to the landowner. It is further noted that this item includes a second stage which will follow the acquisition of truncations from Lots 16 and 17 Berkshire Road, upgrades to bring the Bonser Road intersections up to a standard suitable for category RAV7 vehicles;
3. Nardine Close Extension (Road 2A: Stage 2) design, land acquisition and construction. In the event that Stage 2 is not required given land use changes in the area, this item will be reprioritised as item number 2 (ahead of Bonser Road) and replaced with costs associated with bringing the temporary cul-de-sac up to a permanent standard, and design, land acquisition and construction of an emergency accessway on the north-west side of Lots 50 and 51 Sultana Road West.
4. Milner Road construction.
5. Sultana Road West construction; and
6. Bush Forever Fencing.

Should Stage 2 of the Nardine Close extension be removed as an infrastructure item, the above list will be reprioritised to facilitate land acquisition and construction requirements to make good the temporary arrangements resulting from Stage 1 of the Nardine Close extension (the existing temporary cul-de-sac). In this regard, the priority of works and land acquisition will be included ahead of Bonser Road.

The priorities have been identified in order of priority. The identification of priorities will be undertaken as part of the annual cost estimate review and associated DCP Report update.

5. Period of Operation and Review

The DCP will operate for a period of 10 years, being the date of gazettal of the related scheme amendment to incorporate the DCP into LPS3 as Schedule 12.

The DCP Scheme will be reviewed at least every 5 years from the date of gazettal or earlier when considered appropriate, having regard to the rate of subsequent development in the area since the last review and the degree of development potential still existing.

The DCP Report, incorporating cost estimates, will be reviewed at least annually, allowing for more frequent reviews to be completed on an as-required basis having regard to cost volatility and development priorities.

6. Operational Matters

This section of the DCP Report addresses various operational matters associated with the DCP.

6.1 Principles

Refer Clause 6.5.6 of LPS3.

7. Figures

7.1 Forrestfield / High Wycombe Local Structure Plan (As Amended)



Structure Plan Notes Subdivision and Strata Titling Requirements

General

1. Berkshire Road / Miner Road / Dundas Road is a full movement intersection.

Lot Size

2. Industrial subdivision is to meet the requirements of the Scheme and WAPC Policy DC4.1 – Industrial Subdivision unless otherwise specified.
3. The following minimum lot sizes apply to any subdivision within the Structure Plan area:
 - a. Lot 50 Sullana Road West - 3,000m² subject to:
 - i. The construction of Road 2A;
 - ii. Minimum lot frontage of 30m; and
 - iii. Compliance with all development requirements of this Structure Plan.
 - b. All other lots within the Structure Plan area - approximately one (1) hectare.

Battleaxe Development

4. No battleaxe subdivision will be supported unless otherwise depicted on the Structure Plan Map.
5. Single or shared battleaxe legs are not permitted to service industrial development on existing Lots 50, 51 and 308 Sullana Road West and Lots 305, 306 and 307 Ashby Close. Approval to non-residential development is contingent on securing direct access to a constructed public road.
6. No further subdivision will be permitted on Lots 50, 51 and 308 Sullana Road West and Lots 305, 306 and 307 Ashby Close based on a shared battleaxe leg access arrangement.

Industrial Strata Titling

7. Industrial unit strata titling will only be supported in circumstances where a management statement is imposed as a condition of strata approval to the satisfaction of the City that ensures appropriate management arrangements and ongoing compliance with all development criteria as contained with the Scheme, this Structure Plan, any supporting planning policy or design guidelines, or any other requirements specified by the City.

Development Criteria and Requirements

Land Use Permissibility

8. Although the permissibility of uses is as set out in Table 1 in the Scheme, the Structure Plan intent is to facilitate land uses that take advantage of the lands strategic location in respect to major transport infrastructure, including Perth Airport, Roe Highway and Tonkin Highway. On this basis, logistics and other transport based industries are preferred land uses to take advantage of the lands locational attributes.
9. When considering development applications for 'D' and 'A' uses under the Scheme, due regard will be given to the extent that the proposed use supports the Structure Plan intent in accordance with 8 above and the requirements relating to Lot 50 Sullana Road West as specified below.

Built Form

10. In addition to the requirements of the Scheme, any applicable planning policy and design guidelines, any wall or building facing any street is to be painted or otherwise treated to ensure an appropriate standard of visual amenity to the satisfaction of the City.
11. In addition to the requirements of the Scheme, any applicable planning policy and design guidelines, service areas, bin and storage areas and services such as air conditioners and other machinery are to be screened such that they are not visible from the street.

Vehicle Access and Movement

12. Vehicular access for non-residential development is not permitted via existing battleaxe legs.
13. Vehicular access for all non-residential development is to be taken directly from a gazetted and constructed public road.
14. In addition to the requirements of the Scheme, any applicable planning policy and design guidelines, internal driveways and car parks are to be designed to ensure slow speeds. Lengths of driveway or car parks exceeding 50 metres are to incorporate speed control devices including minor level changes.
15. In regard to Lot 50 Sullana Road West, vehicle access from Sullana Road West shall be permitted for residential purposes only. All other vehicle access shall be from Road 2A (Nardine Close Extension).
16. Vehicle access at the intersection of Ashby Close and Berkshire Road will be restricted to left in, left out only.

Pedestrian Movement and Amenity

17. In addition to the requirements of the Scheme, any applicable planning policy and design guidelines, footpaths are to be provided connecting car parking areas to buildings to the satisfaction of the City.

Landscaping

18. In addition to the requirements of the Scheme, any applicable planning policy and design guidelines, landscaping is to be provided within any development site of a sufficient quality to ensure an attractive well-landscaped environment.
19. Landscaping within car parks throughout the Structure Plan area is to be in accordance with the requirements of the Scheme, any applicable planning policy and design guidelines.
20. In addition to the requirements of the Scheme, any applicable planning policy and design guidelines, the tree species implemented, when not used for screening purposes, shall be of a type having high branch free stems to facilitate surveillance and visibility of building fronts and with a large canopy to achieve adequate shading of car parking areas.

Signage

21. In addition to the requirements of the Scheme, any applicable planning policy and design guidelines, signage is to relate directly to the building containing the use or service and any associated products for advertising purposes, and is not to be excessive or unnecessary. Third party signage is not permitted.

Energy Efficiency

22. In addition to the requirements of the Scheme, any applicable planning policy and design guidelines, building openings should be orientated to benefit from passive climatic heating and cooling opportunities to reduce fixed energy consumption.
23. In addition to the requirements of the Scheme, any applicable planning policy and design guidelines, all new buildings should incorporate energy saving design and technology where practical to do so.

Design Guidelines

24. For additional development criteria and requirements applicable in the Structure Plan area, refer to the Forrestfield/High Wycombe Industrial Area Design Guidelines.

Development Requirements for Lot 50 Sullana Road West, High Wycombe

25. Any development on lots created under the provisions of 3 above is required to demonstrate compliance with the following composite Residential / Light Industry provisions:
 - a. The land within 30 metres of the front lot boundary, taken from Sullana Road West, shall be used for residential purposes only.
 - b. Notwithstanding the provisions contained within the Structure Plan, any development for residential purposes, shall be subject to those provisions of the Scheme relating to the Residential Zone and State Planning Policy 3.1 – Residential Design Codes (R5).
 - c. Any development for the light industrial component of the composite land uses shall be subject to those provisions of the Scheme relating to the Light Industry Zone.
 - d. Any development for light industrial purposes shall be subject to the provisions of the Forrestfield / High Wycombe Industrial Area Design Guidelines Local Planning Policy.
 - e. The lot shall not be developed or used for light industry purposes unless a dwelling is built to plate height first.
 - f. Vehicle access from Sullana Road West shall be permitted for residential purposes only. All other vehicle access shall be from Road 2A (Nardine Close Extension).
26. Any light industrial development which does not form part of a composite residential/light industrial subdivision and development in 3(a)(i) and 25 above, shall be subject to those provisions of the Scheme relating to the Light Industry Zone and the Forrestfield / High Wycombe Industrial Area Design Guidelines Local Planning Policy.

Bushfire

27. Any development requires assessment in accordance with State Planning Policy 3.7 – Planning in Bushfire Prone Areas, which may take the form of a bushfire management plan.

Noise Attenuation for Residential Land Uses

28. Any residential land uses are required to noise attenuation in accordance with State Planning Policy 5.4 – Road and Rail Transport Noise and Freight Considerations in Land Use Planning.

Developer Contributions

29. Developer contributions within this Structure Plan are as set out in Schedule 12 – Development Contribution Areas of the City of Kalamunda Local Planning Scheme No. 3.

Structure Plan Forrestfield/High Wycombe Industrial Area

LEGEND

- Structure Plan Boundary
- Metropolitan Region Scheme Reserve - Parks and Recreation
- Local Planning Scheme No. 3 - Industrial Development Zone
- Local Planning Scheme No. 3 - Special Use Zone - Composite

- Existing Road
- New Road
- Potential New Road
- New road connection/intersection
- Emergency Access

- Roe Highway
- Pedestrian Path
- Shared Path
- 20 metre setback line (main street)
- Potential Road Subject to Subdivision of Lot 50 Sullana Road West

- 10 metre Setback Line (minor street)
- 8 metre Landscaped Buffer to Sullana Road West
- 6 metre Landscaping Strip
- Bush Forever Interface Treatment

File: 19-521 STH1A Staff: LR Checked: MC
Date: 26 November 2019 Scale: 1:5000 @ A3



8. Appendices

Appendix A: Berkshire Road

Item	Description	Quantity	Rate	Amount	Subtotal	Comment
Based on drawings (85% status) prepared by Porter Consulting Engineers 19-11-135/810 Rev C, 19-11-135/811 Rev C, 19-11-135/812 Rev B						
1	Preliminaries					
1.1	All Preliminaries (Mobilisation, Supervision, Insurances, Safety etc.)		6%	\$ 7,743		
	Subtotal - Preliminaries				\$ 7,743	
2	Survey Control and Testing					
2.1	All Survey (Setout, As-Cons, Compaction Testing etc.)		5%	\$ 6,453		
	Subtotal - Survey Control and Testing				\$ 6,453	
3	Clearing and Demolition					
3.1	Clear Large Trees inc Grubbing	-	\$ 246.00	\$ -		
3.2	Clear Small Trees inc Grubbing	-	\$ 179.00	\$ -		
3.3	Clear shrubs/grass	-	\$ 1.82	\$ -		
3.4	Demolish and Dispose redundant footpaths	80	\$ 20.00	\$ 1,590		Removed 30m of damaged path from Section 2, and removed

							13m of 1.5m wide path from Section 3.
	Subtotal - Clearing and Demolition					\$ 1,590	
4	Earthworks						
4.1	Remove 100mm Topsoil to spoil for footpath widening	364	\$	3.00	\$	1,093	Mainly topsoil stripping will be needed for Section 4 where there is no existing path.
4.2	Cut to spoil for footpath widening	36	\$	25.00	\$	911	From path boxout.
	Subtotal - Earthworks					\$ 2,004	
5	Roadworks						
5.1	Widen existing concrete footpaths (from 1.8m wide to 2.5m wide)		\$	47.65	\$	-	
5.2	Install new 100mm thick concrete footpath, 2m wide	424	\$	47.65	\$	20,218	Remove and replace 30m of damaged path from Section 2, and 13m of 1.5m wide path from Section 3.
5.3	Supply and Install Pram Ramps	6	\$	550.00	\$	3,300	Pram ramps only needed where crossovers have edge kerbing.
5.4	Install diagonal pavement line markings to crossovers	194	\$	10.00	\$	1,941	The City specified diagonal pavement markings to delineate path through crossovers.

Subtotal - Roadworks					\$	25,459	
6	Miscellaneous						
6.1	Clean up	1	\$	3,500.00	\$	3,500	
6.2	Adjust Telstra Pit	-	\$	3,000.00	\$	-	Assessed as not required.
6.3	Adjust stay poles	-	\$	5,000.00	\$	-	Assessed as not required.
6.4	Adjust hydrant	-	\$	3,000.00	\$	-	Assessed as not required.
6.5	Provision for misc./unidentified service relocations	1	\$	3,000.00	\$	3,000	Reduce the allowance from \$10k to \$3k for provision for unidentified service relocations.
6.6	Crossover adjustments and reinstatements - allow \$1500 per crossover.	4	\$	1,500.00	\$	6,000	Although crossover adjustments are likely to be minimal within Section 4, consideration has been had for crossovers needing adjustment where a pram ramp is installed.
6.7	Supply and Install street lighting						City of Kalamunda has confirmed that there is no need for additional street lighting for Berkshire Rd.
Subtotal - Miscellaneous					\$	12,500	

7 **Conversion of overhead consumer lines to underground lines to provide RAV clearance requiriements.**

7.1 Convert overhead electrical lines (5 consumer lines) that conflict with RAV clearance requirements to underground lines 4 \$ 15,000.00 \$ 60,000

Refer to 3E's review of the overhead lines to Berkshire Road. (Doc: 3E19102-R01).
Note: Since 3E's review, the number of consumer lines requiring undergrounding was reduced from 5 to 4 as development occurred on Lot 547 (291) Berkshire Road.

7.2 Ancillary works in relation to conversion to overhead to underground within the private property 5 \$ 2,500.00 \$ 10,000

Private cabling from the new pillars to the customer switchboards may be required. Note: Since 3E's review, the number of consumer lines requiring undergrounding was reduced from 5 to 4 as development occurred on Lot 547 (291) Berkshire Road.

Subtotal - Convert overhead consumer lines

\$ 70,000

8 **Subtotal**

8.1	Construction Subtotal ex Prelims, Survey		\$	111,553	
8.2	Construction Subtotal		\$	123,823	
9	Allowances and Charges				
9.1	Traffic Management	5%	\$	6,191.17	
9.2	BCITF Levy	0.2%	\$	248	
9.3	Council Supervision	1.5%	\$	1,857	
9.4	Design and Superintendence	10.0%	\$	12,382.33	
9.5	Contingency	5%	\$	6,191.17.92	
	Subtotal - Allowances and Charges				\$ 26,870
10	TOTAL		\$	150,692.99	

Appendix B: Milner Road

Item	Description	Quantity	Rate	Amount	Subtotal	Comment
<p>Based on 85% design status drawings prepared by Porter Consulting Engineers. Drawings 19-11-135-M-100 Rev A, 101 Rev A, 400 Rev A, 401 Rev A, 402 Rev A, 403 Rev A, 420 Rev A, 421 Rev A, 440 Rev A, 441 Rev A, 600 Rev A, 3E19102-04 Rev 2 (sheet 1) , 3E19102-04 Rev 2 (sheet 2)</p>						
1	Preliminaries					
1.1	All Preliminaries (Mobilisation, Supervision, Insurances, Safety etc.)		6%	\$ 42,400.39		
	Subtotal - Preliminaries				\$ 42,400	
2	Survey Control and Testing					
2.1	All Survey (Setout, As-Cons, Compaction Testing etc.)		5%	\$ 35,333.66		
	Subtotal - Survey Control and Testing				\$ 35,334	
3	Clearing and Demolition					
3.1	Clear Large Trees inc Grubbing		\$ 750.00	\$ -		No large trees in the roadway. All considered to be small.
3.2	Clear Small Trees inc Grubbing	19	\$ 500.00	\$ 9,500.00		PCE has adopted for a higher rate due to existing services near trees to be removed & grubbed. All trees for removal considered small trees.

3.3	Clear shrubs	111	\$3.00	\$	333.00	Based on 85% status drawings
3.4	Demolish and Dispose redundant footpaths (assumed width 2m)	1,494	\$20.00	\$	29,874.00	Based on 85% status drawings
3.5	Demolish and Dispose redundant kerbing	1,220	\$9.00	\$	10,981.80	Based on 85% status drawings
3.6	Remove and Dispose redundant drainage pits	8	\$460.00	\$	3,680.00	Based on 85% status drawings
3.7	Remove and Dispose redundant pavements	-	\$20.00	\$	-	See item 3.8
3.8	Remove and Dispose existing asphalt offsite. Excavate existing base and subbase for possible reuse as part of pavement reconstruction, basecourse as documented.	4,072	\$20.00	\$	81,440.00	For pavements designated "Full depth pavement reconstruction with asphalt intersection mix" & "to be resurfaced"
Subtotal - Clearing and Demolition					\$ 135,809	
4	Earthworks					
4.1	Remove 100mm Topsoil to spoil	2,280	\$3.00	\$	6,840.00	Based on 85% drawings
4.2	Form, Shape, Compact Subgrade	2,915	\$4.00	\$	11,660.16	Based on 85% drawings

4.4	Import Fill, Shape, Compact	-	\$30.00	\$	-
4.5	Cut to spoil		\$24.64	\$	-
4.6	Cut to spoil for boxout formation of widening.	815.40	\$24.64	\$	20,091.46
4.7	Dust Control	1	\$3,000.00	\$	3,000.00

The pavement investigation did not encounter any clay or unsuitable material. That is not to say unsuitable material won't be encountered.

Spoils to be removed & disposed offsite for the widening boxout.

Subtotal - Earthworks

\$41,592

5 Roadworks

5.1	Rip and rework the existing base course to minimum 150mm	2,312	\$ 4.00	\$	9,248.00
5.2	Supply and Install 220mm limestone sub-base	-	\$50.00	\$	-
5.3	Supply and Install 200mm limestone sub-base	2,915	\$12.00	\$	34,980.48
5.4	Supply and Install 100mm road base	-		\$	-

For pavements designated "To be Resurfaced"

For pavements designated "Full depth pavement reconstruction with asphalt intersection mix" & "pavement widening"

5.5	Supply and Install 150mm road base	2,915	\$ 12.00	\$ 34,980.48	For pavements designated "Full depth pavement reconstruction with asphalt intersection mix" & "pavement widening"
5.6					
5.7	Supply and Install 7mm Primer Seal	5,227.04	\$2.60	\$ 13,590.30	Porter's design will result in the existing pavement and new pavement areas needing sealing.
5.8	Supply and Install 30mm AC10 (black)	3,715	\$12.19	\$ 45,285.12	
5.9	Supply and Install 40mm AC10 (intersection mix)	1,704	\$18.00	\$ 30,673.80	
5.10	Supply and Install FK			\$ -	
5.11	Supply and Install MK (refer note 8)			\$ -	
5.12	Supply and Install Reinforced Mountable Kerb	246	\$ 60.00	\$ 14,751.00	
5.13	Supply and Install SMK (refer note 8)	1,133	\$20.48	\$ 23,203.84	
5.14	Key kerbs	265	\$17.00	\$ 4,511.80	
5.15	Remove existing crossover	795	\$20.00	\$ 15,906.00	
5.16	Reinstate existing Crossovers		\$90.00	\$ -	See below for crossovers being reinstated in varying materials

5.17	Reinstated Concrete Crossovers for commercial/industrial properties to be: 150mm thick N32MPa concrete with SL62 mesh centrally located with a 100mm limestone basecourse.	430	\$110.00	\$	47,267.00	Based on 85% designs
5.18	Reinstate Asphalt crossovers for commercial/industrial properties to be: 150mm thick rock roadbase, 7mm primer seal with 30mm asphalt wearing course.	126	\$18.79	\$	2,373.18	Based on 85% designs
5.19	Reinstate concrete crossovers to residential properties to be: 100mm thick N32MPa with 150mm limestone base.	93	\$100.00	\$	9,320.00	Based on 85% designs
5.20	Reinstate Asphalt crossovers to residential properties to be: 100mm thick rock roadbase, primer seal with 30mm asphalt wearing course.	35	\$18.79	\$	661.41	Based on 85% designs
5.21	Reinstate Existing block paving crossovers is to have the existing bricks retained for reuse towards reinstating the crossover on a 150mm limestone base.	30	\$54.00	\$	1,614.60	Based on 85% designs
5.22	Reinstate industrial and commercial laterite gravel crossover 150mm thick	93	\$16.00	\$	1,494.40	Based on 85% designs
5.23	Supply and Install new concrete shared path(2.5m wide)	1,565	\$38.12	\$	59,648.27	Based on 85% designs
5.24	Supply and Install new concrete footpaths (1.8m wide)	1,185	\$38.12	\$	45,163.05	Based on 85% designs. Not included as a cost to DCP given need generated by FFN LSP.
5.25	Supply and Install Pram Ramps	7	\$550.00	\$	3,850.00	
Subtotal - Roadworks					\$353,360	
6	Drainage					
6.1	Supply and Install new 300dia culverts	-	\$2,000.00	\$	-	

6.2	Remove and Replace existing culverts		\$500.00	\$	-	
6.3	Convert Existing SEP's to Gully's		\$2,500.00	\$	-	
6.4	Convert Existing SEP's to Manholes	-	\$2,000.00	\$	-	
6.5	Remove existing drainage pit	7	\$500.00	\$	3,500.00	Based on 85% designs
6.6	Supply and Install new SEP or Gully pit.	8	\$3,000.00	\$	24,000.00	Based on 85% designs
6.7	Supply and Install 300 dia. RCP	-		\$	-	Based on 85% designs
6.8	Supply and Install 375 dia. RCP	-	\$400.00	\$	-	
Subtotal - Drainage					\$27,500	

7 Miscellaneous

7.1	Supply and Install misc linemarking and Signage	1	\$5,000.00	\$	5,000.00	Milner Road and the intersections are currently not linemarked. But linemarking and stencils are required on the 2.5m shared path.
7.2	Supply and Install street lighting		\$110.00	\$	-	
7.3	Supply and install street lightng including cabling	5	\$3,000.00	\$	15,000.00	New luminaires and outreaches on existing timber poles
7.4	Remove light poles	2	\$2,500.00	\$	5,000.00	

7.5	Relocate gas marker post	4	\$500.00	\$	2,000.00
7.6	Supply and Install trees	-	\$450.00	\$	-
7.7	Maintenance of trees and verges for a 2 year period	-	\$11,353.75	\$	-
7.8	Supply and Install select fill for swales	-	\$30.00	\$	-
7.9	Supply and Install gravel for swales	-	\$33.00	\$	-
7.10	Clean up	1	\$2,500.00	\$	2,500.00
7.11	Adjust access chamber (sewer manhole) in road	1	\$3,000.00	\$	3,000.00
7.12	Adjust hydrant lids	1	\$750.00	\$	750.00
7.13	Provision for misc./unidentified service relocations	1	\$10,000.00	\$	10,000.00
7.14	Provisional: High Pressure gas spotter	1	\$ 50,000.00	\$	50,000.00
7.15	DCVG coating survey on HP gas main (Provisional)	1	\$ 5,000.00	\$	5,000.00

The previous Mastersheet amount of \$7k seems high.

Provisional allowance should it arise other services need adjusting

Atco Gas will require a spotter on-site when there is works occurring in the vicinity of the HP gas which is in the northern verge.

When working near HP Gas, ATCO has in the past required testing of the surface coating on HP gas mains. A

					provisional allowance has been made.
					A nominal provisional allowance has been made for any Western Power interfacing works between the existing assets and proposed works which may arise to avoid the underground pits, and new street lighting.
7.16	Western Power quote for interfacing works (Provisional)	1	\$ 5,000.00	\$ 5,000.00	
	Subtotal - Miscellaneous				\$103,250
8	Subtotal				
8.1	Construction Subtotal ex Prelims, Survey			\$ 661,510	
	Construction Subtotal			\$ 734,276	
9	Allowances and Charges				
9.1	Traffic Management	5%		\$ 36,714	
9.2	BCITF Levy	0.2%		\$ 1,469	
9.3	Council Supervision	1.5%		\$ 11,014	
9.4	Design and Superintendence	5.0%		\$ 36,714	Design and superintendence fee reduced from 10% to 5% which is reflective of the likely remaining designs to achieve 100% status

9.5	Contingency	5.0%	\$	36,714	The design development has progressed to an 85% status, supporting the contingency can be further reduced from 10% (Rev B of DCP) to 5%
	Subtotal - Allowances and Charges				\$122,624
10	TOTAL		\$	856,900	

Appendix C: Nardine / Ashby Close

Year	16/17	17/18	18/19	19/20	
Consulting	\$41,498	\$53,018	\$7,941		
Contract	\$430,803	\$548,240	\$436,142	\$91,420	
Other			\$4,880		
TOTAL	\$472,301	\$601,258	\$448,963	\$91,420	\$1,613,942

Appendix D: Bonser Road

**BONSER ROAD (LOCATED BETWEEN BERKSHIRE ROAD AND
NARDINE CLOSE)**
Revised Cost January 2019
Approximate Length 350m

STAGE 1			
Item	Description		Notes
1	Preliminaries	\$44,974.14	Includes mobilisation, demobilisation, site establishment, supervision and management, survey and set out, construction water, traffic management, insurances, BCITF levy
2	Road Construction	\$312,247.82	
2.1	Clearing and Earthworks	\$21,397.85	Includes clearing and grubbing, topsoil removal, cut to fill, cut to spoil
2.2	Roadworks	\$213,625.49	Includes subgrade preparation, subbase 150mm limestone, basecourse roadbase, primer seal and asphalt
2.3	Kerbing and Footpath	\$71,053.03	Includes semi mountable kerb, flush edge beam, backfill behind kerbs, concrete footpath, pram ramps
2.4	Miscellaneous	\$6,171.45	includes pavement testing, kerb removal, footpath removal (Nardine), saw cut and remove asphalt
3	Stormwater	\$30,791.73	
3.1	Excavation and Pipework	\$4,460.12	Includes excavation and backfill
3.2	Concrete Pits	\$6,003.45	Includes gully pit, side entry pit over existing drainage line, replace existing pit cover with gully lid
3.3	Swale Drain	\$19,242.96	Includes excavation and trimming of swale, supply and install chip mulch, supply and install gravel media, plantings
3.4	Miscellaneous	\$1,085.20	Includes the removal of existing culvert
4	Street Lighting	\$42,822.86	
4.1	Excavation and Cabling	\$12,293.96	Includes excavation, supply, install and backfill for cable
4.2	Conduit	\$552.15	Includes supply and install of conduit, misc caps, nuts, bolts etc.
4.3	Street Lights	\$14,676.62	Supply and install street light poles
4.4	Miscellaneous	\$13,325.13	Liaison with Western Power, transport materials, testing and commissioning, under road boring.

4.5	Additional Electrical Design Costs due to Staging	\$1,975.00	Advice from RSA Engineering February 2020
Subtotal 1	Excluding Allowances and Charges	\$430,836.55	Excludes Stage 2 separable portion (see below)
5	Allowances and Charges		
5.1	Council Supervision	\$6,462.55	1.5% of subtotal 1
5.2	Design	\$39,200.00	includes \$39,200 of design costs to date
5.3	Superintendence	\$12,925.10	3% of subtotal 1
5.4	Contingency	\$21,541.83	5% of subtotal 1
Subtotal 2	Including Allowances and Charges	\$510,966	Excludes Stage 2 separable portion (see below)
STAGE 2			
6	Stage 2 - Separable Portion		For construction of truncations once land is acquired from Lots 16 and 17 Berkshire Road.
6.1	Preliminaries	\$12,824.54	Includes mobilisation and demobilisation, site establishment, supervision, management, survey and setout, construction water, traffic management
6.2	Clearing and Earthworks	\$1,736.55	Includes clearing and grubbing, topsoil removal.
6.3	Roadworks	\$28,839.80	Includes subgrade preparation, subbase limestone, basecourse roadbase, primer seal and asphalt.
6.4	Kerbing and Footpath	\$6,669.72	Includes semi mountable kerb, backfill behind kerbs, concrete footpath, pram ramps.
6.5	Concrete Pits	\$3,730.11	Includes site entry pit over existing drainage line, replace existing pit cover with gully type lid.
6.6	Power Reticulation	\$9,688.49	
6.7	Miscellaneous	\$5,048.62	Includes pavement testing, removal of kerbs, removal of existing crossover, saw cut and remove asphalt.
6.8	Additional Electrical Design Costs due to Staging	\$1,500.00	Advice from RSA Engineering February 2020
Subtotal 1	Excluding Allowances and Charges	\$70,038	Excludes Stage 1 (see above)

7	Allowances and Charges		
7.1	Council Supervision	\$1,050.57	1.5% of subtotal 1
7.3	Superintendence	\$2,101.13	3% of subtotal 1
7.4	Contingency	\$3,501.89	5% of subtotal 1
Subtotal 2	Including Allowances and Charges	\$76,691	Excludes Stage 1 (see above)
Total		\$587,657	Includes Stages 1 and 2 and allowances/charges

Appendix E: Nardine Road Extension (Road 2A)

Stage 1

Item	Description	Quantity	Rate	Amount	Subtotal	comment
1	Preliminaries				\$ 97,326.03	Based on Construction contract amounts
2	Clearing and Demolition				\$ 25,461.87	Based on Construction contract amounts
3	Earthworks & Retaining				\$ 29,047.50	Based on Construction contract amounts
5	Roadworks				\$ 193,864.36	Based on Construction contract amounts
6	Drainage				\$ 3,246.29	Based on Construction contract amounts
7	Miscellaneous				\$ 48,212.85	Based on Construction contract amounts
8	Services				\$ 99,119.28	Based on Construction contract amounts
9	Subtotal					
9.1	Construction Subtotal ex Prelims, Survey			\$ 398,952.15		
9.2	Construction Subtotal			\$ 496,278.18		
10	Allowances and Charges					
10.1	Traffic Management			included		
10.2	BCITF Levy			included		
10.3	Council Supervision			Included.		
10.4	Design and Superintendence			Included		
10.5	Contingency			included		

Subtotal - Allowances and Charges

\$ 66,413.00

Based on Construction
contract amounts

11 TOTAL

\$ 562,691

Stage 2

Item	Description	Quantity	Rate	Amount	Subtotal	comment
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Refer to Porter Consulting Engineers drawings job 16-09-116-Road 2A-Stage 2

1 Preliminaries

1.1 All Preliminaries (Mobilisation, Supervision, Insurances, Safety etc.)

8%

\$30,022

Subtotal - Preliminaries

\$30,022

2 Survey Control and Testing

2.1 All Survey (Setout, As-Cons, Compaction Testing etc.)

8%

\$30,022

Subtotal - Survey Control and Testing

\$30,022

3 Clearing and Demolition

3.1 Clear all vegetation and inc Grubbing of trees

1

\$15,000.00

\$15,000

3.2 Demolition and Reinstatement of Garage

1

\$100,000.00

\$100,000

Assumed for the removal of
existing garage to the
residence within lot 51 in
Stage 2. The City has a
quantity surveyor provide an
estimate for demolition &
replacement of the garage.

3.3	Demolish and Dispose redundant footpaths			\$		
				-		
3.4	Demolish and Dispose redundant kerbing			\$		
				-		
3.5	Remove and Dispose redundant drainage pits			\$		
				-		
						Removal of existing tempoary turnaround constructed in Stage 1.
3.6	Remove and Dispose redundant pavements	654	\$20.00	\$13,080		The mastersheet notes a rate of \$35.65/m2 which is towards the higher end of the range. PCE has noted a rate of \$20/m2 for use.
3.7	Demolition works within lot 5 (shed)			\$		
				-		
3.8	Demolition works within Lot 52 (mainly brick paving & small wall & make good)			\$		
				-		
3.9	Remove existing garden limestone retaining wall within lot 52 (1c to 2c exposed)			\$		
				-		
3.10	Demolition works within Lot 51 (shed, bitumen driveway, and carport to house and make good)	0	\$60,000.00	\$		included in item 3.2 above with the \$100,000 allowance.
				-		
3.11	Demolition works within Lot 51 at CH 38(sheds, slabs, lean to's)	0	\$20,000.00	\$		Recent Structure Plan modifications removes dogleg of battle axe.
				-		
Subtotal - Clearing and Demolition					\$128,080	
4	Earthworks & Retaining					
4.1	Remove 100mm Topsoil, stockpile and respread	3340	\$4.00	\$13,360		

4.2	Form, Shape, Compact Subgrade	2231	\$4.00	\$8,924
4.3	Form and Compact Embankment Foundation	1,109	\$2.70	\$2,994
4.4	Import Fill, Shape, Compact	0	\$30.00	\$-
4.5	Cut to spoil (cart offsite)	530	\$25.00	\$13,250
4.6	Cut to fill	265	\$5.00	\$1,325
4.7	Excavate, Form and Compact Swales	422	\$8.00	\$3,376
4.8	Dust Control	1	\$4,500.00	\$4,500
4.9	Post and Panel Wall 0 - 0.5m high			
4.10	Reinstate brick paving by the home of lot 52 following completion of new retaining wall			
	Subtotal - Earthworks & Retaining			\$47,729

PCE assesses there is likely to be excess spoil material, based on cut/fill/balance DTM calculation available to Porter's being the design consultant.

PCE assesses there is likely to be excess spoil material, based on cut/fill/balance DTM calculation available to Porter's being the design consultant.

5 Roadworks

5.1	Supply and Install 200mm limestone sub-base	446	\$50.00	\$22,310	<p>The mastersheet notes a cubic metre rate, when usually this item is costed as a square meter rate. A rate of \$50/m3 equates to \$10/m2 for 200mm subbase, within the expected range.</p> <p>The mastersheet notes a cubic metre rate, when usually this item is costed as a square meter rate. A rate of \$65/m3 equates to \$6.5/m2 of 100mm of base course, which PCE consider too low. PCE suggest using a rate of \$85/m3 that equates to \$8.5/m2 which is the same rate used for the Berkshire/Ashby portion of the works.</p>
5.2	Supply and Install 100mm road base	223	\$85.00	\$18,964	
5.3	Supply and Install 7mm Primer Seal	2,231	\$2.60	\$5,801	
5.4	Supply and Install 30mm AC10	2,231	\$12.19	\$27,196	
5.5	Supply and Install FK	127	\$55.20	\$7,027	
5.6	Supply and Install MK (refer note 8)	97	\$20.00	\$1,946	
5.7	Supply and Install SMK (refer note 8)	119	\$20.48	\$2,445	
5.8	Reinstate existing Crossovers	25	\$92.00	\$2,300	<p>Although not explicitly shown on drawing 401 Rev G, a crossover will need to be provided/reinstated for lot 52 following removal of the temporary turnaround</p>

5.9	Gravel driveway to lot 52	60	\$50.00	\$3,000	Although not explicitly shown on drawing 401 Rev G, the gravel driveway to lot 52 will need to be extended to the new kerbline following removal of the temporary turnaround.
5.10	Emergency vehicle crossover to lot 50	50	\$90.00	\$4,500	
	Swing gate to lot 50	1	\$1,000.00	\$1,000	The mastersheet notes a 2.5m wide footpath. But Porter's drawing notes 2.1m wide path. PCE has assessed a 2.1m wide path.
5.11	Supply and Install new concrete footpaths (2.5m wide)	531	\$40.00	\$21,252	
5.12	Supply and Install Pram Ramps	2	\$550.00	\$1,100	
5.13	Key kerbs	119	\$17.00	\$2,030	
Subtotal - Roadworks				\$120,870	
6	Drainage				
6.1	Supply and Install Rock Pitching - Weirs	3	\$1,000.00	\$3,000	The mastersheet uses a rate of \$1000 for each weir, which is considered acceptable although probably at the higher end of the expected range.
	Stone Pitching	4	\$180.00	\$720	
6.2	Supply and Install new 300dia culverts			\$-	
6.2	Remove and Replace existing culverts			\$-	
6.4	Convert Existing SEP's to Gully's			\$-	
6.5	Covert Existing SEP's to Manholes			\$-	
6.6	Supply and Install new SEP's			\$-	
				\$-	
				\$-	
				\$-	

Subtotal - Drainage				\$3,720	
7	Miscellaneous				
7.1	Supply and Install street lighting	165	\$110.00	\$18,150	
7.2	Supply and Install misc linemarking and Signage	1	\$1,000.00	\$1,000	Although chevron signs are not shown on 16-9-116/400 Rev G, it is expected that at least one chevron is required to be installed for the culdesac.
7.3	Supply and Install vegetation for swales			\$	
7.4	Supply and Install trees			\$	
7.5	Maintenance of trees and verges for a 2 year period			\$	
7.6	Supply and Install select fill for swales			\$	
7.7	Supply and Install gravel for swales			\$	
7.8	Clean up	1	\$5,000.00	\$5,000	
7.9	Provision for misc./unidentified service relocations	1	\$5,000.00	\$5,000	
7.10	Fencing on Western Boundary of Lot 499 - Adjustments			\$	Does not appear lot 499 fencing needs adjusting within stage 2.
7.11	Relocate leach drain for home in lot 52 if encountered (Provisional)			\$	
7.12	Adjust domestic services to lot 52 if encountered (Provisional)			\$	
				-	
Subtotal - Miscellaneous				\$29,150	
8	Services				

8.1	Underground Power (inc. in item 7.1)					
8.2	Western Power Energisation Fees	1		\$10,000.00	\$10,000	Estimate only. Expected to be a comparable value to MS017351.
8.3	Communications					
8.4	Gas Servicing					
8.5	Landscaping					
8.6	Water Reticulation (150 P-12)	250		\$130.00	\$32,500	PCE's rate includes hydrants, valves, bends, fittings. The mastersheet rate of \$60 would be considered simply for the pipe, and not include fittings like valves and hydrants.
8.7	Bore watermain under Ashby Close (12m PE section)					
8.8	Reinstate footpath along Ashby Close as part of water retic works					
8.9	Reinstate the road pavement at Sultana Road west for the water main works	7		\$100.00	\$720	
8.10	Water Corporation Connection Fees	1		\$2,500.00	\$2,500	
	Subtotal - Services				\$45,720	
9	Subtotal					
9.1	Construction Subtotal ex Prelims, Survey				\$375,269	
9.2	Construction Subtotal				\$435,312	
10	Allowances and Charges					
10.1	Traffic Management	2.5%			\$10,883	PCE is of the opinion minimal traffic management would be required as only traffic is for one property.
10.2	BCITF Levy	0.2%			\$871	

10.3	Council Supervision	1.5%	\$6,530	
10.4	Design and Superintendence	10%	\$43,531	
10.5	Contingency	10%	\$43,531	
	Subtotal - Allowances and Charges			\$105,346
11	TOTAL		\$540,658	

Appendix F: Sultana Road West

Item	Description	Quantity	Rate	Amount	Subtotal	Comment
Based on 85% design status drawings prepared by Porter Consulting Engineers. 19-11-138/800 Rev C, 801 Rev C, 802 Rev C, 803 Rev B, 804 Rev A, 3E19102-03 Rev 2 (sheet 1), 3E19102-03 Rev 2 (sheet 2)						
1	Preliminaries					
1.1	All Preliminaries (Mobilization, Supervision, Insurances, Safety etc.)		6%	\$ 74,414.46		
	Subtotal - Preliminaries				\$74,414	
2	Survey Control and Testing					
2.1	All Survey (Setout, As-Cons, Compaction Testing etc.)		5%	\$ 62,012.05		
	Subtotal - Survey Control and Testing				\$62,012	
3	Clearing and Demolition					
3.1	Clear Large Trees inc Grubbing	5	\$ 500.00	\$ 2,500		PCE has adopted for a higher rate due to likely presence of existing services near trees to be removed & grubbed.
3.2	Clear Small Trees inc Grubbing	8	\$ 250.00	\$ 2,000		PCE has adopted for a higher rate due to likely presence of existing services near trees to be removed & grubbed. Based on 85% designs
3.3	Clear shrubs/grass	0	\$ 1.82	\$ -		There are very few scrubs along this length. Topsoil removal accounted for in item 4.1
3.4	Trim / lop branches to shrubs.	1	\$ 2,000.00	\$ 2,000		From a site visit, there is likely to be a need for some overhanging branches to be trimmed/lopped to facilitate the works.
3.5	Demolish and Dispose redundant footpaths	0	\$ 20.00	\$ -		The Milner Road costings accounts for any paths that need removal by the Sultana Road intersection.
3.6	Demolish and Dispose redundant kerbing	1565	\$ 9.00	\$ 14,085		Remove existing flush kerbing along full length.

3.7	Remove and Dispose redundant drainage pits	0	\$ 460.00	\$ -	Appears no drainage pits along the road.
3.8	Remove and Dispose existing asphalt offsite.	5100	\$ 9.50	\$ 48,450	For works to existing pavement areas
3.9	Remove and Dispose redundant pavements	480	\$24.64	\$ 11,827	Redundant pavement between cul-de-sac to Brand St. Not included as a cost to DCP given need generated by FFN LSP.
Subtotal - Clearing and Demolition				\$69,035	
4	Earthworks				
4.1	Remove 100mm Topsoil to spoil	993.9	\$3.00	\$ 2,982	Based on 85% designs
4.2	Form, Shape, Compact Subgrade	8096	\$4.00	\$ 32,384	Length of road taken as 800m with 2m wide pavement extension to both sides, plus a further 0.5m extension beyond the edge of pavement, as shown on the drawings. And the existing pavement being reconstructed.
4.3	Import Fill, Shape, Compact	60	\$ 30.00	\$ 1,800	Minor fill batter into lot 1563 by Milner Road/Sultana Road West intersection.
4.4	Cut to spoil and disposal	2447	\$24.64	\$ 60,300	Includes disposal of topsoil and boxout material.
4.5	Dust Control	1	\$10,000.00	\$ 10,000	
Subtotal - Earthworks				\$107,465	
5	Roadworks				
5.1	Remove existing base course for possible reuse	4620	\$ 4.00	\$ 18,480	For existing pavements to be reconstructed
5.2	Supply and Install 220mm limestone sub-base			\$ -	
5.3	Supply and instal 125mm limestone subbase	8096	\$10.50	\$ 85,008	Based on 85% designs

5.4	Supply and Install 100mm road base	0		\$	-	
5.5	Supply and instal 125mm roadbase	8096	\$11.25	\$	91,080	Based on 85% designs
5.6	Supply and Install 7mm Primer Seal	7376	\$2.60	\$	19,178	Based on 85% designs
5.7	Supply and Install 30mm AC14	7376	\$12.19	\$	89,913	Based on 85% designs
5.8	Supply and Install 40mm AC14	879	\$18.00	\$	15,822	Based on 85% designs
5.9	Supply and Install FK	1490	\$60.00	\$	89,400	Based on 85% designs
5.10	Supply and Install MK (refer note 8)	0		\$	-	Based on 85% designs
5.11	Supply and Install SMK (refer note 8)	157	\$35.00	\$	5,495	Based on 85% designs
5.12	Reinstate existing Crossovers		\$90.00	\$	-	See below for crossovers being reinstated in varying materials
5.13	Key kerbs	157	\$17.00	\$	2,669.00	
5.14	Reinstated Concrete Crossovers for commercial/industrial properties to be: 150mm thick N32MPa concrete with SL62 mesh centrally located with a 100mm limestone basecourse.	261	\$110.00	\$	28,710.00	Based on 85% designs
5.15	Reinstate Asphalt crossovers for commercial/industrial properties to be: 150mm thick rock roadbase, 7mm primer seal with 30mm asphalt wearing course.	43	\$18.79	\$	807.97	Based on 85% designs
5.16	Reinstate concrete crossovers to residential properties to be: 100mm thick N32MPa with 150mm limestone base.	28	\$100.00	\$	2,800.00	Based on 85% designs
5.17	Reinstate Asphalt crossovers to residential properties to be: 100mm thick rock roadbase, primer seal with 30mm asphalt wearing course.	158	\$18.79	\$	2,968.82	Based on 85% designs

5.18	Reinstate Existing block paving crossovers is to have the existing bricks retained for reuse towards reinstating the crossover on a 150mm limestone base.	20	\$54.00	\$	1,080.00	Based on 85% designs
5.19	Reinstate gravel crossover 150mm thick	177	\$16.00	\$	2,832.00	Based on 85% designs
5.20	Supply and Install new concrete footpaths	1621	\$38.12	\$	61,796	As part of Revision B to the DCA report (R34.19), the City has instructed that the path in Sultana Road West is to be reduced from 2.5m to 1.8m. Quantity based on 85% designs.
5.21	Supply and Install Pram Ramps	2	\$550.00	\$	1,100	
	Subtotal - Roadworks				\$519,139	
6	Drainage					
6.1	Supply and Install new 300dia(CL2) culverts	361.4	\$ 85.00	\$	30,719	drainage pipe under crossovers
6.2	Remove and Replace existing culverts OR extend existing culvert		\$ 5,000.00	\$	-	See item below
6.3	Remove existing drainage pipework	29	\$ 30.00	\$	870	Remove the pipework at the intersection with Brae Road. This is at a local high point so no need to have the drainage pipe in place.
6.4	Convert Existing SEP's to Gully's	1	\$ 2,500.00	\$	2,500	
6.5	Covert Existing SEP's to Manholes	0	\$ 2,000.00	\$	-	
6.6	Supply and Install new SEP's	0	\$ 3,000.00	\$	-	
6.7	Supply and install bubble in/out soakwell pits	41	\$ 3,000.00	\$	123,000	pits in swales by crossovers
6.8	Supply and Install 375 dia. RCP	0	\$ 400.00	\$	-	
6.9	Headwalls	0	\$ 500.00	\$	-	
6.10	Form roadside swales	1098	\$ 18.00	\$	19,764	Based on 85% designs
	Subtotal - Drainage				\$176,853	

7	Miscellaneous					
7.1	Supply and Install misc linemarking and Signage	1	\$1,000.00	\$	1,000	Chevrons by Brand Rd
7.2	Supply and Install street lighting		\$110.00	\$	-	
7.3	Supply and install street lightng including cabling	9	\$3,000.00	\$	27,000	
7.4	Supply and Install trees	0	\$450.00	\$	-	City confirms that having street trees located in the proposed swales would be suboptimal, and therefore exclude street trees from the design and costs.
7.5	Maintenance of trees and verges for a 2 year period	0	\$16,948.86	\$	-	City confirms that having street trees located in the proposed swales would be suboptimal, and therefore exclude street trees from the design and costs.
7.6	Supply and Install select fill for swales	0	\$30.00	\$	-	Discussed that proposed roadside swales do not require any specific select filter media. The swales shall consist of the insitu soils which has high permeability characteristics.
7.7	Supply and Install gravel for swales	0	\$33.00	\$	-	Discussed that proposed roadside swales do not require any specific select filter media. The swales shall consist of the insitu soils which has high permeability characteristics.
7.8	Clean up	1	\$5,000.00	\$	5,000	
7.9	Relocation of power pole at Milner Road Intersection (based on Dundas/Milner/Berkshire Quote)	1	\$270,921	\$	270,921	Refer to the Western Power feasibility Study (MF011894 / GFVSVU 22 May 2020) and design drawing (MP190326) for the removal of the power pole #132866. Costs are inclusive of all works shown on the design drawing MP190326, including the switchgear and LV kiosk.
7.10	Provision for misc./unidentified service relocations / adjustments	1	\$ 20,000.00	\$	20,000	For unidentified services relocation. There may be a need to adjust services, in particular where services are perpendicular to proposed swales.

7.11	Adjustment of Telstra or NBN lids to suit finished levels (Provisional)	1	\$ 10,000.00	\$ 10,000	Although it is expected that most of the existing communication pit lids currently match proposed levels, an allowance has been made for some lids needing adjusting.
7.12	Adjustment of Water Corp lids (valves, hydrants) to suit finished levels (Provisional)	11	\$ 2,000.00	\$ 22,000	As the verge level of Sultana Road will be adjusted slightly, lids and spindles will need to be raised.
	Subtotal - Miscellaneous			\$355,921	
8	Subtotal				
8.1	Construction Subtotal ex Prelims, Survey			\$ 1,228,414	
	Construction Subtotal			\$ 1,363,539	
9	Allowances and Charges				
9.1	Traffic Management	3%		\$ 40,906	Traffic management percentage reduced from 5% to 3% to reflect cost of around \$44k.
9.2	BCITF Levy	0.2%		\$ 2,727	
9.3	Council Supervision	1.5%		\$ 20,453	
9.4	Design and Superintendence	7.5%		\$ 102,265	Design and superintendence fee reduced from 10% to 7.5%, includes locating/survey of services that cross swales
9.5	Contingency	5%		\$ 68,177	Contingency reduced from 20% to 5% as part of preparing Revision B of the DCA report (R34.19), as instructed by the City, and is reflective the investigations and designs undertaken to date.
	Subtotal - Allowances and Charges			\$234,529	
10	Subtotal - entire width, approx 800m length			\$1,598,068.13	
11	TOTAL to Scheme (50%)			\$799,034.06	

Appendix G: Intersections

Project	18/19 actuals	19/20 actuals	Remaining	TOTAL COSTS	Comments
Nardine Close extension (Road 2A) Stage 1	\$264,435	\$298,256	\$	\$562,691	Works under contract completed, although still in 12-months defects period until June 2020.
Milner/Nardine	\$7,892	\$287,184	\$5,000	\$300,076	Works under contract completed, although still in 12-months defects period until Nov 2020. Some service adjustments originally identified now no longer required. \$5k for DLP.
Ashby/Berkshire	\$44,898	\$223,144	\$8,729	\$276,771	Works under contract completed, although still in 12-months defects period until October 2020. \$5k for DLP. Water Corporation has requested some work to be done on their manholes.
Milner/Berkshire/Dundas	\$437,116	\$518,117	\$5,000	\$960,233	Works under contract completed, but still in 12-months defects period until Dec 2020. \$5k for DLP.

Appendix H: Bush Forever Fencing

Bushforever Site	Length (m) =	1020
Nardine Close / Sultana Road West / New Road		
Description	Base Costs	Amount
Siteworks		\$ 14,420.00
Drainage		\$ -
Roads		\$ -
Fencing		\$ 75,400.00
Site supervision		\$ 1,347.30
Site Facilities		\$ 898.20
Civil, Geotechnical & Survey		\$ 13,809.83
SUB TOTAL		\$ 105,875.33

Appendix I: Administrative Items

Previous Admin Costs			
Financial Year	Actuals	Cumulative Admin Costs	Comment
13/14	\$53,585.00	\$53,585.00	
14/15	\$123,321.00	\$176,906.00	
15/16	\$15,736.00	\$192,642.00	
16/17	\$137,098.30	\$329,740.30	
17/18	\$105,702.00	\$435,442.30	
18/19	\$102,046.09	\$537,488.39	
20/21 YTD	\$36,424.50	\$573,912.89	YTD as at 31.3.2020
Average Admin Cost	\$83,987.25		

Sourced from GL March 2020.

Average calculated with YTD cumulative admin costs divided by 82 months, multiplied by 12 to give an average yearly admin cost.

Future Admin Costs				
Description	Annual (\$)	Years (# remaining on DCP)	Future (\$)	Comment
Legal / Land Admin	\$15,000.00	3	\$45,000.00	Estimate
Agreements for future contributions	\$30,000.00	3	\$90,000.00	An average figure of approx. \$3,000 has been adopted for the 31 remaining lots
Infrastructure Cost Review	\$15,000.00	3	\$45,000.00	Based on Shawmac quote 2018 and Porters CE quote 2019
Land Valuation	\$5,000.00	3	\$15,000.00	Based on Savills quotes 2018, 2019 and 2020

Staffing Costs				
Planning / Engineering / Project Management (0.7 FTE)	\$50,000.00	3	\$150,000.00	2017 & 2018 approx. project management costs \$50k
Total	\$115,000.00		\$345,000.00	
Admin costs to date	\$573,912.89			
Future admin costs	\$345,000.00			
Total Actual and Future Admin Costs:	\$918,912.89			
Notes:				
1. Land valuation admin costs based on Savills valuation 2018, 2019 and 2020				
2. Infrastructure cost review based on Porters Consulting Engineers quote 2019				
3. Admin cost forecast above limited by duration of DCP (10 years)				
4. Estimated costs for future legal agreements and caveats provided by Mcleods February and May 2020				

Appendix J: Land Valuation



Stage 1 – Forreestfield / High Wycombe Industrial Area, Forreestfield, WA

For City of Kalamunda

30 March 2020

savills
valuation report

savills.com.au/valuations

Savills Australia
Level 27, 108 St Georges Terrace
Perth WA 6000
(08) 9488 4111

Executive Summary


Stage 1 - Forrestfield Industrial Area, Forrestfield, WA

Instructing Party	City of Kalamunda				
Purpose of Valuation	Valuation for resumption advice purposes				
Interest Valued	Fee Simple subject to vacant possession				
Property Description	The land which is the subject of this assessment is all, to the best of our knowledge, vacant and mostly cleared former rural lifestyle lots. Most of the land required for road widening purposes is along the boundary of the relevant lots and with the exception of boundary fencing is otherwise unimproved. We therefore have made no allowances for fencing or other improvements most of which are not considered to add any value for the current industrial land use to which they have been rezoned. In this regard therefore the land is considered to be unimproved for the purposes of the value assessment.				
Tenancy Details	We have assumed for the purpose of this valuation that there are no leases pertaining to the subject properties and that vacant possession can be offered over the subject land parcels.				
Site Areas	Road	Lot Number	Lot Area m²	Road Reserve m²	Net lot Area m²
	Sultana Rd West	51	12,279 m ²	218 m ²	12,061 m ²
	Sultana Rd West	308 *	10,531 m ²	1,750 m ²	8,781 m ²
	Berkshire Road	17	10,000 m ²	76 m ²	9,924 m ²
	Berkshire Road	547	40,570 m ²	7,302 m ²	33,268 m ²
	Nardine Cl	16	10,296 m ²	132 m ²	10,164 m ²
	<i>* Final road reserve requirements subject to detailed design and survey for existing temporary cul-de-sac.</i>				
Title	The individual land parcels the subject of the valuation are contained within various ownerships. We have not searched individual certificates of title for each property and have assumed for the purpose of this valuation that the properties are not subject to any onerous encumbrances. Further, we have assumed that the properties are free of any financial liens and charges.				
Zoning	The subject land is within the ‘Forrestdale/ High Wycombe Industrial Area Stage 1’ with the Local Structure Plan approved by the City of Kalamunda in April 2012. All lots are zoned ‘Industrial Development’ under the structure plan. This is described further in Section 4 of this report.				
Valuation Approach	Direct Comparison Piecemeal and Development Feasibility Approaches				
Date of Valuation	30 March 2020				

Continued overleaf.

Executive Summary (cont.)

Stage 1 - Forrestfield Industrial Area, Forrestfield, WA

Adopted Values of Reserved Land	Summary Of Values			
	Road	Lot Number	Adopted Value	
	Sultana Road West	51	\$54,500	
	Sultana Road West	308 *	\$455,000	
	Berkshire Road	17	\$20,000	
	Berkshire Road	547	\$1,825,000	
	Nardine Close	16	\$34,000	
	*Final road requirements subject to final road requirements for temporary cul-de-sac and detailed survey.			
	Prepared by			
		Paul Bradstreet AAPI		
Licensed Valuer No. 39248				
For the State of Western Australia				
Savills Valuations Pty Ltd				

(*) These valuation amounts are exclusive of a Goods and Services Tax.

To any party relying on this report we advise that this summary must be read in conjunction with the attached report of which this summary forms part. This valuation summary should not be relied upon in isolation for finance or any other purposes.

Liability limited by a scheme approved under Professional Standards Legislation. Savills will not be liable for loss of business, revenue, contracts, savings or consequential losses.

The outbreak of the Novel Coronavirus (COVID-19), declared by the World Health Organisation as a "Global Pandemic" on the 11th March 2020, has impacted global financial markets. Travel restrictions have been implemented by many countries. Market activity is being impacted in many sectors and at the valuation date. As at the valuation date we consider that we can attach less weight to previous market evidence for comparison purposes to fully inform opinions of value. Indeed, the current response to COVID-19 means that we are faced with an unprecedented set of circumstances on which to base a judgement. Our valuation(s) is / are therefore reported on the basis of 'material valuation uncertainty' as per VPS 3 and VPGA 10 of the RICS Red Book Global. Consequently, less certainty - and a higher degree of caution - should be attached to our valuation than would normally be the case. Given the unknown future impact that COVID-19 might have on the real estate market, we recommend that you keep the valuation of Forrestfield Industrial Area under frequent review.

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1 Introduction

1.1 Instruction

We have been instructed by Mr Mitchell Brooks, Senior Strategic Planning Officer of City of Kalamunda in correspondence dated 31 March 2020 to provide the current market value of the subject properties. This valuation has been prepared for Scheme Contribution purposes and can be relied upon by City of Kalamunda, subject to the commentary, suggestions, recommendations and details herein.

This valuation report has been prepared in accordance with Australian Property Institute's Current Valuation Standard.

1.2 Report Addressee

Mr Mitchell Brooks
City of Kalamunda
PO Box 42
KALAMUNDA WA 6926

1.3 Basis of Valuation

Our instructions require us to assess the value of the property on the following basis:

- Market value of the freehold interest of the portion of the lots required for road widening scheme contribution purposes subject to Vacant Possession.

We have assessed the valuation on the basis of freehold title, subject to vacant possession. Included in the amount of this valuation are normal fixtures and fittings. Excluded from the amount of this valuation are items of furniture and furnishings, and tenant's fixtures and fittings.

This valuation is determined on the basis that the property, the title thereto and its use is not affected by any matter other than that mentioned in this report.



1.4 Market Value Definition

Market value as defined by the International Valuation Standards Council and as adopted by the Australian Property Institute is as follows:

“Market value is the estimated amount for which an asset or liability should exchange on the date of valuation between a willing buyer and a willing seller in an arm’s length transaction, after proper marketing, wherein the parties had each acted knowledgeably, prudently and without compulsion.”

1.5 Date of Valuation

30 March 2020



2 Location

2.1 Locality & Surrounding Development

The subject lots are all located within Stage 1 of the proposed Forrestfield / High Wycombe Industrial area. The land affected by each of the lots have frontage to proposed roads which, in some cases, are yet to be constructed and lead from Nardine Close to Berkshire Road and will see the extension of Nardine Close to meet Ashby Close. Stage 1 is bounded by Milner Road in the west, Sultana Road West in the north, Roe Highway to the east and Berkshire Road to the south, all of the lots are currently rural lifestyle lots being generally approximately 1 hectare in size with some lots being approved with residential homes and others comprising vacant land.

The land is generally situated at the northern end of the Forrestfield Industrial area which is characterised by mostly large and substantial industrial developments primarily orientated around transport and logistics uses.

The area is conveniently located within close proximity of the Perth airport and benefits from close proximity to major highways including the Roe Highway and Tonkin Highway which provide access to most areas of the Perth metropolitan areas. The location of the stage 1 estate is set out on the location plan below.

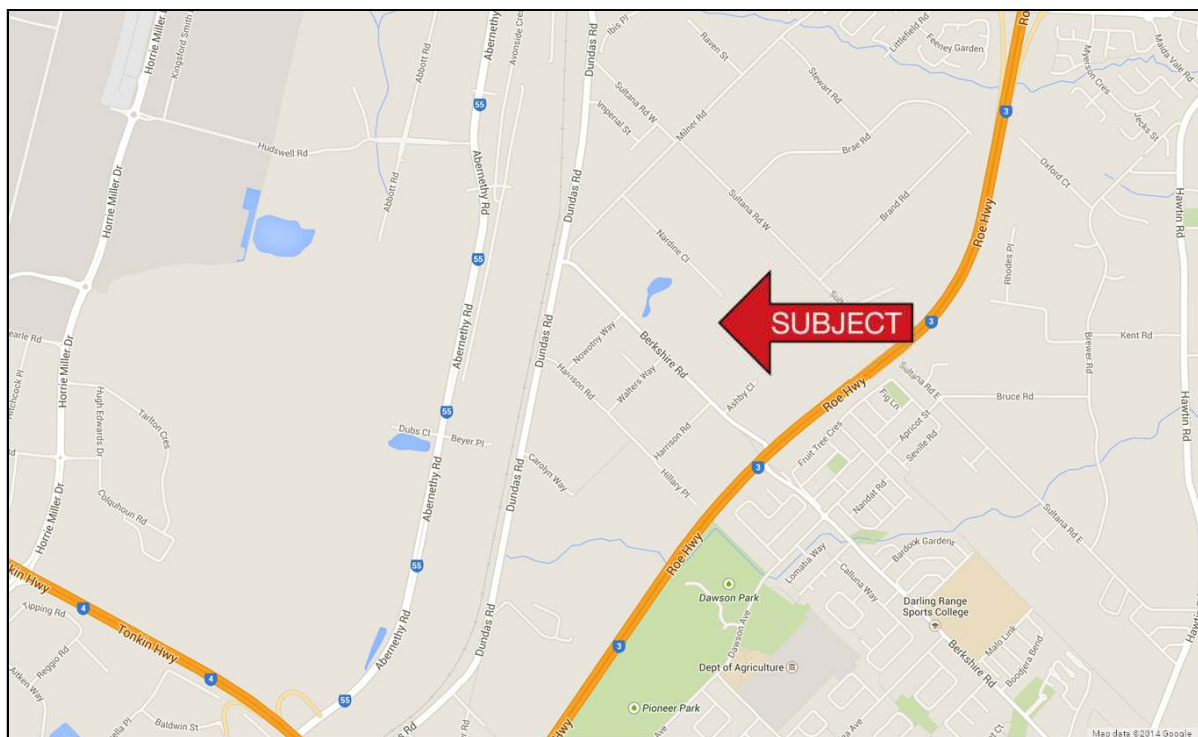
Please refer to the locality maps on overleaf which detail the approximate property location.

2.2 Road System and Access

The subject lots are bound by Berkshire Road, Milner Road, Sultana Road west and Roe Highway to the east.

The area is located within close proximity of the Perth Airport and benefits from close proximity to major highways including the Roe Highway and Tonkin Highway which provide access to most areas of the Perth metropolitan area. The location of the stage 1 estate is set out on the location plan below.

2.3 Location Maps



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3 Land

3.1 Land Area

Based on provided information the land is to be acquired for road widening **and utility relocations** purposes and only effects certain lots within **and adjoining** the structure plan area. The table below sets out the lots and areas affected.

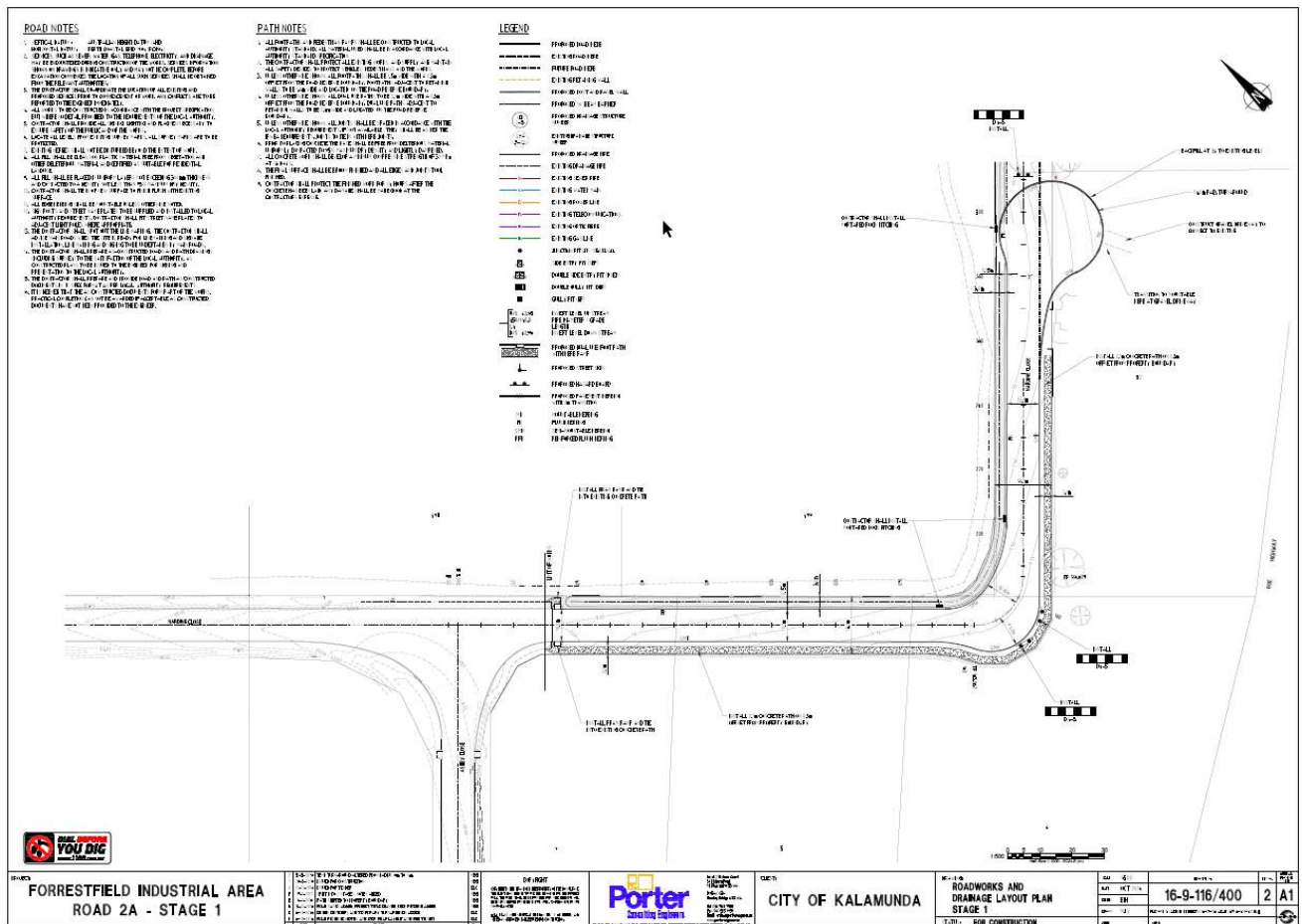
The sketch below sets out the proposed revised cul-de-sac layout for Nardine Close extension (subject to further consideration). This differs from the Local Structure Plan which will be updated should this be determined as the preferred approach.

The plan below shows the cul-de-sac adjacent to Lot 50 Sultana Road West. There is a potential that this will no longer be extended and the cul-de-sac will terminate at the entry to Lot 51 Sultana Road West. The land areas table included in this report have been updated with the latest information available and assume that the cul-de-sac will terminate at the entry of Lot 51. We note that the plan for road widening is still subject to change. Any change in the area of road widening will have an effect on the value of the land. Any change in area would therefore require a reassessment of value.

Road	Lot Number	Lot Area m ²	Road Reserve m ²	Net lot Area m ²
Sultana Rd West	51	12,279 m ²	218 m ²	12,061 m ²
Sultana Rd West	308	10,531 m ²	1,750 m ² *	8,781 m ²
Berkshire Road	17	10,000 m ²	76 m ²	9,924 m ²
Berkshire Road	547	40,570 m ²	7,302 m ²	33,268 m ²
Nardine Cl	16	10,296 m ²	132 m ²	10,164 m ²

* Final road reserve requirements subject to detailed design and survey for existing temporary cul-de-sac.

The sketch below sets out the revised cul-de-sac layout. This differs from the scheme plan which is yet to be updated.



The plan below shows the cul-de-sac adjacent to Lot 50. This will no longer be extended and the cul-de-sac will terminate at the entry to Lot 51. We note that the plan for road widening is still subject to change. Any change in the area of road widening will have an effect on the value of the land. Any changes in area would therefore require a reassessment of value.



3.2 Topography

The lots are all generally level to gently sloping having an even contour to their corresponding road grades. Overall the sites are considered generally level and would be conducive to immediate development in this respect.

3.3 Contamination & Other Environmental Issues

Our enquiries and our physical inspection of the land indicate that the lots have traditionally all been utilised for rural or rural lifestyle purposes. We therefore are unaware of any contamination issues affecting the subject land required for road widening purposes and have assumed for valuation purposes that there are no site contamination issues affecting the subject lots.

We wish to advise however, that we are not qualified to provide advice on the physical condition of the land and we are not aware of any geotechnical and/or environmental defects with the land. Furthermore, we have not sighted any environmental audits or geotechnical reports and have therefore assumed that there is no on site contamination or defects. Should we subsequently be advised of any contamination issues affecting the land, we reserve the right to review our valuation.



We have therefore assumed that the subject land required for road widening is free from site contamination however should subsequent enquiries reveal otherwise then we reserve the right to review our valuation assessment.

3.4 Flooding

Our enquiries with the local authorities revealed that the subject property is not situated within a designated flood zone.

3.5 Services

Electricity and telephone services are generally available for connection within the area. Town water and main sewerage connection are understood to not be available to all lots within the area. Whilst these services are expected to be extended as part of the development process this is likely to take time and much of these costs will be at a land owner's expense. Should subsequent investigations reveal otherwise we reserve the right to amend this valuation.



3.6 Site Identification

We have not sighted a survey plan. However, based upon the Structure Plan provided by the City of Kalamunda and a physical inspection of the properties, we are satisfied that we have correctly identified the land and the subject of this valuation.

We recommend that any party relying on this report satisfy themselves in this respect.

If any encroachments are noted by the survey report, we should be consulted to reassess any effect on the value stated in this report.

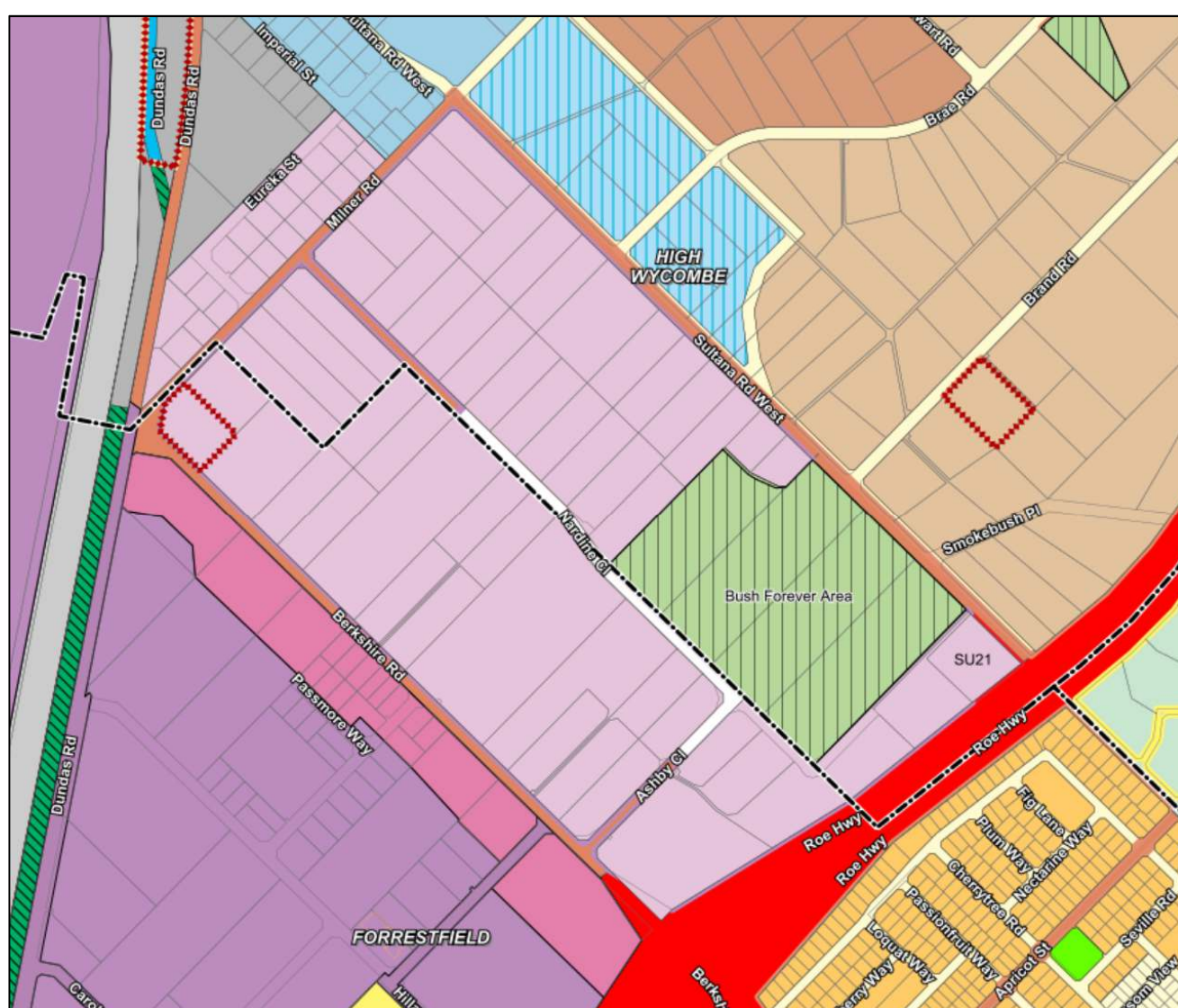
3.7 Registered Proprietors / Encumbrances

The individual land parcels the subject of the valuation are contained within various ownerships. We have not searched individual certificates of title for each property and have assumed for the purpose of this valuation that the properties are not subject to any onerous encumbrances. Further, we have assumed that the properties are free of any financial liens and charges.

4 Town Planning

4.1 Zoning and Development Guidelines

The subject land is within the 'Forrestdale/ High Wycombe Industrial Area Stage 1' with the Local Structure Plan approved by the City of Kalamunda in April 2012 with design guidelines adopted by council in August 2012 and endorsed by the WAPC on 12 November 2013. Amendment 1 was approved by the WAPC on 24 February 2020.



All lots are zoned 'Industrial Development' under the Local Planning Scheme No. 3, except for Lot 50 Sultana Road West, which is zoned Special Use, subject to the following use permissibility and conditions:

NO	DESCRIPTION OF LAND	SPECIAL USE	CONDITIONS
SU21	Lot 50 Sultana Road West, High Wycombe AMD 91 GG 01/06/18 AMD 91 GG 19/06/18 (correction notice)	Those use classes listed under Light Industry Zone in Table One - Zoning Table, except the use classes of Motor Vehicle Wrecking and Fast Food Outlet which are uses not permitted. Single House - (P) Home Occupation - (D)	Those use classes listed under Light Industry in Table One - Zoning Table, their permissibility being in accordance with the symbols cross referenced in Table One except that all 'P' uses become 'D' uses. Subdivision and development requirements are subject to the Forrestfield/High Wycombe Industrial Area Stage 1 - Local Structure Plan (as amended).

Lot 204 (5) Nardine Close, High Wycombe, is subject to Additional Use provisions under the Local Planning Scheme in accordance with the following use permissibility and conditions:

NO.	DESCRIPTION OF LAND	ADDITIONAL USE	CONDITIONS
A56	Lot 65 Milner Road, Forrestfield AMD 93 GG 1/5/18	Motor Vehicle Wash - (P) Service Station - (P) Fast Food - (D) Restaurant - (D) Motor Vehicle Repairs - (D) Convenience Store - (D)	(a) Subdivision and development requirements are subject to the Forrestfield/High Wycombe Industrial Area Stage 1 - Local Structure Plan (as amended) and the Forrestfield/High Wycombe Industrial Area Design Guidelines. (b) The applicant/owner shall prepare and implement a traffic impact assessment for any proposed development or change of use. (c) The development of a fast food outlet or restaurant may only be permitted if it is an incidental use.

In accordance with the structure plan a development contribution scheme has been agreed which is to be regularly reviewed is to assist in finalising the compensation for the road reserves.

The development guidelines provide the following site requirements.

Zones	SETBACKS				SITE REQUIREMENTS		
	Front	Minor Street	Side	Rear	Site Coverage	Plot Ratio	Landscaping Strip (Road Frontage)
Industrial Development	20m ⁽¹⁾	10m ⁽²⁾	At the discretion of Council ⁽³⁾	At the discretion of Council ⁽³⁾	60%	0.5	6m 8m along properties with frontage onto Sultana Road West

- ⁽¹⁾ Berkshire Road, Milner Road and Sultana Road West
⁽²⁾ All other roads (Nardine Close, Ashby Close and the future unnamed Road Reserve)
⁽³⁾ Proponents of new developments are encouraged to set back buildings a minimum of 3m from both the side and rear boundaries to assist with natural light penetration and natural cross-flow ventilation.

We set out below a more detailed plan showing Stage 1 development area which also includes the extension of internal roads to allow a loop road access within the proposed estate.



4.2 Heritage Controls

Our investigations with the City of Kalamunda indicate that the subject properties are not listed as an item of heritage significance.

5 Parcel Descriptions

The land which is the subject of this assessment is all, to the best of our knowledge, vacant and mostly cleared former rural lifestyle lots. Most of the land is required for road widening purposes and is located along the boundary of the relevant lots. With the exception of boundary fencing the subject land has been assumed for valuation purposes to be otherwise unimproved. Those improvements that do exist, including houses and sheds are generally considered to add no value for redevelopment purposes with most likely to be demolished as part of the redevelopment of the land.





We have been provided with a table of land areas to be acquired for road widening purposes. This is set out in section 3.1 of this report.



6 Tenancy Details

We have assumed for the purpose of this valuation that there are no leases pertaining to the subject properties and that vacant possession can be offered over the subject land parcels. We have therefore undertaken these valuations on a vacant possession basis.

7 Economic Commentary – Western Australia

Economic Indicators	Comments	Trend	Benchmark
Economic Growth	<p>The State Final Demand for Western Australia grew by 0.45% in the year to December 2019, which was below the 10 year CAGR of 1.19%. The corresponding quarter-on-quarter annualised growth rate was 1.65%.</p> <p>The Gross State Product for Western Australia grew by 0.98% in the year to June 2019, which was below the 10 year CAGR of 3.55%.</p> <p>The Mining industry recorded the strongest growth rate of all sectors in Western Australia in FY-19 (with a growth rate of 30.95%), followed by the Logistics sector (9.50%), Other sector (6.83%) and the Health Care sector (5.52%).</p>	▲	0.4% quarterly 1.65% annually
Interest Rates	The cash rate was recorded at 0.25% in April 2020, remaining unchanged after two cuts in March 2020.	▼	0.25%
Labour Indicators	Market		
	The unemployment rate (on trend terms) in Western Australia was recorded at 5.38% in March 2020 (down from 6.16% in March 2019). The national unemployment rate was recorded at 5.19% at the same time.	▼	5.38%
	Total employment growth in Western Australia was recorded at 1.96% in the 12 months to March 2020, which was above the 10 year CAGR of 1.39%. Total employment growth was driven by part-time employment growth, which grew at an annual rate of 6.96%, compared to an annual rate of -0.30% for full-time employment growth.	▲	1.96%
	Looking forward, labour market indicators are likely to remain muted in Western Australia over the next 12 months, with annual growth in total job advertisements recorded at -0.74% in March 2020. Job advertisement growth in the Office sector was the strongest, with a recorded growth rate of 3.72% over the same annual period, followed by the Industrial sector (-0.51%) and then the Retail sector (-9.79%).	▼	-0.74%
Inflation	<p>The Perth Consumer Price Index increased by 0.44% in the Dec-19 quarter, corresponding to an annual rate of 1.62%. Nationally (weighted average eight capitals), CPI grew by 0.69% from the previous quarter, which corresponded to an annual rate of 1.84%.</p> <p>The main contributors to the rise in consumer prices in Perth are Liquor (5.88%), Health Care (3.59%), Food (2.31%), and Education (2.13%).</p> <p>These rises were partially offset by falls in the Communication (-3.69%) and the Household Goods (-0.19%) sectors.</p>	▲	0.44% quarterly
Bond Rate	The 10 year Australian Government Bond Yield was recorded at 0.98% in March 2020 down from 2.13% in March 2019.	▼	0.98%
Retail Trade	<p>Retail turnover in Western Australia fell by 0.15% in the Feb-20 quarter, corresponding to an annual rate of 2.31%. Nationally, retail turnover increased by 2.14% in the 12 months to February 2020.</p> <p>In Western Australia total retail trade growth was driven by growth in Supermarkets retailing (3.28%), followed by Café & Restaurants retailing (3.16%) and then Hardware & Garden retailing (3.14%).</p>	▼	-0.15% quarterly
Business Confidence & Consumer Sentiment	The Coronavirus pandemic has had a meaningful impact on the business sector with the latest NAB business survey (March 2020) experiencing its greatest decline on record, now recording historic low confidence levels. Business confidence fell a staggering -64 points from -2 in February to -66. To put this into perspective, confidence levels in the 2008 GFC reached lows of around -30 points. The major contributing factor was profitability, along with trading conditions and employment all experiencing sharp falls. Business conditions also experienced the largest decline on record, falling 21 points to -21, a similar level to that witnessed throughout the GFC. Westpac's Melbourne Institute Index of Consumer Sentiment fell by 17.7% to 75.6 in April, down from 91.9 in March. It is important to highlight that whilst these indicators have fallen drastically, major Government policy and stimulus packages will help to soften the impact of Coronavirus on Australia's economy, with the Federal Governments \$130 billion JobKeeper Payment scheme now underway.		
Building Approvals	The seasonally adjusted total residential housing approvals in Western Australia fell by 7.2% in the 12 months to February 2020, with residential approvals for houses falling by 7.85%.	▼	-7.20%



Median Prices	Residential housing approvals for attached dwellings fell by 5.09% over the same annual period.		
	Median house prices in Perth were recorded at \$500,001 in December 2019 reflecting an annual growth rate of 2.04%. At the same time, median prices for attached dwellings was recorded at \$379,001 reflecting an annual growth rate of -2.57%.	▲	2.04%
Residential Volumes	Residential housing volumes in Perth fell by 0.16% in the 12 months to December 2019, whilst transaction volumes for attached dwellings grew by 4.66% over the same period.	▼	-0.16%
Population	The population of Western Australia was recorded at 2,630,557 in September 2019 (on latest available ABS data). Over the annual period, the population of Western Australia grew by 1.1%, which was below the national annual growth rate of 1.5%. Net interstate migration was recorded at -5,653 persons, whilst 17,071 overseas migrants moved into the state over the 12 month period to September 2019.	▲	1.13%
Wage Earnings	Average weekly full time earnings in Western Australia was recorded at \$1,858.60 in November 2019 (on latest available ABS data) which was above the national average of \$1,720.90. Average weekly full-time earnings in the state grew by 0.73% over the 12 months to November 2019, whilst the national figure was 3.14%.	▲	0.73%

8 Industrial Market Commentary

8.1 National Commentary

The Australian economy continues to be defined as sluggish, despite the RBA's record low monetary policy stance at 0.75% (as at Dec 2019). The three easing's through 2019 have not, as yet, positively impacted business and consumer sentiment, with GDP still below potential at 2.2% year on year to December 2019. Despite low consumer sentiment, Industrial assets, in particular logistics assets, have continued to be well sought after by investors as they leverage to the digital economy and population densification of the capital cities.

Industrial assets are in demand from a capital appreciation perspective across all capital cities, with Institutional and Syndicate Investors, as well as listed REIT's continuing to seek assets for their core portfolios. This is creating an environment where assets effectively leave the market that will in time reduce liquidity, but support capital values. As we noted in the September 2019 Quarter Time, rental growth is still not driving asset demand, but rather the thematic of population densification and the resulting logistics/e-commerce business cycle is maintaining an investor fervour.

Capital City asset values have continued to appreciate, driven by their main markets. Overall there has been continued yield compression of 50bp over 2019, while in Sydney 100bp, with all centres capital and land values improving meaningfully. The asset class remains a capital growth story, however the lack of income growth via rental growth will begin to stabilise yields.

8.2 Western Australian Commentary

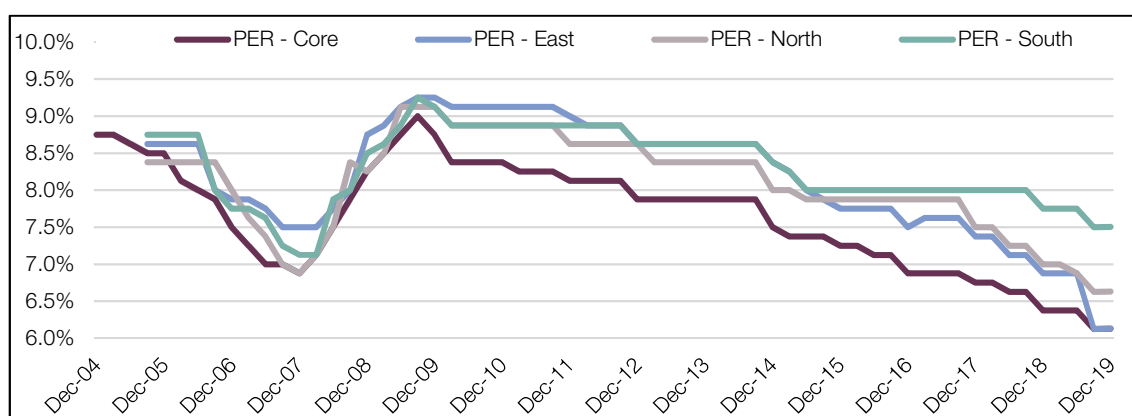
Perth has suffered from weak economic conditions over the last 5 years on the back of the resources slump, which impacted the industrial market as demand for workshops and warehouse facilities fell. A low Australian Dollar is helping to reflate the economy, however with Perth's unemployment rate still marginally above the national average (5.7% compared to 5.2%), there is still work to be done.

Western Australia's industrial market demonstrated no change over the December quarter across key metrics, however, the year to December 2019 witnessed overall yield compression across all Industrial precincts. Similar to the eastern states, the yield compression is a reflection of continual investor demand for large, single-tenanted assets in well positioned locations, complimented by transport and logistics routes. The yield compression comes alongside visible capital value growth despite rental growth remaining stagnant.

With a rebounding local economy and business confidence, the Perth Industrial market has begun to improve in the last 12 months, with leasing and sales levels beginning to pick up. The workshop market is beginning to see demand and is growing, which in turn is pushing Prime growth to +5% year-on-year. As with all States there is growing demand for large-scale new builds logistics and freight properties in core locations.

With tenant demand beginning to improve, yield compression is occurring. The Perth market is still dominated by private owners and a lack of quality product, however there is Institutional activity emerging. All precincts have seen a tightening in average market yields as capital values have all risen over the year to December 2019.

Yield Spread by Precinct (as at December 2019)

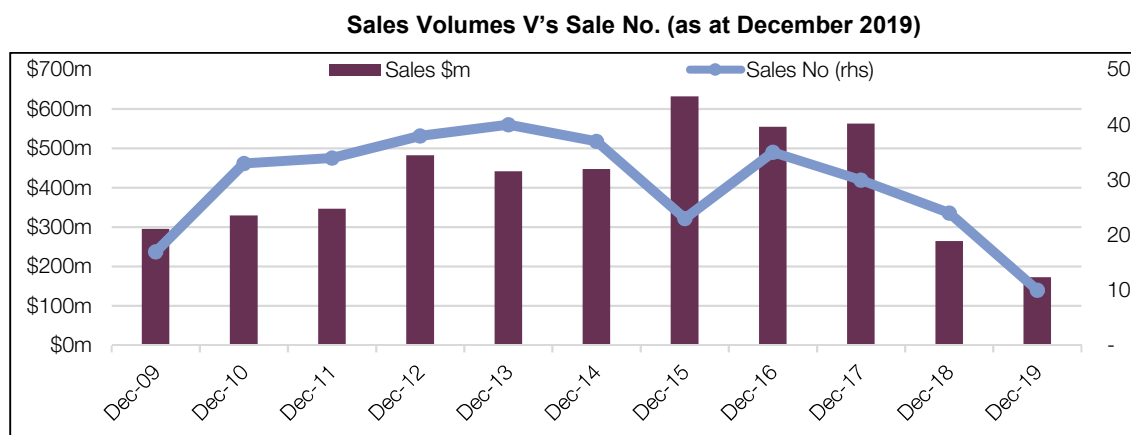


Source: Savills Research

8.3 Sales Activity

Perth's Industrial market as a whole is currently witnessing a falling in overall investment. Confidence has decreased as seen in sales volumes. Lack of leasing activity is a key contributor to the fall in total investment. Perth's Industrial market has experienced a significant fall in sales volumes over the last two years following three years of record volumes. This being said, the 'Core' industrial precinct is showing positive signs of an upswing in investor demand, accounting for \$119 million of all sales volumes (69%). A figure up circa 42% from 2018's 'Core' precinct's sales volumes.

All precincts have seen a tightening in average market yields (circa 40bp) as capital values have all risen over the year period to December 2019. The Core and East precincts saw the largest growth in capital value with 8.4% respectively. As at December 2019 the 'Core' and 'East' precincts saw the largest growth in capital value with 8.4% respectively (average of \$1,625 per square metre). Prime assets are transacting with location the key driver along with long WALE assets. Investor activity is light, reflecting limited quality and prime assets available. Perth's 'East' precinct saw a sharp fall in average IRR of 60bps to 8% year-on-year, with the 'South' precinct tightening 50bps to 8.6%.

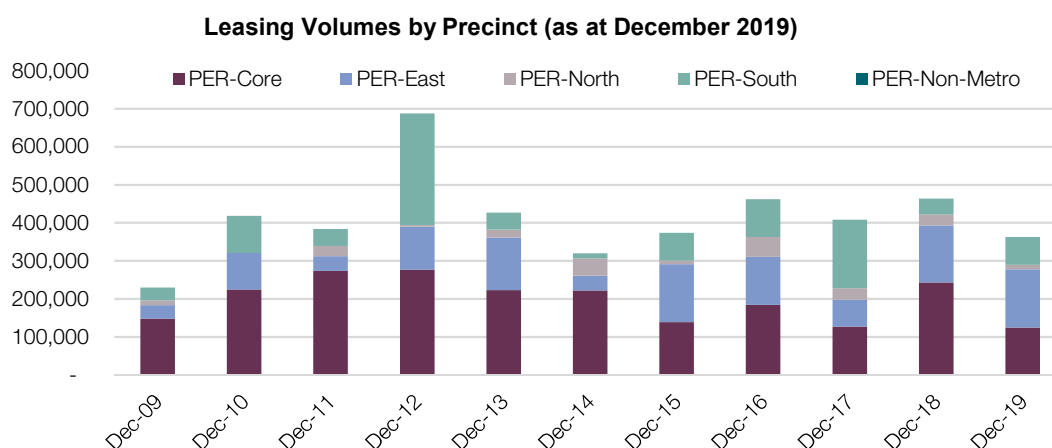


Source: Savills Research

8.4 Leasing Demand

A lack of leasing activity is a key contributor to the fall in total investment, as activity was down 50%. With this in mind, it's interesting to see leasing volumes remained at reasonable levels (362,000sq m) over the year. Leasing volumes, however, have fallen, with tenants still taking short term leases up to five years. Coupled with lower lease terms, Development Approvals remain low as the comparably lower tenant demand isn't enough to fuel speculated developments. We expect Developers to remain conservative.

Rental growth may be present, however is not strong enough to uphold greater IRR returns. Average Prime Net Face Rents have seen rental growth in Perth's Core (6%), East (9%) and South (6%) precincts, over the 12 months to December 2019. Tenant demand for prime location still drives rental rates upward.



Source: Savills Research

8.5 Outlook

The stable tenant demand for the Perth industrial market is expected to lag the eastern states. Perth 'Core' and 'East' are showing signs of recovery, with capital values rising and rental growth evident.

Savills Research expects the growth in valuations to slow in the short to medium term, exacerbated by domestic and international benign economic growth and external shock factors. A global low for longer interest rate environment will support asset values coupled with the cheap Australian Dollar will keep Industrial assets as an attractive investment. With this in mind, we expect investment volumes to improve throughout the latter half of 2020.

We expect Developers to remain disciplined and unprepared to take on the risk of speculative developments without firm leasing covenants and pre-commitments, development will remain well below the 10 year average in WA.

8.6 Covid 19

Following the declaration of a Global Pandemic on 11 March 2020 the property sector as well as the Australian and Global communities has entered a new unseen era which has seen the shutting down of almost all countries in the world including Australia. Understandably the market has slowed significantly with Perth being no exception. Enquiries have been greatly reduced with few transactions being negotiated since the declaration. The above market overview and our sales evidence have been taken from analysis prior to the crisis. The eventual effect on the market is not yet known and it is likely that few transactions will occur during the lockdown.

Transactions that have occurred during the lockdown are likely to not be market related with potential for them to be subject to financial stress. It is considered inappropriate to attempt to analyse the market during the lockdown but rather to wait until the lockdown has been lifted once some recovery has commenced.

The above market analysis together with sales analysis remains the best indicators of value however caution must be advised that the market post Covid 19 may be significantly different. Therefore property values could change frequently and significantly. Therefore it is advised that any values be frequently reviewed during this time.

9 Sales Evidence

9.1 Industrial Land Parcels

We have utilised the following larger industrial land sales which provide guidance to the market values of the subject land parcels.

251 Birkshire Rd, Forrestfield	
Sale Price:	\$8,998,045
Sale Date:	October 2019
Description:	An L-Shaped land parcel zoned Industrial Development. Sold as 3 former combined lots after scheme contributions paid.
MRS Zoning	'Industrial'
LPS 3 Zoning	'Industrial Development'
Site Area:	13,508 m ²
Sale Analysis:	\$300/m ² Ex GST Price excludes scheme contributions of \$17.01/m ² .

26 & 32 Nardine Close, Forrestfield	
Sale Price:	\$5,279,000
Sale Date:	October 2019
Description:	Two adjoining land parcels which included the original houses and infrastructure which required demolition. Sold by 2 separate sellers to 1 purchaser in a single transaction.
MRS Zoning	'Industrial'
LPS 3 Zoning	'Industrial Development'
Site Area:	20,305 m ²
Sale Analysis:	\$260m ² Price excludes scheme contributions of \$17.01/m ² which have yet to be paid.

Lot 307 Nardine Close, Forrestfield	
Sale Price:	\$3,850,000
Sale Date:	May 2019
Description:	A rear battleaxe lot from Ashby Cl that will have a street frontage to Nardine Cl once road and infrastructure works are completed. Sold with Lots 305 & 306 which adjoin to the one purchaser.
MRS Zoning	'Industrial'
LPS 3 Zoning	'Industrial Development'
Site Area:	13,508 m ²
Sale Analysis:	\$285/m ² Price excludes scheme contributions of \$17.01/m ² which have yet to be paid.



Lot 306 Nardine CI, Forrestfield	
Sale Price:	\$2,986,285
Sale Date:	May 2019
Description:	A central battleaxe lot with current access from Ashby Close. The land will have a street frontage to Nardine Close once infrastructure and road works are completed. Sold in line with Lots 305 & 307.
MRS Zoning	'Industrial'
LPS 3 Zoning	'Industrial Development'
Site Area:	10,123 m ²
Sale Analysis:	\$295/m ² Price includes scheme contributions of \$17.01/m ² . Equates to a land rate of \$278/m ² for comparison with the other evidence.

Lot 305 Nardine CI, Forrestfield	
Sale Price:	\$2,231,675
Sale Date:	May 2019
Description:	A rectangular shaped lot with street frontages to Nardine Close and Ashby CI once works are completed. Presently has a narrow frontage to Ashby CI The land will have a street frontage to Nardine Close once infrastructure and road works are completed. Sold in line with Lots 305 & 307.
MRS Zoning	'Industrial'
LPS 3 Zoning	'Industrial Development'
Site Area:	7,565 m ²
Sale Analysis:	\$295/m ² Price includes scheme contributions of \$17.01/m ² . Equates to a land rate of \$278/m ² for comparison with the other evidence.

110 Sultana Road West, Forrestfield	
Sale Price:	\$1,850,000
Sale Date:	January 2019
Description:	A level rectangular shaped industrial development zoned lot proposed to be rezoned Light industrial under a proposed scheme amendment. Improvements are limited to the existing former residence and add no value.
MRS Zoning	'Industrial'
LPS 3 Zoning	'Industrial Development' currently, 'Light Industrial' proposed.
Site Area:	9,568 m ²
Sale Analysis:	\$183/m ²

The lot was sold following a public marketing campaign however is further from the development front and services. It is also proposed to be rezoned which may have affected perceived value.



15 Nardine Cl, Forrestfield	
Sale Price:	\$2,350,000
Sale Date:	September 2018
Description:	A rectangular shaped, level industrial development zoned land parcel in the High Wycombe/Forrestfield Industrial Area. The site is effectively vacant land but is improved with a substantial luxury residence and sheds considered to have added no or little value.
MRS Zoning	'Industrial'
LPS 3 Zoning	'Industrial Development'
Site Area:	9,760 m ²
Sale Analysis:	\$241/m ²

21 Nardine Cl, Forrestfield	
Sale Price:	\$2,650,000
Sale Date:	September 2018
Description:	A rectangular shaped, level industrial development zoned land parcel in the High Wycombe/Forrestfield Industrial Area. The site is effectively vacant land but is improved with a very large luxury residence and sheds considered to have added no or little value.
MRS Zoning	'Industrial'
LPS 3 Zoning	'Industrial Development'
Site Area:	9,566 m ²
Sale Analysis:	\$277/m ²

Both the above two properties were sold to the same buyer by 2 separate sellers. Effectively sold at a blended rate of \$259/m². The purchaser dealt with demolition and is required to pay scheme contributions in addition to the purchase price.

2 Harrison Road, Forrestfield, WA	
Sale Price:	\$2,810,000
Sale Date:	June 2018
Description:	The subject property comprises corner allotment of 8,925 m ² located in the eastern industrial locality of Forrestfield. The property is zoned 'Light Industry' under the City of Kalamunda's Local Planning Scheme. The property is located on the corner of Berkshire and Harrison Roads. Berkshire Road is a major thoroughfare through the locality and provides direct access onto Tonkin Highway to the east of the subject. There are some dated improvements upon the site although discussions with the purchaser indicate that these are to be removed upon settlement. They have therefore been disregarded for the purpose of this valuation. The site is level and underlying soils appear to be sandy and free draining in nature.
MRS Zoning	'Industrial'
LPS 3 Zoning	We have been advised by the City of Kalamunda that the subject property is within an area zoned 'Light Industry' under the provisions of the Local Planning Scheme No.3
Site Area:	8,925 m ²
Sale Analysis:	\$314/m ²



155 Milner Road, Forrestfield	
Sale Price:	\$2,250,000
Sale Date:	April 2018
Description:	A level square shaped lot situated in the emerging Forrestfield Industrial Area. The site has an 82.5 metre frontage to Milner Road and adjoins a site which has been fully developed by Hodgson. We understand that the lot has been purchased from receivers and that the purchaser has to pay the outstanding scheme contributions over the site which are in the order of \$200-\$300k.
MRS Zoning	'Industrial'
LPS 3 Zoning	We have been advised by the City of Kalamunda that the subject property is within an area zoned 'General Industry' under the provisions of the Local Planning Scheme No.3
Site Area:	9,611 m ²
Sale Analysis:	\$234/m ²

We are also aware of Lot 50 Sultana Road West which sold for \$1,850,000 in February 2019. This sale reflected \$170/m² which is considered to be below market levels despite being publically marketed. It was however located well away from services and was subject to significant uncertainty over the amount of land that could be developed. This is considered to be out of line and has not been taken into consideration.

We also note that 33 and 37 Nardine Cl are currently under contract being sold in February 2020 at a rate of \$282/m² including GST if applicable. The contact is unconditional however the purchaser is in intensive care and is extremely sick. The contact is now on hold and it is quite uncertain if it will be completed.

Whilst an indicator of the current market it is far from certain this price, post Covid 19 can be replicated. The selling agent is reporting significantly reduced enquiry and has commenced remarketing.

Overall the recent sales suggest that land values have increased with agents reporting increased enquiry from developers but limited demand from owner occupiers. It should be noted however that all the sales are prior to Covid 19 being declared a Global Pandemic. This introduces a 'Material Uncertainty' to the market that cannot be predicted. The overseas experience is that well located property remained very sought after with retail and office accommodation demand falling but industrial demand in some countries actually increasing particularly for transport and logistics.

Discussions with agents active in this area indicate that land is sought after industrial locations such as Forrestfield remains good and a lack of supply of vacant land continues to fuel demand. The uncertainty of the global market however has temporally halted demand. It remains uncertain if and when demand will increase once again. It would be expected that once all restrictions are lifted including overseas travel then some return to a normal market could be expected. The future of the market however remains quite uncertain.

It would be recommended that the value of the land be reviewed more frequently during this period as changes to values could occur rapidly.

10 Valuation Methodology

We have assessed the valuation on the basis of freehold title.

This valuation is determined on the basis that the property, the title thereto and its use is not affected by any matter other than that mentioned in this report. Furthermore, it has been assumed that reasonable resources are available in negotiating the sale and exposing the property to the market.

Our assessments do not include any allowance for severance, injurious affection or solatium and are not reflective of the value appropriate for the compulsory acquisition which may vary from these values and should be separately assessed as of the date of taking.

In assessing the value of the subject we have considered two basis of valuation being:-

1. Piecemeal (Direct Comparison) Approach; and
2. Static Feasibility Approach

In addition we have been asked to provide a flat or average rate approach adopting a flat rate across all lots. We have utilised direct comparison to carry out this assessment.

The piecemeal approach has been utilised as the most common and acceptable method for assessment of land on an acquisition basis. This approach utilises a rate per square metre basis of analysis and apportions the value of the acquired land based on its land area and the relationship it bears to the total site areas of the total site.

The static feasibility approach has been utilised in accordance with Schedule 13 of City of Kalamunda Local Planning Scheme No. 3 Amendment No. 48, gazetted 10 May 2013. In accordance with the Scheme Amendment, value of land is to be assessed in accordance with Section 6.5.12 which specifies the value as meaning;

“the fair market value of the land at a specific date which is defined as the capital sum that would be negotiated in an arms length transaction in an open and unrestricted market, assuming the highest and best use of the land with all its potential and limitations (other than the limitation arising from the transaction for the land which is being valued) wherein the parties act, prudently and without compulsion to buy or sell.



The net land value is to be determined by static feasibility valuation model, using the workshop sheet model attached to the scheme as Schedule 13. As part of the feasibility, an appropriate profit and risk factor is to be determined from which a 10% profit factor is to be excluded from the calculation”.

An important consideration under the Scheme Amendment is Section 6.5.12.3 which states.

“If an owner objects to a valuation made by the valuer, the owner may give notice to the Local Government requesting a review of the amount of value, at the owner’s expense, within 28 days of being informed of the value”.

A further important consideration, however, is also section 6.5.12.4 which states as follows:

“If, following a review, the value is determination of value of the land is still not a figure acceptable to the owner, the value is to be determined –

- (a) By any method agreed between the Local Government and the owner;
Or
- (b) If the Local Government and the owner cannot agree, the owner may apply to the State Administrative Tribunal for review of the matter under Part 14 of the Planning and Development Act 2005.”

Accordingly, whilst the static feasibility approach is a required methodology under the Scheme Amendment, the Local Authority may utilise any method agreed between the parties in order to come to an agreement as to the value of the land. Accordingly, the utilisation of a piecemeal approach and a figure arrived at by negotiation are considered equally valid methodologies providing they satisfy the definition of fair market value as set out above.

We therefore have utilised the comparative sales method approach in assessing all the land values assessed within this valuation including those values stated in the feasibility calculations.

We detail our findings on the following pages:

11 Piecemeal (Direct Comparison) Approach

We have adopted the Direct Comparison approach as our primary method in determining the current market value of the subject land parcels on a piecemeal basis. This is essentially a land rate basis.

Within this approach we have compared the subject property to sales of other properties in the surrounding locality on a rate \$/m² of land area basis

There remains a number of land owners seeking rates well above these levels however transactions above \$250/m² remain difficult to secure at present.

Analysis of sales from 2012 to 2016 show that recent values have fallen back to levels last seen in in 2013. In 2017 to date there has been some level of resurgence in activity with an increased number of transactions occurring with one sale displaying a rate of \$260/m². Whilst values for some well-located parcels remain around \$250/m² the majority of land, due to reduced demand, remains at lower levels.

Accordingly, we believe the value on a rate per square metre of the acquired land, falls within a range of rates between \$210/m² and \$270/m² with the variation depending upon location and land size. Our calculations are as follows:

Piecemeal Approach						
Road	Lot Number	Lot Area m ²	Road Reserve m ²	Net lot Area m ²	Value of Road Reserve \$/m ²	Value of Road Reserve
Sultana Rd West	51	12,279 m ²	218 m ²	12,061 m ²	\$240 /m ²	\$52,320
Sultana Rd West	308	10,531 m ²	1,750 m ² *	8,781 m ²	\$260 /m ²	\$455,000
Berkshire Road	17	10,000 m ²	76 m ²	9,924 m ²	\$270 /m ²	\$20,520
Berkshire Road	547	40,570 m ²	7,302 m ²	33,268 m ²	\$250 /m ²	\$1,825,500
Nardine Cl	16	10,296 m ²	132 m ²	10,164 m ²	\$260 /m ²	\$34,320

* Final road reserve requirements subject to detailed design and survey for existing temporary cul-de-sac.

12 Static Feasibility Approach

We have also adopted the hypothetical development approach in assessing the current market values for the subject properties. This is in accordance with schedule 13 of Scheme Amendment 28. A copy of the base feasibility as set out in the amendment is set out below.

SCHEDULE 13			
STATUTORY STATIC FEASIBILITY ASSESSMENT MODEL			
Gross realisation			
Net lot yield @ average market value per lot			
"X" lots @ "\$Y" per lot	\$		(1)
Less GST @ standard / normal rates			
(1) Multiplied by GST rate/(100+GST rate)	\$		(2)
(1-2)		\$	(3)
Less selling, marketing, advertising & settlement fees			
@ market % multiplied by (1)	\$		(4)
Add back Input Tax Credit on selling fees			
(4) Multiplied by GST rate/(100+GST rate)	\$		(5)
(4-5)		\$	(6)
Balance after selling costs etc & Input Tax Credit (3-6)		\$	(7)
Less adjusted profit & risk allowance as per SPP 3.6			
Market determined profit & risk allowance %			(8)
Less fixed profit allowance per SPP3.6 10%			(9)
Risk rate applied (8-9) = %			(10)
EXPLANATION: (10) to be expressed as a whole number eg 15% = 15 ie Risk = (7) multiplied by (10)/((10)+(100))			
		\$	(11)
Balance after profit & risk factor (7-11)		\$	(12)
Less development costs @ "X" lots multiplied by "\$Z" per lot			
Add back Input Tax Credit on (13)			
(13) Multiplied by GST rate/(100+GST rate)	\$		(14)
Development cost after Input Tax Credit (13-14)	\$		(15)
Add interest on net development costs (15)			
For 1/2 development & 1/2 selling term			
@ Applicable market rates			
(15) Multiplied by % rate	\$		(16)
(15+16)		\$	(17)
Balance after deduction of development costs & interest (12-17)		\$	(18)
Less interest on land value, rates & taxes and stamp duty			
Assessed over 1/2 development and 1/2 selling term			
@ Applicable market rates			
(18) Multiplied by (% rate/100+% rate)		\$	(19)
Balance after interest on the land (18-19)		\$	(20)
Less rates & taxes			
		\$	(21)
Balance after rates & taxes (20-21)		\$	(22)
Less Stamp Duty @ current statutory rates			
(22) Multiplied by stamp duty rate/(100+stamp duty rate)		\$	(23)
Residual Land Value prior to GST considerations (22-23)		\$	(24)
Add GST (24) + GST at prevailing statutory rate		\$	(25)
ASSESSED STATUTORY CONTRIBUTION PER SPP 3.6			
(22+23)	\$		

We note however, that given no approvals have been obtained, as well as formal costings being provided by a Quantity Surveyor, this approach is considered less reliable and somewhat subjective.

Within this approach we determine the expected gross realisations for the completed lots to which we make deductions for GST liability, selling, development and financing costs, profit and risks allowances and rates and taxes associated with the development.

In assessing an estimated realisation for any proposed development, we have had consideration for the proposed plans and lot yield prepared by planners as well as had regard for the prices currently being achieved for industrial zoned lots in the Perth metropolitan area.

We have therefore adopted realisations for the completed lots on a rate per square metre of \$375/m² dependant on size, aspect and proximity of the lots.

We table our adopted gross realisations below.

Road	Lot Number	Adopted End Rate	Net lot Area m ²
Sultana Rd West	51	\$375 /m ²	12,061 m ²
Sultana Rd West	308	\$375 /m ²	8,781 m ²
Berkshire Road	17	\$375 /m ²	9,924 m ²
Berkshire Road	547	\$375 /m ²	33,268 m ²
Nardine Cl	16	\$375 /m ²	10,164 m ²

From this amount we have deducted an amount for GST, which equates to 1/11th of the above realisations. We have then made a further deduction for selling and marketing costs, which is calculated at 3.00% of gross realisations and then added the input tax credit on the selling fees as the final part of the GST calculation.

From the net realisation we have made a deduction of 20% for developer's profit and risk. We consider this rate to be appropriate given the lack of approvals and presales in place, as well as uncertainty relating to likely developed costs.

We have then made a deduction for the development costs associated with the development of the land parcels. These costs include allowances for:

- Clean Fill Development Management
- Water Headworks Charges
- Electricity Headworks Charges
- Design and Engineering
- Development Management
- Professional Fees
- Scheme Contributions

We have then added back input tax credits associated with the development costs of the development.

We have then made further deductions for financing costs which are based on an interest rate of 6.50%. We consider an appropriate development period for the development to be 3 months, in order to obtain the necessary approvals. Issue the building contract and obtain the necessary approvals. We have also adopted a selling period of 3 months.

Finally, we have then deducted rates and taxes and stamp duty associated with the sale. After having consideration for the adopted development costs and relevant deductions we have calculated the residual value of the subject land parcels as follows:

Road	Lot Number	Road Reserve m ²	Value Indicated	Land Rate
Sultana Rd West	51	218 m ²	\$56,895	\$261 /m ²
Sultana Rd West	308	1,750 m ²	\$452,919	\$259 /m ²
Berkshire Road	17	76 m ²	\$19,740	\$260 /m ²
Berkshire Road	547	7,302 m ²	\$1,932,873	\$265 /m ²
Nardine Cl	16	132 m ²	\$34,307	\$260 /m ²

We attach a full set of feasibility calculations for each of the lots as an annexure to the rear of this report.

13 Direct Comparison – Average Rate Approach

In accordance with your instructions, we have also adopted an Average Rate Approach to value assessment. Whilst this, in general terms, is not considered a highly reliable approach, it does in our opinion, provide a relatively equitable analysis of value assessment whereby it is easily able to be said that all parties are treated equally in terms of the land acquisition process. Whilst in our opinion there are some variances in the relative value of various parcels of land, this approach is not considered invalid in this circumstance.

Accordingly, we have adopted an average land value of \$250/m² for all of the land parcels, which has been based on our analysis of sales evidence. Our assessments of value are set out below.

Road	Lot Number	Road Reserve m ²	Direct Comparison (Average Rate)	
Sultana Rd West	51	218 m ²	\$54,500	\$250 /m ²
Sultana Rd West	308	1,750 m ²	\$437,500	\$250 /m ²
Berkshire Road	17	76 m ²	\$19,000	\$250 /m ²
Berkshire Road	547	7,302 m ²	\$1,825,500	\$250 /m ²
Nardine Cl	16	132 m ²	\$33,000	\$250 /m ²



14 Reconciliation of Values

Our valuation calculations provide the following rounded values:-

Summary Of Values									
Road	Lot Number	Road Reserve m ²	Value By Piecemeal Approach		Development Feasibility		Adopted Value		Direct Comparison (Average Rate)
Sultana Rd West	51	218 m ²	\$52,320	\$240 /m ²	\$56,895	\$261 /m ²	\$54,500	\$250 /m ²	\$54,500 \$250 /m ²
Sultana Rd West	308	1,750 m ² *	\$455,000	\$260 /m ²	\$452,919	\$259 /m ²	\$455,000	\$260 /m ²	\$437,500 \$250 /m ²
Berkshire Road	17	76 m ²	\$20,520	\$270 /m ²	\$19,740	\$260 /m ²	\$20,000	\$263 /m ²	\$19,000 \$250 /m ²
Berkshire Road	547	7,302 m ²	\$1,825,500	\$250 /m ²	\$1,932,873	\$265 /m ²	\$1,825,000	\$250 /m ²	\$1,825,500 \$250 /m ²
Nardine Cl	16	132 m ²	\$34,320	\$260 /m ²	\$34,307	\$260 /m ²	\$34,000	\$258 /m ²	\$33,000 \$250 /m ²
* Final road requirements subject to final road requirements for temporary cul-de-sac and detailed survey.									

The outbreak of the Novel Coronavirus (COVID-19), declared by the World Health Organisation as a "Global Pandemic" on the 11th March 2020, has impacted global financial markets. Travel restrictions have been implemented by many countries. Market activity is being impacted in many sectors and at the valuation date. As at the valuation date we consider that we can attach less weight to previous market evidence for comparison purposes to fully inform opinions of value. Indeed, the current response to COVID-19 means that we are faced with an unprecedented set of circumstances on which to base a judgement. Our valuation(s) is / are therefore reported on the basis of 'material valuation uncertainty' as per VPS 3 and VPGA 10 of the RICS Red Book Global. Consequently, less certainty - and a higher degree of caution - should be attached to our valuation than would normally be the case. Given the unknown future impact that COVID-19 might have on the real estate market, we recommend that you keep the valuation of the Forrestfield Industrial Area under frequent review.



15 Pecuniary Interest

We hereby certify that the Valuer and valuation firm does not have any direct, indirect or financial interest in the property or clients described herein that would conflict with the proper Valuation of the property.

16 Company Qualifications

Where this report has not been prepared by a senior executive of this Company the report has been countersigned to verify the report is issued by this Company. Any reliance upon this report should therefore be based upon the actual possession or sighting of an original document duly signed and countersigned in the before mentioned manner.

This valuation is prepared for **scheme contribution assessment purposes** on the specific instructions of **City of Kalamunda**. This report should not be relied upon by anyone other than **City of Kalamunda** whether for that purpose or otherwise.

Savills Valuations Pty Ltd accepts no responsibility to third parties nor does it contemplate that this report will be relied upon by third parties. We invite other parties who may come into possession of this report to seek our written consent to them relying upon this report and we reserve our rights to review the contents in the event that our consent is sought.

This Valuation is current at the date of valuation only. The value assessed herein may change significantly and unexpectedly over a relatively short period of time (including as a result of general market movements or factors specific to the particular property). Liability for losses arising from such subsequent changes in value are excluded as is liability where the valuation is relied upon after the expiration of three months from the date of valuation, or such earlier date if you become aware of any factors that have any effect on the valuation.

Liability limited by a scheme approved under Professional Standards Legislation.





17 Valuation

We assess the **current market value** of the land required for road widening, as at **30 March 2020** and subject to the details referred to herein, to be:

Lot 51 Sultana Road West	\$54,500* (Fifty Four Thousand Five Dollars)
Lot 308 Sultana Road West	\$455,000* (Four Hundred and Fifty Five Thousand Dollars)
Lot 17 Berkshire Road	\$20,000* (Twenty Thousand Dollars)
Lot 547 Berkshire Road	\$1,825,000* (One Million Eight Hundred & Twenty Five Thousand Dollars)
Lot 16 Milner Road	\$34,000* (Thirty Four Thousand Dollars)

(*) These valuation amounts are exclusive of a Goods and Services Tax.

We have assessed the market value of the property in accordance with the Market Value definition referred to in Section 1.4 of this report. In the event that a sale was to occur in circumstances not reflecting that Market Value definition, the price realised may be at a substantial discount to the Market Value assessed.

The outbreak of the Novel Coronavirus (COVID-19), declared by the World Health Organisation as a "Global Pandemic" on the 11th March 2020, has impacted global financial markets. Travel restrictions have been implemented by many countries. Market activity is being impacted in many sectors and at the valuation date. As at the valuation date we consider that we can attach less weight to previous market evidence for comparison purposes to fully inform opinions of value. Indeed, the current response to COVID-19 means that we are faced with an unprecedented set of circumstances on which to base a judgement. Our valuation(s) is / are therefore reported on the basis of 'material valuation uncertainty' as per VPS 3 and VPGA 10 of the RICS Red Book Global. Consequently, less certainty - and a higher degree of caution - should be attached to our valuation than would normally be the case. Given the unknown future impact that COVID-19 might have on the real estate market, we recommend that you keep the valuation of Forrestfield Industrial Area under frequent review.

Prepared by Savills Valuations Pty Ltd.

A blue ink signature of Paul Bradstreet, written in a cursive style.

Paul Bradstreet AAPI
Associate Director
Certified Practising Valuer
Licensed Valuer No. 39248
For the State of Western Australia

A blue ink signature of Mark Foster-Key, written in a cursive style.

Mark Foster-Key
State Director
Valuation & Consultancy Division

The State Director signatory verifies that this report is genuine, and issued by, and endorsed by Savills Valuations Pty Ltd. However the opinion expressed in this report has been arrived at by all signatories.

Appendix K: General Ledger 19/20 to 31 March 2020

GL Summary		
Con	Developer Contributions	- 568,884.41
Int	Interest Income	- 1,119.57
MExp	Management Fees	12,993.86
Leg	Legal fees	11,680.64
Consult	Consultancy Fees	11,750.00
Land	Land acquisition costs	-
Road	Road Construction costs	1,416,245.62
Con refund	Contribution Refund	-
Audit	Audit Fees	-
Adv	Advertising	-
	Net result	882,666.14
	Check	882,666.14

Date	Code	Description	Debit	Credit	Balance	Year	Job
	BFWD				(1,382,439.98)		
12-07-2019		recognise payment of invoice 27729 Cruskall SP & RM on 12/07/2019 JNL to recognise payment of invoice 27729 Cruskall SP & RM on 12/07/2019		(155,896.65)	(1,538,336.63)	19/20	
29-07-2019		McLeods Barristers & Solicitors. Invoice 108106 dated 30/04/2019 (N380) JNL to recognise the expenditure in Forrestfield Industrial Scheme Stage 1 for July 2019	2,996.00		(1,535,340.63)	19/20	N380

McLeods Barristers & Solicitors. Invoice 108517 dated 31/05/2019 (N380) JNL to recognise the expenditure in Forrestfield Industrial Scheme Stage 1 for July 2019	2,326.00	(1,533,014.63)	N380
McLeods Barristers & Solicitors. Invoice 108591 dated 31/05/2019 (N380) JNL to recognise the expenditure in Forrestfield Industrial Scheme Stage 1 for July 2019	635.31	(1,532,379.32)	N380
McLeods Barristers & Solicitors. Invoice 108590 dated 31/05/2019 (N380) JNL to recognise the expenditure in Forrestfield Industrial Scheme Stage 1 for July 2019	106.80	(1,532,272.52)	N380
McLeods Barristers & Solicitors. Invoice 109154 dated 11/07/2019 (N380) JNL to recognise the expenditure in Forrestfield Industrial Scheme Stage 1 for July 2019	453.10	(1,531,819.42)	N380
McLeods Barristers & Solicitors. Invoice 109154 dated 11/07/2019 (N380) JNL to recognise the expenditure in Forrestfield Industrial Scheme Stage 1 for July 2019	1,140.06	(1,530,679.36)	N380
Kott Gunning Lawyers Invoice 241344 dated 29/05/2019 (N380) JNL to recognise the expenditure in Forrestfield Industrial Scheme Stage 1 for July 2019	5,218.40	(1,525,460.96)	N380
Kott Gunning Lawyers Invoice 242166 dated 28/06/2019 (N380) JNL to recognise the expenditure in Forrestfield Industrial Scheme Stage 1 for July 2019	12,666.00	(1,512,794.96)	N380
Savills Valuations Pty Ltd. Invoice INV00044765 dated 28/06/2019 (N380) JNL to recognise the expenditure in Forrestfield Industrial Scheme Stage 1 for July 2019	3,000.00	(1,509,794.96)	N380

	Curnow Group Hire Pty Ltd. Invoice N-A003 dated 20/06/2019 (FFR1) JNL to recognise the expenditure in Forrestfield Industrial Scheme Stage 1 for July 2019	30,962.27		(1,478,832.69)		FFR1
	Complete Underground Power Installations. Invoice 00000359 dated 10/07/2019 (FFR1) JNL to recognise the expenditure in Forrestfield Industrial Scheme Stage 1 for July 2019	1,539.00		(1,477,293.69)		FFR1
	Porter Consulting Engineers. Invoice 00019734 dated 17/07/2019 (FFR3) JNL to recognise the expenditure in Forrestfield Industrial Scheme Stage 1 for July 2019	2,000.00		(1,475,293.69)		FFR3
	R J Vincent & Co. Invoice 007256 dated 05/07/2019 (FFR3) JNL to recognise the expenditure in Forrestfield Industrial Scheme Stage 1 for July 2019	208,515.82		(1,266,777.87)		FFR3
31-07-2019	Forrestfield Industrial Area Stage 1 BOS Interest Earned July 19 JNL Interest Earned July 19		(207.21)	(1,266,985.08)	19/20	
21-08-2019	Refund from Water Corp for overcharge of water main link fee JNL Refund from Water Corp for overcharge of water main link fee		(432.00)	(1,267,417.08)	19/20	FFR3
22-08-2019	Curnow Group Hire Pty Ltd. Invoice N-A 004 dated 23/07/2019 (FFR1) JNL to recognise the expenditure in Forrestfield Industrial Scheme Stage 1 for August 2019	48,300.24		(1,219,116.84)	19/20	FFR1
	Wallis Property (WA) Pty Ltd. Invoice 00190121 dated 31/07/2019 (FFR1) JNL to recognise the expenditure in Forrestfield Industrial Scheme Stage 1 for August 2019	517.49		(1,218,599.35)		FFR1

	Water Corporation. Invoice 9023421570 dated 23/07/2019 (FFR1) JNL to recognise the expenditure in Forrestfield Industrial Scheme Stage 1 for August 2019	2,317.52	(1,216,281.83)		FFR1
	Western Power. Invoice CORPB0462806 dated 30/07/2019 (FFR3) JNL to recognise the expenditure in Forrestfield Industrial Scheme Stage 1 for August 2019	7,786.00	(1,208,495.83)		FFR3
	RJ Vincent & CO. Invoice 007316 dated 16/08/2019 (FFR3) JNL to recognise the expenditure in Forrestfield Industrial Scheme Stage 1 for August 2019	56,741.12	(1,151,754.71)		FFR3
	Shawmac Pty Ltd. Invoice 00009401 dated 26/07/2019 (FFR5) JNL to recognise the expenditure in Forrestfield Industrial Scheme Stage 1 for August 2019	3,699.00	(1,148,055.71)		FFR5
	HAS Earthmoving. Invoice 00000519 dated 09/08/2019 (FFR5) JNL to recognise the expenditure in Forrestfield Industrial Scheme Stage 1 for August 2019	20,856.92	(1,127,198.79)		FFR5
31-08-2019	Forrestfield Industrial Area Stage 1 BOS Interest Earned August 19 JNL Interest Earned August 19		(103.73)	(1,127,302.52)	19/20
27-09-2019	Porter Consulting Engineers. Invoice 00019450 dated 28/08/2019 (N380) JNL to recognise the expenditure in Forrestfield Industrial Scheme Stage 1 for September 2019	1,500.00		(1,125,802.52)	19/20 N380
	Porter Consulting Engineers. Invoice 00019449 dated 28/08/2019 (N380) JNL to recognise the expenditure in Forrestfield Industrial Scheme Stage 1 for September 2019	5,000.00		(1,120,802.52)	N380

	HAS Earthmoving. Invoice 00000530 dated 13/09/2019 (FFR4) JNL to recognise the expenditure in Forrestfield Industrial Scheme Stage 1 for September 2019	5,881.00	(1,114,921.52)	FFR4	
	Shawmac Pty Ltd. Invoice 00009456 dated 29/08/2019 (FFR5) JNL to recognise the expenditure in Forrestfield Industrial Scheme Stage 1 for September 2019	6,389.00	(1,108,532.52)	FFR5	
	HAS Earthmoving. Invoice 00000529 dated 09/09/2019 (FFR5) JNL to recognise the expenditure in Forrestfield Industrial Scheme Stage 1 for September 2019	114,300.57	(994,231.95)	FFR5	
	Porter Consulting Engineers. Invoice 00019494 dated 20/09/2019 (FFR7) JNL to recognise the expenditure in Forrestfield Industrial Scheme Stage 1 for September 2019	1,800.00	(992,431.95)	FFR7	
30-09-2019	Forrestfield Industrial Area Stage 1 BOS Interest Earned September 2019 JNL Interest Earned September 2019		(91.14)	(992,523.09)	19/20
09-10-2019	LSV Borello Lawyers. Invoice 023143 dated 31/12/2018 JNL to reimburse Forrestfield Industrial Area Scheme Stage 1 Reserve for incorrectly coded legal invoices		(180.00)	(992,703.09)	19/20
	LSV Borello Lawyers. Invoice 024046 dated 29/03/2019 JNL to reimburse Forrestfield Industrial Area Scheme Stage 1 Reserve for incorrectly coded legal invoices		(360.00)	(993,063.09)	
	Kott Gunning Lawyers. Invoice 240047 dated 27/02/2019 JNL to reimburse Forrestfield Industrial Area Scheme Stage 1 Reserve for incorrectly coded legal invoices		(1,642.50)	(994,705.59)	

17-10-2019	Kott Gunning. Invoice 241344 dated 29/05/2019 JNL to reimburse Forrestfield Industrial Area Scheme Stage 1 Reserve for incorrectly coded legal invoices		(5,218.40)	(999,923.99)	19/20	
	Kott Gunning. Invoice 241166 dated 28/06/2019 JNL to reimburse Forrestfield Industrial Area Scheme Stage 1 Reserve for incorrectly coded legal invoices		(12,666.00)	(1,012,589.99)		
25-10-2019	McLeods Barristers & Solicitors. Invoice 110293 dated 26/09/2019. (N380) JNL to recognise the expenditure in Forrestfield Industrial Scheme Stage 1 for October 2019	489.83		(1,012,100.16)	19/20	N380
	McLeods Barristers & Solicitors. Invoice 110293 dated 26/09/2019. (N380) JNL to recognise the expenditure in Forrestfield Industrial Scheme Stage 1 for October 2019	355.70		(1,011,744.46)		N380
	Porter Consulting Engineers. Invoice 00019524 dated 11/10/2019. (N380) JNL to recognise the expenditure in Forrestfield Industrial Scheme Stage 1 for October 2019	2,250.00		(1,009,494.46)		N380
	Curnow Group Hire Pty Ltd. Invoice N-SEPA 001 dated 01/10/2019. (FFR1) JNL to recognise the expenditure in Forrestfield Industrial Scheme Stage 1 for October 2019	13,183.38		(996,311.08)		FFR1
	Curnow Group Hire Pty Ltd. Invoice N-A 002 dated 01/10/2019. (FFR1) JNL to recognise the expenditure in Forrestfield Industrial Scheme Stage 1 for October 2019	4,275.79		(992,035.29)		FFR1

	Telstra Corporation. Invoice 0152927800 dated 20/09/2019. (FFR1) JNL to recognise the expenditure in Forrestfield Industrial Scheme Stage 1 for October 2019	841.31	(991,193.98)	FFR1
	Shawmac Pty Ltd. Invoice 00009518 dated 27/09/2019. (FFR4) JNL to recognise the expenditure in Forrestfield Industrial Scheme Stage 1 for October 2019	3,410.00	(987,783.98)	FFR4
	HAS Earthmoving. Invoice 0000540 dated 04/10/2019 (FFR4) JNL to recognise the expenditure in Forrestfield Industrial Scheme Stage 1 for October 2019	52,519.16	(935,264.82)	FFR4
	Shawmac Pty Ltd. Invoice 00009518 dated 27/09/2019. (FFR5) JNL to recognise the expenditure in Forrestfield Industrial Scheme Stage 1 for October 2019	3,552.00	(931,712.82)	FFR5
	HAS Earthmoving. Invoice 00000539 dated 04/10/2019. (FFR5) JNL to recognise the expenditure in Forrestfield Industrial Scheme Stage 1 for October 2019	68,887.96	(862,824.86)	FFR5
30-10-2019	recognise payment of invoice 29279 from HM & EP Smith JNL to recognise payment of invoice 29279 from HM & EP Smith	(170,236.08)	(1,033,060.94)	19/20
31-10-2019	Forrestfield Industrial Area Stage 1 BOS Interest Earned October 2019 JNL Interest Earned October 2019	(82.52)	(1,033,143.46)	19/20
27-11-2019	recognise payment of invoice 27796 from Salini Impregilo - NRW JNL to recognise payment of invoice 27796 from Salini Impregilo - NRW	(80,000.00)	(1,113,143.46)	19/20

28-11-2019	Shawmac Pty Ltd. Invoice 00009563 dated 31/10/2019 (FFR4) JNL to recognise the expenditure in Forrestfield Industrial Scheme Stage 1 for November 2019	6,820.00		(1,106,323.46)	19/20	FFR4
	HAS Earthmoving. Invoice 00000550 dated 08/11/2019 (FFR4) JNL to recognise the expenditure in Forrestfield Industrial Scheme Stage 1 for November 2019	201,830.79		(904,492.67)		FFR4
	HAS Earthmoving. Invoice 00000551 dated 06/11/2019 (FFR6) JNL to recognise the expenditure in Forrestfield Industrial Scheme Stage 1 for November 2019	5,804.25		(898,688.42)		FFR6
	Drainflow Services Pty Ltd. Invoice 00004457 dated 11/11/2019 (FFR6) JNL to recognise the expenditure in Forrestfield Industrial Scheme Stage 1 for November 2019	595.00		(898,093.42)		FFR6
30-11-2019	Forrestfield Industrial Area Stage 1 BOS Interest Earned November 2019 JNL Interest Earned November 2019		(83.99)	(898,177.41)	19/20	
04-12-2019	JNL to refund the Cabcharge Australia Limited. Invoice 25055462P1905 dated 20/05/2019		(60.14)	(898,237.55)	19/20	N380
20-12-2019	McLeods Barristers & Solicitors. Invoice 111182 dated 28/11/2019 (N380) JNL to recognise the expenditure in Forrestfield Industrial Scheme Stage 1 for December 2019	2,842.36		(895,395.19)	19/20	N380
	Shawmac Pty Ltd. Invoice 00009605 dated 28/11/2019 (FFR4) JNL to recognise the expenditure in Forrestfield Industrial Scheme Stage 1 for December 2019	2,046.00		(893,349.19)		FFR4

	HAS Earthmoving. Invoice 00000561 dated 04/12/2019 (FFR4) JNL to recognise the expenditure in Forrestfield Industrial Scheme Stage 1 for December 2019	6,840.00	(886,509.19)	FFR4	
	Shawmac Pty Ltd. Invoice 00009605 dated 28/11/2019 (FFR6) JNL to recognise the expenditure in Forrestfield Industrial Scheme Stage 1 for December 2019	10,000.00	(876,509.19)	FFR6	
	HAS Earthmoving. Invoice 00000562 dated 04/12/2019 (FFR6) JNL to recognise the expenditure in Forrestfield Industrial Scheme Stage 1 for December 2019	212,677.06	(663,832.13)	FFR6	
	Porter Consulting Engineers. Invoice 00019586 dated 26/11/2019 (FFR7) JNL to recognise the expenditure in Forrestfield Industrial Scheme Stage 1 for December 2019	2,075.00	(661,757.13)	FFR7	
	Porter Consulting Engineers. Invoice 00019625 dated 12/12/2019 (FFR7) JNL to recognise the expenditure in Forrestfield Industrial Scheme Stage 1 for December 2019	1,250.00	(660,507.13)	FFR7	
31-12-2019	Forrestfield Industrial Area Stage 1 BOS Interest Earned December 2019 JNL Interest Earned December 2019		(68.44)	(660,575.57)	19/20
31-12-2019	recognise payment of invoice 28680 from Ascent Property Holdings Pty Ltd ATF Jackson Property Trust JNL to recognise payment of invoice 28680 from Ascent Property Holdings Pty Ltd ATF Jackson Property Trust		(162,751.68)	(823,327.25)	19/20

16-01-2020	JNL to recognise refund of Invoice QN14636 dated 14/05/2018 from Water Corporation for works not proceeded with in Ashby Road, Forrestfield (FFR1) JNL to recognise refund of Invoice QN14636 dated 14/05/2018 from Water Corporation for works not proceeded with in Ashby Road, Forrestfield		(10,517.49)	(833,844.74)	19/20	FFR1
23-01-2020	Dowsing Group Pty Ltd. Invoice 13121 dated 20/12/2019 (FFR3) JNL to recognise the expenditure in Forrestfield Industrial Scheme Stage 1 for January 2020	21,041.60		(812,803.14)	19/20	FFR3
	Shawmac Pty Ltd. Invoice 00009636 dated 23/12/2019 (FFR4) JNL to recognise the expenditure in Forrestfield Industrial Scheme Stage 1 for January 2020	1,364.00		(811,439.14)		FFR4
	HAS Earthmoving. Invoice 00000569 dated 06/01/2020 (FFR4) JNL to recognise the expenditure in Forrestfield Industrial Scheme Stage 1 for January 2020	796.72		(810,642.42)		FFR4
	Shawmac Pty Ltd. Invoice 00009636 dated 23/12/2019 (FFR6) JNL to recognise the expenditure in Forrestfield Industrial Scheme Stage 1 for January 2020	7,000.00		(803,642.42)		FFR6
	HAS Earthmoving. Invoice 00000570 dated 13/01/2020 (FFR6) JNL to recognise the expenditure in Forrestfield Industrial Scheme Stage 1 for January 2020	221,915.47		(581,726.95)		FFR6
	Porter Consulting Engineers. Invoice 00019640 dated 18/12/2019 (FFR7) JNL to recognise the expenditure in Forrestfield Industrial Scheme Stage 1 for January 2020	1,745.00		(579,981.95)		FFR7

31-01-2020	Forrestfield Industrial Area Stage 1 BOS Interest Earned January 2020 JNL Interest Earned January 2020		(60.32)	(580,042.27)	19/20	
19-02-2020	Forrestfield Industrial Area Stage 1 payment for project management costs for July 2019 to January 2020 JNL Forrestfield Industrial Area Stage 1 payment for project management costs for July 2019 to January 2020	9,952.00		(570,090.27)	19/20	
27-02-2020	McLeods Barristers and Solicitors. Invoice 40567 dated 30/01/2020. (N380) JNL to recognise the expenditure in Forrestfield Industrial Scheme Stage 1 for February 2020	53.98		(570,036.29)	19/20	
	McLeods Barristers and Solicitors. Invoice 43465 dated 29/01/2020. (N380) JNL to recognise the expenditure in Forrestfield Industrial Scheme Stage 1 for February 2020	2,464.00		(567,572.29)		
	HAS Earthmoving. Invoice 00000577 dated 14/02/2020. (FFR6) JNL to recognise the expenditure in Forrestfield Industrial Scheme Stage 1 for February 2020	23,146.17		(544,426.12)		FFR6
	Porter Consulting Engineers. Invoice 00020051 dated 30/01/2020. (FFR7) JNL to recognise the expenditure in Forrestfield Industrial Scheme Stage 1 for February 2020	6,000.00		(538,426.12)		FFR7
29-02-2020	Forrestfield Industrial Area Stage 1 BOS Interest Earned February 2020 JNL Interest Earned February 2020		(45.74)	(538,471.86)	19/20	

25-03-2020	Project Managers costs related to City's Capex jobs and costs related to Forrestfield Industrial Scheme Stage 1 from N360 July 2019 (N380) JNL to recognise the expenditure in Forrestfield Industrial Scheme Stage 1 for March 2020	92.00	(538,379.86)	19/20
	Project Managers costs related to City's Capex jobs and costs related to Forrestfield Industrial Scheme Stage 1 from N360 July 2019 (N380) JNL to recognise the expenditure in Forrestfield Industrial Scheme Stage 1 for March 2020	10.00	(538,369.86)	
	Porter Consulting Engineers Invoice 00020092 dated 04/03/2020 (N380) JNL to recognise the expenditure in Forrestfield Industrial Scheme Stage 1 for March 2020	3,000.00	(535,369.86)	
	Project Managers costs related to City's Capex jobs and costs related to Forrestfield Industrial Scheme Stage 1 from N360 July 2019 (FFR3) JNL to recognise the expenditure in Forrestfield Industrial Scheme Stage 1 for March 2020	1,007.00	(534,362.86)	FFR3
	Project Managers costs related to City's Capex jobs and costs related to Forrestfield Industrial Scheme Stage 1 from N360 August 2019 (FFR3) JNL to recognise the expenditure in Forrestfield Industrial Scheme Stage 1 for March 2020	472.00	(533,890.86)	FFR3
	Project Managers costs related to City's Capex jobs and costs related to Forrestfield Industrial Scheme Stage 1 from N360 October 2019 (FFR3) JNL to recognise the	123.00	(533,767.86)	FFR3

expenditure in Forrestfield Industrial Scheme Stage 1 for March 2020			
Project Managers costs related to City's Capex jobs and costs related to Forrestfield Industrial Scheme Stage 1 from N360 November 2019 (FFR3) JNL to recognise the expenditure in Forrestfield Industrial Scheme Stage 1 for March 2020	395.00	(533,372.86)	FFR3
Project Managers costs related to City's Capex jobs and costs related to Forrestfield Industrial Scheme Stage 1 from N360 December 2019 (FFR3) JNL to recognise the expenditure in Forrestfield Industrial Scheme Stage 1 for March 2020	362.00	(533,010.86)	FFR3
Project Managers costs related to City's Capex jobs and costs related to Forrestfield Industrial Scheme Stage 1 from N360 July 2019 (FFR3) JNL to recognise the expenditure in Forrestfield Industrial Scheme Stage 1 for March 2020	106.00	(532,904.86)	FFR3
Project Managers costs related to City's Capex jobs and costs related to Forrestfield Industrial Scheme Stage 1 from N360 August 2019 (FFR3) JNL to recognise the expenditure in Forrestfield Industrial Scheme Stage 1 for March 2020	47.00	(532,857.86)	FFR3

Project Managers costs related to City's Capex jobs and costs related to Forrestfield Industrial Scheme Stage 1 from N360 October 2019 (FFR3) JNL to recognise the expenditure in Forrestfield Industrial Scheme Stage 1 for March 2020	12.00	(532,845.86)	FFR3
Project Managers costs related to City's Capex jobs and costs related to Forrestfield Industrial Scheme Stage 1 from N360 November 2019 (FFR3) JNL to recognise the expenditure in Forrestfield Industrial Scheme Stage 1 for March 2020	40.00	(532,805.86)	FFR3
Project Managers costs related to City's Capex jobs and costs related to Forrestfield Industrial Scheme Stage 1 from N360 December 2019 (FFR3) JNL to recognise the expenditure in Forrestfield Industrial Scheme Stage 1 for March 2020	38.00	(532,767.86)	FFR3
Project Managers costs related to City's Capex jobs and costs related to Forrestfield Industrial Scheme Stage 1 from N360 July 2019 (FFR4) JNL to recognise the expenditure in Forrestfield Industrial Scheme Stage 1 for March 2020	366.00	(532,401.86)	FFR4
Project Managers costs related to City's Capex jobs and costs related to Forrestfield Industrial Scheme Stage 1 from N360 August 2019 (FFR4) JNL to recognise the expenditure in Forrestfield Industrial Scheme Stage 1 for March 2020	189.00	(532,212.86)	FFR4

Project Managers costs related to City's Capex jobs and costs related to Forrestfield Industrial Scheme Stage 1 from N360 September 2019 (FFR4) JNL to recognise the expenditure in Forrestfield Industrial Scheme Stage 1 for March 2020	1,093.00	(531,119.86)	FFR4
Project Managers costs related to City's Capex jobs and costs related to Forrestfield Industrial Scheme Stage 1 from N360 October 2019 (FFR4) JNL to recognise the expenditure in Forrestfield Industrial Scheme Stage 1 for March 2020	2,085.00	(529,034.86)	FFR4
Project Managers costs related to City's Capex jobs and costs related to Forrestfield Industrial Scheme Stage 1 from N360 November 2019 (FFR4) JNL to recognise the expenditure in Forrestfield Industrial Scheme Stage 1 for March 2020	494.00	(528,540.86)	FFR4
Project Managers costs related to City's Capex jobs and costs related to Forrestfield Industrial Scheme Stage 1 from N360 December 2019 (FFR4) JNL to recognise the expenditure in Forrestfield Industrial Scheme Stage 1 for March 2020	724.00	(527,816.86)	FFR4
Project Managers costs related to City's Capex jobs and costs related to Forrestfield Industrial Scheme Stage 1 from N360 January 2020 (FFR4) JNL to recognise the expenditure in Forrestfield Industrial Scheme Stage 1 for March 2020	201.00	(527,615.86)	FFR4

25-03-2020	Project Managers costs related to City's Capex jobs and costs related to Forrestfield Industrial Scheme Stage 1 from N360 July 2019 (FFR4) JNL to recognise the expenditure in Forrestfield Industrial Scheme Stage 1 for March 2020	39.00	(527,576.86)		FFR4
	Project Managers costs related to City's Capex jobs and costs related to Forrestfield Industrial Scheme Stage 1 from N360 August 2019 (FFR4) JNL to recognise the expenditure in Forrestfield Industrial Scheme Stage 1 for March 2020	19.00	(527,557.86)		FFR4
	Project Managers costs related to City's Capex jobs and costs related to Forrestfield Industrial Scheme Stage 1 from N360 September 2019 (FFR4) JNL to recognise the expenditure in Forrestfield Industrial Scheme Stage 1 for March 2020	104.00	(527,453.86)		FFR4
	Project Managers costs related to City's Capex jobs and costs related to Forrestfield Industrial Scheme Stage 1 from N360 October 2019 (FFR4) JNL to recognise the expenditure in Forrestfield Industrial Scheme Stage 1 for March 2020	212.00	(527,241.86)		FFR4
	Project Managers costs related to City's Capex jobs and costs to Forrestfield Industrial Scheme Stage 1 from N360 November 2019 (FFR4) JNL to recognise the expenditure in Forrestfield Industrial Scheme Stage 1 for March 2020	49.00	(527,192.86)	19/20	FFR4

Project Managers costs related to City's Capex jobs and costs to Forrestfield Industrial Scheme Stage 1 from N360 December 2019 (FFR4) JNL to recognise the expenditure in Forrestfield Industrial Scheme Stage 1 for March 2020	76.00	(527,116.86)	FFR4
Project Managers costs related to City's Capex jobs and costs to Forrestfield Industrial Scheme Stage 1 from N360 January 2020 (FFR4) JNL to recognise the expenditure in Forrestfield Industrial Scheme Stage 1 for March 2020	25.00	(527,091.86)	FFR4
Project Managers costs related to City's Capex jobs and costs to Forrestfield Industrial Scheme Stage 1 from N360 August 2019 (FFR5) JNL to recognise the expenditure in Forrestfield Industrial Scheme Stage 1 for March 2020	1,794.00	(525,297.86)	FFR5
Project Managers costs related to City's Capex jobs and costs to Forrestfield Industrial Scheme Stage 1 from N360 July 2019 (FFR5) JNL to recognise the expenditure in Forrestfield Industrial Scheme Stage 1 for March 2020	1,190.00	(524,107.86)	FFR5
Project Managers costs related to City's Capex jobs and costs to Forrestfield Industrial Scheme Stage 1 from N360 September 2019 (FFR5) JNL to recognise the expenditure in Forrestfield Industrial Scheme Stage 1 for March 2020	1,491.00	(522,616.86)	FFR5

Project Managers costs related to City's Capex jobs and costs to Forrestfield Industrial Scheme Stage 1 from N360 October 2019 (FFR5) JNL to recognise the expenditure in Forrestfield Industrial Scheme Stage 1 for March 2020	368.00	(522,248.86)	FFR5
Project Managers costs related to City's Capex jobs and costs to Forrestfield Industrial Scheme Stage 1 from N360 February 2020 (FFR5) JNL to recognise the expenditure in Forrestfield Industrial Scheme Stage 1 for March 2020	120.00	(522,128.86)	FFR5
Project Managers costs related to City's Capex jobs and costs to Forrestfield Industrial Scheme Stage 1 from N360 July 2019 (FFR5) JNL to recognise the expenditure in Forrestfield Industrial Scheme Stage 1 for March 2020	126.00	(522,002.86)	FFR5
Project Managers costs related to City's Capex jobs and costs to Forrestfield Industrial Scheme Stage 1 from N360 August 2019 (FFR5) JNL to recognise the expenditure in Forrestfield Industrial Scheme Stage 1 for March 2020	179.00	(521,823.86)	FFR5
Project Managers costs related to City's Capex jobs and costs to Forrestfield Industrial Scheme Stage 1 from N360 September 2019 (FFR5) JNL to recognise the expenditure in Forrestfield Industrial Scheme Stage 1 for March 2020	142.00	(521,681.86)	FFR5

Project Managers costs related to City's Capex jobs and costs to Forrestfield Industrial Scheme Stage 1 from N360 October 2019 (FFR5) JNL to recognise the expenditure in Forrestfield Industrial Scheme Stage 1 for March 2020	37.00	(521,644.86)	FFR5
Project Managers costs related to City's Capex jobs and costs to Forrestfield Industrial Scheme Stage 1 from N360 February 2020 (FFR5) JNL to recognise the expenditure in Forrestfield Industrial Scheme Stage 1 for March 2020	12.00	(521,632.86)	FFR5
Project Managers costs related to City's Capex jobs and costs to Forrestfield Industrial Scheme Stage 1 from N360 July 2019 (FFR6) JNL to recognise the expenditure in Forrestfield Industrial Scheme Stage 1 for March 2020	275.00	(521,357.86)	FFR6
Project Managers costs related to City's Capex jobs and costs to Forrestfield Industrial Scheme Stage 1 from N360 October 2019 (FFR6) JNL to recognise the expenditure in Forrestfield Industrial Scheme Stage 1 for March 2020	490.00	(520,867.86)	FFR6
Project Managers costs related to City's Capex jobs and costs to Forrestfield Industrial Scheme Stage 1 from N360 November 2019 (FFR6) JNL to recognise the expenditure in Forrestfield Industrial Scheme Stage 1 for March 2020	1,186.00	(519,681.86)	FFR6

Project Managers costs related to City's Capex jobs and costs to Forrestfield Industrial Scheme Stage 1 from N360 December 2019 (FFR6) JNL to recognise the expenditure in Forrestfield Industrial Scheme Stage 1 for March 2020	1,809.00	(517,872.86)	FFR6
Project Managers costs related to City's Capex jobs and costs to Forrestfield Industrial Scheme Stage 1 from N360 January 2020 (FFR6) JNL to recognise the expenditure in Forrestfield Industrial Scheme Stage 1 for March 2020	1,005.00	(516,867.86)	FFR6
Project Managers costs related to City's Capex jobs and costs to Forrestfield Industrial Scheme Stage 1 from N360 February 2020 (FFR6) JNL to recognise the expenditure in Forrestfield Industrial Scheme Stage 1 for March 2020	960.00	(515,907.86)	FFR6
Project Managers costs related to City's Capex jobs and costs to Forrestfield Industrial Scheme Stage 1 from N360 July 2019 (FFR6) JNL to recognise the expenditure in Forrestfield Industrial Scheme Stage 1 for March 2020	29.00	(515,878.86)	FFR6
Project Managers costs related to City's Capex jobs and costs to Forrestfield Industrial Scheme Stage 1 from N360 October 2019 (FFR6) JNL to recognise the expenditure in Forrestfield Industrial Scheme Stage 1 for March 2020	50.00	(515,828.86)	FFR6

25-03-2020	Project Managers costs related to City's Capex jobs and costs to Forrestfield Industrial Scheme Stage 1 from N360 November 2019 (FFR6) JNL to recognise the expenditure in Forrestfield Industrial Scheme Stage 1 for March 2020	119.00	(515,709.86)		FFR6
	Project Managers costs related to City's Capex jobs and costs to Forrestfield Industrial Scheme Stage 1 from N360 December 2019 (FFR6) JNL to recognise the expenditure in Forrestfield Industrial Scheme Stage 1 for March 2020	191.00	(515,518.86)		FFR6
	Project Managers costs related to City's Capex jobs and costs to Forrestfield Industrial Scheme Stage 1 from N360 January 2020 (FFR6) JNL to recognise the expenditure in Forrestfield Industrial Scheme Stage 1 for March 2020	127.00	(515,391.86)		FFR6
	Transfer Project Managers costs related to City's Capex jobs and costs related to Forrestfield Industrial Scheme Stage 1 from N360 February 2020 (FFR6) JNL to recognise the expenditure in Forrestfield Industrial Scheme Stage 1 for March 2020	96.00	(515,295.86)	19/20	FFR6
	Shawmac Py Ltd. Invoice 00009713 dated 28/02/2020 JNL to recognise the expenditure in Forrestfield Industrial Scheme Stage 1 for March 2020 (FFR6)	3,000.00	(512,295.86)		FFR6
	Transfer Project Managers costs related to City's Capex jobs and costs related to Forrestfield Industrial Scheme Stage 1 from N360 August 2019 (FFR7) JNL to recognise	567.00	(511,728.86)		FFR7

the expenditure in Forrestfield Industrial Scheme Stage 1 for March 2020			
Transfer Project Managers costs related to City's Capex jobs and costs related to Forrestfield Industrial Scheme Stage 1 from N360 September 2019 (FFR7) JNL to recognise the expenditure in Forrestfield Industrial Scheme Stage 1 for March 2020	994.00	(510,734.86)	FFR7
Transfer Project Managers costs related to City's Capex jobs and costs related to Forrestfield Industrial Scheme Stage 1 from N360 October 2019 (FFR7) JNL to recognise the expenditure in Forrestfield Industrial Scheme Stage 1 for March 2020	858.00	(509,876.86)	FFR7
Transfer Project Managers costs related to City's Capex jobs and costs related to Forrestfield Industrial Scheme Stage 1 from N360 November 2019 (FFR7) JNL to recognise the expenditure in Forrestfield Industrial Scheme Stage 1 for March 2020	395.00	(509,481.86)	FFR7
Transfer Project Managers costs related to City's Capex jobs and costs related to Forrestfield Industrial Scheme Stage 1 from N360 January 2020 (FFR7) JNL to recognise the expenditure in Forrestfield Industrial Scheme Stage 1 for March 2020	1,307.00	(508,174.86)	FFR7

Transfer Project Managers costs related to City's Capex jobs and costs related to Forrestfield Industrial Scheme Stage 1 from N360 February 2020 (FFR7) JNL to recognise the expenditure in Forrestfield Industrial Scheme Stage 1 for March 2020	1,201.00	(506,973.86)	FFR7
Transfer Project Managers costs related to City's Capex jobs and costs related to Forrestfield Industrial Scheme Stage 1 from N360 August 2019 (FFR7) JNL to recognise the expenditure in Forrestfield Industrial Scheme Stage 1 for March 2020	57.00	(506,916.86)	FFR7
Transfer Project Managers costs related to City's Capex jobs and costs related to Forrestfield Industrial Scheme Stage 1 from N360 September 2019 (FFR7) JNL to recognise the expenditure in Forrestfield Industrial Scheme Stage 1 for March 2020	94.00	(506,822.86)	FFR7
Transfer Project Managers costs related to City's Capex jobs and costs related to Forrestfield Industrial Scheme Stage 1 from N360 October 2019 (FFR7) JNL to recognise the expenditure in Forrestfield Industrial Scheme Stage 1 for March 2020	87.00	(506,735.86)	FFR7
Transfer Project Managers costs related to City's Capex jobs and costs related to Forrestfield Industrial Scheme Stage 1 from N360 November 2019 (FFR7) JNL to recognise the expenditure in Forrestfield Industrial Scheme Stage 1 for March 2020	40.00	(506,695.86)	FFR7

31-03-2020	Transfer Project Managers costs related to City's Capex jobs and costs related to Forrestfield Industrial Scheme Stage 1 from N360 January 2020 (FFR7) JNL to recognise the expenditure in Forrestfield Industrial Scheme Stage 1 for March 2020	166.00		(506,529.86)	FFR7
	Transfer Project Managers costs related to City's Capex jobs and costs related to Forrestfield Industrial Scheme Stage 1 from N360 February 2020 (FFR7) JNL to recognise the expenditure in Forrestfield Industrial Scheme Stage 1 for March 2020	120.00		(506,409.86)	FFR7
	Porter Consulting Engineers. Invoice 00020096 dated 04/03/2020 (FFR7) JNL to recognise the expenditure in Forrestfield Industrial Scheme Stage 1 for March 2020	4,262.50		(502,147.36)	FFR7
	Porter Consulting Engineers. Invoice 00020095 dated 04/03/2020 (FFR7) JNL to recognise the expenditure in Forrestfield Industrial Scheme Stage 1 for March 2020	2,750.00		(499,397.36)	FFR7
	Forrestfield Industrial Area Stage 1 BOS Interest Earned March 2020 JNL Interest Earned March 2020		(376.48)	(499,773.84)	19/20

Appendix L: Forrestfield Industrial Area Stage 1 Statement of Financial Position as at 31 March 2020

CITY OF KALAMUNDA
FORRESTFIELD INDUSTRIAL AREA SCHEME STAGE 1
FINANCIAL REPORT (UNAUDITED)

FOR THE NINE MONTHS ENDED 31 MARCH 2020

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Principal place of business:
Address
2 Railway Road
KALAMUNDA WA 6076

CITY OF KALAMUNDA
FORRESTFIELD INDUSTRIAL AREA SCHEME STAGE 1
STATEMENT OF COMPREHENSIVE INCOME
FOR THE NINE MONTHS ENDED 31 MARCH 2020

	31 March 2020	30 June 2019
REVENUE	\$	\$
Contributions received	568,884	472,691
Interest	1,120	8,069
	<u>570,004</u>	<u>480,760</u>
EXPENSES		
Project Management & Consultancy fees	24,744	70,212
Legal Expenses	11,681	35,536
Road Construction costs	1,416,246	1,203,304
	<u>1,452,670</u>	<u>1,309,053</u>
NET RESULT-SURPLUS	<u>(882,666)</u>	<u>(828,292)</u>

This statement is to be read in conjunction with the accompanying notes.
This statement is unaudited.

CITY OF KALAMUNDA
FORRESTFIELD INDUSTRIAL AREA SCHEME STAGE 1
STATEMENT OF FINANCIAL POSITION
AS AT 31 MARCH 2020

	31 March 2020 \$	30 June 2019 \$
CURRENT ASSETS		
Cash and Cash Equivalents	<u>499,773</u>	<u>1,382,440</u>
 EQUITY		
Retained Surplus	499,773	1,382,440
 TOTAL EQUITY	<u>499,773</u>	<u>1,382,440</u>

This statement is to be read in conjunction with the accompanying notes.
This statement is unaudited.

CITY OF KALAMUNDA
FORRESTFIELD INDUSTRIAL AREA SCHEME STAGE 1
STATEMENT OF CHANGES IN EQUITY
FOR THE NINE MONTHS ENDED 31 MARCH 2020

	RETAINED SURPLUS \$	TOTAL EQUITY \$
Balance as at 30 June 2018	2,210,732	2,210,732
Comprehensive Income Net Result	(828,292)	(828,292)
	<hr/>	<hr/>
Balance as at 30 June 2019	1,382,440	1,382,440
Comprehensive Income Net Result	(882,666)	(882,666)
	<hr/>	<hr/>
Balance as at 31 March 2020	<u>499,773</u>	<u>499,773</u>

This statement is to be read in conjunction with the accompanying notes.
This statement is unaudited.

CITY OF KALAMUNDA
FORRESTFIELD INDUSTRIAL AREA SCHEME STAGE 1
STATEMENT OF CASH FLOW
FOR THE NINE MONTHS ENDED 31 MARCH 2020

	31 March 2020 \$	30 June 2019 \$
Cash Flows from Operating Activities		
Receipts		
Contributions	568,884	472,691
Interest Earnings	1,120	8,069
	<u>570,004</u>	<u>480,760</u>
Payments		
Materials and Contracts	1,452,670	1,309,053
	<u>1,452,670</u>	<u>1,309,053</u>
Net Cash Provided By (Used In) Operating Activities	(882,666)	(828,292)
Net Increase (Decrease) in Cash Held	(882,666)	(828,292)
Cash at Beginning of Year	1,382,440	2,210,732
Cash and Cash Equivalents at the End of the period	<u><u>499,773</u></u>	<u><u>1,382,440</u></u>

This statement is to be read in conjunction with the accompanying notes.

This statement is unaudited.

CITY OF KALAMUNDA
FORRESTFIELD INDUSTRIAL AREA SCHEME STAGE 1
Notes to and Forming Part of the Financial Report
FOR THE NINE MONTHS ENDED 31 MARCH 2020

1. Summary of Significant Accounting Policies

(a) Basis of Preparation

The financial report comprises special purpose financial statements which have been prepared in accordance with the following Australian Accounting Standards only:

101 - Presentation of Financial Statements
107 - Statement of Cash flows
108 - Accounting Policies, Changes in Estimates and Errors
1031 - Materiality

The following material accounting policies which have been adopted in the preparation of this financial report are presented below.

The report has also been prepared on cash basis and is based on historical costs only.

Critical Accounting Estimates

The preparation of a financial report in conformity with Australian Accounting Standards requires management to make judgements, estimates and assumptions that effect the application of policies and reported amounts of assets and liabilities, income and expenses.

The estimates and associated assumptions are based on historical experience and various other factors that are believed to be reasonable under the circumstances; the results of which form the basis of making the judgements about carrying values of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates.

The Local Government Reporting Entity

All Funds through which the Council controls resources to carry on its functions have been included in the financial statements forming part of this financial report.

In the process of reporting on the local government as a single unit, all transactions and balances between those Funds (for example, loans and transfers between Funds) have been eliminated.

(b) Goods and Services Tax (GST)

Pursuant to the Town Planning and Development Act 1928, Transfer of Land Act 1893, Metropolitan Region Town Planning Scheme Act 1959 and Western Australian Planning Commission Act 1985 contributions made by developers towards the provision of public open space, infrastructure and services are excluded from GST.

Expenses are recognised net of the amount of GST, except where the amount of GST incurred is not recoverable from the Australian Taxation Office. (ATO)

(c) Cash and Cash Equivalents

Cash and cash equivalents include cash on hand, cash at bank, deposits available on demand with banks and other short term highly liquid investments that are readily convertible to known amounts of cash and which are subject to an insignificant risk of changes in value and bank overdrafts.

Bank overdrafts are reported as short term borrowings in current liabilities in the statement of financial position.

CITY OF KALAMUNDA
FORRESTFIELD INDUSTRIAL AREA SCHEME STAGE 1
Notes to and Forming Part of the Financial Report
FOR THE NINE MONTHS ENDED 31 MARCH 2020

1. Summary of Significant Accounting Policies (continued)

(d) Current and Non-Current Classification

In the determination of whether an asset or liability is current or non-current, consideration is given to the time when each asset or liability is expected to be settled. The asset or liability is classified as current if it is expected to be settled within the next 12 months, being the Scheme's operational cycle. In the case of liabilities where the Scheme does not have the unconditional right to defer settlement beyond 12 months, the liability is classified as current even if not expected to be settled within the next 12 months.

(e) Rounding Off Figures

All figures shown in this financial report, are rounded to the nearest dollar.

(f) Comparative Figures

Where required, comparative figures have been adjusted to conform with changes in presentation for the current financial year.

When the Scheme applies an accounting policy retrospectively, makes a retrospective restatement or reclassifies items in its financial statement, an additional (third) statement of financial position as at the beginning of the preceding period in addition to the minimum comparative financial statements is presented.

2. Cash and Cash Equivalents

	31 March 2020 \$	30 June 2019 \$
Cash at Bank - Restricted reserves	499,773	1,382,440
	<u>499,773</u>	<u>1,382,440</u>

The following restrictions have been imposed by regulation and other externally imposed requirements:

Reserves- Restricted		
Forrestfield Industrial Area Scheme Stage 1	499,773	1,382,440



FORRESTFIELD / HIGH WYCOMBE
STAGE 1 DEVELOPMENT
CONTRIBUTION PLAN

REVIEW OF COST ESTIMATES

Porter



REPORT PREPARED FOR
CITY OF KALAMUNDA

Prepared by	Porter Consulting Engineers
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Job number	19-03-043
Our reference	R34.19
Checked	BIH

HISTORY AND STATUS OF THE DOCUMENT

Revision	Date issued	Author	Issued to	Revision type
Rev A	30/08/2019	M. Cook	City of Kalamunda	1 st submission before public advertising
Rev B	07/02/2020	M. Cook	City of Kalamunda	2 nd submission
Rev C	19/06/2020	M. Cook	City of Kalamunda	3 rd submission
Rev D	23/06/2020	M. Cook	City of Kalamunda	4 th submission
Rev E	26/06/2020	M. Cook	City of Kalamunda	5 th submission
Rev F	29/06/2020	M. Cook	City of Kalamunda	6 th submission

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ATTACHMENTS

- 1: Local Structure Plan
- 2: Berkshire Road footpath upgrade drawings
- 3: Review of overhead electrical lines along Berkshire Road
- 4: Milner Road (85% design status drawings)
- 5: Nardine Close Extension (Road 2A) – Stage 1 Drawings
- 6: Nardine Close Extension (Road 2A) – Stage 2 Drawings
- 7: Nardine Close extension (Road 2A) – Adjusted Construction Contract amount
- 8: Nardine Close Cul-de-sac Assessment
- 9: Sultana Road West (85% design status drawings)
- 10: Milner Road and Nardine Close Intersection Drawings
- 11: Berkshire Road and Ashby Close Intersection Drawings
- 12: Dundas Road, Berkshire Road and Milner Road Intersection Drawings
- 13: Bonser Road drawings
- 14: Full Mastersheet

1.0 INTRODUCTION

Porter Consulting Engineers (PCE) was initially commissioned by the City of Kalamunda on 15 March 2019 to review cost estimates for civil infrastructure included in the Forrestfield / High Wycombe Stage 1 Light Industrial Area Development Contribution Plan Report.

The Forrestfield / High Wycombe development area is located within the City of Kalamunda (the City) and is bound by Milner Road to the north, Sultana Road West to the east, Roe Highway to the south and Berkshire Road and Dundas Road to the west as shown in **Figure 1**.



Figure 1: Forrestfield / High Wycombe Local Structure Plan area

The Forrestfield / High Wycombe Local Structure Plan (the LSP) has been prepared to facilitate industrial subdivision and development within the area. Due to the nature of fragmented land ownership, a Development Contribution Plan (DCP) has been prepared to coordinate the provision of common infrastructure required to cater for development. A copy of the Forrestfield/ High Wycombe Local Structure Plan is included in **Attachment 1**.

1.1 Background

The Scheme Amendment to include the Development Contribution Scheme (DCS) within the City's Local Planning Scheme No. 3 (LPS3) was gazetted in May 2013. This allowed the City to place on development and subdivision approvals, the obligation to pay a development contribution.



Following the gazettal of the DCS, the Council was required to adopt a DCP Report and cost apportionment schedule. The DCP Report and the associated cost apportionment schedule sets out in detail the calculation of cost contributions for development in accordance with the methodology shown in the DCP. The DCP Report is a dynamic document to maintain the currency of the cost of infrastructure, land and other DCP items.

Each DCP review includes an assessment of the cost estimates (based on current industry rates) for various items of civil infrastructure within the DCP.

The first cost contribution was adopted by the City in December 2012. The DCP Report is required by Clause 6.5.11.2 of LPS3 to be reviewed at least annually. The DCP Report is currently under review, with previous reviews having occurred in December 2013, June 2015, December 2016 and December 2018.

1.2 Summary of Preceding Revisions of this Review Document

Revision A of this document

The scope of the review as part of Revision A of this document was:

- 1) Review the following documents provided by the City:
 - Forrestfield/High Wycombe Industrial Area Stage 1 Development Contribution Plan Report July 2017 - June 2018 (Revised October 2018);
 - Special Council Meeting minutes for 3 December 2018;
 - DCS Mastersheet 2017-2018 for Cost Estimate Review (hereafter referred to as the Mastersheet); and
 - Relevant design drawings provided.
- 2) Review aerial mapping and information readily available online in the area of the subject roads.
- 3) Review relevant design drawings to the subject roads, the subject roads being:
 - Berkshire Road –Ashby Close to Milner Road;
 - Milner Road- Berkshire Road to Sultana Road West;
 - Nardine Close extension (Road 2A);
 - Sultana Road West-Milner Road to Roe Highway;
 - Milner Road and Nardine Close intersection;
 - Berkshire Road and Ashby Close intersection; and
 - Dundas Road, Berkshire Road and Milner Road intersection.
- 4) Review and comment on the rates and quantities listed in the DCS Mastersheet civil works cost estimate for the subject roads for their appropriateness to the relevant scope; and
- 5) Document and make comments regarding the designs (if necessary), rates and quantities of the subject roads.

At the time of preparing Revision A of this document, the engineering drawings for Bonser Road were currently being redesigned and therefore no assessments were made for Bonser Road in Revision A.



Revision B of this document

The scope of the review as part of Revision B of this document was:

- 1) The City at Officer level has reviewed Revision A of this document and provided comments (as Work Package 1)¹ to PCE for consideration towards adoption.
Clarification of utilities for Milner and design work progressed to a 25% status have led the City to the belief warranting a reduction in the Contingency amount noted in the Mastersheet:
 - Reducing the Contingency amount to Milner Road from 20% to 10%.
 - Reducing the Contingency amount for Sultana Road West from 20% to 5%.
- 2) The Milner Road and Nardine Close intersection works had concluded in November 2019. Revision B of this document was able to publish the actual projects costs as of 22 January 2020 as reported by the City.
- 3) The Berkshire Road and Ashby Close intersection works were completed in October 2019. Revision B of this document was able to publish the actual projects costs as of 22 January 2020 as reported by the City.
- 4) Compare tender price submission received by the City for the construction of Bonser Road against the Mastersheet. Bonser Road will provide a connection between Nardine Close and Berkshire Road.

1.3 Purpose of this Version of the Report

The purpose of this report is to document the review of the DCP cost estimates prior to the DCP report being presented to the Council for adoption.

The scope of the review as part of Revision C of this document was:

- 1) The City has refined the design parameters (as Works Package 2)² to better inform designs and DCP cost assessment for the upgrade of Sultana Road West and Milner Road:
 - Sultana Road West to be widened to 9m wide.
 - Milner Road to be widened to 10m wide.
 - A pavement investigation to confirm the profile of the existing pavement to Sultana Road West and Milner Road.
 - Permeability testing of the soil to prove up the viability of the use of verge side swales for the disposal of stormwater in Sultan Road West.
 - The design vehicle for Sultana Road West being amended from a Restricted Access Vehicle category 4 (RAV4) 27.5m long to an "As of Right" 19m semi-trailer.
 - Locate and survey of services to inform the designs.
 - Prepare 85% design status drawings for Sultana Road West, Milner Road and Berkshire Road.

¹ Budge. G, FW: Porters Design & Consultancy Services - Forrestfield North, 30 January 2020, email to Cook. M, <mcook@portereng.com.au>

² Budge. G, FW: Porters Design & Consultancy Services - Forrestfield North, 30 January 2020, email to Cook. M, <mcook@portereng.com.au>



- 2) Incorporate the findings and cost estimate from the Western Power Feasibility Study for the relocation of the power pole at the Milner Road / Sultana Road West intersection.
- 3) Incorporate updated actual project costs as reported by the City to the following roads:
 - Milner Road/Nardine Close intersection;
 - Dundas Road, Berkshire Road and Milner Road intersection; and
 - Berkshire Road and Ashby Close intersection.

The comparisons provided in the cost review summaries throughout this report include reference to a “Mastersheet Amount”. The estimated costs provided in this report is compared to the Mastersheet amounts utilised to complete the DCP review on 3 December 2018.

1.4 General Assumptions

- a) Pavement investigation has been undertaken for Milner Road and Sultana Road West, with the findings informing the 85% designs.
- b) No assessment has been made of the capacity of the existing utility services infrastructure to support the expected development within the LSP (i.e. electrical infrastructure may need zone capacity upgrades to support the anticipated development). A servicing investigation to the area could be undertaken to review the existing infrastructure and the capacity to service the future development within the LSP. Servicing upgrades are generally paid for by individual developments when required by Service Authorities to support respective development sites.
- c) All costs noted are exclusive of GST.

2.0 BERKSHIRE ROAD

Berkshire Road is an existing road that borders the western portion of the LSP area and is approximately 900m long. Berkshire Road is required to be upgraded to service the future development envisaged by the LSP.

Originally, the DCP proposed funds to upgrade the northern footpath to a shared path. However, it is understood the City will be seeking grant funding³ from the Department of Transport for a cycling shared path along the southern verge of Berkshire Road.

Therefore, the City will need to consider further whether the DCP will continue to fund improvements to the existing footpath in the northern verge. In the event that the City elects to remove improvements to the northern footpath, the costs to the DCPE for Berkshire Road would only be for undergrounding consumer aerial lines (see below).

Northern Verge Footpath

For the City’s future consideration, PCE has prepared 85% design status engineering drawings for the improvement of the footpath in the northern verge (see **Attachment 2**), which seeks to provide a 2m wide continuous path between Milner Road and Roe Highway.

³ Budge, G, RE: 19-11-135: Berkshire Road: 25% design for proposed footpath, 5 February 2020, email to Cook.M, <mcook@portereng.com.au>

It is noted that this design represents an ultimate outcome for the future footpath on the northern verge of Berkshire Road.

Notwithstanding the above, for the purposes of providing an estimated cost, the City has requested that PCE consider and note the following short term objectives regarding the footpath in the northern verge:

- Construct a 2m wide footpath along the northern verge of Berkshire Road. Where there is currently an existing 2m wide footpath in sound condition the path will be retained, however, where the path is in disrepair or the path is less than 2m wide the path will be widened or removed and reconstructed to be 2m wide.
- Apply painted gore markings to crossovers to delineate the path crossing the crossovers.

The City has reviewed the existing condition of the footpath on the northern verge of Berkshire Road and has made the following assessment:

- Section 1. From the Milner Road / Berkshire Road intersection, extending south approximately 150m the existing path is in good condition with a mix of new and old footpath.
- Section 2. Older 2m wide footpath, in fair to good condition. A 30m long section of path is damaged and needs replacement with a 2m wide path.
- Section 3. Relatively new section of footpath typically 1.8m wide. There is a 13m long section of path that is 1.5m wide which will be widened or removed and replaced with a 2m wide path.
- Section 4. No path exists along this section of the northern verge from Lot 99 (271) to the Ashby Close / Berkshire Road intersection. Construct a 2m wide path.
- Section 5. An existing 2m wide footpath is present at the Ashby Close / Berkshire Road intersection extending along Ashby Close, with a path along the southern verge of Berkshire to Roe Highway.



Figure 2: Condition Assessment for a 2m path along the northern verge of Berkshire Road



Overhead Consumer Line

To provide Berkshire Road with unobstructed overhead height clearance that applies for RAV routes, an overhead clearance of 4.6m is to be provided and satisfy minimum clearance requirements from the relevant authorities for services that pass over the road.

A clearance assessment has been undertaken to all overhead services that cross Berkshire Road, which consists of Western Power consumer lines. The assessment notes the following:

Western Power has indicated it would not consider the option of raising the lines and therefore the direction from Western Power was to convert these overhead lines to underground lines. An assessment has been made (see **Attachment 3**) with the following consumer aerial lines needing to be undergrounded:

- Pole S132830 – Consumer Aerials fronting the #303/307 Berkshire Road property boundary.
- Pole S122686 – Consumer Aerials fronting #291 Berkshire Road and the Bonser Road intersection.
- Pole S122688 – Consumer Aerials fronting #287 Berkshire Road.
- Pole S122689 – Consumer Aerials fronting #281 Berkshire Road.
- Pole S122696 – Consumer Aerials fronting #247 Berkshire Road.

The assessment report notes the probable cost estimate to underground the 5 overhead consumer lines to be in the order of \$75,000 (no GST payable). A further allowance of \$12,500 plus GST should there be a need to any internal electrical re-cabling works within the respective properties as part of the change over from an overhead supply to an underground supply.

PCE's comments in review of the Mastersheet is noted **Table A**, with **Table 1** presenting a summary of the amounts and the variances between the Mastersheet and PCE's review. The full Mastersheet listing quantities and rates for the Berkshire Road construction cost estimate are noted in **Attachment 14**.

Table 1: Berkshire Road Cost Review Summary

Description	Mastersheet Amount	PCE Review Amount	Variance
Preliminaries	3,877	7,743	(3,867)
Survey Control and Testing	3,230	6,453	(3,222)
Clearing and Demolition	0	1,590	(1,590)
Earthworks	1,890	2,004	(114)
Roadworks	32,220	25,459	(6,761)
Miscellaneous	24,500	\$12,500	(12,000)
Conversion of overhead consumer lines to underground lines	0	\$87,500	(87,500)
Construction Sub Total excl. GST (including preliminaries & survey)	\$71,717	\$143,248	(\$71,532)
Allowances and Charges	\$19,148	\$31,085	(\$11,937)
CONSTRUCTION TOTAL excl. GST	\$90,865	\$174,333	(\$83,468)

The project cost estimate variance for Berkshire Road between the Mastersheet amount of \$90,865 and PCE's review amount of \$174,333, is \$83,468 which is 92% of the Mastersheet amount mainly due to conversion of the overhead consumer lines to underground. The Mastersheet did not initially allow for the conversion of the overhead consumer lines to underground, but rather the lifting of overhead consumer lines. As outlined above this option would not be supported by Western Power.

2.1 Other Considerations

In relation to the scope of works discussed above the City may wish to consider:

- Make an application to Western Power to design and quote for the conversion of the overhead lines to underground that cross Berkshire Road.
- Investigate and prepare designs for any internal electrical works to the respective properties that may be required as part of the change over from an overhead supply to an underground supply.
- Preparing 100% design documentation for the installation of the 2m wide footpath along the northern verge.
- Preparing designs for the shared path along the southern verge of Berkshire Road, and secure construction funding from the Department of Transport.

Table A: Mastersheet Commentary Summary to Berkshire Road

Mastersheet							Porter Consulting Engineers Reviews			
Item	Description	Qty	Unit	Rate	Amount	Notes	Qty	Rate	Amount	Comments
3.4	Demolish and dispose redundant footpaths					Existing footpath to be retained and widened. No allowance noted in Mastersheet for removal of portions of the existing path.	80	\$20.00	\$1,590.00	Removed 30m of damaged path from Section 2, and removed 13m of 1.5m wide path from Section 3.
4.1	Remove 100mm Topsoil to spoil for footpath widening	630	m ²	\$3.00	\$1,890.00	Calculated based on 0.7m stripping for footpath widening for 900m assumed length. 0.7x900=630	364	\$3.00	\$1,093.00	Mainly topsoil stripping will be needed for Section 4 where there is no existing path.
4.2	Cut to spoil for footpath widening		m ³			No allowance noted in Mastersheet	36	\$25.00	\$911.00	From path boxout.
5.1	Widen existing concrete footpaths (from 1.8m wide to 2.5m wide)	630	m ²	\$47.65	\$30,019.50	Assumed existing footpath to be retained and widened to 2.5m. New footpath widening of 0.7 m for 900m assumed length. 0.7x900=630				
5.2	Install new 100mm thick concrete footpath, 2m wide		m ²	\$5.20			424	\$47.65	\$20,218.00	Remove and replace 30m of damaged path from Section 2 and 13m of 1.5m wide path from Section 3.
5.3	Supply and Install Pram Ramps	4	ea	\$550.00		Allowed for 2 road crossings. 2x2=4	6	\$550.00	\$3,300.00	Pram ramps only needed where crossovers have edge kerbing.
5.4	Install diagonal pavement markings to crossovers		Width of crossover				194	\$10.00	\$1,941.00	The City specified diagonal pavement markings to delineate path through crossovers.
6.2	Adjust Telstra Pit	1	Item	\$3,000.00	\$3,000.00	Quantity based on aerial imagery.	-	\$3,000.00	\$-	Assessed as not required.
6.3	Adjust stay poles	1	Item	\$5,000.00	\$5,000.00	Quantity based on aerial imagery.	-	\$5,000.00	\$-	Assessed as not required.
6.4	Adjust hydrant	1	Item	\$3,000.00	\$3,000.00	Quantity based on data from Water Corporation.	-	\$3,000.00	\$-	Assessed as not required.
6.5	Provision for miscellaneous/unidentified service relocations	1	Item	\$10,000.00	\$10,000.00	A conservative allowance for minor works to existing services	1	\$3,000.00	\$3,000.00	Reduce the allowance from \$10k to \$3k for provision for unidentified services relocation.
6.6	Crossover adjustments and reinstatements - allow \$1,500 per crossover	4	Item	\$1,500.00	\$6,000.00	Although the original Mastersheet notes this \$6,000 amount, it is not included in the summation amount of \$24,500	4	\$1,500.00	\$6,000.00	Although crossover adjustments are likely to be minimal, consideration has been had for crossovers needing adjustment where a pram ramp is installed.
7.1	Convert overhead electrical lines (5 consumer lines) that conflict with RAV clearance requirements to underground lines						5	\$15,000.00	\$75,000.00	Refer to 3E's review of the overhead lines to Berkshire Road. (Drawing No. 3E19102-R01)
7.2	Ancillary works in relation to conversion to overhead to underground within the private property						5	\$2,500.00	\$12,500.00	Private cabling from the new pillar to the customer switchboard may be required.
9.5	Contingency			10%	\$7,172.00			5%	\$7,162.42	The percentage for contingency has been reduced from 10% to 5% as the scope has been well defined.

3.0 MILNER ROAD

Milner Road is an existing road that borders the northern boundary of the LSP area. Milner Road is required to be upgraded to service the future industrial development envisaged by the LSP.

The following items are noted in the DCP report for the Milner Road scope:

- Widen the carriageway from 7.4m to achieve a 10m wide pavement from kerb to kerb.
- Remove existing pedestrian paths and reinstate the verge area.
- Construction of a 2.5m shared path to provide a connection between Berkshire Road and Sultana Road West.
- Install street lighting between Berkshire Road and Sultana Road West to comply with Lighting standards.
- Road upgrades to accommodate category RAV7 36.5m long vehicles between Berkshire Road and Nardine Close including the Berkshire Road / Nardine Close intersection.
- Road upgrades to accommodate category "As of Right" (19m semi-trailer) vehicles between Nardine Close and Sultana Road West including the Milner Road / Sultana Road West intersection.

PCE has prepared 85% design status engineering drawings for the upgrade of Milner Road which is included in **Attachment 4**.

PCE's comments in review of the Mastersheet are noted in **Table B**, with **Table 2** presenting a summary of the amounts and the variances between the Mastersheet and PCE's review. The full Mastersheet for Berkshire Road is noted in **Attachment 14**.

Table 2: Milner Road Cost Review Summary

Description	Mastersheet Amount	PCE Review Amount	Variance
Preliminaries	29,040	42,400	(13,361)
Survey Control and Testing	24,200	35,334	(11,134)
Clearing and Demolition	57,911	135,809	(77,898)
Earthworks	51,944	41,592	(10,352)
Roadworks	237,038	398,523	(161,485)
Drainage	41,000	27,500	(13,500)
Miscellaneous	96,100	103,250	(7,150)
Construction Sub Total excl. GST (including prelims, survey)	\$537,233	\$784,407	(\$247,175)
Allowances and Charges	197,164	\$130,996	(\$66,168)
CONSTRUCTION TOTAL excl. GST	\$734,397	\$915,403	(\$181,007)

The construction cost estimate variance for Milner Road between the Mastersheet amount of \$734,397 and PCE's review amount of \$915,403, is \$181,007, 25% greater than the Mastersheet amount. This is mainly due to the items listed in **Table B**.

3.1 Particulars and Assumptions

- a) The Milner Road / Sultana Road West (heading south) intersection has been upgraded to accommodate 'As of Right (19m semi-trailer)' vehicles with lane correct turning movements.
- b) The cost of the pavement works to construct Milner Road / Sultana Road West (heading south) intersection upgrades is included within the Milner Road works costs. However, due to historic reasons the cost to relocate the power pole at the intersection is allocated within the Sultana Road West costs.
- c) A pavement investigation⁴ has been undertaken that has informed the required pavement works:
 - i. Existing pavement areas shall have the asphalt wearing course removed and the existing base course ripped and reworked to a minimum 150mm thick. A 30mm AC14 dense grade asphalt wearing course (black) and 7mm primer sealed shall be laid.
 - ii. For areas of pavement widening, the pavement shall consist of a compacted subgrade, 200mm thick limestone subbase, 150mm thick base course, 7mm primer seal and 30mm AC14 dense grade asphalt wearing course (black).
 - iii. For the Eureka Street / Milner Road intersection and Milner Road / Sultana Road West intersection, the pavement shall be fully reconstructed to a 200mm thick limestone subbase, 150mm thick base course, 7mm primer seal and 40mm AC14 dense grade asphalt wearing course (black).
- d) A preliminary lighting design has been prepared that specifies luminaires and outreaches installed on existing poles in the southern verge.
- e) There is an existing ATCO Gas high pressure gas main along the northern verge of Milner Road which has been located and surveyed to inform the designs. ATCO gas has stringent design and construction requirements typically within 15m of high pressure assets with the following allowance made:
 - i. Generally, for any works within 15m of high pressure assets, ATCO will require a full time approved onsite spotter to supervise the works at the developers/constructors expense. PCE has made a nominal \$50,000 provisional allowance for spotter supervision and associated costs.
 - ii. ATCO will require analysis of the coating to the high pressure gas main (a DCVG survey), to ensure the integrity of the coating to the pipe is still suitable ahead of the proposed works. PCE has made a nominal \$5,000 provisional allowance for this.
- f) There is an underground Western Power 132kV transmission cable under the north boundary lane. The cable has been located and surveyed to inform the designs.
- g) Crossovers will be reinstated to match the material of the existing crossovers.
- h) Having undertaken 85% designs for Milner Road, the Contingency percentage has been further reduced to 5% due to the greater confidence in the designs and project risks.

⁴ Brown Geotechnical, *Geotechnical Investigation (Factual Report) – Milner, Sultana Rd West - Pavement Cores and CBR Testing*, 20 December 2019 <ref: 19051>

Table B: Mastersheet Commentary Summary to Milner Road

Mastersheet							Porter Consulting Engineers Review			
Item	Description	Qty	Unit	Rate	Amount	Notes	Qty	Rate	Amount	Comments
3.1	Clear large trees including grubbing	9	ea	\$246.00	\$2,214.00	Quantity based on aerial imagery.				
3.2	Clear small trees inc grubbing	6	ea	\$179.00	\$1,074.00	Quantity based on aerial imagery.	19	\$500.00	\$9,500.00	PCE has adopted for a higher rate due to existing services near trees to be removed & grubbed. All trees for removal considered small trees.
3.3	Clear shrubs	5,040	m ²	\$1.82	\$9,172.80	Allowed for clearing from edge of footpath to road reserve boundary. Clearing required is approximately 4.5m on both sides for 560m assumed length. (4.5x2)x560=5040	111	\$3.00	\$333.00	Based on 85% status drawings
3.5	Demolish and dispose redundant kerbing	1,120	m	\$2.73	\$3,057.60	Adopted road length 560m, estimated kerb length is double this and excludes intersection upgrades at Dundas, Nardine and Sultana. 560x2=1,120	1,220	\$9.00	\$10,981.80	Based on 85% status drawings
3.6	Remove and Dispose redundant drainage pits	0	ea	\$460.00	\$0.00		8	\$460.00	\$3,680.00	Based on 85% status drawings
3.7	Remove and dispose redundant pavements	112	m ²	\$35.65	\$3,992.80	100mm allowed on both sides of the widening for the cut line. (0.1x2)x560=112	-	\$20.00	\$-	See item 3.8
3.8	Remove and Dispose existing asphalt offsite. Excavate exiting base and subbase for possible reuse as part of pavement reconstruction, basecourse as documented.						4,072	\$20.00	\$81,440.00	For pavements designated "Full depth pavement reconstruction with asphalt intersection mix" & "to be resurfaced"
4.1	Remove 100mm Topsoil to spoil	5,040	m ²	\$3.00	\$15,120.00	Allowed for topsoil stripping from edge of footpath to road reserve boundary. Area is approximately 4.5m on both sides for 560m assumed length. (4.5x2)x560=5040	2,280	\$3.00	\$6,840.00	Based on 85% drawings
4.2	Form, Shape, Compact Subgrade	1,680	m ²	\$4.00	\$6,720.00	Existing 8m wide pavement. Widening to 10m with equal 1m widening on both side. An additional 500mm of widening has been allowed for on both sides to allow for kerbing. Total of 3m widening has been allowed for roadbase construction for estimated length of 560m. 3x560=1680	2,915	\$4.00	\$11,660.16	Based on 85% drawings
4.5	Cut to spoil	1,100	m ³	\$24.64	\$27,104.00	Removal of unsuitable materials based on Portion B rate. Excavate to prepare subgrade to say 600-700mm depth		\$24.64	\$-	The pavement investigation did not encounter any clay or unsuitable material. That is not to say unsuitable material won't be encountered.
4.6	Cut to spoil for box out formation of widening.		m ³			Nil noted.	815.40	\$24.64	\$20,091.46	Spoils to be removed & disposed offsite for the widening box out.
5.1	Rip and rework the existing base course to minimum 150mm		m ²				2,312	\$4.00	\$9,248.00	For pavements designated "To be Resurfaced"
5.2	Supply and Install 220mm limestone sub-base	370	m ³	\$50.00	\$18,480.00	Sub-base has been calculated for the 3m widening for estimated length of 560m for a depth of 220mm. (3x560)x0.22=370	-	\$50.00	\$0	PCE has adopted a higher rate for 100mm road base of \$85/m ³ compared to the Mastersheet of \$65/m ³ .
5.3	Supply and Install 200mm limestone sub-base		m ²				2,915	\$12.00	\$34,980.48	For pavements designated "Full depth pavement reconstruction with asphalt intersection mix" & "pavement widening"
5.4	Supply and Install 100mm road base	168	m ³	\$65.00	\$10,920.00	Basecourse has been calculated for the 3m widening for estimated length of 560m for a depth of 100mm. (3x560)x0.1=168	-		\$-	

5.5	Supply and Install 150mm road base		m ³				2,915	\$12.00	\$34,980.48	For pavements designated "Full depth pavement reconstruction with asphalt intersection mix" & "pavement widening"
5.7	Supply and Install 7mm Primer Seal	1,680	m ²	\$2.60	\$4,368.00	Primer seal has been calculated for the 3m widening for estimated length of 560m. 3x560=1680	5,227.04	\$2.60	\$13,590.30	Porter's design will result in the existing pavement and new pavement areas needing sealing.
5.8	Supply and Install 30mm AC10 (black)	5,600	m ²	\$12.19	\$68,264.00	Allows for full resheet of 10m wide pavement for estimated 560m length. 10x560=5600	3,715	\$12.19	\$45,285.12	
5.9	Supply and Install 40mm AC10 (intersection mix)						1,704	\$18.00	\$30,673.80	
5.13	Supply and Install SMK (refer note 8)	1,120	m	\$20.48	\$22,937.60	Semi Mountable Kerb assumed for entire job. Estimated road length of 560m. 2x560=1120	1,133	\$20.48	\$23,203.84	
5.14	Key kerbs		m				265	\$17.00	\$4,511.80	
5.15	Remove existing crossover		m ²				795	\$20.00	\$15,906.00	
5.16	Reinstate existing Crossovers	640	m ²	\$90.00	\$57,600.00	Allowing 40m2 reinstated for 16 crossovers. 16x40=640		\$90.00	\$-	See below for crossovers being reinstated in varying materials
5.17	Reinstated Concrete Crossovers for commercial/industrial properties to be: 150mm thick N32MPa concrete with SL62 mesh centrally located with a 100mm limestone basecourse.		m ²				430	\$110.00	\$47,267.00	Based on 85% designs
5.18	Reinstate Asphalt crossovers for commercial/industrial properties to be: 150mm thick rock roadbase, 7mm primer seal with 30mm asphalt wearing course.		m ²				126	\$18.79	\$2,373.18	Based on 85% designs
5.19	Reinstate concrete crossovers to residential properties to be: 100mm thick N32MPa with 150mm limestone base.		m ²				93	\$100.00	\$9,320.00	Based on 85% designs
5.20	Reinstate Asphalt crossovers to residential properties to be: 100mm thick rock roadbase, primer seal with 30mm asphalt wearing course.		m ²				35	\$18.79	\$661.41	Based on 85% designs
5.21	Reinstate Existing block paving crossovers is to have the existing bricks retained for reuse towards reinstating the crossover on a 150mm limestone base.		m ²				30	\$54.00	\$1,614.60	Based on 85% designs
5.22	Reinstate industrial and commercial laterite gravel crossover 150mm thick		m ²				93	\$16.00	\$1,494.40	Based on 85% designs
5.23	Supply and Install new concrete footpaths (2.5m wide)	1,400	m ²	\$38.12	\$53,368.00	Assumed only reinstating footpath on one side of the road with a width of 2.5m for estimated length of 560m. 2.5x560=1400	1,565	\$38.12	\$59,648.27	Based on 85% designs
5.24	Supply and Install new concrete footpaths (1.8m wide)						1,185	\$38.12	\$45,163.05	Based on 85% designs
5.25	Supply and Install Pram Ramps	2	ea	\$550.00	\$1,100.00		7	\$550.00	\$3,850.00	
6.6	Supply and Install new SEP or Gully pit.	0	ea	\$3,000.00	\$0.00		7	\$500.00	\$3,500.00	Based on 85% designs
6.6	Supply and Install 375 dia. RCP	15	m	\$400.00	\$6,000.00		8	\$3,000.00	\$24,000.00	Based on 85% designs
7.2	Supply and Install street lighting	560	m	\$110.00	\$61,600.00	Based on adopted road length of 560m and Portion A & B pricing.				
7.3	Supply and install street lighting including cabling		ea pole				5	\$3,000.00	\$15,000.00	
7.4	Remove light poles		ea pole				2	\$2,500.00	\$5,000.00	

7.11	Adjust access chamber (sewer manhole) in road	1	ea	\$7,000.00	\$7,000.00	Estimate based on data from Water Corporation. 1 Manhole observed.		1	\$3,000.00	\$3,000.00	The Mastersheet amount of \$7k seems high.
7.13	Provision for miscellaneous /unidentified service relocations	1	Item	\$20,000.00	\$20,000.00			1	\$10,000.00	\$10,000.00	Provisional allowance should it arise other services need adjusting
7.14	High Pressure gas spotter (Provisional)		Item			No specific allowance noted in the Mastersheet.		1	\$50,000.00	\$50,000.00	Atco Gas will require a spotter on-site when there is works occurring in the vicinity of the HP gas which is in the northern verge.
7.15	DCVG coating survey on HP gas main (Provisional)		Item			No specific allowance noted in the Mastersheet.		1	\$5,000.00	\$5,000.00	When working near HP Gas, ATCO Gas has in the past required testing of the surface coating on HP gas mains. A provisional allowance has been made.
7.16	Western Power quote for interfacing works (Provisional)							1	\$5,000.00	\$5,000.00	The design development has progressed to an 85% status, supporting the contingency can be further reduced from 10% (Rev B of DCP) to 5%.

4.0 NARDINE CLOSE EXTENSION (ROAD 2A)

The Nardine Close extension (Road 2A) is the extension to provide access to lots currently serviced by a series of battle-axe legs. The extension is required to service the future development envisaged by the LSP.

The following items are noted in the DCP report for the Nardine Close extension (Road 2A) scope:

- Construction of a new 10m wide pavement to service current battle-axe configuration lots.
- Construction of a drainage swale along the road verge sections in accordance with the Drainage Strategy.
- Roads will only be constructed to service current battle-axe configured lots if land assembly and consolidation processes do not provide the affected lands with access from gazetted and constructed public roads.
- Creation of a new 20m road reservation.
- Associated service installation and relocation.

The City of Kalamunda provided engineering drawings prepared by Porter Consulting Engineers for the Nardine Close extension (Road 2A), with the extension drawings documented over two stages (i.e. Stages 1 and 2). The drawings are included in **Attachment 5** and **Attachment 6**.

PCE was the Superintendent and undertook contract administration duties during the Stage 1 works constructed by RJV. Stage 1 was a 280m extension of Nardine Close from Ashby Close to a constructed cul-de-sac by the lot 308 /lot 51 property boundary. The original intention for the cul-de-sac was to be temporary until the Stage 2 works occurred.

The Stage 1 works achieved practical completion on 5 July 2019. PCE has utilised the Adjusted Contract Amount of \$496,278 for Stage 1 costs plus GST which includes approved variations that arose during the works which is noted in **Attachment 7**.

The Stage 2 works as shown on the engineering drawings seeks to extend Nardine Close approximately 130m northwards to establish a permanent cul-de-sac by the boundary of lot 50 and lot 51.

PCE has reviewed both the Stage 2 engineering drawings and Mastersheet in relation to quantity and rates.

During the preparation of the cost estimate for Stage 2, a number of comments were noted as presented in **Table C**.

As the actual construction amount for Stage 1 has been utilised to reflect the true construction cost, it is not possible to make a direct like for like comparison to the Mastersheet cost headings. However, PCE has endeavoured to group costs from the Stage 1 contract to be appropriate to the Mastersheet headings and prepared a cost estimate for the construction of Stage 2, as presented in **Table 3**.



For both Stages 1 and 2 of the Nardine Close extension (Road 2A), the variance between the Mastersheet value of \$1,108,188 excluding GST and PCE's value of \$1,103,349 excluding GST is \$4,839, which is 0.5% of the Mastersheet value and is within the typical expected range of cost estimates of this nature.

Table 3: Nardine Close Extension (Road 2A) Cost Review Summary

Description	PCE Stage1 Adjusted Contract Amount	PCE Stage 2 Estimate Amount	PCE Stage 1 & 2 Summation Total	Mastersheet Amount	Variance
Preliminaries	97,326	\$30,022	\$127,348	39,399	\$87,949
Survey Control and Testing	Included in Preliminaries	\$30,022	\$30,022	32,832	(\$2,810)
Clearing and Demolition	25,462	\$128,080	\$153,542	125,000	\$28,542
Earthworks & Retaining	29,048	\$47,729	\$76,777	86,016	(\$9,239)
Roadworks	193,864	\$120,870	\$314,734	269,032	\$45,702
Drainage	3,246	\$3,720	\$6,966	3,000	\$3,966
Miscellaneous	48,213	\$29,150	\$77,363	75,400	\$1,963
Services	99,119	\$45,720	\$144,839	98,200	\$46,639
Construction Sub total	\$496,278	\$435,312	\$931,591	\$728,879	\$202,712
Allowances and Charges	66,413	\$105,346	\$171,759	194,611	(\$22,852)
Western Power costs					
Water Corporation costs					
Design and Superintendence					
Total excl. GST	\$562,691	\$540,658	\$1,103,349	\$923,490	\$179,859
Staging Contingency	included	included	included	184,698	
Total with Staging excl. GST	\$562,691	\$540,658	\$1,103,349	\$1,108,188	(\$4,839)

The City is also considering an option to not undertake the Stage 2 works, such that the existing cul-de-sac at the lot 308 / lot 51 boundary is to be converted to permanently cul-de-sac. Due to a recent Development Application for a place of worship to lot 50 Sultana Road, Stage 2 extension works of Nardine Close may no longer be required. It is possible to provide a cul-de-sac by the lot 308 / lot 51 boundary and service these lots for future industrial development.

An engineering assessment and development cost has been prepared that reviews the options available should the Stage 2 works not occur and a permanent cul-de-sac is provided by the lot 308 / lot 51 boundary. The assessment considered retaining the existing cul-de-sac and an alternative arrangement such that the cul-de-sac is relocated approximately 35m northwards so that it straddles the lot 308 / lot 51 property boundary. The consideration of an alternative arrangement is due to concerns being raised that the exiting cul-de-sac arrangement may not provide adequate access to lot 51.



A summary of the indicative development costs for the cul-de-sac is presented in with the full assessment in **Attachment 8**.

Table 4: Summary of costs for a cul-de-sac by the lot 308 / lot 51 boundary

Item	Costs to Accommodate the Existing Cul-de-sac	Costs to Relocate the Cul-de-sac to the lot 308/lot 51 boundary
Construction costs	132,200	223,200
Extra over costs for works from the interim to permanent reservation boundary	28,000	Nil
Development Fees and Charges	29,100	23,400
Sub total	\$189,300	\$246,600
GST	\$18,930	\$24,660
Total including GST	\$208,230	\$271,260
Costs for Emergency Accessway works	67,100	61,100
Development Fees and Charges for the Emergency Accessway works	8,000	7,500
Sub total	\$75,100	\$68,600
GST	\$7,510	\$6,860
Total including GST	\$82,610	\$75,460
Sub total for cul-de-sac and emergency way works	\$264,400	\$315,200
GST	\$26,440	\$31,520
Total including GST for cul-de-sac and emergency accessway works	\$290,840	\$346,720

Table C: Mastersheet Nardine Close Extension (Road 2A) Commentary

Mastersheet								Porter Consulting Engineers Review (Stage 2)			
Item	Description	Qty	Unit	Rate	Amount	Notes		Stage 2 Qty	Rate	Amount	Comments
3.6	Remove and dispose redundant pavements		m ²	\$35.65	0	It appears the Mastersheet did not note allowance for removal of the temporary turnaround constructed in Stage 1.		654	\$20.00	\$13,080.00	Removal of existing temporary turnaround constructed in Stage 1. The Mastersheet notes a rate of \$35.65/m ² which is towards the higher end of the range. PCE has noted a rate of \$20/m ² for this item.
4.5	Cut to spoil (cart offsite)	0 (for Stages 1 & 2)	m ³	\$24.64	0	It appears the Mastersheet did not allow for cut to spoil.		530	\$25.00	\$13,250.00	PCE assesses there is likely to be excess spoil material, based on cut/fill/balance DTM calculation available to PCE being the design consultant.
4.6	Cut to fill	1,000 (for Stages 1 & 2)	m ³	\$5.00	\$5,000.00			265 (for Stage 2)	\$5.00	\$1,325.00	PCE assesses there is likely to be excess spoil material, based on cut/fill/balance DTM calculation available to PCE being the design consultant.



5.0 SULTANA ROAD WEST

Sultana Road West is an existing road that borders the western boundary of the LSP area. Sultana Road West from Milner Road to Lot 222 (#128) Sultana Road West is to be upgraded to service the future development envisaged by the LSP.

PCE has prepared 85% design status engineering drawings for the upgrade of Sultana Road West which is included in **Attachment 9**.

The following items are noted for the Sultana Road West scope:

- Carriageway widening between Milner Road and Lot 222 (#128) Sultana Road West to provide a 9-metre-wide carriageway between kerbs. The existing carriageway width is 6m.
- Construction of drainage swales along the road verge sections for stormwater disposal.
- Construction of a footpath along the west side to provide a connection between Milner Road and Lot 222 (#128) Sultana Road West. The original Mastersheet had provision for a 2.5m wide path, however, the City has advised⁵ that the path does not form part of the City's overarching Bicycle Plan and therefore does not require a path wider than 1.8m. Therefore, allowance has now been made for a 1.8m wide path.
- Install street lighting to comply with lighting standards.

PCE's comments in review of the Mastersheet as noted in **Table D**, with **Attachment 9**.

Table 5 presenting a summary of the amounts and variances between the Mastersheet and PCE's review. The full Mastersheet for Sultana Road West is noted in **Attachment 14**.

Table 5: Sultana Road West Cost Review Summary

Description	Mastersheet Amount	PCE Review Amount	Variance
Preliminaries	59,631	\$74,414	\$14,784
Survey Control and Testing	49,692	\$62,012	\$12,320
Clearing and Demolition	18,941	\$80,862	\$61,921
Earthworks	47,856	\$107,465	\$59,609
Roadworks	388,849	\$519,139	\$130,291
Drainage	12,000	\$176,853	\$164,853
Miscellaneous	526,198	\$355,921	(\$170,277)
Construction Sub total	\$1,103,167	\$1,376,668	\$273,501
Allowances and Charges	404,862	\$236,787	(\$168,075)
Sub Total entire width, approx 800m length	\$1,508,028	\$1,613,454	\$105,426
Total to Scheme (50%) excl. GST	\$754,014	\$806,727	\$52,713

The construction cost estimate variance for Sultana Road West between the Mastersheet amount of \$1,508,028 excluding GST and PCE's review amount of \$1,613,454 excluding GST, is \$105,426, which is approximately 7% of the Mastersheet amount mainly due to the items listed in **Table D**. The DCP report indicates that 50% of the construction costs will be borne by the DCP.

⁵ Budge. G, FW: 19-03-043:: Forrestfield North DCA with Porter's comments, email to Cook. M, 31 January 2020, <mcook@portereng.com.au>



5.1 Particulars and Other Considerations

- a) The Milner Road / Sultana Road West (heading south) intersection has been upgraded to accommodate 'As of Right (19m semi-trailer)' vehicles with lane correct turning movements.
- b) Western Power has undertaken a feasibility study⁶ and estimate of costs for the removal of existing power pole #132866 to facilitate the proposed intersection widening works at Milner Road / Sultana Road West. The study notes the cost for the works being \$270,920.99 (GST not applicable). This amount does not allow for any costs associated with land acquisitions.
- c) The design drawings (MP190326) that accompanied the Western Power feasibility study for the removal of pole #132866 notes a need for a new electrical substation and LV kiosk in lot 90 north of the intersection. The required land areas are:

- i. Kiosk: 1.9m deep by 2.4m wide.
- ii. Substation: 3m deep by 4.5m wide.

The City should allow sufficient time to liaise with the landowner of lot 90 for the acquisition of the required land for the kiosk and substation. Lot owner approvals would also need to be sought where new stay poles front respective properties.

- d) A pavement investigation⁷ has been undertaken that has informed the required pavement works:
 - As the existing pavement ranges from a 150mm to 225mm thick base course, it shall be fully reconstructed to consist of a compacted subgrade, 125mm thick limestone subbase, 125mm thick base course, 7mm primer seal and 30mm AC14 dense grade asphalt wearing course (black).
 - For areas of pavement widening, the pavement shall consider of a compacted subgrade, 125mm thick limestone subbase, 125mm thick base course, 7mm primer seal and 30mm AC14 dense grade asphalt wearing course (black).
 - A 40mm AC15 MRWA intersection mix asphalt shall be applied to the cul-de-sac head.
- e) Permeability testing⁸ of the insitu sands in the verge was undertaken to assess the suitability of stormwater disposal via roadside swales. The testing indicated good drainage characteristic soils with 47.5m/day permeability.
- f) A preliminary lighting design has been prepared to comply with Standards that specifies luminaires and outreaches installed on existing poles.
- g) An allowance has been made for the adjustment of communication pit lids and Water Corporation valve and hydrant lids.
- h) No allowance has been made for street trees or landscaping⁹ given insufficient space is available due to the swales drainage requirements.

⁶ Western Power, *Feasibility Study Milner Road (MF011894/GFVSVU)*, 22 May 2020

⁷ Brown Geotechnical, *Geotechnical Investigation (Factual Report) – Milner, Sultana Rd West - Pavement Cores and CBR Testing*, 20 December 2019 <ref: 19051>

⁸ Brown Geotechnical, *Geotechnical Investigation – (Permeability Testing) – Sultana Road West, Forrestfield.*, 14 April 2020, <ref: 20034>

⁹ Lodge. C, *Re: 19-11-135: Sultana Road West: Street trees*, 15 June 2020, email to Cook. M, <mcook@portereng.com.au>



-
- i) Land acquisitions of approximately 350m² in area from 4 Brand Road, High Wycombe will be required to facilitate the cul-de-sac. It is noted that this will not be a land acquisition cost of the DCP.
 - j) No land acquisitions are expected to be required to facilitate the intersection upgrades to Milner Road / Sultana Road West (heading south). However, the City will need to obtain approval from the owner of lot 1563 (H85) Milner Road, High Wycombe to allow for a batter approximately 1m in height and extending 3m into the property as part of works to the Milner Road / Sultana Road West intersection. If the owner does not grant approval for the batter, consideration could be had for a panel and post retaining wall, or land acquisition.

For the costings, it has been assumed that the lot owner of 1563 will grant approval for the battering works to extend into the property.
 - k) The DCP report indicates that 50% of the roadwork upgrade costs will be borne by the DCP, with the remaining 50% assumed to be borne by future developers undertaking development on the eastern side of Sultana Road West. There is a risk that the City may encounter a funds shortfall to undertake the roadworks as the timeframe for securing funds from future developers is uncertain. Development to the east side of Sultana Road West will develop over time and is not likely to coincide with the City's timeframe to undertake the roadworks. Therefore, the City may need to consider prefunding the infrastructure for the other 50% of the roadworks costs with a portion of the costs being repaid by a future DCP in Forrestfield North.

Table D: Mastersheet commentary summary to Sultana Road West works

Mastersheet							Porter Consulting Engineers Review			
Item	Description	Qty	Unit	Rate	Amount	Notes	Qty	Rate	Amount	Comments
3.1	Clear large trees inc grubbing	10	ea	\$246.00	\$2,460.00	approximate only based on aerial imagery	10	\$500.00	\$5,000.00	PCE has adopted for a higher rate due to likely presence of existing services near trees to be removed & grubbed.
3.2	Clear small trees inc grubbing	27	ea	\$179.00	\$4,833.00	approximate only based on aerial imagery	8	\$250.00	\$2,000.00	PCE has adopted for a higher rate due to likely presence of existing services near trees to be removed & grubbed.
3.3	Clear shrubs/grass	4,000	m ²	\$1.82	\$7,280.00	Length of road taken as 800m with 4m road widening (2x 0.5m extra for topsoil stripping). 800x5=4000	0	\$1.82	\$-	There are very few scrubs along this length. Topsoil removal accounted for in item 4.1
3.4	Trim / lop branches to shrubs.		Item				1	\$2,000.00	\$2,000.00	From a site visit, there is likely to be a need for some overhanging branches to be trimmed/lopped to facilitate the works.
3.5	Demolish and dispose redundant footpaths	0	m ²	\$20.00	\$0	No allowance in the Mastersheet.	0	\$20.00	\$-	The Milner Road costings accounts for any paths that need removal by the Sultana Road intersection.
3.6	Demolish and dispose redundant kerbing	1,600	m	\$2.73	\$4,368.00	Quantity based on assumed length. Removal on both sides of road. 800x2=1600	1,565	\$9.00	\$14,085.00	Remove existing flush kerbing along full length.
3.8	Remove and Dispose existing asphalt offsite.		m ²				5,100	\$9.50	\$48,450.00	For works to existing pavement areas
3.9	Remove and Dispose redundant pavements	0	m ²	\$97.37	\$0.00		480	\$24.64	\$11,827.00	Redundant pavement between cul-de-sac to Brand St.
4.1	Remove 100mm topsoil to spoil	4,000	m ²	\$3.00	\$12,000.00	Length of road taken as 800m with 4m road widening (2x 0.5m extra for topsoil stripping). 800x5=4000	993.9	\$3.00	\$2,982.00	Based on 85% designs
4.2	Form, Shape, Compact Subgrade	4,000	m ²	\$4.00	\$16,000.00	Length of road taken as 800m with 4m road widening (2x 0.5m extra for topsoil stripping). 800x5=4000	8096	\$4.00	\$32,384	Length of road taken as 800m with 2m wide pavement extension to both sides, plus a further 0.5m extension beyond the edge of pavement, as shown on the drawings. And the existing pavement being reconstructed.
4.3	Import Fill, Shape, Compact	0	m ³	\$30.00	\$0.00		60	\$30.00	\$1,800.00	Minor fill batter into lot 1563 by Milner Road/Sultana Road West intersection.
4.4	Cut to spoil	400	m ³	\$24.64	\$9,856.00	Allowed for 100mm of cut for topsoil area. (5x800)x 0.1=400.	1,107	\$24.64	\$27,287.00	Includes disposal of topsoil and boxout material.
5.1	Rip and rework the existing base course to minimum 150mm		m ²				4,620	\$4.00	\$18,480.00	For works to existing pavement areas
5.2	Supply and install 220mm limestone sub-base	880	m ³	\$50.00	\$44,000.00	Road area with 220mm depth. (5x800)x0.22= 880			\$-	
5.3	Supply and install 125mm limestone sub-base		m ²				8096	\$10.50	\$85,008	Based on 85% designs.
5.4	Supply and install 100mm road base	400	m ³	\$65.00	\$26,000.00	Road area with 100mm depth. (5x800)x0.1=400	0		\$-	
5.5	Supply and install 125mm road base		m ²				8096	\$11.25	\$91,080	Based on 85% designs
5.6	Supply and Install 7mm Primer Seal	4,000	m ²	\$2.60	\$10,400.00	Road area. 5x800=4000.	7376	\$2.60	\$19,178	Based on 85% designs
5.7	Supply and Install 30mm AC14	3,200	m ²	\$12.19	\$39,008.00	Length of road (800m) x road widening (4m). 800x4=3200	7376	\$12.19	\$89,913	Based on 85% designs
5.8	Supply and Install 40mm AC14						879	\$18.00	\$15,822.00	Based on 85% designs
5.9	Supply and Install FK	1,529	m	\$55.20	\$84,400.80	781m south side, 748m north side	1,490	\$60.00	\$89,400.00	Based on 85% designs
5.11	Supply and Install SMK (refer note 8)	0	m	\$35.00	\$0.00		157	\$35.00	\$5,495.00	Based on 85% designs
5.12	Reinstate existing Crossovers	1,160	m ²	\$90.00	\$104,400.00	29 crossovers at 40m2 each. 29x40=1160m2		\$90.00	\$-	See below for crossovers being reinstated in varying materials
5.14	Reinstated Concrete Crossovers for commercial/industrial properties to be: 150mm thick N32MPa concrete with SL62 mesh centrally located with a 100mm limestone basecourse.		m ²				261	\$110.00	\$28,710.00	Based on 85% designs

5.15	Reinstate Asphalt crossovers for commercial/industrial properties to be: 150mm thick rock roadbase, 7mm primer seal with 30mm asphalt wearing course.		m ²				43	\$18.79	\$807.97	Based on 85% designs
5.16	Reinstate concrete crossovers to residential properties to be: 100mm thick N32MPa with 150mm limestone base.		m ²				28	\$100.00	\$2,800.00	Based on 85% designs
5.17	Reinstate Asphalt crossovers to residential properties to be: 100mm thick rock roadbase, primer seal with 30mm asphalt wearing course.		m ²				158	\$18.79	\$2,968.82	Based on 85% designs
5.18	Reinstate Existing block paving crossovers is to have the existing bricks retained for reuse towards reinstating the crossover on a 150mm limestone base.		m ²				20	\$54.00	\$1,080.00	Based on 85% designs
5.19	Reinstate gravel crossover 150mm thick		m ²				177	\$16.00	\$2,832.00	Based on 85% designs
5.20	Supply and Install new concrete footpaths	2,000	m ²	\$38.12	\$76,240.00	800x2.5 = 2000m2	1,621	\$38.12	\$61,796.00	As part of Revision B to the DCA report (R34.19), the City has instructed that the path in Sultana Road West is to be reduced from 2.5m to 1.8m. Quantity based on 85% designs.
5.21	Supply and Install Pram Ramps	8	ea	\$550.00	\$4,400.00	6 @ Milner, 2x @ Brae	2	\$550.00	\$1,100.00	
6.1	Supply and install new 300dia culverts	0	ea	\$2,000.00	\$0	No allowance in the Mastersheet.	361.4	\$85.00	\$30,719.00	drainage pipe under crossovers
6.2	Remove and Replace existing culverts OR extend existing culvert	1	ea	\$5,000.00	\$5,000.00	Brae Road		\$5,000.00	\$-	See item below
6.3	Remove existing drainage pipework		m				29	\$30.00	\$870.00	Remove the pipework at the intersection with Brae Road. This is at a local high point so no need to have the drainage pipe in place.
6.4	Convert Existing SEP's to Gully's	0	ea	\$2,500.00	\$0.00		1	\$2,500.00	\$2,500.00	
6.5	Covert Existing SEP's to Manholes	1	ea	\$2,000.00	\$2,000.00	Quantity based on aerial imagery.	0	\$2,000.00	\$-	
6.6	Supply and Install new SEP's	1	ea	\$3,000.00	\$3,000.00	Quantity based on aerial imagery.	0	\$3,000.00	\$-	
6.7	Supply and install bubble in/out soakwell pits						41	\$3,000.00	\$123,000.00	Pits in swales by crossovers
6.8	Supply and Install 375 dia. RCP	5	m	\$400.00	\$2,000.00	Quantity based on aerial imagery.	0	\$400.00	\$-	
6.10	Form roadside swales		m				1098	\$18.00	\$19,764.00	Based on 85% designs
7.1	Supply and Install misc linemarking and Signage	1	Item	\$5,000.00	\$5,000.00	7.1	1	\$1,000.00	\$1,000.00	Chevrons by Brand Rd
7.3	Supply and install street lighting including cabling		ea pole				9	\$3,000.00	\$27,000.00	Based on 85% designs
7.4	Supply and Install trees	54	ea	\$450.00	\$24,300.00	Allowed for trees at 15m spacing for the entire road length. 800/15=53.33 rounded up.	0	\$450.00	\$-	City confirms that having street trees located in the proposed swales would be suboptimal, and therefore exclude street trees from the design and costs.
7.5	Maintenance of trees and verges for a 2 year period	2	year	\$16,948.86	\$33,897.72		0	\$16,948.86	\$-	City confirms that having street trees located in the proposed swales would be suboptimal, and therefore exclude street trees from the design and costs.
7.11	Adjustment of Telstra or NBN lids to suit finished levels (Provisional)						1	\$10,000.00	\$10,000.00	Although it is expected that most of the existing communication pit lids currently match proposed levels, an allowance has been made for some lids needing adjusting.
7.12	Adjustment of Water Corp lids (valves, hydrants) to suit finished levels (Provisional)						11	\$2,000.00	\$22,000.00	As the verge level of Sultana Road will be adjusted slightly, lids and spindles will need to be raised.
9.5	Contingency	20%			\$220,633.26		5%		\$56,606.00	Contingency reduced from 20% to 5% as part of preparing Revision B of the DCA report (R34.19), as instructed by the City, and is reflective the investigations and designs undertaken to date.



6.0 MILNER ROAD AND NARDINE CLOSE INTERSECTION

The widening works at the intersection of Milner Road and Nardine Close have been designed to accommodate a 36.5m B-triple truck turning movement, with the relevant drawings included in **Attachment 10**.

The Milner Road and Nardine Close intersection works were completed in November 2019, and is currently within the 12 months defect liability period. **Table 6** notes the project costs¹⁰ as of 11 June 2020 for the intersection works including investigations, construction, professional fees and charges. The City has noted there are outstanding minor works for the adjustment of services for an estimated \$5000.

Due to the complexity of cost allocations across the whole project, a lump sum amount is noted within **Table 6**.

Table 6: Milner Road and Nardine Close Intersection Cost Review Summary

Description	Mastersheet Amount	Actual Project Amount to 11 June 2020	Outstanding costs	Project Costs to completion	Variance
Total project costs excl. GST	\$450,019	\$295,076	\$5,000	\$300,076	<i>\$149,943</i>

The project cost variance between the Mastersheet value of \$450,019 and the project costs to completion of \$300,076 is \$149,943 which is 66% less than the Mastersheet value.

Future reviews of the DCP costs should include any costs that may arise during the defects liability period which concludes on 15 July 2020.

7.0 BERKSHIRE ROAD AND ASHBY CLOSE INTERSECTION

The widening works for the Berkshire Road and Ashby Close intersection have been designed to accommodate a 36.5m B-Triple truck turning movement with the relevant drawings included in **Attachment 11**.

The intersection construction works were completed in October 2019 and are currently within the 12 months defects liability period.

Table 7 notes the actual project costs as of 11 June 2020 including investigations, construction and professional fees and charges. The City has noted there are outstanding minor works for the adjustment of sewer manholes for an amount of \$8,729.

Due to the complexity of cost allocation across the whole project, a lump sum amount is noted in **Table 7**.

¹⁰ Lodge.C, RE: 19-03-043: Forrestfield DCP: Any further adjustments to costs to the Berkshire /Ashby intersection, 11 June 2020, email to Cook. M, <mcook@portereng.com.au>

**Table 7: Berkshire Road and Ashby Close Intersection Cost Review Summary**

Description	Mastersheet Amount	Actual Project Amount to 11 June 2020	Outstanding costs	Project Costs to completion	Variance
Total project costs exc GST	\$210,614	\$268,042	\$8,729	\$276,771	(\$66,157)

The project cost variance between the Mastersheet estimated value of \$210,614 and the project costs to completion of \$276,771, is \$66,157, 31% greater than the Mastersheet value.

Future reviews of the DCP costs should include any further costs that may arise during the defects liability period which concludes on November 2020.

8.0 DUNDAS ROAD, BERKSHIRE ROAD AND MILNER ROAD INTERSECTION

The works at the intersection of Dundas Road, Berkshire Road, and Milner Road have been designed for a 19m long semi-trailer turning movement, with relevant drawings included in **Attachment 12**.

The intersection construction works were completed in December 2019, and is currently within the 12 months defects liability period. **Table 8** notes the project costs as of 11 June 2020 for including investigations, construction, professional fees and charges. The City has noted a \$5000 allowance towards any works that may be required during the defect liability period.

Due to the complexity of cost allocations across the whole project, a lump sum amount is noted in **Table 8**.

Table 8: Dundas Road, Berkshire Road and Milner Road Cost Review Summary

Description	Mastersheet Amount	Actual Project Amount to 11 June 2020	Outstanding costs	Project Costs to completion	Variance
Total project costs exc GST	\$1,159,269	\$955,233	\$5,000	\$960,233	\$199,036

The project cost variance between the Mastersheet amount of \$1,159,268 and the project costs to completion of \$960,233, is \$199,036, being 83% less than the Mastersheet amount.

Future reviews of the DCP costs should include any further costs that may arise during the defects liability period which concludes on December 2020.

9.0 BONSER ROAD

Bonser Road will be a newly constructed road providing a connection between Nardine Close and Berkshire Road. The following items are noted in the DCP report for the Bonser Road scope:

- A 10m wide carriageway kerb to kerb,
- Drainage swales within the road verges,



- A 1.8m wide footpath in the northern verge,
- Intersections to accommodate a category RAV7 vehicle,
- Supply and installation of street trees.

The City of Kalamunda has provided engineering drawings prepared by RSA Consulting Engineers for Bonser Road, which are included in **Attachment 13**. The drawings have been approved by the City and utilised for tendering purposes as reported by the City¹¹.

Bonser Road construction will be divided into two stages:

- 1) The construction of Bonser Road with the exception of road works (truncations) impacting Lots 16 and 17 Berkshire Road. This first stage would result in a road that is not to a standard suitable for a category RAV7 vehicle. The acquisition of truncations for Lots 16 and 17 Berkshire Road is required in order to facilitate the full construction of an intersection for RAV 7 vehicles.
- 2) Following the acquisition of truncations from Lots 16 and 17 Berkshire Road, upgrades to bring the intersections up to a standard suitable for category RAV7 vehicles will be undertaken.

The first stage of construction works commenced in January 2020 and achieved Practical Completion in June 2020. The second stage will follow the acquisition of truncations from Lots 16 and 17 Berkshire Road.

The City has provided costs to Bonser Road based on received tender prices presented in the Mastersheet included in **Attachment 14**. Attempts have been made to group cost headings to be appropriate to the Mastersheet headings as presented in **Table 9**.

The amounts do not make allowance for land acquisition costs related to lot 16 and lot 17 Berkshire Road.

Table 9: Bonser Road Cost Review Summary

Description	Mastersheet Amount	Amounts based on tender prices (provided by the City)	Variance
Preliminaries	20,706	44,974	5,167
Survey Control & Testing	17,255		
Clearing and Demolition	12,180		
Earthworks	52,456	312,248	(67,772)
Roadworks	192,020		
Stormwater Drainage	0		
Miscellaneous	88,452	\$42,823	45,629
Stage 2: For construction of truncations once land is acquired from Lots 16 and 17 Berkshire Road	0	70,038	(70,038)
Sub Total excl. GST	\$383,069	\$500,874	(117,805)
Allowances and Charges	\$102,280	\$86,783	15,497
Total excl. GST	\$485,350	\$587,657	(102,307)

11 Lodge. C, RE: 19-03-043: Forrestfield North DCA with Porter's comments, email to Cook.M, 30 January 2020, <mcook@portereng.com.au>



The cost estimate variance between the Mastersheet value of \$485,350 and the amount based on tender prices of \$587,657, is \$102,307 being 21% greater than the Mastersheet value.

Subsequent DCA reviews of Bonser Road should include the final construction costs along with any changes to fees or charges, and consideration for land acquisition costs.

10.0 CONCLUSION

The body of this document outlines in greater detail the assumptions, considerations and differences noted in a review of estimated costs of infrastructure included in the DCP. However, in brief, the following conclusions are noted below and should be reviewed further for addressing in future review of the DCP and design development of the respective road.

10.1 Berkshire Road

In relation to the scope of works discussed above the City may wish to consider:

- Make an application to Western Power to design and quote for the conversion of the overhead lines to underground that cross Berkshire Road for a RAV route.
- Investigate and prepare designs for any internal electrical works (if required) from the new Western Power pillar to the consumer switchboard.
- Preparing 100% design documentation for the installation of the 2m wide footpath along the northern verge.
- Prepare designs for the shared path along the southern verge of Berkshire Road, and secure funding from the Department of Transport.

10.2 Bonser Road

Future reviews of the DCP costs should include the final construction costs and any costs that may arise during the defects liability period.

10.3 Milner Road

Prepare 100% design status drawings and seek approvals from Authorities. Due to the high pressure gas main and underground transmission cables, approvals should be expedited early with ATCO Gas and Western Power due to typically long approval times.

10.4 Nardine Close

The City is to make a determination on whether Stage 2 works are to occur, or if the establishment of a permanent cul-de-sac by the lot 308/lot 51 boundary is to take pace. And incorporate the outcome in future reviews of the DCP.



10.5 Sultana Road West

- a) Prepare 100% status design drawings and seek approvals from Authorities.
- b) Allow sufficient time for Western Power to prepare the detailed design for the removal of the existing power pole #132866. Western Power also require 12 weeks advance notice to schedule the works once the construction quote has been paid by the proponent. The pole will need to be removed in advance of the intersection works.
- c) Undertake early liaison with the land owners of lot 90 Milner Road, High Wycombe for the acquisition of the required land for the kiosk (1.9m deep by 2.4m wide) and substation (3m deep by 4.5m wide) to facilitate the removal of the existing power pole #132866.
- d) Undertake early liaison with lot owners for approval for the installation of stay poles that front the respective properties to facilitate the removal of the existing power pole #132866.
- e) Undertake early liaison with the owner of 4 Brand Road for the acquisition of approximately 350m² to facilitate the cul-de-sac.
- f) Undertake early liaison with the owner of lot 1563 (H85) Milner Road to allow for a batter approximately 1m in height and extending 3m into the property as part of works to the Milner Road / Sultana Road West intersection. If the owner does not grant approval for the batter, consideration could be had for a panel and post retaining wall, or land acquisitions.
- g) As part of ongoing design development for Sultana Road West, early discussions should be had with Telstra and NBN to provide quotes:
 - i. Adjustment of pit lids along the length of road to suit finished levels.
- h) Obtain quotes from the Water Corporation for the relocation of existing valves by the intersection, and adjustment of valve and hydrant lids along the road to suit finished levels.
- i) The DCP report indicates that 50% of the roadwork upgrade costs will be borne by the DCP. The City should review how the remaining funding is secured as this is not clear in the DCP report.

10.6 Milner Road and Nardine Close intersection

Future reviews of the DCP costs should include any costs that may arise during the defects liability period which would be expected to be negligible.

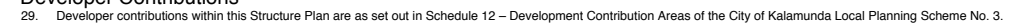
10.7 Berkshire Road and Ashby Close intersection

Future reviews of the DCP costs should include any costs that may arise during the defects liability period which would be expected to be negligible.

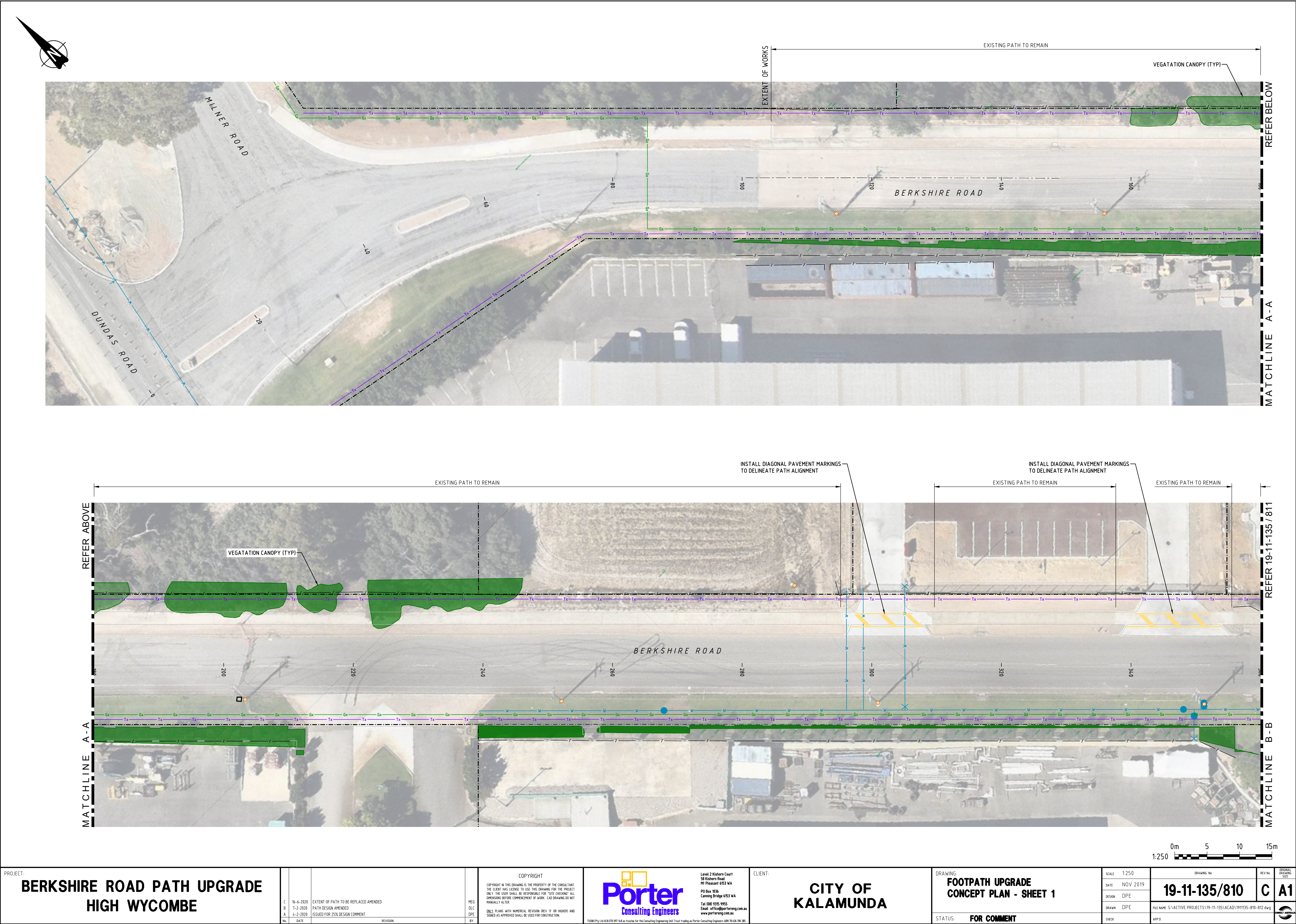
10.8 Dundas Road, Berkshire Road and Milner Road intersection

Future reviews of the DCP costs should include any costs that may arise during the defects liability period which would be expected to be negligible.

Attachment 1:
Local Structure Plan



Attachment 2:
Berkshire Road footpath upgrade drawings (85% design status drawings)







Attachment 3:
Review of overhead electrical lines along Berkshire Road

PROJECT:

**BERKSHIRE ROAD, FORRESTFIELD
OVERHEAD AERIALS VEHICLE CLEARANCE ASSESSMENT**

REPORT FOR:

SITE ELECTRICAL SERVICES

DOCUMENT NO: **3E19102-R-01**

CIVIL ENGINEERS:

PORTER CONSULTING ENGINEERS

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1	31/03/2020	VH	DJ	DJ	For Information
2	01/04/2020	VH	DJ	DJ	For Information

Distribution of copies

Revision	Copy no	Quantity	Issued to
1	Digital PDF	1	PORTER CONSULTING ENGINEERS
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SECTION 3	BUDGET ESTIMATES	5
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Berkshire Road, Forrestfield
Overhead Aerial Vehicle Clearance Assessment

Electrical Servicing Report

SECTION 1 INTRODUCTION

1.1 SCOPE AND ASSUMPTIONS

We understand that the City of Kalamunda is considering the use of Berkshire Road as a RAV7 vehicle thoroughfare between Milner Road and Roe Highway.

This report shall provide information on the existing electrical networks within this road reserve and inform of any likely vehicle traffic obstructions. Lastly, it will provide an order of cost estimates for the required works to remove these obstructions to provide unrestricted clearance for RAV7 vehicles.

In accordance with Main Roads WA's Standard Restricted Access Vehicle Route Assessment Guidelines, RAV routes must provide adequate overhead clearance for a load/vehicle height of 4.6m:

- With 300mm clearances to overhead obstructions (except power lines)
- Power lines – at least the minimum clearance required by telecommunications and electrical transmission cable providers

The vehicle clearance to overhead aerals assessment in the below sections have been completed on this basis.

Berkshire Road, Forrestfield
Overhead Aerial Vehicle Clearance Assessment

Electrical Servicing Report

SECTION 2 ELECTRICAL SERVICES

2.1 EXISTING POWER DISTRIBUTION NETWORK

The existing Western Power (WP) distribution infrastructure in the vicinity of the site comprises of a 22kV three phase High Voltage (HV) and three phase Low Voltage (LV) aerial and underground network.

HV and LV aerials primarily exist along the western side of Berkshire Road running in a southeast to northwest direction. The aerial network supplies power to several commercial/light industrial premises located on the eastern side via aerial consumer cables. Existing stay wires supporting the current pole arrangements also cross over Berkshire Road. Possible clearances issues for RAV7 vehicles travelling through Berkshire Road are identified below.

2.2 POSSIBLE OVERHEAD CLEARANCE ISSUES

The following electrical infrastructure crossing over Berkshire Road has been identified:

Electrical Asset
Pole S132830 – Consumer Aerials
Pole S122686 – Consumer Aerials
Pole S122688 – Consumer Aerials
Pole S122689 – Consumer Aerials
Pole S122696 – Consumer Aerials
Pole S122698 – Stay Wire

Refer to Figure 1 in the Appendix for the location of the aforementioned electrical assets.

With conductors/wire crossing over Berkshire Road, a possible hazard exists for RAV7 vehicles in terms of vehicle clearance to aerials and therefore unrestricted access may not be provided.

2.3 OVERHEAD AERIAL VEHICLE CLEARANCE ASSESSMENT

A power line survey in accordance to Western Power's Survey Brief has been conducted by BCE Spatial. From the data collected, a preliminary assessment of vehicle to aerial conductor clearance can be completed. The following conclusion can be deducted from the survey points gathered.

Berkshire Road, Forrestfield
Overhead Aerial Vehicle Clearance Assessment

Electrical Servicing Report

Electrical Asset	Asset Survey Point $\frac{3}{4}$ Span (AHD)	Ground Survey Point (AHD)	Asset to Ground Clearance
Pole S132830 – Consumer Aerials	34.739	29.404	5.33m
Pole S122686 – Consumer Aerials	34.390	29.056	5.33m
Pole S122688 – Consumer Aerials	34.734	29.405	5.32m
Pole S122689 – Consumer Aerials	34.974	29.665	5.30m
Pole S122696 – Consumer Aerials	37.874	32.878	4.99m
Pole S122698 – Stay Wire	41.149	33.8210	7.32m

The $\frac{3}{4}$ span survey point produces the lowest clearance over the roadway and has therefore been used in this assessment.

Danger zones for live electrical apparatus are prescribed in Section 3.64 of the Occupational Safety and Health Regulations 1996. No person, plant or materials shall enter the danger zone of any electrical network asset. With consumer aerials insulated and less than 1000 volts, a danger zone of 0.5m is applicable. Western Power policies however inform of a greater danger zone of 1m for overhead powerlines up to 1000 volts. No clarifications were provided during discussion with Western Power and therefore the more stringent requirement of 1m is to be applied.

Overhead line clearance calculations involve a more complex process than reviewing surveyed points. Special situations such as sag and blowout are to be considered and are to be based off the Service Authority's design parameters. For Western Power, such design parameters are of their intellectual property and therefore calculations can only be completed by Western Power however it has been advised that they do not assess clearances on consumer aerial conductors.

Based on the above, the following conclusions can be made:

Electrical Asset	Asset to Ground Clearance	Load/Vehicle Height	Vehicle to Asset Clearance	Within Danger Zone
Pole S132830 – Consumer Aerials	5.33m	4.6m	0.73m	Yes
Pole S122686 – Consumer Aerials	5.33m	4.6m	0.73m	Yes
Pole S122688 – Consumer Aerials	5.32m	4.6m	0.72m	Yes
Pole S122689 – Consumer Aerials	5.30m	4.6m	0.70m	Yes
Pole S122696 – Consumer Aerials	4.99m	4.6m	0.33m	Yes
Pole S122698 – Stay Wire	7.32m	4.6m	2.72m	No

All consumer aerial conductors need to be undergrounded to provide unrestricted access for RAV7 vehicles.

With the tension of stay wires, sag and blowout does not play a factor and therefore this asset should pose no obstruction to vehicles of 4.6m height.

Berkshire Road, Forrestfield
Overhead Aerial Vehicle Clearance Assessment

Electrical Servicing Report

2.4 LIKELY POWER SUPPLY SCENARIO AND OPTIONS

Western Power has confirmed that they will not consider the use of taller consumer poles to raise the height of consumer aerials as they do not own the poles and therefore an underground conversion solution will only be presented. In an Industrial/commercial lot, this is implemented by WP owned and maintained URD 3-phase direct buried underground cabling from Western Power's LV network to uni-pillars serving each lot on the general basis of one uni-pillar per industrial/commercial lot.

The following options are available to the City:

- 1.) For temporary arrangement: Oversize Load Movement Application
 - a. Submit application to WP in advance of planned vehicle movement
 - b. Western Power to assess if the load can travel safely and advise what special conditions are required.
 - c. Where possible, Western Power will consider the temporary disconnection and reconnection of consumer aerials as the vehicle passes through. This will require approval from affected consumers.
 - d. In some cases, substantial planning and/or construction works are required (e.g. undergrounding powerlines). In these cases, Western Power will quote on the work required and therefore there are potential delays to allow for design and construction.
- 2.) For a permanent arrangement: Overhead to Underground Power Conversion Application
 - a. Submit application to Western Power for the undergrounding conversion of consumer mains to provide unrestricted vehicle movement in the future
 - b. With this type of application, WP to design and construct
 - c. Note: MRWA & Western Power's Transporting Oversize Loads processes will still need to be followed.

Berkshire Road, Forrestfield
Overhead Aerial Vehicle Clearance Assessment

Electrical Servicing Report

SECTION 3 BUDGET ESTIMATES

3.1 ELECTRICAL SERVICES

For Option 2, we understand that the Network Augmented Costs for the overhead to underground supply conversion will be charged at Western Power's full cost method.

Our very early pre-design, pre-feasibility study order of probable cost estimates for the underground conversion of five overhead consumer supplies is in the order of \$75k.

WP scope to include the following:

- Western Power to design and complete overhead to underground conversion as per consultant's site plan
- WP to design to include:
 - o Removal of existing consumer aerials
 - o Installation of new underground cable from pole to new pillar supply
 - o Installation of new pillar supply

3.2 QUALIFICATIONS AND EXCLUSIONS

The above preliminary cost estimate excludes surveyor costs (pegging of lot boundaries and proposed pillar locations), switchboard upgrades/replacement, private cabling from customer switchboard to new pillar supply, design fees and consultant costs.

An electrical contractor is to be engaged for the new internal private wiring from the existing switchboard to the new pillar supply. A site audit may be required to determine if any additional works are required for the reconnection works to comply with current standards. For these reasons, an estimate for the reconnection works have been excluded in the above cost estimate.

Existing Western Power distribution poles appears to be in good order and suitable for new cable terminations, therefore the assumption has been made that no existing poles will require replacing. This cost has been excluded from the estimate.

We confirm that the budgets presented are indicative only. If the reader intends to use these costs for financial purposes they should be satisfied that they are adequate. 3E Consulting Engineers does not accept liability or responsibility for their interpretation or use.

Berkshire Road, Forrestfield
Overhead Aerial Vehicle Clearance Assessment

Electrical Servicing Report

APPENDIX

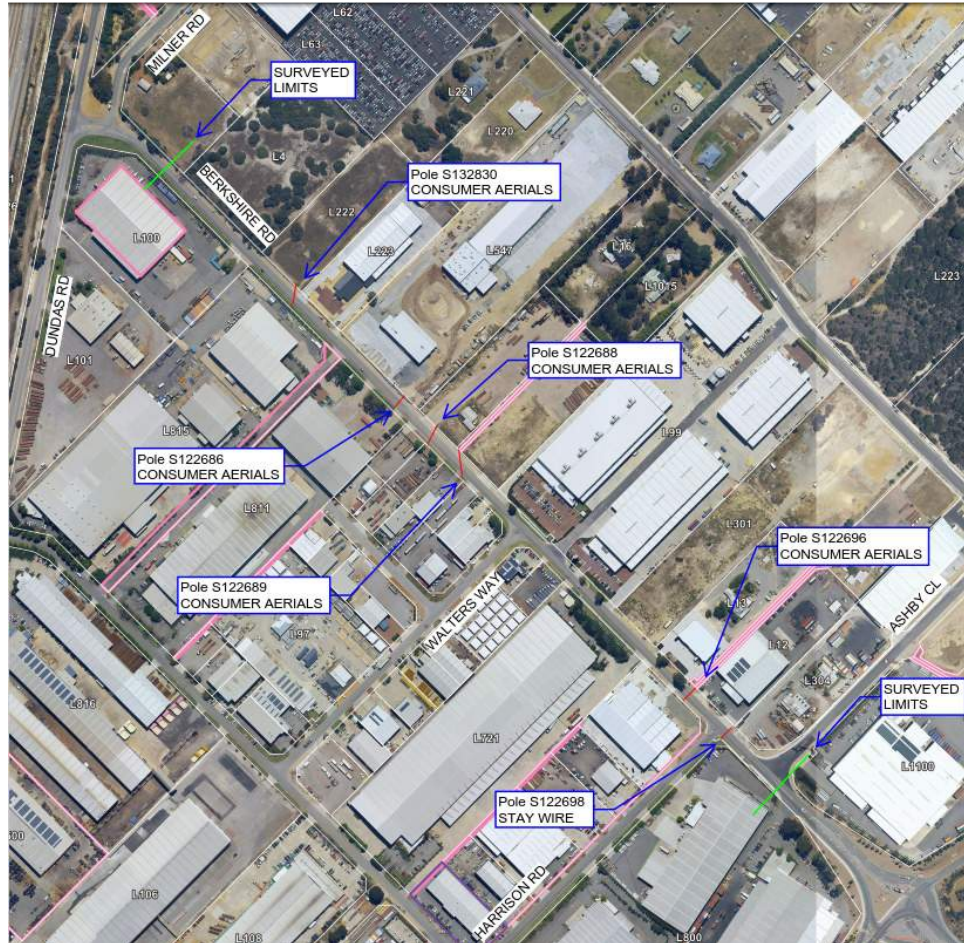


Figure 1: Electrical Assets Crossing Over Berkshire Road

Attachment 4:
Milner Road (85% design status drawings)

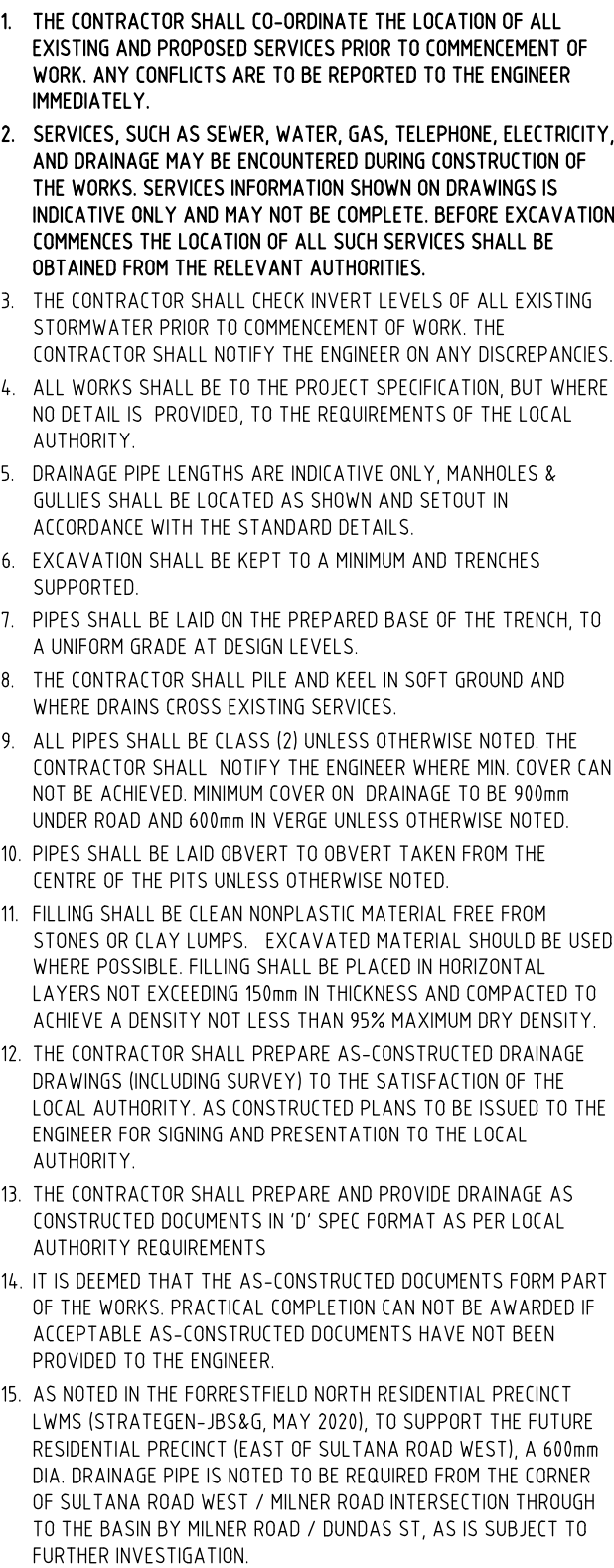












MILNER ROAD WIDENING HIGH WYCOMBE

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
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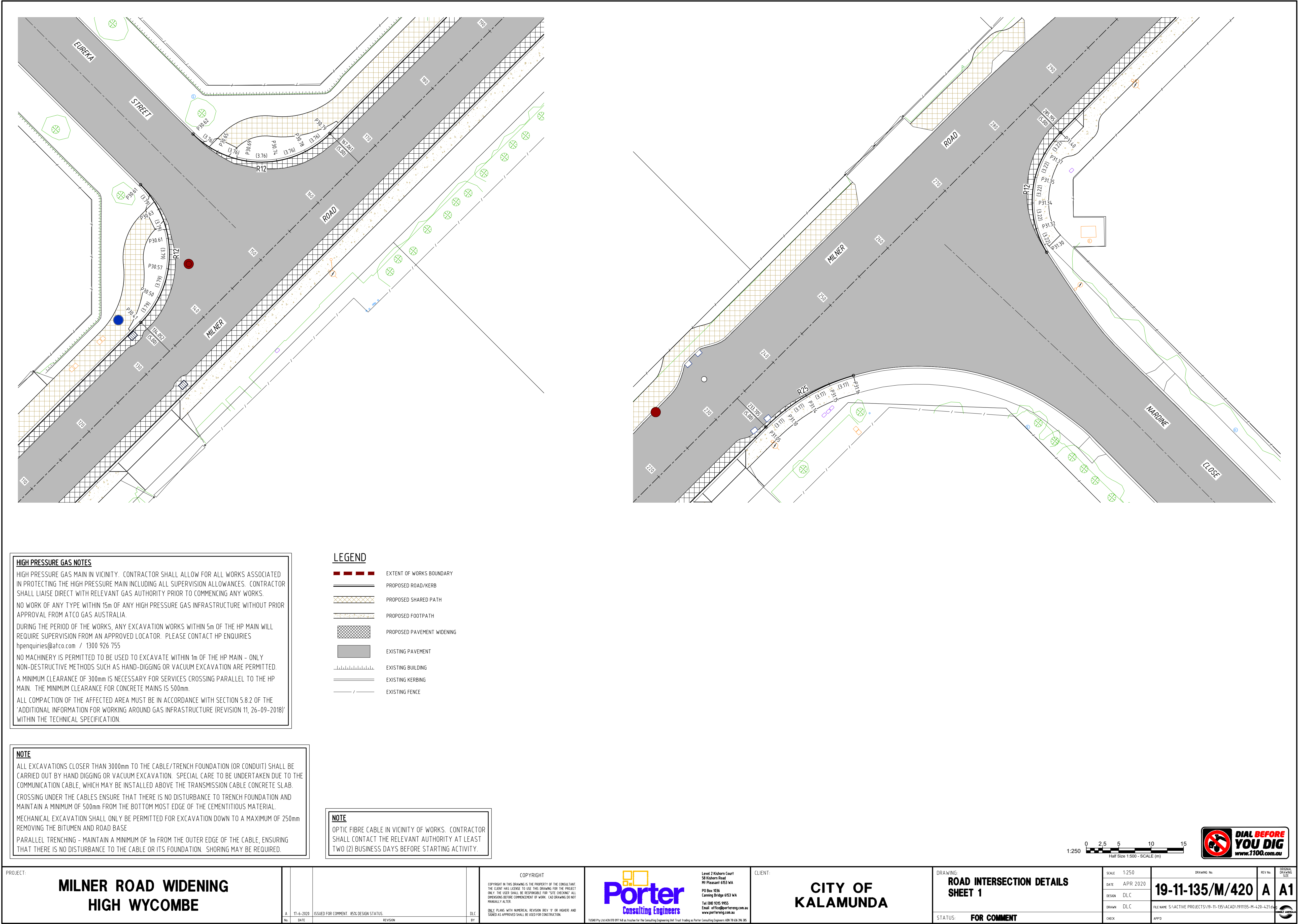
CLIENT

CLIENT: **CITY OF KALAMUNDA**

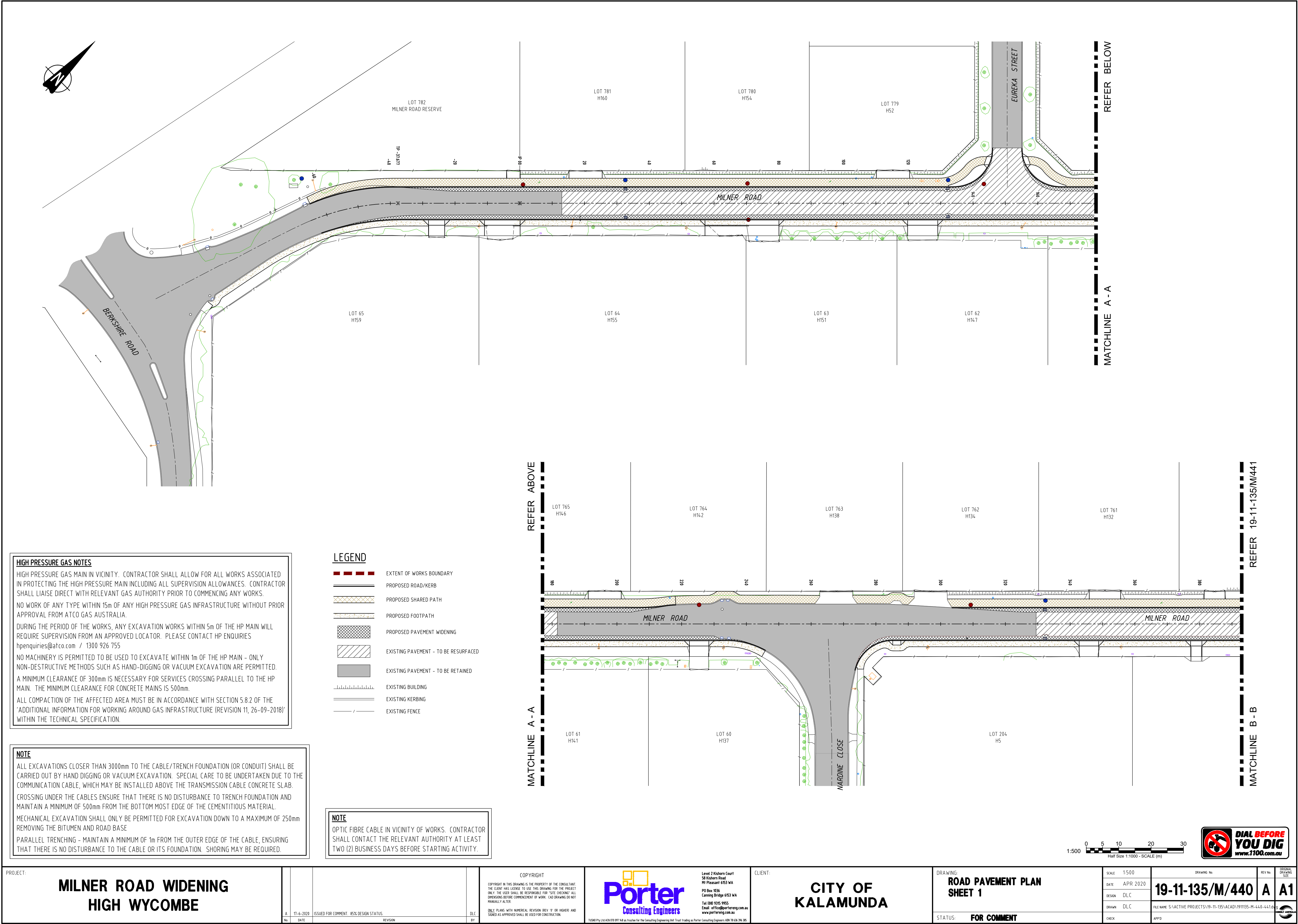
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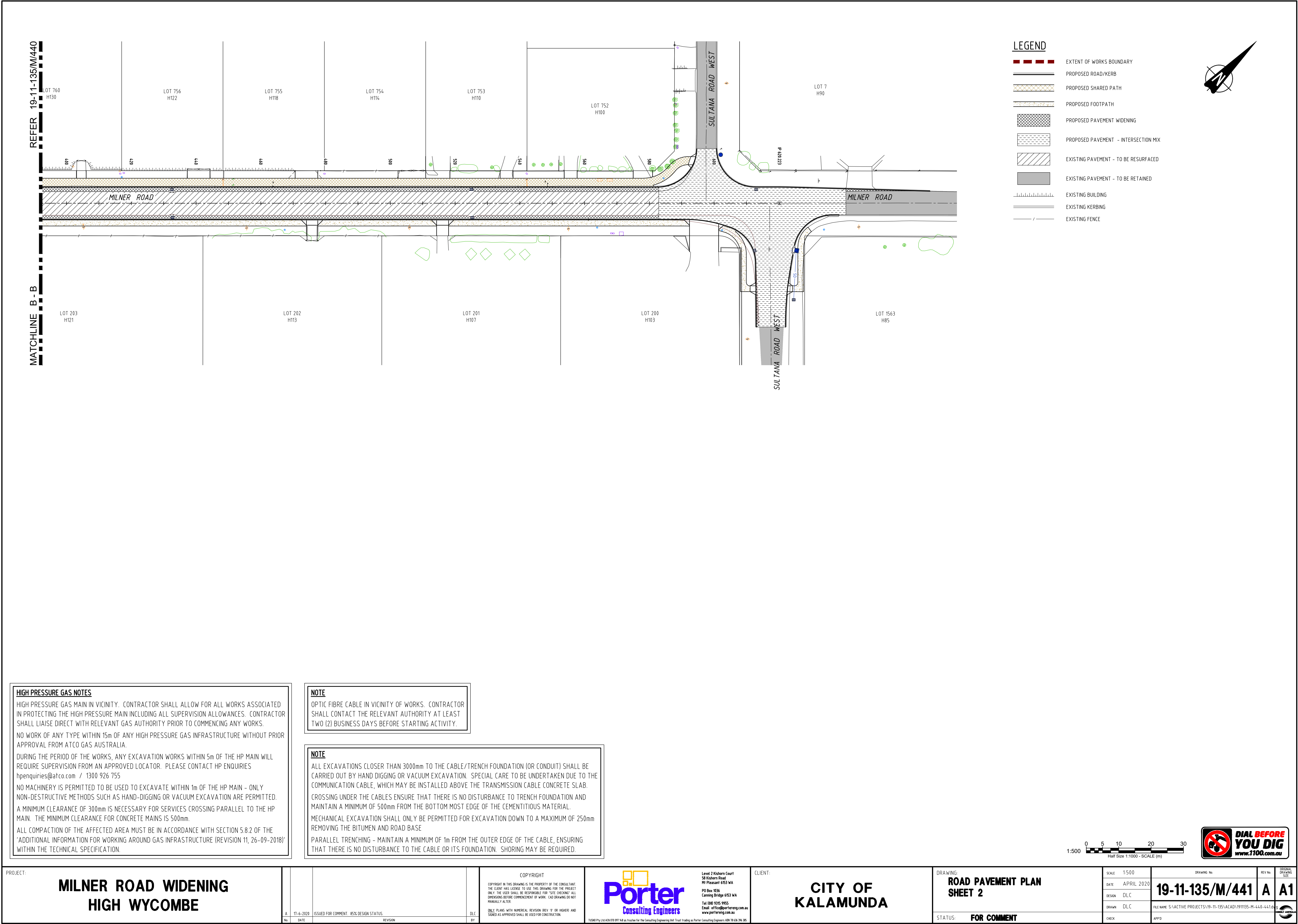
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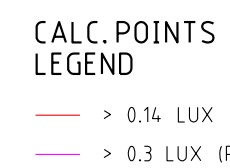





















Calculation Summary						
Label	CalcType	Units	Avg	Max	Min	Max/Avg
Milner Road	Illuminance	Lux	1.68	12.91	0.22	7.68

<p>MILNER ROAD, HIGH WYCOMBE</p> <p>DEMONSTRATION OF COMPLIANCE OF ILLUMINANCE & LUMINANCE TO AS1158.3.1 - PR5</p>			
Sheet	Of	3E Drawing Number	Revision
1	2	3E19102-04	2



Luminaire Schedule					
Symbol	Qty	Label	Mounting Type	Total Lamp Lumens	LLF
	3	EXISTING 42W CF	OVERHEAD POLE	3200	0.700
	2	EXISTING 80W MV	OVERHEAD POLE	3800	0.700
	1	EXISTING 125W MV	OVERHEAD POLE	6300	0.700
	2	EXISTING 150W HPS	12.5m WP POLE	14500	0.700
	2	EXISTING 250W HPS	12.5m WP POLE	28000	0.700
	4	PROPOSED 20W LED	OVERHEAD POLE	2300	0.800
	1	PROPOSED 20W LED UPGRADE	6.5m WP POLE	2300	0.800
	1	PROPOSED 36W LED	OVERHEAD POLE	4003	0.800
	1	PROPOSED 53W LED	OVERHEAD POLE	6104	0.800

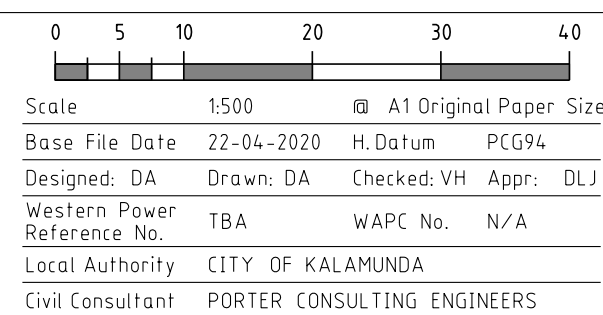
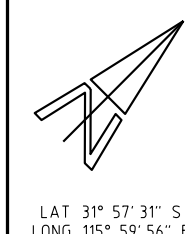
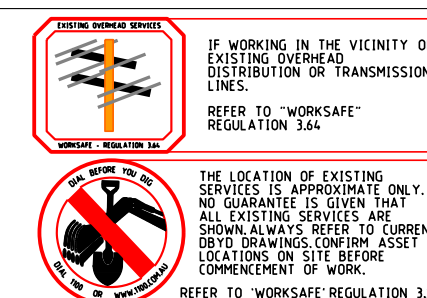
Calculation Summary						
Label	CalcType	Units	Avg	Max	Min	Max/Avg
Milner Road	Illuminance	Lux	1.98	12.91	0.31	6.52

2	PR5 - LOT 756 LIGHT POLE REMOVED;LUMINAIRE ADDED TO EX OH POLE. LUMINAIRE ARRANGEMENT AT SULTANA RD WEST UPDATED TO MATCH MP190326					17.06.2006	DA	VH	
1	ISSUED TO CLIENT FOR COMMENT					12.05.2008	DA	VH	
REV	DESCRIPTION					DATE	DRAWN	CHKD	



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Preliminary
Not For Construction



<p>MILNER ROAD, HIGH WYCOMBE</p> <p>DEMONSTRATION OF COMPLIANCE OF ILLUMINANCE & LUMINANCE TO AS1158.3.1 - PR3</p>			
Sheet	Of	3E Drawing Number	Revision
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Attachment 5:
Nardine Close Extension (Road 2A) – Stage 1 Drawings

FORRESTFIELD INDUSTRIAL AREA

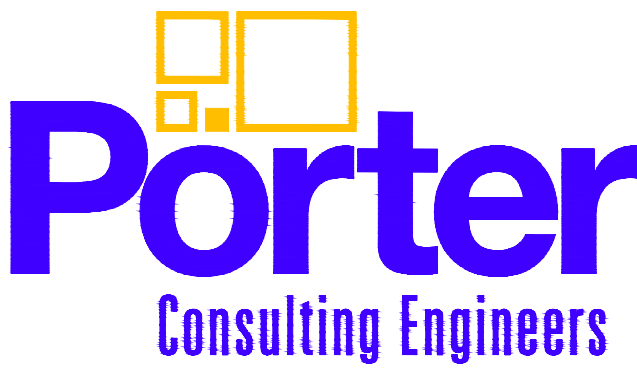
ROAD 2A – STAGE 1

NARDINE CLOSE EXTENSTION

TABLE OF CONTENTS

16-09-116/000	LOCALITY AND STAGING PLAN
16-09-116/100	SITEWORKS PLAN - STAGE 1
16-09-116/300	WATER RETICULATION PLAN - STAGE 1
16-09-116/400	ROADWORKS AND DRAINAGE LAYOUT PLAN - STAGE 1
16-09-116/410	ROAD LAYOUT AND LONGITUDINAL SECTION PLAN - STAGE 1
16-09-116/420	INTERSECTION DETAILS PLAN - STAGE 1
16-09-116/600	STANDARD DETAILS

CITY OF
KALAMUNDA



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JOB No. 16-9-116





ROAD NOTES

1. VERTICAL DATUM AUSTRALIAN HEIGHT DATUM (AHD)
2. SERVICES, SUCH AS SEWER, WATER, GAS, TELEPHONE, ELECTRICITY, AND DRAINAGE MAY BE ENCOUNTERED DURING CONSTRUCTION OF THE WORKS. SERVICES INFORMATION SHOWN ON DRAWINGS IS INDICATIVE ONLY AND MAY NOT BE COMPLETE. BEFORE EXCAVATION COMMENCES THE LOCATION OF ALL SUCH SERVICES SHALL BE OBTAINED FROM THE RELEVANT AUTHORITIES.
3. THE CONTRACTOR SHALL CO-ORDINATE THE LOCATION OF ALL EXISTING AND PROPOSED SERVICES PRIOR TO COMMENCEMENT OF WORK. ANY CONFLICTS ARE TO BE REPORTED TO THE ENGINEER IMMEDIATELY.
4. ALL WORKS TO BE CONSTRUCTED IN ACCORDANCE WITH THE PROJECT SPECIFICATION, BUT WHERE NO DETAIL PROVIDED, TO THE REQUIREMENTS OF THE LOCAL AUTHORITY.
5. CONTRACTOR SHALL PROVIDE ALL SIGNING, LIGHTING AND FLAGMEN NECESSARY TO ENSURE SAFETY OF THE PUBLIC AND OF THE WORKS.
6. LOCATE ALL LEVELS FROM EXISTING SURVEY MARKS. ALL SURVEY MARKS ARE TO BE PROTECTED.
7. EXISTING VERGES SHALL NOT BE DISTURBED BEYOND THE EXTENT OF WORK.
8. ALL FILL SHALL BE CLEAN NON PLASTIC MATERIAL FREE FROM VEGETATION AND OTHER DELETERIOUS MATERIAL AND CERTIFIED AS SUITABLE FOR RESIDENTIAL LANDUSE.
9. ALL FILL SHALL BE PLACED IN UNIFORM LAYERS NOT EXCEEDING 300mm THICKNESS AND COMPACTED TO A DENSITY NOT LESS THAN 95% MAXIMUM DRY DENSITY.
10. CONTRACTOR SHALL TIE IN OF NEW SURFACE TO FINISH FLUSH WITH EXISTING SURFACE.
11. ALL EDGE KERBING SHALL BE MOUNTABLE UNLESS OTHERWISE NOTED.
12. SIGN POSTS AND STREET NAME PLATES TO BE SUPPLIED AND INSTALLED TO LOCAL AUTHORITY REQUIREMENTS. CONTRACTOR SHALL FIT STREET NAME PLATES TO ADJACENT LIGHT POLES WHERE APPROPRIATE.
13. THE CONTRACTOR SHALL SPOT OUT THE LINE MARKING. THE CONTRACTOR SHALL ADVISE MAIN ROADS WHEN THE SITE IS READY FOR LINE MARKING AND SIGNAGE. INSTALLATION LINE MARKING AND SIGNING TO BE UNDERTAKEN BY MAIN ROADS.
14. THE CONTRACTOR SHALL PREPARE AS-CONSTRUCTED ROADS AND PATH DRAWINGS (INCLUDING SURVEY) TO THE SATISFACTION OF THE LOCAL AUTHORITY. AS CONSTRUCTED PLANS TO BE ISSUED TO THE ENGINEER FOR SIGNING AND PRESENTATION TO THE LOCAL AUTHORITY.
15. THE CONTRACTOR SHALL PREPARE AND PROVIDE ROAD AND PATH AS CONSTRUCTED DOCUMENTS IN 'R' SPEC FORMAT AS PER LOCAL AUTHORITY REQUIREMENTS.
16. IT IS DEEMED THAT THE AS CONSTRUCTED DOCUMENTS FORM PART OF THE WORKS. PRACTICAL COMPLETION CAN NOT BE AWARDED IF ACCEPTABLE AS CONSTRUCTED DOCUMENTS HAVE NOT BEEN PROVIDED TO THE ENGINEER.

PATH NOTES

1. ALL FOOTPATHS AND PEDESTRIAN RAMPS SHALL BE CONSTRUCTED TO LOCAL AUTHORITY STANDARD. ALL MATERIAL USED SHALL BE IN ACCORDANCE WITH LOCAL AUTHORITY STANDARD SPECIFICATION.
2. THE CONTRACTOR SHALL PROTECT ALL EXISTING WORKS, AND SUPPLY AND MAINTAIN ALL SAFETY DEVICES TO PROTECT VEHICLES, PEDESTRIANS AND THE WORKS.
3. UNLESS OTHERWISE SHOWN, ALL FOOTPATHS SHALL BE 1.5m WIDE WITH A 0.3m OFFSET FROM THE ROAD RESERVE BOUNDARY. FOOTPATHS ADJACENT TO RETAINING WALLS TO BE 1.8m WIDE AND LOCATED ON THE ROAD RESERVE BOUNDARY.
4. UNLESS OTHERWISE SHOWN, ALL DUAL USE PATHS TO BE 2.1m WIDE WITH A 0.3m OFFSET FROM THE ROAD RESERVE BOUNDARY. DUAL USE PATHS ADJACENT TO RETAINING WALLS TO BE 2.4m WIDE AND LOCATED ON THE ROAD RESERVE BOUNDARY.
5. UNLESS OTHERWISE SHOWN, ALL JOINTS SHALL BE SPACED IN ACCORDANCE WITH THE LOCAL AUTHORITY REQUIREMENTS. IF NOT AVAILABLE, THEY SHALL BE AS PER THE IPWEA REQUIREMENTS. JOINTS TO TIE IN WITH KERB JOINTS.
6. PRIOR TO PLACING CONCRETE THE BASE SHALL BE FREE FROM DELETERIOUS MATERIAL, UNIFORMLY COMPACTED TO 95% MAXIMUM DRY DENSITY AND LIGHTLY DAMPENED.
7. ALL CONCRETE WORK SHALL DEVELOP A MINIMUM COMPRESSIVE STRENGTH OF 32 MPa AT 28 DAYS.
8. THE FINAL SURFACE SHALL BE BROOM FINISHED AND ALL EDGES AND JOINTS TOOL FINISHED.
9. CONTRACTOR SHALL PROTECT THE FINISHED WORK FOR 24 HOURS AFTER THE CONCRETE HAS BEEN LAID, ANY DAMAGE SHALL BE MADE GOOD AT THE CONTRACTORS EXPENSE.

LEGEND

- PROPOSED ROAD/KERB
EXISTING ROAD/KERB
FUTURE ROAD/KERB
EXISTING RETAINING WALL
PROPOSED POST AND PANEL WALL
PROPOSED 'W' BEAM BARRIER
PROPOSED DRAINAGE STRUCTURE NUMBER
EXISTING DRAINAGE STRUCTURE NUMBER
PROPOSED DRAINAGE PIPE
EXISTING DRAINAGE PIPE
EXISTING SEWER PIPE
EXISTING WATER MAIN
EXISTING POWER LINE
EXISTING TELECOMMUNICATIONS
EXISTING OPTIC FIBRE
EXISTING GAS LINE
JUNCTION PIT (JP) 1050 U.N.O.
SIDE ENTRY PIT (SEP)
DOUBLE SIDE ENTRY PIT (DSEP)
DOUBLE GULLY PIT (DGP)
GULLY PIT (GP)
INVERT LEVEL UP STREAM
PIPE DIAMETER / GRADE
LENGTH
INVERT LEVEL DOWN STREAM
PROPOSED DUAL USE/FOOT PATH WITH KERB RAMP
PROPOSED STREET SIGN
PROPOSED HAZARD BOARD
PROPOSED PAVEMENT/KERBING WITH 2m TRANSITION
MOUNTABLE KERBING
FLUSH KERBING
SEMI-MOUNTABLE KERBING
REINFORCED FLUSH KERBING
MK
FK
SMK
RFK

It does not appear the DCS mastersheet includes a costing table for Nadine Close, Stage 1



PROJECT:
**FORRESTFIELD INDUSTRIAL AREA
ROAD 2A - STAGE 1**

No	DATE	REVISION
0	21-12-2018	ISSUED FOR TENDER
1	19-1-2017	SPLIT INTO 2 STAGES, NOTES ADDED
2	16-1-2016	PATH SHIFTED TO PROPERTY BOUNDARY
3	13-12-2016	ROAD NAMES ADDED, PROJECT TITLE CHANGE, ROCK PITCHING ADDED
4	8-12-2016	DESIGN CONTOURS AND TEMPORARY TURNAROUNDS ADDED
5	6-12-2016	ROAD RESERVE WIDTHS AMENDED, ROAD LAYOUT AMENDED TO SUIT
6	24-10-2016	ISSUED FOR APPROVAL

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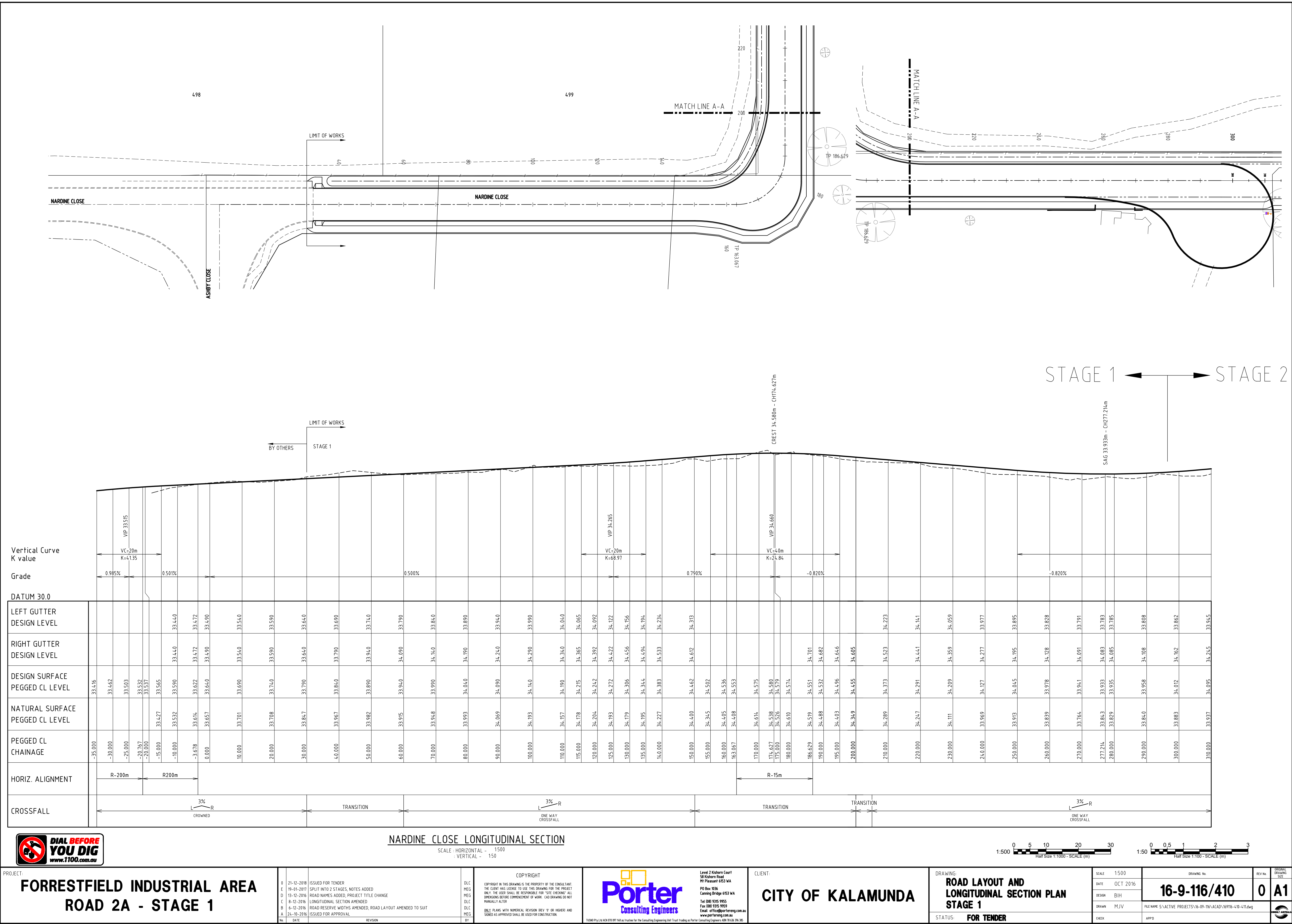
Level 2 Richmond Court
38 Richmore Road
M/ Pleasant Hill SA
PO Box 1036
Canning Bridge 4153 WA
Tel 080 515 9555
Fax 080 515 9559
Email office@portereng.com.au
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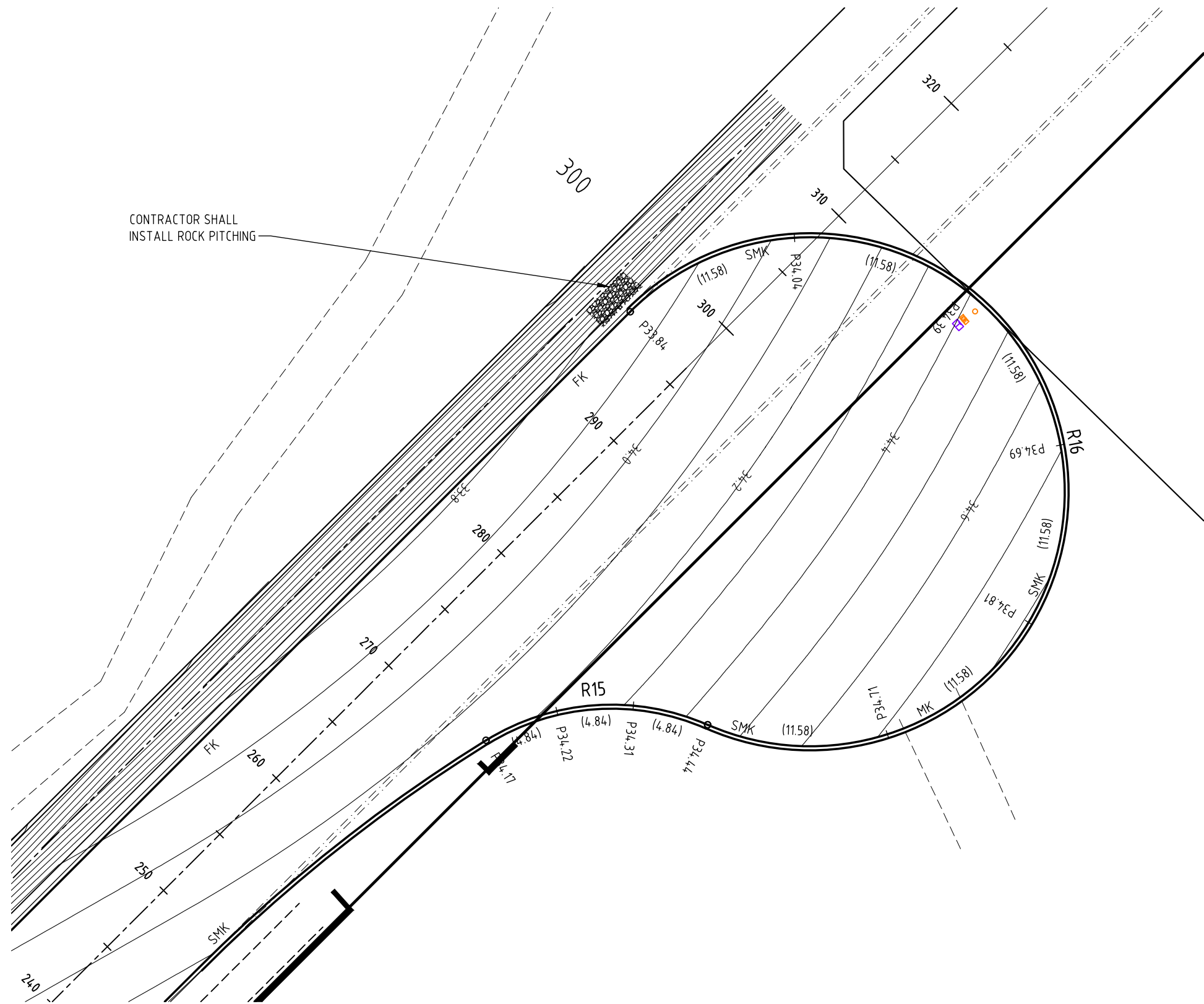
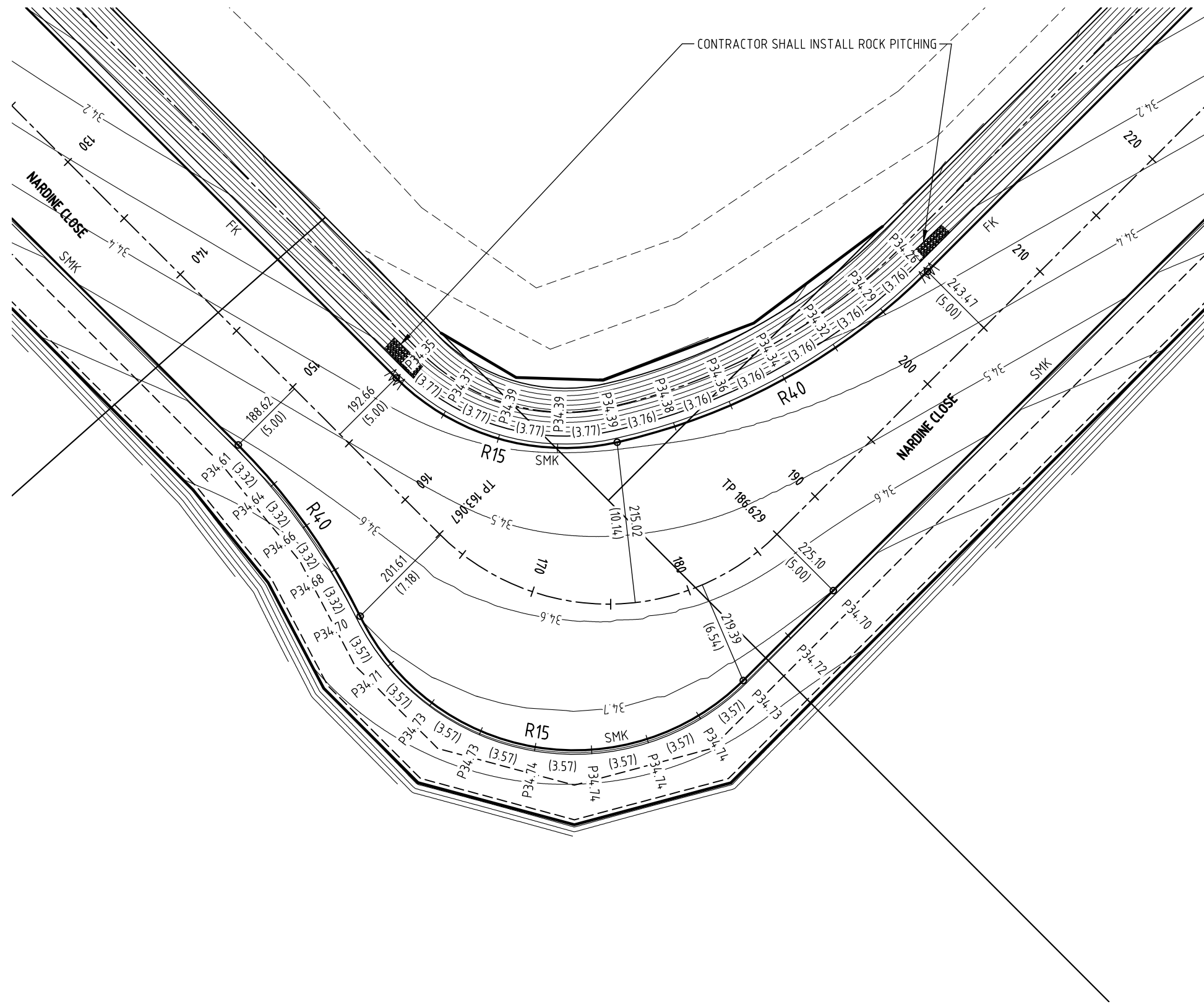
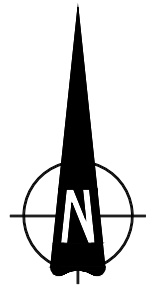
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CITY OF KALAMUNDA

DRAWING:
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DRAINAGE LAYOUT PLAN
STAGE 1**
STATUS: **FOR TENDER**

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DESIGN	BIH
DRAWN	MJV
CHECK	APPD

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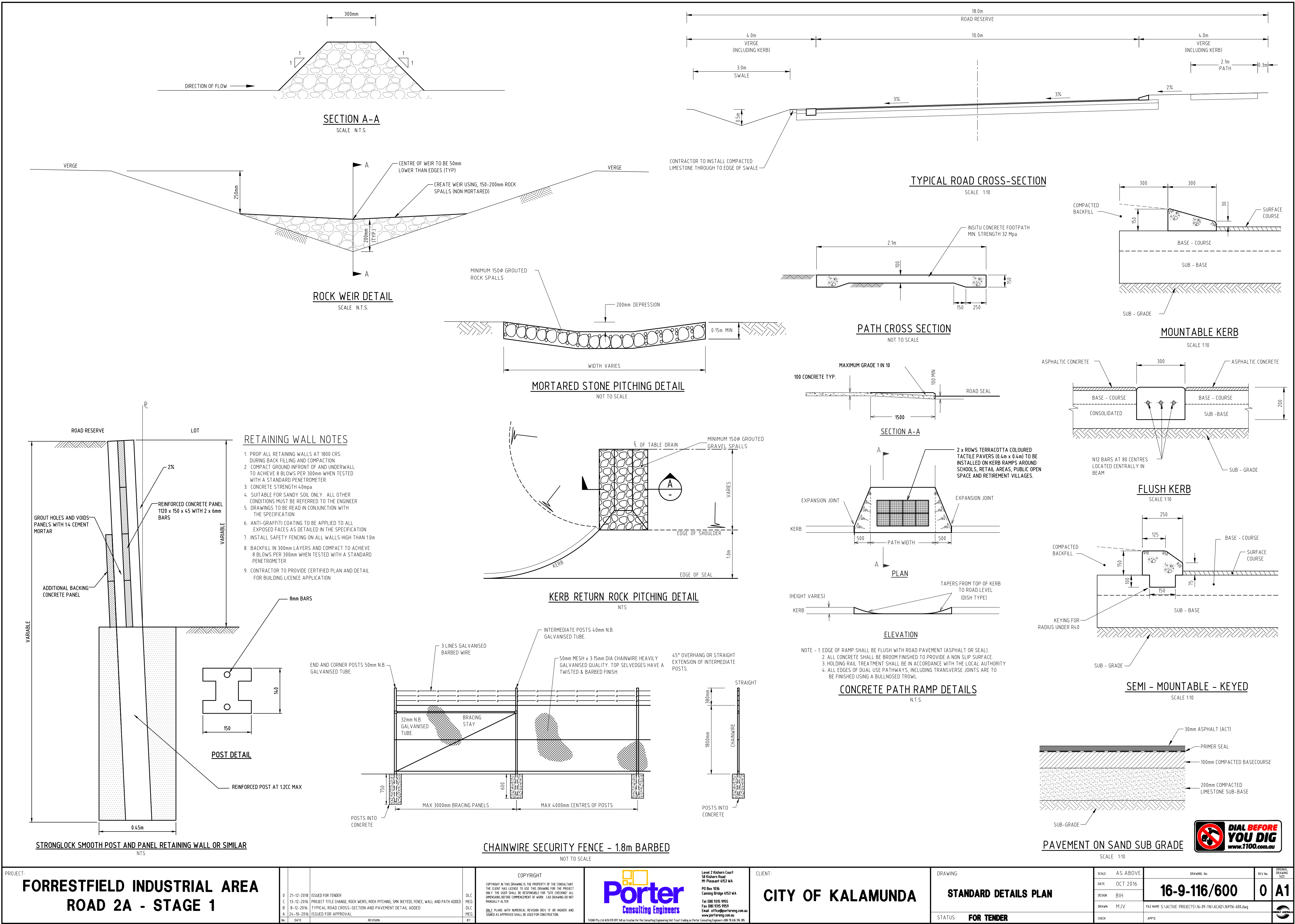


LEGEND

- PROPOSED ROAD/KERB
- MK MOUNTABLE KERBING
- FK FLUSH KERBING
- SMK SEMI-MOUNTABLE KERBING
- RFK REINFORCED FLUSH KERBING
- PROPOSED PAVEMENT /KERBING WITH 2m TRANSITION



PROJECT: FORRESTFIELD INDUSTRIAL AREA ROAD 2A - STAGE 1		COPYRIGHT COPYRIGHT IN THIS DRAWING IS THE PROPERTY OF THE CONSULTANT. THE CLIENT HAS LICENSE TO USE THIS DRAWING FOR THE PROJECT ONLY. THE USER SHALL BE RESPONSIBLE FOR "SITE CHECKING" ALL DIMENSIONS BEFORE COMMENCEMENT OF WORK. LOCAL DRAWING DO NOT MANUALLY ALTER. ONLY PLANS WITH NUMERICAL REVISION (REV 12 OR HIGHER) AND SIGNED AS APPROVED SHALL BE USED FOR CONSTRUCTION.		CLIENT: CITY OF KALAMUNDA		DRAWING: INTERSECTION DETAILS PLAN STAGE 1		SCALE: 1:250		DRAWING NO.: 16-9-116/420		REV NO.: 0		TOTAL DRAWING SIZE: A1	
STATUS: FOR TENDER		DATE: DEC 2016		DESIGN: DLC		DRAWN: DLC		CHECK: APPD		FILE NAME: S:\ACTIVE PROJECTS\16-09-16\ACAD\169116-420-421.dwg					

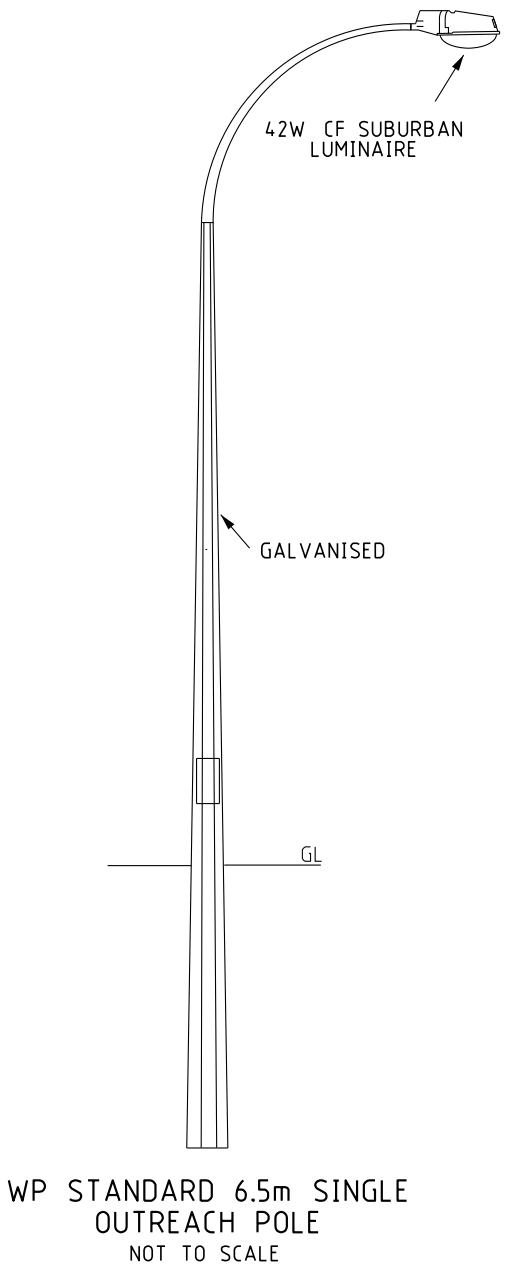


CONTRACTOR NOTES:

- DRAWING TO BE READ IN CONJUNCTION WITH CONTRACT DRAWINGS AND SPECIFICATIONS.
- ALL WORKS TO BE COMPLETED IN LINE WITH WESTERN POWER POLICIES, INCLUDING THE UDS, WADCM, DDC, DSM, DCSH, UCIM AND EARTHING FAQ.
- VERIFY ALL MATERIAL QUANTITIES AGAINST SITE CONDITIONS PRIOR TO QUOTATION AND ADVISE ELECTRICAL CONSULTANTS OF ANY VARIATIONS.
- SHOW CAUTION IN PROXIMITY TO EXISTING ASSETS. ALWAYS REFER TO CURRENT DBYD DRAWINGS, POT HOLE TO LOCATE IF NECESSARY. PROTECT SERVICES AS REQUIRED. APPLY FOR NECESSARY VICINITY ACCESS PERMITS AND OUTAGES WHERE REQUIRED. DO NOT ENCROACH MINIMUM APPROACH DISTANCES FOR UNDERGROUND OR OVERHEAD ASSETS.
- LIAISE WITH WESTERN POWER AS REQUIRED. ORGANISE PRE-HANDOVER INSPECTION AND ENERGISATION SCHEDULE WITH WESTERN POWER PRIOR TO COMPLETION OF WORKS. WHERE REQUIRED FOR COMPLEX INTERFACE PROJECTS, ORGANISE A PRE-START SITE MEETING WITH WESTERN POWER.
- ARRANGE WITH 3E FOR ELECTRONIC AS CONSTRUCTED DRAWING COMPLETION AND SUBMISSION TO WESTERN POWER.
- MAKE ALLOWANCE FOR TERRACING OF CABLES WHERE REQUIRED, INCLUDING FOR ROAD CROSSINGS.
- CLEAN BEDDING SAND TO BE IMPORTED FOR CABLE TRENCHES WHERE EXISTING MATERIALS DO NOT MEET WP REQUIREMENTS.
- PLAN CABLE RUNS TO LIMIT THE NUMBER OF STRAIGHT JOINTS.
- COMMENCE LAYING CABLES FROM THE TRANSFORMER, SWITCHGEAR OR UNIVERSAL PILLAR.
- ALL CABLES LAID NEXT TO RETAINING WALLS TO BE IN CONDUIT.
- INSTALL HEATSHRINK "END CAP" AT ALL CABLE ENDS.
- INSTALL HEATSHRINK GLOVES ON ALL LV CABLE TERMINATION ENDS.
- STREETLIGHT POLES MUST NOT BE INSTALLED IN FOOTPATHS. PEG POLES LOCATIONS PRIOR TO INSTALL AND NOTIFY 3E OF CLASHES IN ADVANCE.
- ERECT LIGHT POLES ONLY AFTER NEARBY EXISTING OVERHEAD POWERLINES ARE REMOVED, WHERE NOTED.
- BORE UNDER EXISTING ROADS.
- CONTRACTOR TO LEAVE SUFFICIENT CABLE COILED AT ALL INTERFACE POINTS (INCLUDING JOINTS, PILLAR TERMINATIONS & POLE TERMINATIONS) TO ALLOW WP TO COMPLETE INTERFACE WORKS. INSTALL END CAPS TO PROTECT CABLE.
- HV FEEDER CABLES TO BE INSTALLED AT MINIMUM COVER OF 120mm TO ALLOW REQUIRED SEPARATIONS TO BE ACHIEVED TO FUTURE LV CABLES.

WESTERN POWER SCOPE OF WORKS

- Ⓐ WP TO COST TO CARRY OUT TERMINATION OF NEW 240LV CABLE TO UNI PILLAR LOT 4 AND CONFIGURE AS SHOWN. WP TO SUPPLY ALL MATERIALS AND CARRY OUT ALL ASSOCIATED WORKS.
- Ⓑ WP TO COST TO CARRY OUT TERMINATION OF NEW 16SL CABLE TO UNI PILLAR LOT 4. WP TO SUPPLY ALL TERMINATION AND CARRY OUT ALL ASSOCIATED WORKS.



NOTE:
6.5m STANDARD SINGLE OUTREACH POLE WITH SUBURBAN 42W CF LAMP TO BE GALVANISED
ALL STREETLIGHT CABLE TO BE IN CONDUIT IF OUTSIDE WP ALIGNMENT.

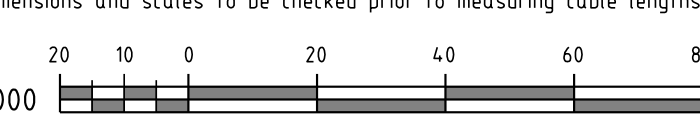
WP STREETLIGHTS TO BE LOCATED IN-LINE WITH COMMON LOT BOUNDARY ON 2.7m ALIGNMENT, UNLESS NOTED OTHERWISE.

STREETLIGHT POLE LOCATION

WP STREETLIGHTS ON STREET CORNERS TO BE LOCATED EQUIDISTANT FROM TRUNC POINTS 2.7m FROM LOT BOUNDARY, UNLESS NOTED OTHERWISE.

STREETLIGHT POLE LOCATION - CORNERS

ARROW DENOTES DIRECTION TO PEG WITH WHICH DUCTS ARE TO BE ALIGNED
DUCTS TO BE LAID TO WP SPECIFICATION AS OUTLINED IN UNDERGROUND DISTRIBUTION SCHEMES MANUAL - POLICY AND INSTALLATION OPTIONS
DENOTES PREVIOUSLY REQUESTED DUCTS



LEGEND

SCHEME BDY. ---
RETAINING WALL ---
RETAINING WALL EXTRA FOOTING ---

HV CABLES

- CNS3 - 400mm² (3X1c)
- CNS4 - 240mm² (3X1c)
- CNS5 - 185mm² (3X1c)
- CNS6 - 95mm² (3X1c)
- CNS7 - 50mm² (3X1c)
- CNS8 - 25mm² (1c)
- CNS9 - 35mm² (3X1c)
- CNS10 - 35mm² (1c)

LV-SL CABLES

- CNS1 - 240mm² (1c)
- CNS2 - 185mm² (1c)
- CNS3 - 120mm² (1c)
- CNS4 - 25mm² (1c)
- CNS5 - 16mm² SL (1c)
- 40 C PILOT

EXISTING HV CABLES
ISIZE AND TYPE INDICATED

EXISTING LV CABLES
ISIZE AND TYPE INDICATED

STREET LIGHTS

- 42w CFL
- 10/75w MH
- 70w HPS
- 18w LED
- 80w MV
- 150w MH
- 150w HPS
- 250w MH
- 250w HPS

LEGEND DEFINES TYPE & WATTAGE - NOT COLOUR

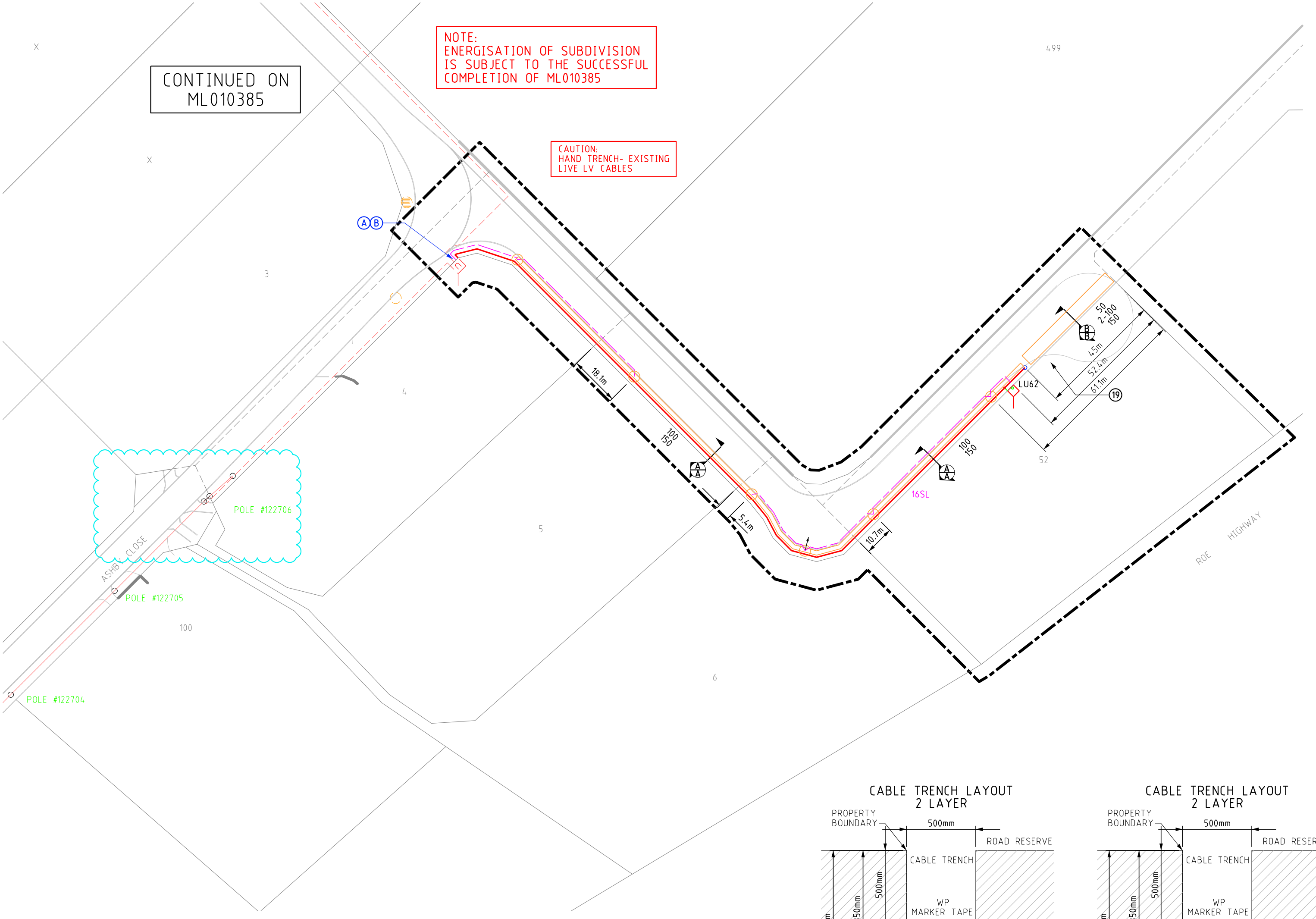
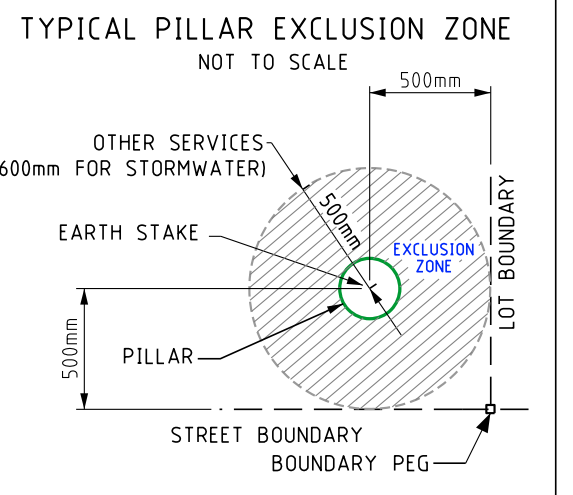
PILLARS / PITS / ETC

- MINI (WORKING END)
- UNIVERSAL
- MINI
- LINK
- CABLE MARKER U/G
- UMS PIT
- UTILITIES PIT
- 100/200AMP CUTOFF
- CONDUIT / POLY PIPE

TRANSFORMERS **SWITCHGEAR**

AERIAL CONDUCTORS AND POLES

- NEW POLE (ANY TYPE AS INDICATED)
- EXISTING POLE (ANY TYPE AS INDICATED)
- EXISTING AERIAL CONDUCTORS (SIZE AND TYPE INDICATED)





283

284

Attachment 6:
Nardine Close Extension (Road 2A) – Stage 2 Drawings

NADINE CLOSE

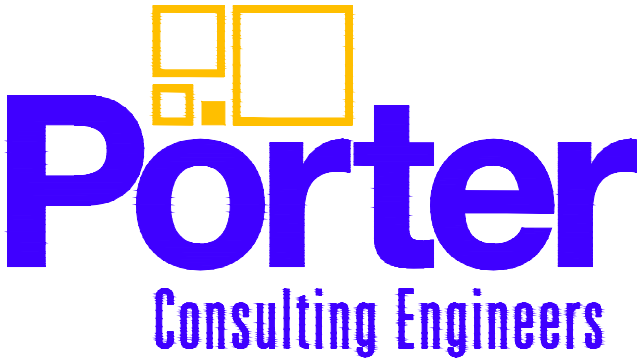
FORRESTFIELD

STAGE 2

TABLE OF CONTENTS

16-09-116/000	LOCALITY AND STAGING PLAN
16-09-116/101	SITEWORKS PLAN - STAGE 2
16-09-116/301	WATER RETICULATION PLAN - STAGE 2
16-09-116/401	ROADWORKS AND DRAINAGE LAYOUT PLAN - STAGE 2
16-09-116/411	ROAD LAYOUT AND LONGITUDINAL SECTION PLAN - STAGE 2
16-09-116/421	INTERSECTION DETAILS PLAN - STAGE 2
16-09-116/600	STANDARD DETAILS

**SHIRE OF
KALAMUNDA**



TUSNO Pty Ltd ACN 070 097 148 as trustee for the Consulting Engineering Unit Trust
trading as Porter Consulting Engineers ABN 78 636 396 385















Level 2 Kishorn Court
58 Kishorn Road
Mt Pleasant 6153 WA

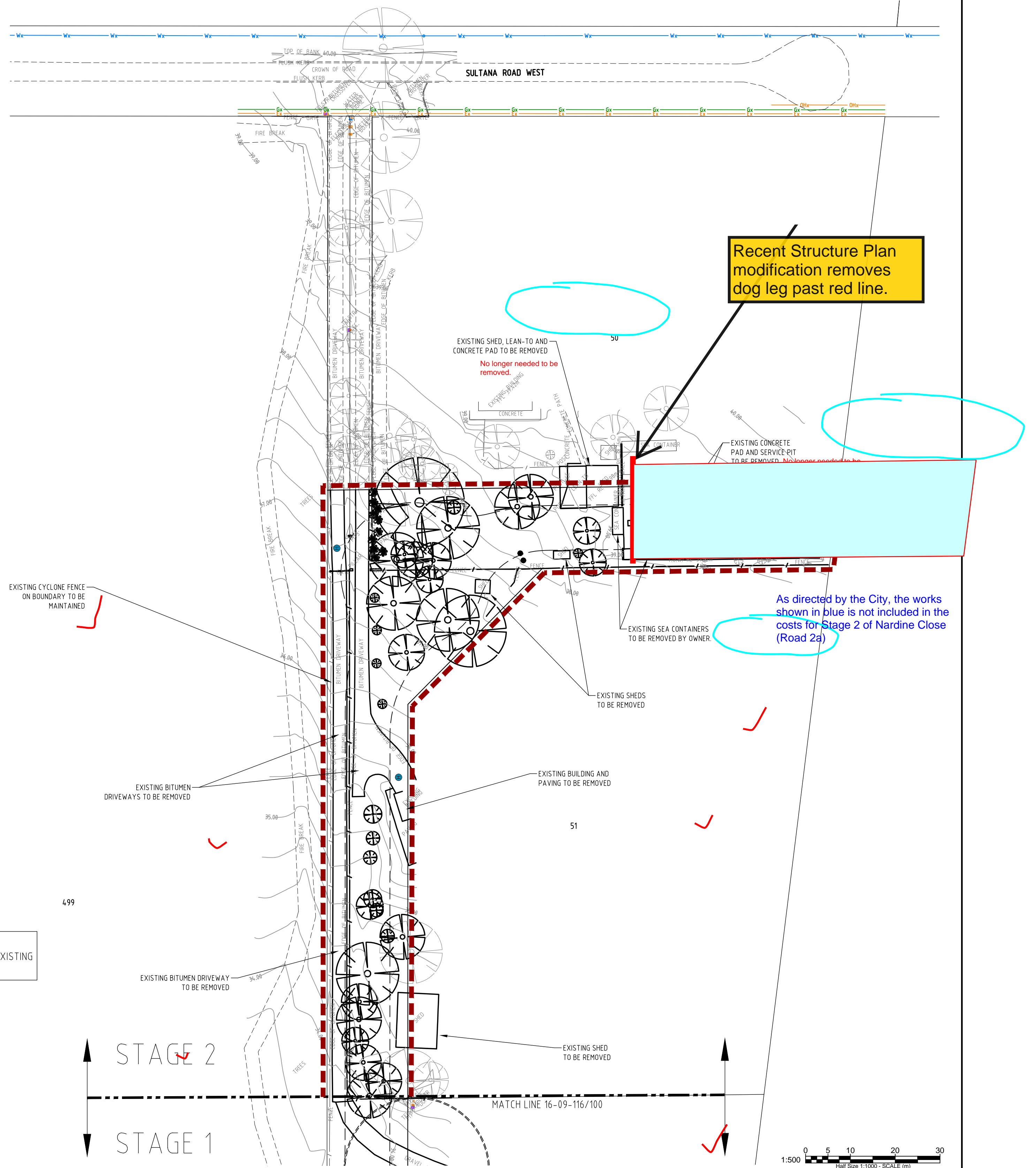
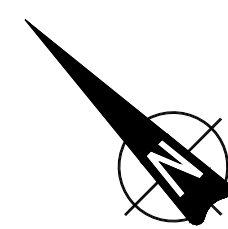
PO Box 1036
Canning Bridge 6153 WA

Tel (08) 9315 9955
Fax (08) 9315 9959
Email office@portereng.com.au
www.portereng.com.au

JOB No. 16-9-116

LEGEND

- | | |
|-----------------------------------------------------------------------------------|--------------------------------|
|  | EXISTING GROUND CONTOUR |
|  | EXISTING GROUND SPOT LEVEL |
|  | SITEWORK'S BOUNDARY |
|  | EXISTING RETAINING WALL |
|  | EXISTING FENCE |
|  | EXISTING FENCE - TO BE REMOVED |
|  | EXISTING SEWER |
|  | EXISTING WATER |
|  | EXISTING POWER |
|  | EXISTING TELECOMMUNICATIONS |
|  | EXISTING GAS |
|  | EXISTING DRAINAGE |
|  | EXISTING TREES |
|  | EXISTING TREES - TO BE REMOVED |



NOTE
CONTRACTOR TO LOCATE AND PROTECT EXISTING
DOMESTIC SERVICES TO LOTS 51 AND 52



**NADINE CLOSE
FORRESTFIELD**

PROJECT:	NADINE CLOSE FORRESTFIELD				<div><div><div></div><div></div><div></div></div><div>Porter Consulting Engineers</div></div>	<div>Level 2 Wilson Court 58 Kalamunda Road M9 Pleasant 653 WA</div> <div>PO Box 1036 Canning Bridge 6153 WA</div> <div>Tel: 080 555 5555 Fax: 080 555 5559 Email: enquiries@portereng.com.au www.portereng.com.au</div> <div>TIGARD Pty Ltd ACN 078 887 541 is a trustee for The Consulting Engineering's Trust trading as Porter Consulting Engineers 080 555 5555</div>	CLIENT: SHIRE OF KALAMUNDA	<div>DRAWING: SITEWORKS PLAN STAGE 2</div> <div>SCALE: 1:500 DATE: OCT 2016 DESIGN: BH DRAWN: MJV</div>	<div>DRAWING No: 16-9-116/101</div> <div>REV No: D</div> <div>REVISION: A1</div> <div>FILE NAME: S:\ACTIVE PROJECTS\16-09-16\NADAD\16-100-101.dwg</div> <div>STATUS: FOR TENDER</div> <div>CHECK: APPD</div>	<div>SCALE: 1:500 DATE: OCT 2016 DESIGN: BH DRAWN: MJV</div> <div>FILE NAME: S:\ACTIVE PROJECTS\16-09-16\NADAD\16-100-101.dwg</div> <div>STATUS: FOR TENDER</div> <div>CHECK: APPD</div>	<div>SCALE: 1:500 DATE: OCT 2016 DESIGN: BH DRAWN: MJV</div> <div>FILE NAME: S:\ACTIVE PROJECTS\16-09-16\NADAD\16-100-101.dwg</div> <div>STATUS: FOR TENDER</div> <div>CHECK: APPD</div>
	<div>C 19-01-2017 SPLIT INTO 2 STAGES, NOTES ADDED</div> <div>B 19-02-2016 PROJECT TITLE CHANGE</div> <div>B 4-02-2016 ROAD RESERVE NOTES AMENDED</div> <div>A 24-10-2016 ISSUED FOR APPROVAL</div>	MEG MEG DLC MEG	REVISION	BY	ONLY PLANS WITH NUMERICAL REVISION 'R' (IF REQUIRED) AND SOMEAS AS APPROVED SHALL BE USED FOR CONSTRUCTION.						



PATH NOTES

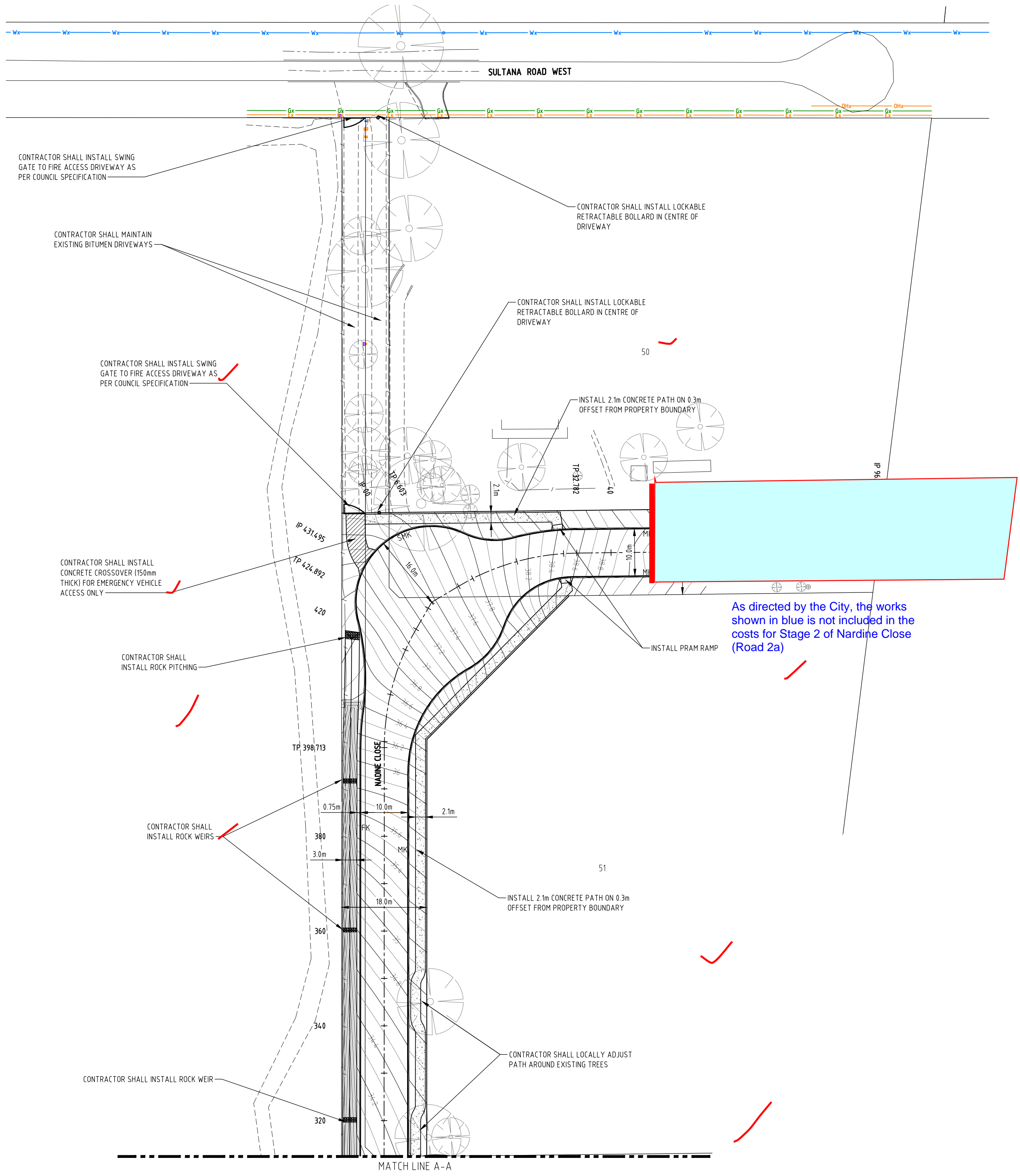
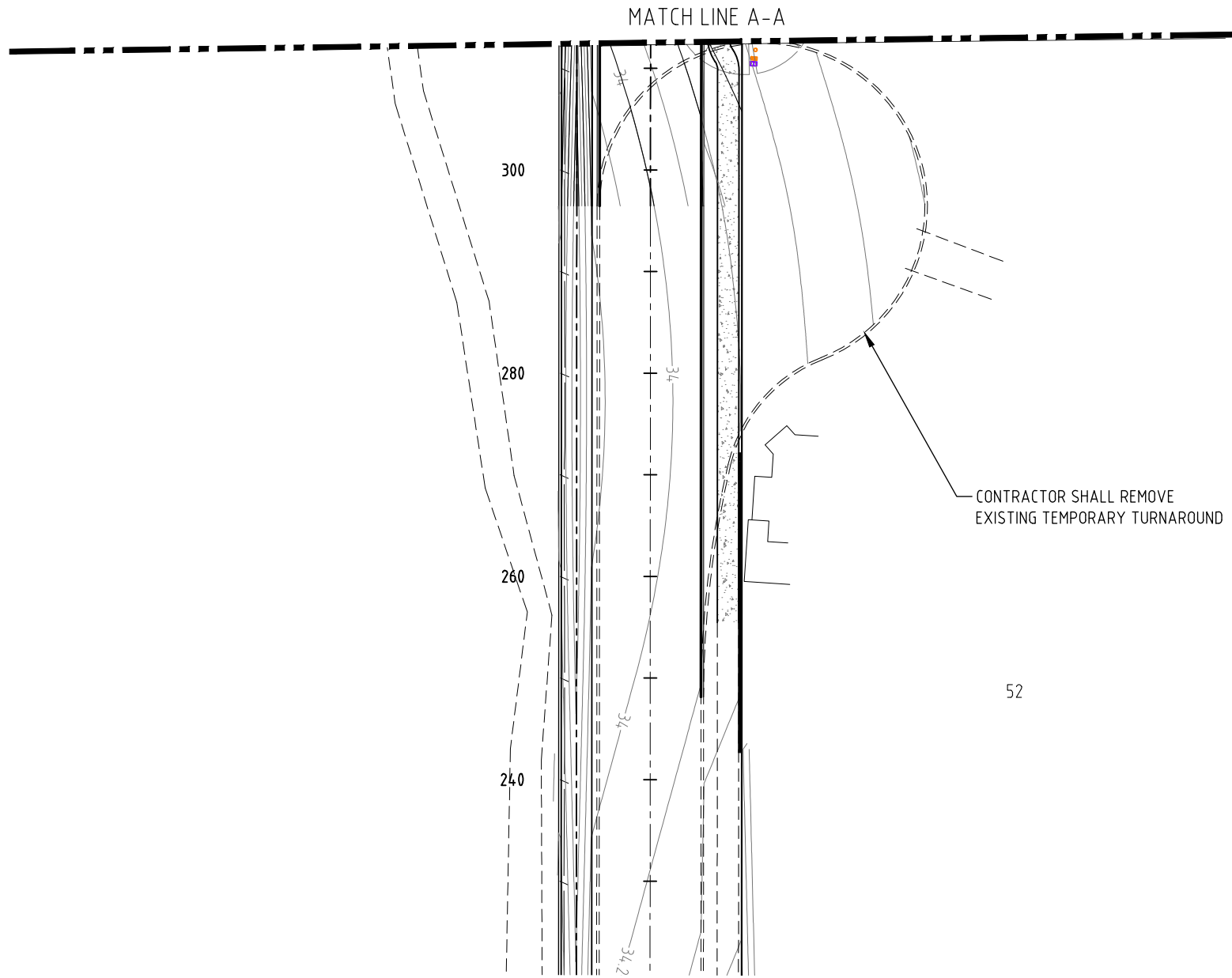
1. ALL FOOTPATHS AND PEDESTRIAN RAMPS SHALL BE CONSTRUCTED TO LOCAL AUTHORITY STANDARD. ALL MATERIAL USED SHALL BE IN ACCORDANCE WITH LOCAL AUTHORITY STANDARD SPECIFICATION.
2. THE CONTRACTOR SHALL PROTECT ALL EXISTING WORKS, AND SUPPLY AND MAINTAIN ALL SAFETY DEVICES TO PROTECT VEHICLES, PEDESTRIANS AND THE WORKS.
3. UNLESS OTHERWISE SHOWN, ALL FOOTPATHS SHALL BE 1.5m WIDE WITH A 0.3m OFFSET FROM THE ROAD RESERVE BOUNDARY. FOOTPATHS ADJACENT TO RETAINING WALLS TO BE 8m WIDE AND LOCATED ON THE ROAD RESERVE BOUNDARY.
4. UNLESS OTHERWISE SHOWN, ALL DUAL USE PATHS TO BE 2.1m WIDE WITH A 0.3m OFFSET FROM THE ROAD RESERVE BOUNDARY. DUAL USE PATHS ADJACENT TO RETAINING WALLS TO BE 2.4m WIDE AND LOCATED ON THE ROAD RESERVE BOUNDARY.
5. UNLESS OTHERWISE SHOWN, ALL JOINTS SHALL BE SPACED IN ACCORDANCE WITH THE LOCAL AUTHORITY REQUIREMENTS. IF NOT AVAILABLE, THEY SHALL BE AS PER THE IPWEA REQUIREMENTS. JOINTS TO TIE IN WITH KERB JOINTS.
6. PRIOR TO PLACING CONCRETE THE BASE SHALL BE FREE FROM DELTERIOUS MATERIAL, UNIFORMLY COMPACTED TO 95% MAXIMUM DRY DENSITY AND LIGHTLY DAMPENED.
7. ALL CONCRETE WORK SHALL DEVELOP A MINIMUM COMPRESSIVE STRENGTH OF 32 MPa AT 28 DAYS.
8. THE FINAL SURFACE SHALL BE BROOM FINISHED AND ALL EDGES AND JOINTS TOOL FINISHED.
9. CONTRACTOR SHALL PROTECT THE FINISHED WORK FOR 24 HOURS AFTER THE CONCRETE HAS BEEN LAID, ANY DAMAGE SHALL BE MADE GOOD AT THE CONTRACTORS EXPENSE.

LEGEND

- ===== PROPOSED ROAD/KERB
===== EXISTING ROAD/KERB
---w--- PROPOSED 'w' BEAM BARRIER
SEP 2-45 PROPOSED DRAINAGE STRUCTURE NUMBER
SEP 3-05 EXISTING DRAINAGE STRUCTURE NUMBER
----- PROPOSED DRAINAGE PIPE
----- EXISTING DRAINAGE PIPE
----- EXISTING SEWER PIPE
----- EXISTING WATER MAIN
----- EXISTING POWER LINE
----- EXISTING TELECOMMUNICATIONS
----- EXISTING OPTIC FIBRE
----- EXISTING GAS LINE
● JUNCTION PIT (JP) 1050 U.N.O.
SIDE ENTRY PIT (SEP)
DOUBLE SIDE ENTRY PIT (DSEP)
DOUBLE GULLY PIT (DGP)
GULLY PIT (GP)
U/S 42.95 INVERT LEVEL UP STREAM
450/1400 PIPE DIAMETER / GRADE
14 LENGTH
D/S 42.96 INVERT LEVEL DOWN STREAM
----- PROPOSED DUAL USE/FOOT PATH WITH KERB RAMP
● PROPOSED STREET SIGN
● PROPOSED HAZARD BOARD
----- PROPOSED PAVEMENT/KERBING WITH 2m TRANSITION
MK MOUNTABLE KERBING
FK FLUSH KERBING
SMK SEMI-MOUNTABLE KERBING
RFK REINFORCED FLUSH KERBING
○ LOCKABLE RETRACTABLE BOLLARD
▽ SWING GATE

ROAD NOTES

1. VERTICAL DATUM : AUSTRALIAN HEIGHT DATUM (AHD)
2. HORIZONTAL DATUM : PERTH COASTAL GRID 1994 (PCG94)
3. SERVICES, SUCH AS SEWER, WATER, GAS, TELEPHONE, ELECTRICITY, AND DRAINAGE MAY BE ENCOUNTERED DURING CONSTRUCTION OF THE WORKS. SERVICES INFORMATION SHOWN ON DRAWINGS IS INDICATIVE ONLY AND MAY NOT BE COMPLETE. BEFORE EXCAVATION COMMENCES THE LOCATION OF ALL SUCH SERVICES SHALL BE OBTAINED FROM THE RELEVANT AUTHORITIES.
4. THE CONTRACTOR SHALL CO-ORDINATE THE LOCATION OF ALL EXISTING AND PROPOSED SERVICES PRIOR TO COMMENCEMENT OF WORK. ANY CONFLICTS ARE TO BE REPORTED TO THE ENGINEER IMMEDIATELY.
5. ALL WORKS TO BE CONSTRUCTED IN ACCORDANCE WITH THE PROJECT SPECIFICATION, BUT WHERE NO DETAIL PROVIDED, TO THE REQUIREMENTS OF THE LOCAL AUTHORITY.
6. CONTRACTOR SHALL PROVIDE ALL SIGNING, LIGHTING AND FLAGMEN NECESSARY TO ENSURE SAFETY OF THE PUBLIC AND OF THE WORKS.
7. LOCATE ALL LEVELS FROM EXISTING SURVEY MARKS. ALL SURVEY MARKS ARE TO BE PROTECTED.
8. EXISTING VERGES SHALL NOT BE DISTURBED BEYOND THE EXTENT OF WORK.
9. ALL FILL SHALL BE CLEAN NON PLASTIC MATERIAL FREE FROM VEGETATION AND OTHER DELETERIOUS MATERIAL AND CERTIFIED AS SUITABLE FOR RESIDENTIAL LANDUSE.
10. ALL FILL SHALL BE PLACED IN UNIFORM LAYERS NOT EXCEEDING 300mm THICKNESS AND COMPACTED TO A DENSITY NOT LESS THAN 95% MAXIMUM DRY DENSITY.
11. CONTRACTOR SHALL TIE IN OF NEW SURFACE TO FINISH FLUSH WITH EXISTING SURFACE.
12. ALL EDGE KERBING SHALL BE MOUNTABLE UNLESS OTHERWISE NOTED.
13. SIGN POSTS AND STREET NAME PLATES TO BE SUPPLIED AND INSTALLED TO LOCAL AUTHORITY REQUIREMENTS. CONTRACTOR SHALL FIT STREET NAME PLATES TO ADJACENT LIGHT POLES WHERE APPROPRIATE.
14. THE CONTRACTOR SHALL SPOT OUT THE LINE MARKING. THE CONTRACTOR SHALL ADVISE MAIN ROADS WHEN THE SITE IS READY FOR LINEMARKING AND SIGNAGE INSTALLATION. LINE MARKING AND SIGNING TO BE UNDERTAKEN BY MAIN ROADS.
15. THE CONTRACTOR SHALL PREPARE AS-CONSTRUCTED ROADS AND PATH DRAWINGS (INCLUDING SURVEY) TO THE SATISFACTION OF THE LOCAL AUTHORITY. AS CONSTRUCTED PLANS TO BE ISSUED TO THE ENGINEER FOR SIGNING AND PRESENTATION TO THE LOCAL AUTHORITY.
16. THE CONTRACTOR SHALL PREPARE AND PROVIDE ROAD AND PATH AS CONSTRUCTED DOCUMENTS IN 'R' SPEC FORMAT AS PER LOCAL AUTHORITY REQUIREMENTS.
17. IT IS DEEMED THAT THE AS CONSTRUCTED DOCUMENTS FORM PART OF THE WORKS. PRACTICAL COMPLETION CAN NOT BE AWARDED IF ACCEPTABLE AS CONSTRUCTED DOCUMENTS HAVE NOT BEEN PROVIDED TO THE ENGINEER.



NADINE CLOSE
FORRESTFIELD

NO.	DATE	REVISION
G	19-01-2017	SPLIT INTO 2 STAGES, NOTES ADDED
F	16-1-2016	PATH SHIFTED TO PROPERTY BOUNDARY
E	19-12-2016	SWING GATES ADDED TO FIRE ACCESS DRIVEWAY
D	13-12-2016	ROAD NAMES ADDED, PROJECT TITLE CHANGE, ROCK PITCHING ADDED
C	8-12-2016	DESIGN CONTOURS ADDED
B	4-12-2016	ROAD RESERVE WIDTHS AMENDED, ROAD LAYOUT AMENDED TO SUIT
A	24-10-2016	ISSUED FOR APPROVAL

BY	DATE	REVISION
MEG		
MEG		
MEG		
DLC		
MEG		

Porter
Consulting Engineers

Level 2 Kalamunda Court
18 Kalamunda Road
PO Box 4053 WA
PO Box 1036
Canning Bridge 4153 WA
Tel (08) 9315 9955
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www.portereng.com.au

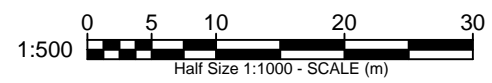
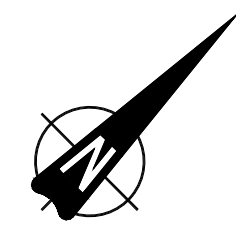
100MPhy 100A0N 001 001 100A as provided for the Consulting Engineering Unit Trust trading as Porter Consulting Engineers 40N 100 001 001 100 001

SHIRE OF KALAMUNDA

DRAWING:	ROADWORKS AND DRAINAGE LAYOUT PLAN STAGE 2
STATUS:	FOR TENDER

SCALE	1:500
DATE	OCT 2016
DESIGN	BIH
DRAWN	MJV
CHECK	APPS

DRAWING NO.	REV NO.
16-9-116/401	G A1
FILE NAME	S:\ACTIVE PROJECTS\N-09-116\ACAD\N9116-401-401.dwg
APPS	



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MEG
DLC
DLC
MEG
BY

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ONLY PLANS WITH NUMERICAL REVISION (REV 10" OR HIGHER) AND SIGNED AS APPROVED SHALL BE USED FOR CONSTRUCTION.


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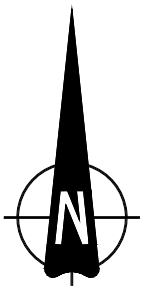
SHIRE OF KALAMUNDA

STATUS: **FOR TENDER**

ORIGINAL
DRAWING
SIZE

A1

 CONSULT AUSTRALIA



CONTRACTOR SHALL INSTALL MOUNTABLE KERBING IN FRONT OF CROSSOVER

	PROPOSED ROAD/KERB
MK	MOUNTABLE KERBING
FK	FLUSH KERBING
SMK	SEMI-MOUNTABLE KERBING
RFK	REINFORCED FLUSH KERBING
PA	PROPOSED PAVEMENT/KERBING WITH 2m TRANSITION

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Attachment 7:

Nardine Close extension (Road 2A) – Adjusted Construction Contract amount

- Progress Certificate 4 (L153.19)

Our Ref: BH/JK/L153.19
Job No: 16-09-116

16 August 2019

City of Kalamunda
PO Box 42
KALAMUNDA, WA 6926

Attention: Graeme Budge

Dear Graeme

**FORRESTFIELD INDUSTRIAL AREA – ROAD 2A – STAGE 1
PAYMENT CERTIFICATE 4**

We enclose Valuation of Works Certificate No. 4 in favour of RJ Vincent for work completed to 13 August 2019, for the above project.

We have assessed the claim for the work completed and recommend payment of \$62,415.23 inclusive of GST, direct to RJ Vincent in accordance with the requirements of the contract.

We also enclose Variation Order No.3 for your records.

RJ Vincent has provided a bank guarantee in lieu of cash retention. The original copy of the guarantee is held at the offices of the City of Kalamunda, and can be released at the expiry of the 12 month defect liability period, once a Final Certificate is issued.

RJ Vincent has also provided a Statutory Declaration. A copy of the declaration is enclosed for your records.

RJ Vincent has been requested to forward an invoice to you direct for payment.

Yours faithfully



**BRAD HARRIS
MANAGING DIRECTOR**

Enc.

cc: Chris Mania – RJ Vincent



Level 2 Kishorn Court
58 Kishorn Road
Mount Pleasant WA 6153

PO Box 1036
Canning Bridge WA 6153

Tel: (08) 9315 9955
Fax: (08) 9315 9959
Email: office@portereng.com.au
www.portereng.com.au

PAYMENT CERTIFICATE

Project:	Forrestfield Industrial Area - Road 2A - Stage 1	Date Issued:	16 August 2019
Principal:	City of Kalamunda	Job Number:	16-09-116
Contractor:	RJ Vincent	Valuation Number:	4
		Prev. Valuation No:	3

To: (Contractor): RJ Vincent
 4 & 5 Kirke Street,
 Balcatta, WA 6021

(Principal): City of Kalamunda
 PO Box 42
 Kalamunda, WA 6926

The Superintendent hereby certifies payment of the sum of \$62,415.23 is to be made by the Principal to the Contractor for the value of work effected to 13 August 2019 calculated as follows:

 (signature)

 (Superintendent)

Original Contract Sum:		\$538,494.92
Less Provisional Sums:	\$74,800.00	
Contingency Sum:	\$0.00	\$74,800.00
Adjusted Contract Amount:		\$463,694.92
Authorised Variations to Date: VO1, VO2		\$17,895.08
Variations Recommended for This Month: VO3		\$14,588.18
Total Variations:		\$32,483.26
Adjusted Contract Amount to Date:		\$496,178.18

Estimated Value of Work Completed to Date:	\$496,178.18
Less 0% Retention - Bank Guarantee Provided.	\$0.00
Less Amount Previously Valued:	\$439,437.06
SUB TOTAL:	\$56,741.12
GST Amount:	\$5,674.11
THIS VALUATION:	\$62,415.23


Distribution:	Principal	Contractor	File
			P086.19

To be used in conjunction with AS 2124 .

CONTRACT VARIATION ORDER

Project:	Forrestfield Industrial Area - Road 2A	Date Issued:	16 August 2019
Principal:	City of Kalamunda	Job Number:	16-09-116
Contractor:	RJ Vincent	Number:	3

DESCRIPTION OF VARIATION	CONTRACT SUM ADJUSTMENT	
	ADDITION (\$)	DEDUCTION (\$)
1 Installation of 1.8m Cyclone Fencing along property boundary.	9,882.40	
2 Water service change-over and meter relocation - Provisional Sum included in Contract.	4,705.78	
TOTAL	14,588.18	0.00
NET TOTAL ADJUSTMENTS	14,588.18	

 (signature)
(Superintendent)

Distribution:	Principal	Contractor	File
			P085.19

To be used in conjunction with AS 2124.



Government of Western Australia
Department of Finance
Building Management and Works

Statutory Declaration Form 1

STATUTORY DECLARATION

PAYMENT TO SUBCONTRACTORS

I, Christopher Mania

of 6 Yabera Rd, Forrestfield, WA 6058.

Project Engineer for RJ Vincent & Co

sincerely declare as follows-

1. I hold the position of Project Engineer

and am duly authorised by the Contractor to make this declaration in accordance with the provisions of clause 43 of the General Conditions of Contract.

2. In respect of Civil Construction Nardine Close Forrestfield Contract

and Progress Claim Number 4 of 31/07/2019

all Subcontractors have been paid all moneys due and payable to them at the date of this Progress Claim in respect of work under this Contract.

This declaration is true and I know that it is an offence to make a declaration knowing that it is false in a material particular.

This declaration is made under the *Oaths, Affidavits and Statutory Declarations Act* 2005 at:

...5 Kirke Street, Balcatta, 6021..... on 02 08 2019
(Location) (Day Number) (Month) (Year)

by:

[Signature of person making the declaration]

in the presence of

[Signature of authorised witness]
Blake William Burton JAENKE
Chartered Accountant (241683)

[Name of authorised witness and qualification as such a witness]

Sample_Statutory_Declaration_Subcontractors_01Dec2015

100% claim

Date 31/07/2019
Project: Forrestfield Industrial Area -
Client: Nardine Close
City of Kalamunda
C/-: Porter Consultants
Attn: Brad Harris
58 Kishorn Rd, Mt Pleasant,
Address: WA 6153
Job No: 2638
Contract No: RFT 1901
Ref. No: CPC11384



PROGRESS CLAIM ONLY

CLAIM FOR PAYMENT NUMBER 4 - JULY 2019

ORIGINAL TENDERED SUM	\$538,494.92 ✓
PLUS / MINUS PROVISIONAL & CONTINGENT VARIATIONS	-\$42,316.74
AMENDED CONTRACT SUM	\$496,178.18 ✓
GROSS VALUE OF WORKS NOW COMPLETED	\$496,178.18 ✓
Retention provided in the form of 1 x 2.5% BG	\$496,178.18 ✓

LESS PREVIOUS CERTIFICATES

Date	Number	Value
3/05/19	Payment Certificate #1	\$29,199.35
7/06/19	Payment Certificate #2	\$201,721.89
5/07/19	Payment Certificate #3	\$208,515.82

Value Previously Certified	\$439,437.06 ✓	\$439,437.06 ✓
VALUE NOW FOR PAYMENT		\$56,741.12 ✓
GST		\$5,674.11 ✓
TOTAL VALUE NOW FOR PAYMENT		\$62,415.23 ✓



PROJECT: Forrestfield Industrial Area - Nardine Close
CLIENT: City of Kalamunda
CONSULTANT: Porter Consultants

SCHEDULE REVISION STATUS

REV	DESCRIPTION	DATE
A	Issued for Pricing	12th February 2019

SUMMARY OF TENDER PRICE

ITEM	DESCRIPTION	AMOUNT	CLAIM TO DATE
1	Site Establishment including Access and Traffic Control	\$84,757.40	\$84,757.40
2	Physical Location of Services (prior to works)	\$4,140.00	\$4,140.00
3	Site Security and Wind Fencing	\$3,533.95	\$3,533.95
4	Clearing and Disposal	\$25,461.87	\$25,461.87
5	Earthworks	\$29,047.50	\$29,047.50
6	Stormwater Drainage System (complete)	\$3,246.29	\$3,246.29
7	a) Water Reticulation (complete)	\$43,502.88	\$43,502.88
8	b) Reconnection of existing house (Provisional Sum)	\$1,800.00	\$1,800.00
9	Roadworks (Complete including kerbs, bollards and signs)	\$175,102.52	\$175,102.52
10	Footpaths and Ramps	\$18,761.84	\$18,761.84
11	Fencing	\$7,071.35	\$7,071.35
12	Retaining Walls	\$14,679.23	\$14,679.23
13	Dilapidation Surveys	\$720.00	\$720.00
14	'As Constructed' documents (including as cons and third-party certification)	\$2,990.00	\$2,990.00
15	a) Underground Power and Street Lighting (complete)	\$41,777.20	\$41,777.20
16	b) Reconnection of existing house (Provisional Sum)	\$3,000.00	\$3,000.00
17	Communications	\$7,718.21	\$7,718.21
18	Provisional Sum for Septic Tank Adjustments	\$15,000.00	\$15,000.00
19	Provisional Sum for Water Corporation connections	\$5,000.00	\$5,000.00
20	Provisional Sum for path works on Ashby Close as directed by the Super intendent	\$50,000.00	\$50,000.00
21	BCITF Levy	\$1,184.68	\$1,184.68
	SUB-TOTAL TENDER excl GST	\$538,494.92	\$538,494.92

VARIATIONS

VARIATION NUMBER	AMOUNT	CLAIM TO DATE
Variation Number 1 - Delete Provisionals	-\$74,800.00	-\$74,800.00
Variation Number 2 - 3E Power Certification	\$3,800.00	\$3,800.00
Variation Number 3 - Relocate Leach Drain	\$7,541.00	\$7,541.00
Variation Number 4 - Reduction in Comms Scope	-\$843.79	-\$843.79
Variation Number 5 - Change in water crossing design	-\$1,541.00	-\$1,541.00
Variation Number 6 - House power reconnection	\$23,618.10	\$23,618.10
Variation Number 7 - Delete post & panel wall	-\$14,679.23	-\$14,679.23
Variation Number 8 - Black 1.80m cyclone fencing	\$9,882.40	\$9,882.40
Variation Number 7 - Water changeover costs	\$4,705.78	\$4,705.78
SUB-TOTAL VARIATIONS excl GST	-\$42,316.74	-\$42,316.74
TOTAL TENDER + VARIATIONS excl GST	\$496,178.18	\$496,178.18
GST	\$49,617.82	\$49,617.82
TOTAL INCL GST	\$545,796.00	\$545,796.00



PROJECT: Forrestfield Industrial Area - Nardine Close
 CLIENT: City of Kalamunda
 CONSULTANT: Porter Consultants

14/08/2019
 3 of 10

CURRENT SCHEDULE REVISION: A

SCHEDULE OF PRICES						PROGRESS CLAIM	
ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT	% COMP	CLAIM AMOUNT
1	Site Establishment including Access and Traffic Control						
1.1	Site Establishment						
	a) Site Compound and facilities	1	item	\$10,032.43	\$10,032.43	100%	\$10,032.43
	b) Mobilisation to Site	1	item	\$7,475.00	\$7,475.00	100%	\$7,475.00
1.2	Supervision	10	weeks	\$2,775.00	\$27,750.00	100%	\$27,750.00
1.3	Survey for Construction	10	weeks	\$1,495.00	\$14,950.00	100%	\$14,950.00
1.4	Insurances	1	item	\$2,000.00	\$2,000.00	100%	\$2,000.00
1.5	Management Plans	1	item	\$1,500.00	\$1,500.00	100%	\$1,500.00
1.6	QA Kit	1	item	\$1,500.00	\$1,500.00	100%	\$1,500.00
1.7	Construction Water	1	item	\$9,999.97	\$9,999.97	100%	\$9,999.97
1.8	Dust Control	10	Week	\$955.00	\$9,550.00	100%	\$9,550.00
Subtotal - Site Establishment					\$84,757.40		\$84,757.40
2	Physical Location of Services (prior to works)	1	item	\$4,140.00	\$4,140.00	100%	\$4,140.00
Subtotal - Location of Services					\$4,140.00		\$4,140.00
3	Site Security and Wind Fencing						
3.1	Site Fencing	187	m	\$8.05	\$1,505.35	100%	\$1,505.35
3.2	Wind Fencing	147	m	\$13.80	\$2,028.60	100%	\$2,028.60
Subtotal - Site Fencing					\$3,533.95		\$3,533.95
4	Clearing and Disposal						
4.1	Clear and Mulch existing vegetation	1	item	\$15,065.00	\$15,065.00	100%	\$15,065.00
4.2	Dispose of mulch	350	m3	\$8.02	\$2,807.00	100%	\$2,807.00
4.3	Remove existing rural fencing	199	m	\$13.80	\$2,746.20	100%	\$2,746.20
4.4	Remove existing shed	1	item	\$1,624.50	\$1,624.50	100%	\$1,624.50
4.5	Remove existing retaining wall	73.5	m	\$31.59	\$2,321.87	100%	\$2,321.87
4.6	Strip existing garden beds	45	m2	\$19.94	\$897.30	100%	\$897.30
Subtotal - Clearing and Disposal					\$25,461.87		\$25,461.87
5	Earthworks						
5.1	Strip and stockpile topsoil (100mm)	6,119	m2	\$0.31	\$1,896.89	100%	\$1,896.89
5.2	Cut to Fill	527	m3	\$5.98	\$3,151.46	100%	\$3,151.46
5.3	Respread topsoil (100mm thick)	2,152	m3	\$0.55	\$1,183.60	100%	\$1,183.60
5.4	Remove excess sand from site	379	m3	\$27.42	\$10,392.18	100%	\$10,392.18
5.5	Remove excess topsoil from site	397	m3	\$27.72	\$10,996.52	100%	\$10,996.52
5.6	Earthworks testing	1	item	\$500.00	\$500.00	100%	\$500.00
5.7	Hydromulch	2,505	m2	\$0.37	\$926.85	100%	\$926.85
Subtotal - Earthworks					\$29,047.50		\$29,047.50
6	Stormwater Drainage System (complete)						
6.1	Trim and shape Swales	807	m2	\$2.22	\$1,791.54	100%	\$1,791.54
6.2	Stonepitching	11	m2	\$132.25	\$1,454.75	100%	\$1,454.75
Subtotal - Stormwater					\$3,246.29		\$3,246.29



PROJECT: Forrestfield Industrial Area - Nardine Close
 CLIENT: City of Kalamunda
 CONSULTANT: Porter Consultants

14/08/2019
 4 of 10

CURRENT SCHEDULE REVISION: A

SCHEDULE OF PRICES						PROGRESS CLAIM	
ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT	% COMP	CLAIM AMOUNT
7	a) Water Reticulation (complete)						
1	Mobilisation	1	Item	\$1,380.00	\$1,380.00	100%	\$1,380.00
2	Excavation for water main in sand	403	M	\$11.96	\$4,819.88	100%	\$4,819.88
3	Supply and lay 100mm Dia uPVC Pipe	3	M	\$24.15	\$72.45	100%	\$72.45
4	Supply and lay 150mm Dia uPVC Pipe	400	M	\$33.58	\$13,432.00	100%	\$13,432.00
5	Supply and Install TBE on 100mm Main	1	No	\$414.00	\$414.00	100%	\$414.00
6	Supply and Install FP on 150mm Main	1	No	\$667.00	\$667.00	100%	\$667.00
7	Supply and Install Hydrant on 150mm main	4	No	\$931.50	\$3,726.00	100%	\$3,726.00
8	Supply and Install Bend on 150mm main	13	No	\$247.25	\$3,214.25	100%	\$3,214.25
9	Supply and Drill 180PE PN16 x 12M length	1	No	\$2,242.50	\$2,242.50	100%	\$2,242.50
10	Attendance by butt welder	1	Item	\$1,035.00	\$1,035.00	100%	\$1,035.00
11	Supply and Install 180/150 Puddle flange	2	No	\$2,530.00	\$5,060.00	100%	\$5,060.00
12	Supply and Lay 150mm adaptors	2	No	\$162.15	\$324.30	100%	\$324.30
13	Supply and Lay 150/100 taper	1	No	\$287.50	\$287.50	100%	\$287.50
14	150mm same side water service- Single Prelay	1	No	\$287.50	\$287.50	100%	\$287.50
15	Liaison with Water Corporation	1	Item	\$517.50	\$517.50	100%	\$517.50
16	Supply and Install Tap Protectors	1	No	\$57.50	\$57.50	100%	\$57.50
17	Testing of Watermain	1	Item	\$1,092.50	\$1,092.50	100%	\$1,092.50
18	Remove and dispose of existing footpath	110	m2	\$11.52	\$1,267.20	100%	\$1,267.20
19	Reinstate footpath	110	m2	\$32.78	\$3,605.80	100%	\$3,605.80
Subtotal - Water Reticulation					\$43,502.88		\$43,502.88
	b) Reconnection of existing house (Provisional Sum)						
	Provisional Sum	1	item	\$1,800.00	\$1,800.00	100%	\$1,800.00
Subtotal - Reconnection of existing house					\$1,800.00		\$1,800.00
8	Roadworks (Complete including kerbs, bollards and signs)						
8.1	Subgrade Preparation	3,967	m2	\$2.99	\$11,861.33	100%	\$11,861.33
8.2	Supply, Lay, and trim 200mm Limestone	3,967	m2	\$9.94	\$39,431.98	100%	\$39,431.98
8.3	Supply, Lay, and trim 100mm Roadbase	3,967	m2	\$8.72	\$34,592.24	100%	\$34,592.24
8.4	Primer Seal	3,967	m2	\$2.96	\$11,742.32	100%	\$11,742.32
8.5	Lay 30mm thickness asphalt	3,614	m2	\$11.73	\$42,392.22	100%	\$42,392.22
8.6	Semimountable kerbing	359	m	\$19.67	\$7,061.53	100%	\$7,061.53
8.7	Mountable Kerbing	11	m	\$15.99	\$175.89	100%	\$175.89
8.8	Flush Kerbing	221	m	\$60.84	\$13,445.64	100%	\$13,445.64
8.9	E/O to Key kerb	181	m	\$8.97	\$1,623.57	100%	\$1,623.57
8.10	Road Tie-in	1	item	\$500.00	\$500.00	100%	\$500.00
8.11	Final Trim	5,312	m2	\$0.95	\$5,046.40	100%	\$5,046.40
8.12	Lift up existing pavers and relay as required	1	item	\$3,300.00	\$3,300.00	100%	\$3,300.00



PROJECT: Forrestfield Industrial Area - Nardine Close
 CLIENT: City of Kalamunda
 CONSULTANT: Porter Consultants

14/08/2019
 5 of 10

CURRENT SCHEDULE REVISION: A

SCHEDULE OF PRICES						PROGRESS CLAIM	
ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT	% COMP	CLAIM AMOUNT
8.13	Supply and Install Chevron	1	No.	\$300.00	\$300.00	100%	\$300.00
8.14	Testing	1	item	\$3,629.40	\$3,629.40	100%	\$3,629.40
Subtotal - Roadworks					\$175,102.52		\$175,102.52
9	Footpaths and Ramps						
9.1	Supply and Lay 2.1m wide footpath	248	m	\$70.83	\$17,565.84	100%	\$17,565.84
9.2	Supply and Install Pram Ramps	2	no.	\$598.00	\$1,196.00	100%	\$1,196.00
Subtotal - Footpaths and Ramps					\$18,761.84		\$18,761.84
10	Fencing						
10.1	Install new rural fencing	91	m	\$17.25	\$1,569.75	100%	\$1,569.75
10.2	Install new rural gate	1	no.	\$1,380.00	\$1,380.00	100%	\$1,380.00
10.3	Reinstate Cyclone Fencing	112	m	\$36.80	\$4,121.60	100%	\$4,121.60
Subtotal - Fencing					\$7,071.35		\$7,071.35
11	Retaining Walls						
11.1	Concrete post and panel	1	item	\$991.88	\$991.88	100%	\$991.88
11.2	Mobilisation	1	item	\$1,157.19	\$1,157.19	100%	\$1,157.19
11.3	Post hole coring	30	m	\$344.14	\$10,324.20	100%	\$10,324.20
11.4	600mm retained height						
11.5	Antigraffiti Coating	1	item	\$303.60	\$303.60	100%	\$303.60
11.6	Certification by Structural Engineer	1	item	\$1,287.33	\$1,287.33	100%	\$1,287.33
11.7	OHS	1	item	\$230.03	\$230.03	100%	\$230.03
11.8	Building licence	1	item	\$385.00	\$385.00	100%	\$385.00
Subtotal - Retaining Walls					\$14,679.23		\$14,679.23
12	Dilapidation Surveys						
12.1	Pre-Commencement Surveys	2	No.	\$360.00	\$720.00	100%	\$720.00
Subtotal - Dilapidations					\$720.00		\$720.00
13	'As Constructed' documents (including as cons and third-party certification)						
13.1	R-Spec	1	item	\$2,990.00	\$2,990.00	100%	\$2,990.00
Subtotal - As-constructed documents					\$2,990.00		\$2,990.00
14	a) Underground Power and Street Lighting (complete)						
1	Excavation in sand for power & communications	243	M	\$11.96	\$2,906.28	100%	\$2,906.28
2	Hand excavation in sand for power	33	M	\$24.15	\$796.95	100%	\$796.95
3	Supply & Lay 100 HD conduit	259	M	\$12.31	\$3,188.29	100%	\$3,188.29
4	Supply & Lay 150 HD conduit	243	No	\$17.25	\$4,191.75	100%	\$4,191.75
5	Supply & Lay 16mm2 Streetlight cable	226	M	\$10.47	\$2,366.22	100%	\$2,366.22
6	Supply & Lay 25 LV cable	3	M	\$23.58	\$70.74	100%	\$70.74
7	Supply & Lay 240 LV cable	273	M	\$49.11	\$13,407.03	100%	\$13,407.03
8	Transport of Power Materials	1	Item	\$1,127.00	\$1,127.00	100%	\$1,127.00
9	LU2- 240 Straight Joint	1	No	\$358.80	\$358.80	100%	\$358.80
10	LU5- 240 Tee Joint	1	No	\$358.80	\$358.80	100%	\$358.80
11	LU10-Mini Pillar	1	No	\$373.75	\$373.75	100%	\$373.75



PROJECT: Forrestfield Industrial Area - Nardine Close
 CLIENT: City of Kalamunda
 CONSULTANT: Porter Consultants

14/08/2019
 6 of 10

CURRENT SCHEDULE REVISION: A

SCHEDULE OF PRICES						PROGRESS CLAIM	
ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT	% COMP	CLAIM AMOUNT
12	End caps, slabbing & warning tape	1	Item	\$276.00	\$276.00	100%	\$276.00
13	LU62- Live End Seal	1	No	\$392.15	\$392.15	100%	\$392.15
14	10.5M SOR GAL pole with 80W Road Flair LED luminaire	4	No	\$2,450.36	\$9,801.44	100%	\$9,801.44
15	Testing/Commissioning	1	Item	\$897.00	\$897.00	100%	\$897.00
16	Liaison with Western Power, other utilities & Electrical Consultant	1	Item	\$437.00	\$437.00	100%	\$437.00
17	As constructed Information	1	Item	\$828.00	\$828.00	100%	\$828.00
Subtotal - Underground Power					\$41,777.20		\$41,777.20
	b) Reconnection of existing house (Provisional Sum)	1	item	\$3,000.00	\$3,000.00	100%	\$3,000.00
Subtotal - Reconnection of existing house					\$3,000.00		\$3,000.00
15	Communications						
1	Additional excavation in sand for Communications only	57	M	\$9.78	\$557.46	100%	\$557.46
2	Supply & Lay 50Dia Communications conduit	6	M	\$8.63	\$51.78	100%	\$51.78
3	Supply & Lay 100Dia Communications conduit	303	M	\$12.31	\$3,729.93	100%	\$3,729.93
4	Supply & Lay 100Dia conduit bend	4	No	\$28.75	\$115.00	100%	\$115.00
5	Supply & Install P5 Communications pit- C/W gasket & concrete Class B lid	3	No	\$365.70	\$1,097.10	100%	\$1,097.10
6	Supply & Install P6 Communications pit- C/W gasket & concrete Class B lid	1	No	\$657.80	\$657.80	100%	\$657.80
7	Supply & Install 50m ID lot lead in pipe	1	No	\$41.40	\$41.40	100%	\$41.40
8	Capped end	9	No	\$23.00	\$207.00	100%	\$207.00
9	Rod & Rope ducting	329	M	\$1.56	\$513.24	100%	\$513.24
10	As constructed information	1	Item	\$747.50	\$747.50	100%	\$747.50
Subtotal - Communications					\$7,718.21		\$7,718.21
16	Provisional Sum for Septic Tank Adjustments	1	item	\$15,000.00	\$15,000.00	100%	\$15,000.00
17	Provisional Sum for Water Corporation connections	1	item	\$5,000.00	\$5,000.00	100%	\$5,000.00
18	Provisional Sum for path works on Ashby Close as directed by the Super intendent	1	item	\$50,000.00	\$50,000.00	100%	\$50,000.00
19	BCITF Levy	1	item	\$1,184.68	\$1,184.68	100%	\$1,184.68

003.1

DATE: 16/07/2019
 PROJECT: Forrestfield Industrial Area - Nardine Close
 JOB NO : 2638
 CONSULTANT: Porter Consultants



VARIATION ORDER VO (8)

Item	Description	Qty	Unit	Rate	Total	(%)	Claim Amount
	This variation refers to requested boundary fencing to 166 Sultana Rd. We hereby claim:						
1	Black 1800mm chainmesh fencing with 3 barbed wires	158	m	\$52.80 ✓	\$8,342.40	100%	\$8,342.40
2	Matching black 2 x 4m gates across driveway	1	Item	\$1,540.00 ✓	\$1,540.00	100%	\$1,540.00
Signed: <u>Mania</u>		(Excl GST)		<u>\$9,882.40</u>		<u>\$9,882.40</u>	

103.1

Jamie King

From: Graeme Budge <Graeme.Budge@kalamunda.wa.gov.au>
Sent: Tuesday, 16 July 2019 3:51 PM
To: Christopher Mania; Jamie King
Cc: Joshua Hickey
Subject: RE: 16-09-116 : Forrestfield Industrial - Resident fencing quote

Accepted.

Regards

Graeme Budge | **Project Manager Delivery**
T 08 9257 9978 | E Graeme.Budge@kalamunda.wa.gov.au
P City of Kalamunda, PO Box 42, KALAMUNDA WA 6926
W www.kalamunda.wa.gov.au

[Subscribe here](#) to keep updated

Please consider the environment before you print this e-mail.

From: Christopher Mania [mailto:christopher.mania@rjv.com.au]
Sent: Tuesday, July 16, 2019 3:23 PM
To: Jamie King <jamie@portereng.com.au>; Graeme Budge <Graeme.Budge@kalamunda.wa.gov.au>
Cc: Joshua Hickey <joshua.hickey@rjv.com.au>
Subject: RE: 16-09-116 : Forrestfield Industrial - Resident fencing quote

Jamie,

Updated variation attached based on provided fencing sketch & specification.

Kind regards,

Chris Mania
Project Engineer



A. 4 and 5 Kirke Street, Balcatta. WA. 6021
T. 08 9345 3999
F. 08 9345 3121
M. 0419 931 042
E. christopher.mania@rjv.com.au
W. www.rjv.com.au

From: Jamie King <jamie@portereng.com.au>
Sent: Monday, 15 July 2019 10:54 AM
To: Christopher Mania <christopher.mania@rjv.com.au>; Graeme Budge <Graeme.Budge@kalamunda.wa.gov.au>

DATE: 24/07/2019
 PROJECT: Forrestfield Industrial Area - Nardine Close
 JOB NO : 2638
 CONSULTANT: Porter Consultants



VARIATION ORDER VO (9)

Item	Description	Qty	Unit	Rate	Total	(%)	Claim Amount
	This variation refers to the changeover of water supply to new main. We hereby claim:						
1	Clear decorative stones, pavers, excavate & hand trench new water pipe from meter to house, backfill & compact, reinstate stones to garden bed.						
1.1	5T Excavator	5	Hr	\$105.00	\$525.00	100%	\$525.00
1.2	Pipelayer	8	Hr	\$72.00	\$576.00	100%	\$576.00
1.3	Labourer	8	Hr	\$55.00	\$440.00	100%	\$440.00
1.4	Pipe, fittings & consumables	1	Item	\$134.20	\$134.20	100%	\$134.20
2	Licenced plumbers attendance for water meter relocation (by Water Corp)	1	Item	\$605.00	\$605.00	100%	\$605.00
3	Licenced plumbers attendance for ticketing & notices for both water changeover & leach drain relocation.	1	Item	\$907.50	\$907.50	100%	\$907.50
4	Water Corp quote for changeover and cut & cap redundant service + 10% P&A	1	Item	\$1,518.08	\$1,518.08	100%	\$1,518.08
<i>Hours & Rates reasonable.</i>							
Signed: <i>Mania</i>		(Excl GST)		\$4,705.78		\$4,705.78	

103-2

**Application Account**

Issue date 23 July 2019

INEARTH PTY LTD
P.O.BOX 1296
EAST VICTORIA PARK PO BOXES WA 6981

Account number 90 23450 96 1

Please pay \$1 380.08

Account For: 90 14045 54 2 - 166 SULTANA RD WEST HIGH WYCOMBE LOT 308

Applic Num	Application Type	Total Fee
MW2064492-*	RELOCATE SERVICE OVER 0.5M	1,380.08
Goods and Services Tax (GST)		0.00
Total Due:		1,380.08

on 865.
TWO 865.
NADINE CROSS
23/07/19

\$1,380.08 + 10% P+H
= \$1,518.08

See Back For Additional Information

Payment slip

Account number 90 23450 96 1

Please pay \$1 380.08

Website: watercorporation.com.au/contact
Faults and Emergencies: (24/7) 13 13 75



*690 9023450961

Attachment 8:
Nardine Close cul-de-sac assessment



ENGINEERING REPORT

**TEMPORARY CUL-DE-SAC
OPTIONS AND COST
REVIEW FOR
NARDINE CLOSE,
HIGH WYCOMBE**

Porter

REPORT PREPARED FOR
CITY OF KALAMUNDA

Prepared by	Porter Consulting Engineers
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HISTORY AND STATUS OF THE DOCUMENT

Revision	Date issued	Author	Issued to	Revision type
Rev A	17/06/2020	Michael Cook	City of Kalamunda	Technical Note
Rev B	19/06/2020	Michael Cook	City of Kalamunda	Conversion to Formal Report, incorporate City review comments

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ATTACHMENTS:

1. Retain existing cul-de-sac layout
2. Existing services plan
3. City of Kalamunda Emergency Accessway concept plan
4. Indicative Costs for retention of the existing cul-de-sac (T092.20)
5. Indicative Costs for Emergency Accessway to tie into existing cul-de-sac (T095.20)
6. Relocating the cul-de-sac layout
7. Indicative Costs for relocating the cul-de-sac layout (T093.20)
8. Indicative Costs for Emergency Accessway to tie into relocated cul-de-sac (T096.20)

1.0 INTRODUCTION

The City of Kalamunda is seeking an assessment of the existing cul-de-sac on Nardine Close in High Wycombe that currently terminates at the boundary line of lot 308 and lot 51. The cul-de-sac was constructed in July 2019 as part of road upgrade works to Nardine Close (Road 2A-Stage 1) to service the Forrestfield industrial area. The cul-de-sac has been designed to accommodate a 27.5m long Restricted Access Vehicle (RAV) category 2 to 4 (inclusive).

The cul-de-sac was intended to be temporary and was to be removed as part of a future extension of Nardine Close (Stage 2) to the boundary of lot 50 and lot 51 as shown in **Figure 1**.

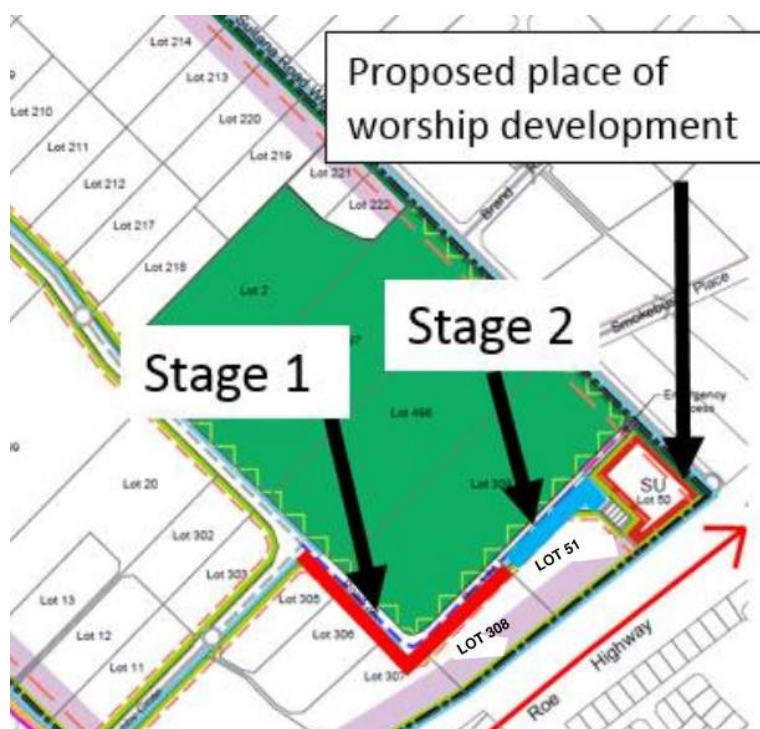


Figure 1: Stage 1 and 2 extents for Nardine Close (Road 2A)

The City has recently approved a Development Application for a place of worship to lot 50. The place of worship will be primarily serviced by light vehicles, with all access via Sultana Road West. Therefore, the Stage 2 extension works of Nardine Close to the boundary of lot 50/lot 51 may no longer be required if the place of worship development progresses as planned.

The City has requested the consideration of the existing cul-de-sac arrangement but also wishes to consider an alternative arrangement with the cul-de-sac being centrally located on the boundary dividing lots 308 and 51. The consideration of an alternative arrangement is due to concerns being raised that the existing cul-de-sac arrangement will not provide adequate access to lot 51.



The City of Kalamunda has engaged Porter Consulting Engineers to provide an assessment, advice and costs towards:

- The cul-de-sac remaining in its current location.
- Relocate the cul-de-sac.

It is noted the original scheme had a cul-de-sac at the end of Nardine Close, with no access through to Sultana Road West except for the emergency accessway. In industrial areas it would be preferable not to create cul-de-sacs due to turning requirements for larger vehicles. However, industrial traffic was not seen as desirable to Sultana Road West and therefore both assessments have a cul-de-sac at the end of Nardine Close.

2.0 RETAIN THE CUL-DE-SAC IN ITS CURRENT LOCATION

2.1 27.5m long Restricted Access Vehicle access

The existing cul-de-sac will not detrimentally impact access for 27.5m long RAV vehicles entering and exiting lot 51 and lot 308. The current setout of the cul-de-sac allows for the installation of crossovers to lot 51 and lot 308 consistent with industrial sites in the area.

2.2 Road Reservation to the cul-de-sac

The existing cul-de-sac is partially located within the Nardine Close road reservation and partially within private land ownership of lot 308. The City has established an agreement with the owners of lot 308 that allows part of the cul-de-sac to be within lot 308 due to its temporary nature. Should the existing cul-de-sac be retained in its current location on a permanent basis, the City will acquire the necessary land from the owners of lot 308 as part of establishing a permanent cul-de-sac.

Towards establishing the existing cul-de-sac as permanent, consideration should be had to providing an adequate verge width from the face to kerb to reservation boundary around the cul-de-sac.

Although lot 308 is zoned industrial, it accommodates a residential home which immediately abuts Nardine Close. An interim reservation boundary may need to be established whilst this residential home remains. The interim reservation boundary would need to be setout such that the boundary retains the residential home within lot 308.

When lot 308 is developed into an industrial development, a permanent reservation boundary should be established to provide nominal 3m wide verges.

Attachment 1, illustrates the interim and permanent reservation setouts.

2.3 Works Required

As the cul-de-sac was intended to be temporary, the services installed finished before the cul-de-sac and did not extend to the lot 308/lot 51 boundary as per typical requirements of the relevant utility authorities.



Should the cul-de-sac become permanent, the utility authorities will require the services to be extended to the lot 308/lot 51 boundary.

Electrical

The existing electrical cables terminate immediately south of the existing cul-de-sac as shown in **Attachment 2**.

These electrical cables will need to be extended by following the interim reservation boundary to the lot 308/lot 51 boundary. A light pole is expected to be required by the cul-de-sac head towards establishing the cul-de-sac as permanent.

It is likely that the electrical cables will need to be relocated to suit the permanent reservation boundary when this is established.

Due to the proximity of the existing residential home to the boundary line, it is expected that trenchless technique installation will be required for electrical conduits.

Communications

The existing NBN conduits terminate immediately south of the existing cul-de-sac as shown in **Attachment 2**. NBN Co. will require new conduit/cabling to be installed that follows the interim road reservation boundary line to extend to lot 51.

It is likely that the NBN conduits/cables will need to be relocated to suit the permanent reservation boundary when this is established.

Due to the proximity of the existing residential home to the boundary line, it is expected that trenchless technique installation will be required for communication conduits.

Gas

Lot 308 is serviced with a gas supply via a private supply line within the emergency accessway. It is expected that ATCO Gas will require new mains to be installed from the emergency accessway that follows the interim reservation boundary.

It is unlikely that ATCO Gas will allow this gas supply to be retained for use when lot 308 is developed into an industrial development. However, this would need to be confirmed with ATCO at the time of development.

Water

The existing DN150 water main currently terminates immediately south of the existing cul-de-sac as in **Attachment 2**. The water main will need to be extended by following the interim reservation boundary to the lot 308/lot 51 boundary.

The Water Corporation has previously advised that the water main will need to be extended to Sultana Road West (via the emergency accessway) to reinforce the water supply network in this area.

It is likely that the water mains will need to be relocated to suit the permanent reservation boundary when this is established.

Fencing

Existing fencing and gates will need to be relocated to the new reservation boundary.

At present, there is an existing 1.8m high chain mesh fence between the existing cul-de-sac kerb line and the residential home (see **Figure 2**). This fencing is within the road reservation and will need to be relocated to the boundary line. By relocating the fence to the boundary line, access to the western side of the residential home will be severely limited due to the building to effect having a near nil setback.

Consideration should be had to defer relocating the fencing until the demolition of the residential home so not to impact the resident's access around the home. For the purpose of this advice, it has been assumed that the chain mesh fence will not be relocated to the boundary line until the home is demolished as part of industrial development to lot 308.

A provisional allowance has been included for the possible relocation of the private internal service (i.e. drainage from downpipes) by the western side of the home to avoid clashes with proposed extension of services.



Figure 2: Existing mesh fencing by the existing residential property of lot 308

Footpath

The existing 2.1m wide footpath currently terminates immediately south of the existing cul-de-sac. Typically it would be expected that this footpath is extended to lot 51. However, with the existing chain mesh fence assumed to remain in its current position, it will not be possible to extend the footpath. Therefore, it has been assumed that the extension of the footpath will be deferred until the home is demolished.

Crash Barrier

Whilst the existing residential home is still in place within lot 308, consideration should be had to installing a crash safety barrier (i.e. W-Beam) due to the proximity of the home to the kerb line of the cul-de-sac. The home has to affect a nil setback offset to the south-west corner of the

building. The crash barrier would be installed immediately behind the kerb line and existing chain mesh fencing.

The barrier would be removed once the residential home is demolished and the permanent reservation boundary is established.

Emergency Accessway

Although there is currently an emergency accessway from the existing cul-de-sac to Sultana Road West, the City is seeking to formalise this accessway to 6m wide 'Right of Way' with a 6m wide gravel basecourse. Although the emergency accessway concept drawing shown in **Attachment 3** notes a 5m wide basecourse, allowance has been made for a 6m wide basecourse which is the minimum trafficable surface width in accordance with the 'Guidelines for Planning in Bushfire Prone Areas'¹.

The existing width of the access is currently 5m wide and the City would need to acquire a 1m width from lot 51 to establish a 6m wide Right of Way.

The existing 3m wide asphalt surfacing will be removed for the installation of the water main from Sultana Road West. Clearing of existing vegetation to establish a 6m width will be required. The 6m wide gravel basecourse will be constructed to achieve the noted design levels.

By Sultana Road West there is an existing distribution board and an electrical meter box that straddles the current boundary line for the existing 5m accessway boundary line which would need to be relocated (See **Figure 3**).



Figure 3: Existing distribution board and an electrical meter box by Sultana Road West will need relocating

¹ Department of Planning, Lands and Heritage, *Guidelines for Planning in Bushfire Prone Areas*, viewed 19 June 2020, </getmedia/0364136f-bf61-41ed-a68f-e77f165d6e3c/GD-BF-Bushfire_Guidelines_Version_1-3_Dec2017-Appendices>

2.4 Opinion of Probable Cost

The table below is a summary of the indicative costs to facilitate the interim reservation to accommodate the existing cul-de-sac. A more detailed breakdown is included in **Attachment 4**.

Item	Costs to Accommodate the Existing Cul-de-sac
Construction costs to accommodate the interim reservation boundary	\$132,200
Extra over costs for works from the interim to permanent reservation boundary.	\$28,000
Development Fees and Charges	\$29,100
Subtotal	\$189,300
GST	\$18,930
Total including GST	\$208,230

The table below is a summary of the indicative costs for the emergency access way to tie into the existing cul-de-sac. A more detailed breakdown is included in **Attachment 5**.

Item	Costs for Emergency Accessway works
Construction costs to accommodate the interim reservation boundary	\$67,100
Development Fees and Charges	\$8,000
Subtotal	\$75,100
GST	\$7,510
Total including GST	\$82,610

The amounts noted exclude any costs associated with land acquisitions.

3.0 RELOCATE THE CUL-DE-SAC

By relocating the cul-de-sac as shown in **Attachment 6**, it provides lot 308 with increased road frontage allowing for greater flexibility to crossovers and access as part of future industrial development to the lot. Whilst this greater flexibility is desirable, it is not necessary to provide this additional frontage to facilitate industrial development to lot 308, as the existing cul-de-sac setout provides adequate access to lot 308 and 51

By relocating the cul-de-sac, it eliminates the issue of the existing residential home in lot 308 being too close to the kerb and the need for an interim reservation boundary. The City will acquire the necessary land from the owners of lot 308 and lot 51 as part of establishing a cul-de-sac.

A 3.5m wide verge should be established as part of establishing the relocated cul-de-sac.

3.1 27.5m long Restricted Access Vehicle access to lot 51

A relocated cul-de-sac will not detrimentally impact access for 27.5m long RAV vehicles entering and exiting lot 51 and lot 308.

3.2 Works Required

Demolition

A small shed and other ancillary structures at the south-west corner of lot 51 will need to be relocated or demolished to accommodate a relocated cul-de-sac.

Electrical

The existing electrical cables would need to be extended to follow the new reservation boundary as part of the works to construct a relocated cul-de-sac.

Due to the proximity of the existing residential home to the boundary line, it is expected that trenchless technique installation will be required for electrical conduits.

Communications

The existing NBN conduits/cables would need to be extended to follow the new reservation boundary as part of the works to construct a relocated cul-de-sac.

Due to the proximity of the existing residential home to the boundary line, it is expected that trenchless technique installation will be required for communication conduits.

Gas

The gas supply from the emergency accessway that serves lot 308 is expected to require adjustment to follow the new road reservation boundary whilst a residential home is still in place for lot 308.

It is unlikely that ATCO Gas will allow this gas supply to be retained for use when lot 308 is developed into an industrial development. However, this would need to be confirmed by ATCO Gas at the time of development.

Water

The existing DN150 water main would need to be extended to follow the new reservation boundary as part of the works to construct a relocated cul-de-sac.

The Water Corporation has previously advised that the water main will need to be extended to Sultana Road West (via the emergency accessway) to reinforce the water supply network in this area.

Roadworks

Redundant portions of the cul-de-sac will require demolition and a new cul-de-sac head constructed in the new location.

As the new cul-de-sac head will not be near any existing buildings, installation of crash barriers will not be required.

The new cul-de-sac head will need to tie into the existing emergency accessway.

Footpath

The 2.1m wide footpath would be extended around the new cul-de-sac head.

Emergency Accessway

Although there is currently an emergency accessway from the existing cul-de-sac to Sultana Road West, the City is seeking to formalise this accessway to 6m wide with a 6m wide gravel basecourse as shown in **Attachment 3**.

The existing width of the access is currently 5m wide and the City would need to acquire a 1m width from lot 51 to establish a 6m wide Right of Way.

The existing 3m wide asphalt surfacing will be removed due to the installation of the water main from Sultana Road West. Clearing of existing vegetation to establish a 6m wide clear width will be required and the 6m gravel base course constructed to achieve the noted design levels.

By Sultana Road West there is an existing distribution board and an electrical meter box that straddles the current boundary line for the existing 5m accessway boundary line which would need to be relocated (See **Figure 3**).

Fencing

Existing fencing and gates will need to be relocated to the new reservation boundary.

At present, there is an existing 1.8m high chain mesh fence between the existing cul-de-sac kerbline and the residential home (see **Figure 3**). This fencing is within the road reservation and will need to be relocated to the boundary line. By relocating the fence to the boundary line, access to the western side of the residential home will be severely limited due to the building to effect having a near nil setback.

A provisional allowance should also be included for the possible relocation of the private internal service (i.e. drainage from downpipes).

3.3 Opinion of Probable Cost

The table below is a summary of the indicative costs to relocate the cul-de-sac. A more detailed breakdown is included in **Attachment 7**.

Item	Costs to Relocate the Cul-de-sac
Construction Costs	\$223,200
Development Fees and Charges	\$23,400
Subtotal	\$246,600
GST	\$24,660
Total including GST	\$271,260

The table below is a summary of the indicative costs for the emergency access way to tie into the relocated cul-de-sac. A more detailed breakdown is included in **Attachment 8**.

Item	Costs for Emergency Accessway works
Construction Costs	\$61,100
Development Fees and Charges	\$7,500
Subtotal	\$68,600
GST	\$6,860
Total including GST	\$75,460

The amounts noted exclude any costs associated with land acquisitions.

4.0 CONCLUSION

4.1 Retain the cul-de-sac

Retaining the existing cul-de-sac does not impact on access to lot 51 and lot 308 for 27.5m long Restricted Access Vehicles (RAV Category 2 and 4). Whilst the existing residential home is still present in lot 308, an interim reservation boundary would need to be established due to the proximity of the home to the kerb line.

The chain mesh fence between the existing cul-de-sac kerb line and residential home will need to be relocated to the boundary line. By relocating the fence to the boundary line, access to the western side of the residential home will be severely limited due to the building to effect having a near nil setback.

Adjustment and relocating of private internal services may be required (i.e. drainage from downpipes).

Once lot 308 is developed into an industrial lot and the home is demolished, a permanent reservation boundary would need to be established. The Opinion of Probable Cost to retain the cul-de-sac to accommodate the interim and permanent boundary works is \$208,230 including GST.

The Opinion of Probable Cost for the emergency accessway works is an additional \$82,610 including GST.



If this is the City's preferred option, then preliminary designs should be prepared to establish the full scope of works, land acquisition areas, updating designs to the emergency access and in particular resolving particulars in relation to the existing residential home (ie, existing private services needing to be relocated).

The amounts noted exclude any costs associated with land acquisitions.

4.2 Relocate the cul-de-sac

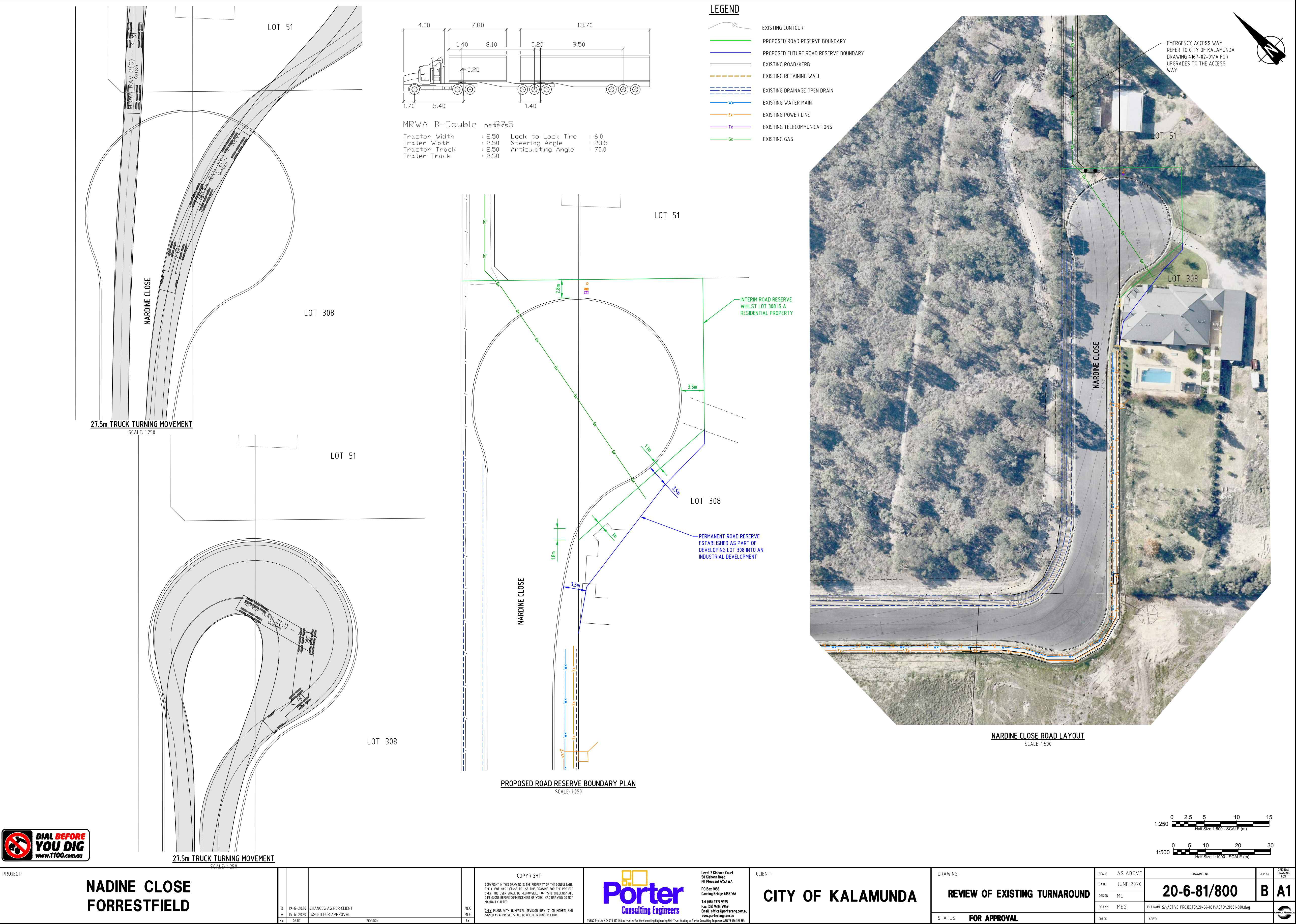
Should the cul-de-sac be relocated, access to lot 51 and lot 308 for 27.5m long Restricted Access Vehicles (RAV Category 2 and 4) is not impacted. A new reservation boundary would be established for the relocated cul-de-sac without a need for an interim reservation boundary due to the greater separation from the kerblines to the home on lot 308. The Opinion of Probable Cost to relocate the cul-de-sac is \$271,260 including GST.

The Opinion of Probable Cost for the emergency accessway works is an additional \$75,460 including GST.

The amounts noted exclude any costs associated with land acquisitions.

If this is the City's preferred option, then preliminary designs should be prepared to establish the scope of works, land acquisition areas, and updating designs to the emergency access.

ATTACHMENT 1:
Retain existing cul-de-sac layout



ATTACHMENT 2:
Existing services plan



CONTRACTOR NOTES:

- DRAWING TO BE READ IN CONJUNCTION WITH CONTRACT DRAWINGS AND SPECIFICATIONS.
- ALL WORKS TO BE COMPLETED IN LINE WITH WESTERN POWER POLICIES, INCLUDING THE UDS, WADCM, DDC, DSM, DCSH, UCM AND EARTHING FAQ. ALL MATERIALS USED MUST BE APPROVED WESTERN POWER MATERIALS.
- VERIFY ALL MATERIAL QUANTITIES AGAINST SITE CONDITIONS PRIOR TO QUOTATION AND ADVISE ELECTRICAL CONSULTANTS OF ANY VARIATIONS.
- SHOW CAUTION IN PROXIMITY TO EXISTING ASSETS. ALWAYS REFER TO CURRENT DRYD DRAWINGS, POTHOLE TO LOCATE IF NECESSARY. PROTECT SERVICES AS REQUIRED DO NOT ENDOUR MINIMUM APPROACH DISTANCES FOR UNDERGROUND OR OVERHEAD ASSETS.
- LIAISE WITH WESTERN POWER AS REQUIRED. ORGANISE PRE-HANDOVER INSPECTION AND ENERGISATION SCHEDULE WITH WESTERN POWER PRIOR TO COMPLETION OF WORKS.
- ARRANGE WITH 3E FOR ELECTRONIC AS CONSTRUCTED DRAWING COMPLETION AND SUBMISSION TO WESTERN POWER.
- MAKE ALLOWANCE FOR TERRACING OF CABLES WHERE REQUIRED, INCLUDING FOR ROAD CROSSINGS.
- CLEAN BEDDING SAND TO BE IMPORTED FOR CABLE TRENCHES WHERE EXISTING MATERIALS DO NOT MEET WP REQUIREMENTS.
- PLAN CABLE RUNS TO LIMIT THE NUMBER OF STRAIGHT JOINTS.
- COMMENCE LAYING CABLES FROM THE TRANSFORMER, SWITCHGEAR OR UNIVERSAL PILLAR.
- ALL CABLES LAID NEXT TO RETAINING WALLS TO BE IN CONDUIT. EXTEND CONDUIT 2m PAST WALL ON STRAIGHT SECTIONS.
- INSTALL HEATSHRINK "END CAP" AT ALL CABLE ENDS.
- INSTALL HEATSHRINK GLOVES ON ALL LV CABLE TERMINATION ENDS.
- STREETLIGHT POLES MUST NOT BE INSTALLED IN FOOTPATHS. PEG POLES LOCATIONS PRIOR TO INSTALL AND NOTIFY 3E OF CLASHES IN ADVANCE.
- ERECT LIGHT POLES ONLY AFTER NEARBY EXISTING OVERHEAD POWERLINES ARE REMOVED, WHERE NOTED.
- BORE UNDER EXISTING ROADS.
- CONTRACTOR TO LEAVE SUFFICIENT CABLE COILED AT ALL INTERFACE POINTS (INCLUDING JOINTS, PILLAR TERMINATIONS & POLE TERMINATIONS) TO ALLOW WP TO COMPLETE INTERFACE WORKS. INSTALL END CAPS TO PROTECT CABLE.
- HV FEEDER CABLES TO BE INSTALLED AT DEPTHS SHOWN IN TRENCH CROSS SECTIONS TO ALLOW FOR CLEARANCES TO OTHER AND FUTURE CABLES.
- ELECTRICAL CONTRACTOR TO INSPECT EXISTING METER BOARD AND CONSUMER SUPPLY TO DETERMINE APPROPRIATE NEW CONSUMER MAINS ARRANGEMENT. SUPPLY, INSTALL & TERMINATE NEW UNDERGROUND CONSUMER MAINS TO NEW PILLAR. RELOCATE AND MAKE APPROPRIATE ALTERATIONS TO EXISTING METER BOARD.

WESTERN POWER SCOPE OF WORKS

- (A) WP TO COST TO CARRY OUT TERMINATION OF NEW 240LV CABLE TO UNI PILLAR LOT 4. WP TO SUPPLY ALL MATERIALS AND CARRY OUT ALL ASSOCIATED WORKS.

WP STANDARD 10.5m POLE WITH STANDARD 3m SINGLE OUTREACH
NOT TO SCALE

NOTE:
10.5m STANDARD SINGLE OUTREACH POLE WITH ROAD FLAIR 80W LED 4L LAMP TO BE GALVANISED
ALL STREETLIGHT CABLE TO BE IN CONDUIT IF OUTSIDE WP ALIGNMENT.

WP STREETLIGHTS TO BE LOCATED IN-LINE WITH COMMON LOT BOUNDARY ON 2.7m ALIGNMENT, UNLESS NOTED OTHERWISE.

STREETLIGHT POLE LOCATION

NOTE: ALL UNMETERED SUPPLIES (Including CUSTOMER AND WESTERN POWER STREETLIGHTING ASSETS)					
TYPE OF EQUIPMENT	NO of UNITS	UNIT WATTAGE	TOTAL WATTAGE	DAILY HRS OPERATION	WP Asset Yes / No
10.5m WP STANDARD POLE + STANDARD SOR + ROAD FLAIR 80W LED 4L LUMINAIRE	4	80W	320W	DUSK/DAWN	YES

NOTE: ALL UNMETERED SUPPLIES and STREETLIGHTS MUST BE INCLUDED IN DESIGN DRAWING

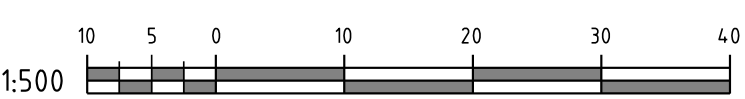
*ASTERISK DENOTES CHANGE IN LOAD ON AN EXISTING CIRCUIT

TRANSFORMER SPECIFICATIONS AND LOCATION	FUSEWAY NO.	CIRCUIT NO.	FUSE AMPS	CABLE mm ²	CIRCUIT NAME	VOLT DROP	AMPS	TOTAL AMPS
EXISTING 630kVA Tx LOT 100 (B27A) ADMD=200kVA/HECTARE	1	1	-	630	CONTIGUOUS SUPPLY	47.27V	403A	438A
	2							
	3	2*	315	240	I.E.S LOT 308	5.76V	31A	
	4	3	-	-		-	-	
	5	4	-	-		-	-	
	6	5	-	-		-	-	
	7	6	-	-		-	-	
	8	7	315	240		0.41V	6A	

NOTE:
ENERGISATION OF SUBDIVISION IS SUBJECT TO THE SUCCESSFUL COMPLETION OF ML010385

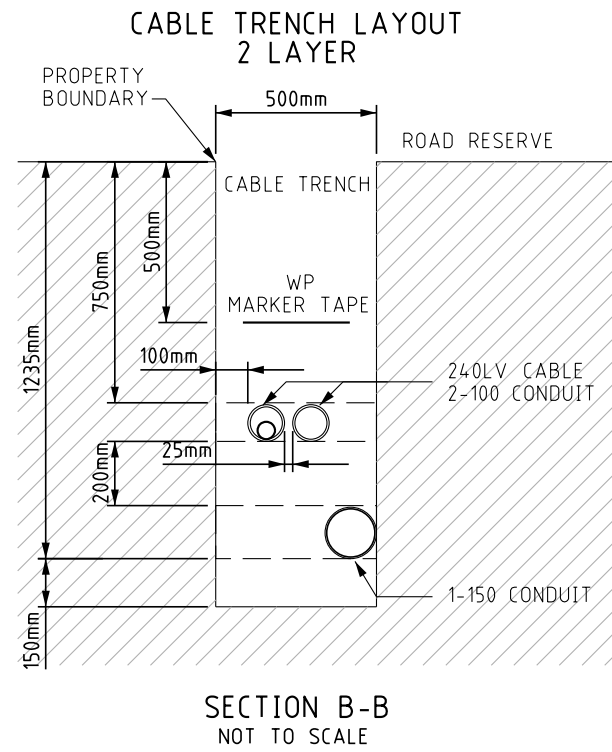
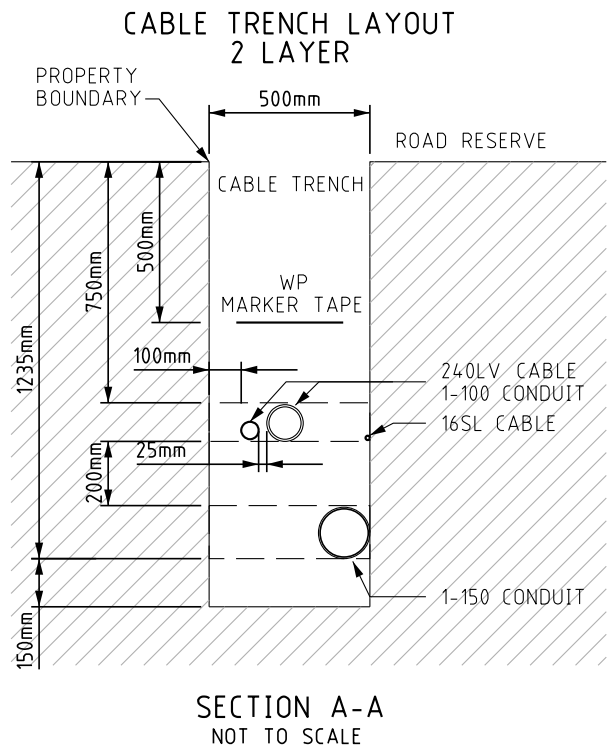
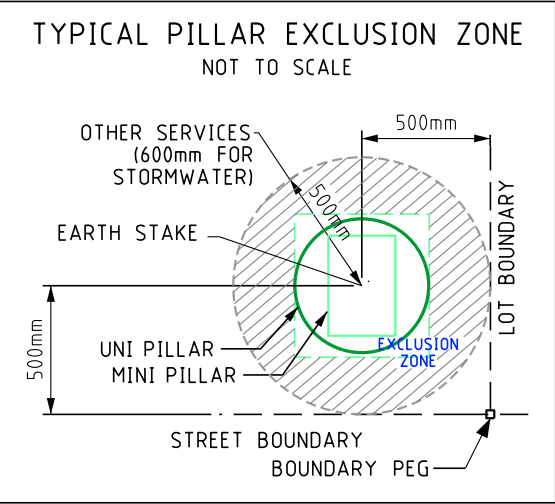
CONTINUED ON ML010385

Dimensions and scales to be checked prior to measuring cable lengths



ARROW DENOTES DIRECTION TO PEG WITH WHICH DUCTS ARE TO BE ALIGNED
DUCTS TO BE LAID TO WP SPECIFICATION AS OUTLINED IN UNDERGROUND DISTRIBUTION SCHEMES MANUAL - POLICY AND INSTALLATION OPTIONS
DENOTES PREVIOUSLY REQUESTED DUCTS

LEGEND	
SCHEME BOD.	---
RETAINING WALL	---
RETAINING WALL EXTRA FOOTING	---
RESTRICTED ZONE	---
EASEMENT	---
HV CABLES	
CNS3 - 400mm ² (3X1c)	---
CNS4 - 240mm ² (3X1c)	---
CNS4 - 185mm ² (3X1c)	---
CNS5 - 95mm ² (3X1c)	---
CNS1 - 50mm ² (3X1c)	---
CNS1 - 50mm ² (1c)	---
CNS4 - 35mm ² (3X1c)	---
CNS7 - 35mm ² (1c)	---
EXISTING HV CABLES (SIZE AND TYPE INDICATED)	---
LV-SL CABLES	
CNS5 - 240mm ² (1x3c)	---
CNS4 - 185mm ² (1x3c)	---
CNS3 - 120mm ² (1x3c)	---
CNS2 - 25mm ² (1x3c)	---
CNS1 - 16mm ² SL (1c)	---
40 c PILOT	---
EXISTING LV CABLES (SIZE AND TYPE INDICATED)	---
STREET LIGHTS	
EXISTING	---
12W CFL	---
80W MV	---
125W MV	---
70W HPS	---
95W HPS	---
750W HPS	---
750W HPS AERODROME	---
70W MH	---
95W MH	---
750W MH	---
SL LED	---
2L LED	---
3L LED	---
4L LED	---
5L LED	---
6L LED	---
LEGEND DEFINES TYPE & WATTAGE - NOT COLOUR	
PILLARS / PITS / ETC	
MINI (WORKING END)	---
UNIVERSAL	---
MINI	---
CABLE MARKER U/G	---
CONDUIT / POLY PIPE	---
TRANSFORMER	---
EXISTING	---
SWITCHGEAR	---
AERIAL CONDUCTORS AND POLES	
NEW POLE (ANY TYPE AS INDICATED)	---
EXISTING POLE (ANY TYPE AS INDICATED)	---
EXISTING AERIAL CONDUCTORS (SIZE AND TYPE INDICATED)	---



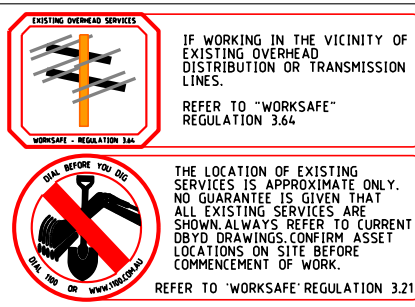
B	AS CONSTRUCTED	28-06-19	DA	VH
	ISSUED TO CLIENT FOR CONSTRUCTION	12-03-19	DA	VH
A	ISSUED TO WESTERN POWER FOR CONFORMANCE	23-01-19	DA	VH
2	WP PROJECT NUMBER ADDED, DESIGN UPDATED TO SUIT EXISTING ASSET LOCATIONS SHOWN IN WP DIP.	21-01-19	DA	VH
1	ISSUED TO CLIENT FOR COMMENT	12-12-18	DA	VH
REV	DESCRIPTION	DATE	DRAWN	CHKD

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AS CONSTRUCTED
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Scale	1:500	A1 Original Paper Size
Base File Date	09-03-2017	H. Datum PCG94
Designed	DA	Drawn DA
Checked	VH	Approved DLJ
Western Power Reference No.	MS017351	WAPC No. 155145
Local Authority	CITY OF KALAMUNDA	
Civil Consultant	PORTER CONSULTING ENGINEERS	

NARDINE CL & ASHBY CL FORRESTFIELD STAGE 1
ROADWAY EXTENSION ELECTRICAL RETICULATION LAYOUT

Sheet	Of	3E Drawing Number	Revision
1	1	3E18121-01	B

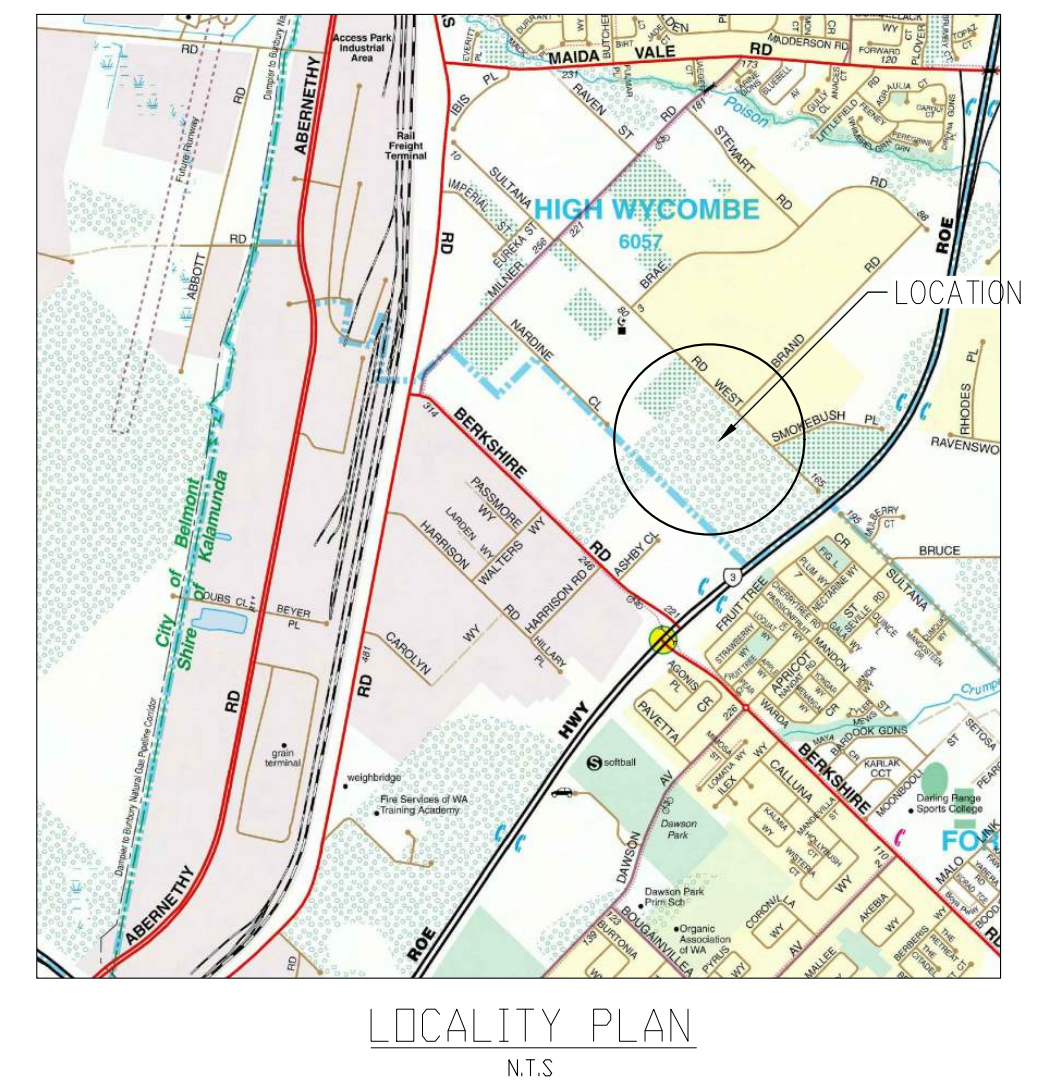


328

329

ATTACHMENT 3:

City of Kalamunda Emergency access way concept plan (4167-02-01/A)



AREA OF LANE TO BE SHAPED (1342m² Approx.)

NOTES:


1. THIS DESIGN IS NOT FINAL AND IS CONCEPTUAL IN NATURE ONLY.
2. CADASTRAL INFORMATION APPROXIMATE ONLY.
3. DIMENSION IN METERS U N O
4. CONTOURS FOR INFORMATION ONLY. FINAL SURVEY REQUIRED FOR FINAL DESIGN. GROUND LOCATIONS.
5. SERVICE LOCATIONS DIAGRAMMATIC ONLY. CONTACT SERVICE AUTHORITIES FOR EXACT IN GROUND LOCATIONS.
6. KERBING TO BE CONSTRUCTED IN ACCORDANCE WITH CITY OF KALAMUNDA DRGS. 7A TO 7D
7. ALL DISTURBANCES TO EXISTING VERGE. RETICULATION AND TURFING TO BE REINSTATED.

NOT FOR
CONSTRUCTION

CONCEPT
ONLY



WARNING
SERVICES AND CADASTRAL BOUNDARY LOCATIONS
ARE ONLY INDICATIVE AND MUST NOT BE USED FOR
EXCAVATION. THE "ONE CALL 1100" SYSTEM SHALL
BE USED TO OBTAIN ACCURATE SERVICE LOCATIONS.

 <p>Shire of Kalamunda</p>	<h1>ASSET SERVICES</h1>		
<h2>EMERGENCY ACCESS</h2> <p>NARDINE CLOSE TO SULTANA ROAD WEST</p> <p>MAIDA VALE</p>			
<h3>CONCEPT PLAN</h3> <p>1 OF 1</p>			
<p>DRAWING No. _____</p>	<p>-SHEET _____</p>	<p>/REVISION _____</p>	<p>ORIGINAL (Dwg. Size) _____</p>
<p>4167-02-01/A</p>			<p>A1</p>

ATTACHMENT 4:

Indicative Costs for retention of the existing cul-de-sac (T092.20)

Project Nardine Close, High Wycombe – Temporary cul-de-sac and cost review
Option The existing cul-de-sac remaining in its current position
Client City of Kalamunda
Engineer Michael Cook
Job Number 20-06-081
Date 19 June 2020
File Name T092.20
Revision B
Reference Document R43.20



Level 2, 58 Kishorn Road
 Mount Pleasant WA 6153
 PO Box 1036
 Canning Bridge WA 6153
 Tel: (08) 9315 9955
 office@portereng.com.au
 www.portereng.com.au

INDICATIVE DEVELOPMENT COSTS	
CONSTRUCTION COSTS	TOTAL COST
Preliminaries	\$ 11,600
Earthworks and Siteworks	\$ 12,700
Water Reticulation	\$ 37,800
Roads and Paths	\$ 14,300
Fencing	\$ 7,200
Underground Power	\$ 17,800
Communications	\$ 13,700
Gas Servicing	\$ 2,100
Provisional: Adjustment of internal services by the western side of the residential home	\$ 3,000
Construction Contingency (7.5% of construction)	\$ 12,000
CONSTRUCTION TOTAL	\$ 132,200
Extra over costs for works from the interim to permanent reservation boundary.	\$ 28,000
DEVELOPMENT FEES AND CHARGES	TOTAL COST
Local Authority Fees	\$ 800
Water Corporation Fees	\$ 1,500
Western Power Fees	\$ 2,500
Communications Headworks and Backhaul Charges	\$ -
WAPC and Landgate Fees	\$ -
Professional Fees	\$ 22,300
Administration Contingency (5% of fees/charges)	\$ 2,000
DEVELOPMENT FEES AND CHARGES TOTAL	\$ 29,100
SUB TOTAL COSTS	\$ 189,300
GST	\$ 18,930
TOTAL COSTS	\$ 208,230

We stress that these costs are indicative only and are reflective of current construction costs in the area. No allowances have been made for property costs. The reader should be satisfied that the costs are appropriate for their purpose. Porter Consulting Engineers does not accept responsibility or liability for their interpretation or use.

ATTACHMENT 5:

Indicative Costs for Emergency Access way to tie into existing cul-de-sac (T095.20)

Project Nardine Close, High Wycombe - Emergency Access Way development
Option As per City of Kalamunda Emergency access concept plan 4167-02-01/A, based on retaining the existing cul-de-sac.



Client City of Kalamunda
Engineer Michael Cook
Job Number 20-06-081
Date 19 June 2020
File Name T095.20
Revision B
Reference Document R43.20

Level 2, 58 Kishom Road
 Mount Pleasant WA 6153
 PO Box 1036
 Canning Bridge WA 6153
 Tel: (08) 9315 9955
 office@portereng.com.au
 www.portereng.com.au

INDICATIVE DEVELOPMENT COSTS	
CONSTRUCTION COSTS	TOTAL COST
Preliminaries	\$ 8,000
Earthworks and Siteworks	\$ 17,000
Accessway pavement works	\$ 15,500
Fencing	\$ 19,800
Firebreaks	\$ -
Electrical	\$ 2,800
Construction Contingency (5% of construction)	\$ 4,000
CONSTRUCTION TOTAL	\$ 67,100
DEVELOPMENT FEES AND CHARGES	TOTAL COST
Local Authority Fees	\$ 600
Professional Fees	\$ 6,400
Administration Contingency (5% of fees/charges)	\$ 1,000
DEVELOPMENT FEES AND CHARGES TOTAL	\$ 8,000
SUB TOTAL COSTS	\$ 75,100
GST	\$ 7,510
TOTAL COSTS	\$ 82,610

We stress that these costs are indicative only and are reflective of current construction costs in the area. No allowances have been made for property costs. The reader should be satisfied that the costs are appropriate for their purpose. Porter Consulting Engineers does not accept responsibility or liability for their interpretation or use.

ATTACHMENT 6:
Relocating the cul-de-sac layout



ATTACHMENT 7:

Indicative Costs for relocating the cul-de-sac layout (T093.20)

Project Nardine Close, High Wycombe – Temporary cul-de-sac and cost review
Option Relocate the cul-de-sac
Client City of Kalamunda
Engineer Michael Cook
Job Number 20-06-081
Date 17 June 2020
File Name T093.20
Revision A
Reference Document R43.20



Level 2, 58 Kishorn Road
 Mount Pleasant WA 6153
 PO Box 1036
 Canning Bridge WA 6153
 Tel: (08) 9315 9955
 office@portereng.com.au
 www.portereng.com.au

INDICATIVE DEVELOPMENT COSTS	
CONSTRUCTION COSTS	TOTAL COST
Preliminaries	\$ 13,800
Earthworks and Siteworks	\$ 30,700
Water Reticulation	\$ 38,200
Roads and Paths	\$ 75,500
Fencing	\$ 8,800
Underground Power	\$ 20,400
Communications	\$ 14,500
Gas Servicing	\$ 2,300
Provisional: Adjustment of internal services by the western side of the residential home	\$ 3,000
Construction Contingency (7.5% of construction)	\$ 16,000
CONSTRUCTION TOTAL FOR THE INTERIM BOUNDARY	\$ 223,200
DEVELOPMENT FEES AND CHARGES	TOTAL COST
Water Corporation Standard Sewer Infrastructure Contribution	\$ -
Water Corporation Standard Water Infrastructure Contribution	\$ -
Water Corporation Standard Drainage Infrastructure Contribution	\$ -
Local Authority Fees	\$ 1,400
WAPC and Landgate Fees	\$ -
Professional Fees	\$ 15,600
Developer Contribution Scheme	\$ -
DEVELOPMENT FEES AND CHARGES TOTAL	\$ 23,400
SUB TOTAL COSTS	\$ 246,600
GST	\$ 24,660
TOTAL COSTS	\$ 271,260

We stress that these costs are indicative only and are reflective of current construction costs in the area. No allowances have been made for property

ATTACHMENT 8:

Indicative Costs for Emergency Access way to tie into relocated cul-de-sac (T096.20)

Project Nardine Close, High Wycombe - Emergency Access Way development
Option As per City of Kalamunda Emergency access concept plan 4167-02-01/A, based on the cul-de-sac being relocated.



Client City of Kalamunda
Engineer Michael Cook
Job Number 20-06-081
Date 19 June 2020
File Name T096.20
Revision B
Reference Document R43.20

Level 2, 58 Kishom Road
 Mount Pleasant WA 6153
 PO Box 1036
 Canning Bridge WA 6153
 Tel: (08) 9315 9955
 office@portereng.com.au
 www.portereng.com.au

INDICATIVE DEVELOPMENT COSTS	
CONSTRUCTION COSTS	TOTAL COST
Preliminaries	\$ 8,000
Earthworks and Siteworks	\$ 16,400
Accessway pavement works	\$ 13,500
Fencing	\$ 17,400
Firebreaks	\$ -
Electrical	\$ 2,800
Construction Contingency (5% of construction)	\$ 3,000
CONSTRUCTION TOTAL	\$ 61,100
DEVELOPMENT FEES AND CHARGES	TOTAL COST
Local Authority Fees	\$ 600
Professional Fees	\$ 5,900
Administration Contingency (5% of fees/charges)	\$ 1,000
DEVELOPMENT FEES AND CHARGES TOTAL	\$ 7,500
SUB TOTAL COSTS	\$ 68,600
GST	\$ 6,860
TOTAL COSTS	\$ 75,460

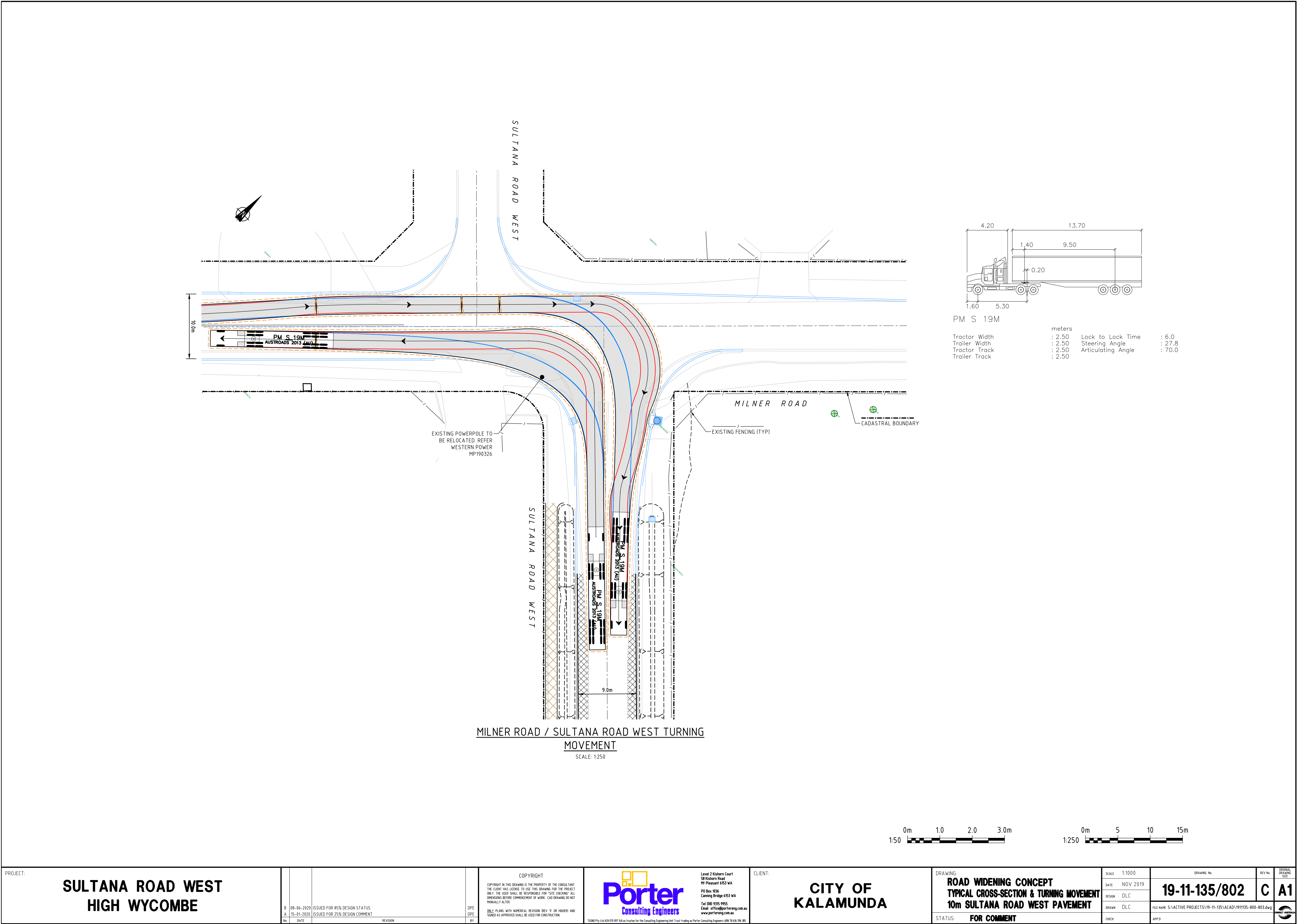
We stress that these costs are indicative only and are reflective of current construction costs in the area. No allowances have been made for property costs. The reader should be satisfied that the costs are appropriate for their purpose. Porter Consulting Engineers does not accept responsibility or liability for their interpretation or use.

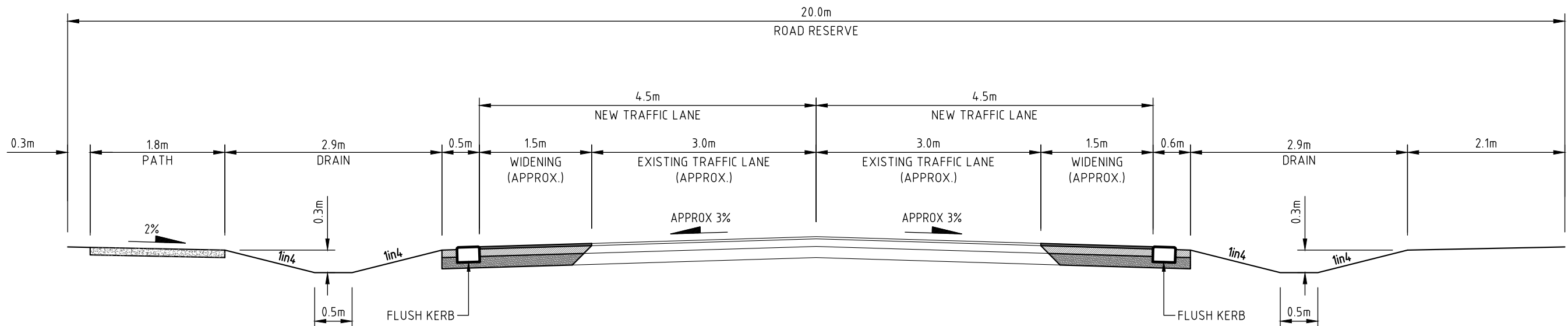
Attachment 9:
Sultana Road West (85% design status drawings)











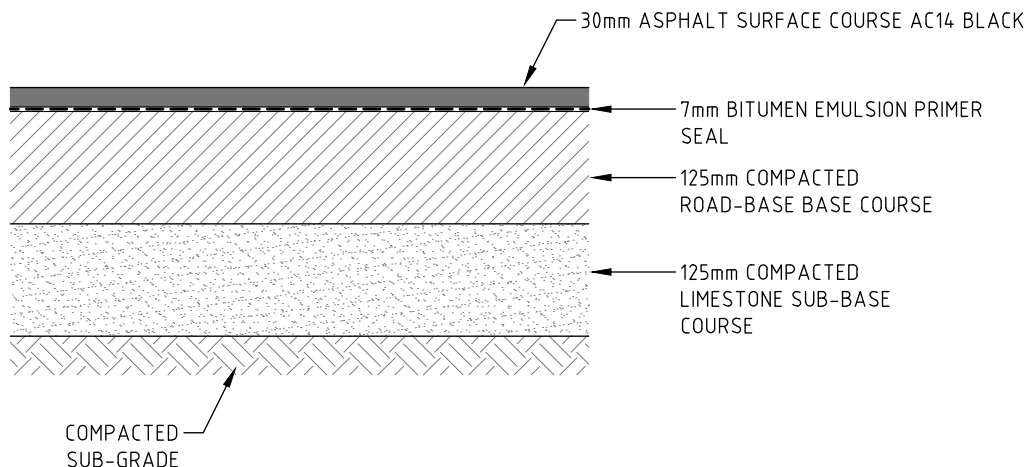
TYPICAL ROAD CROSS SECTION 'A' - SULTANA ROAD WEST

SCALE: 1:50

CITY OF KALAMUNDA STANDARD DRAWINGS:

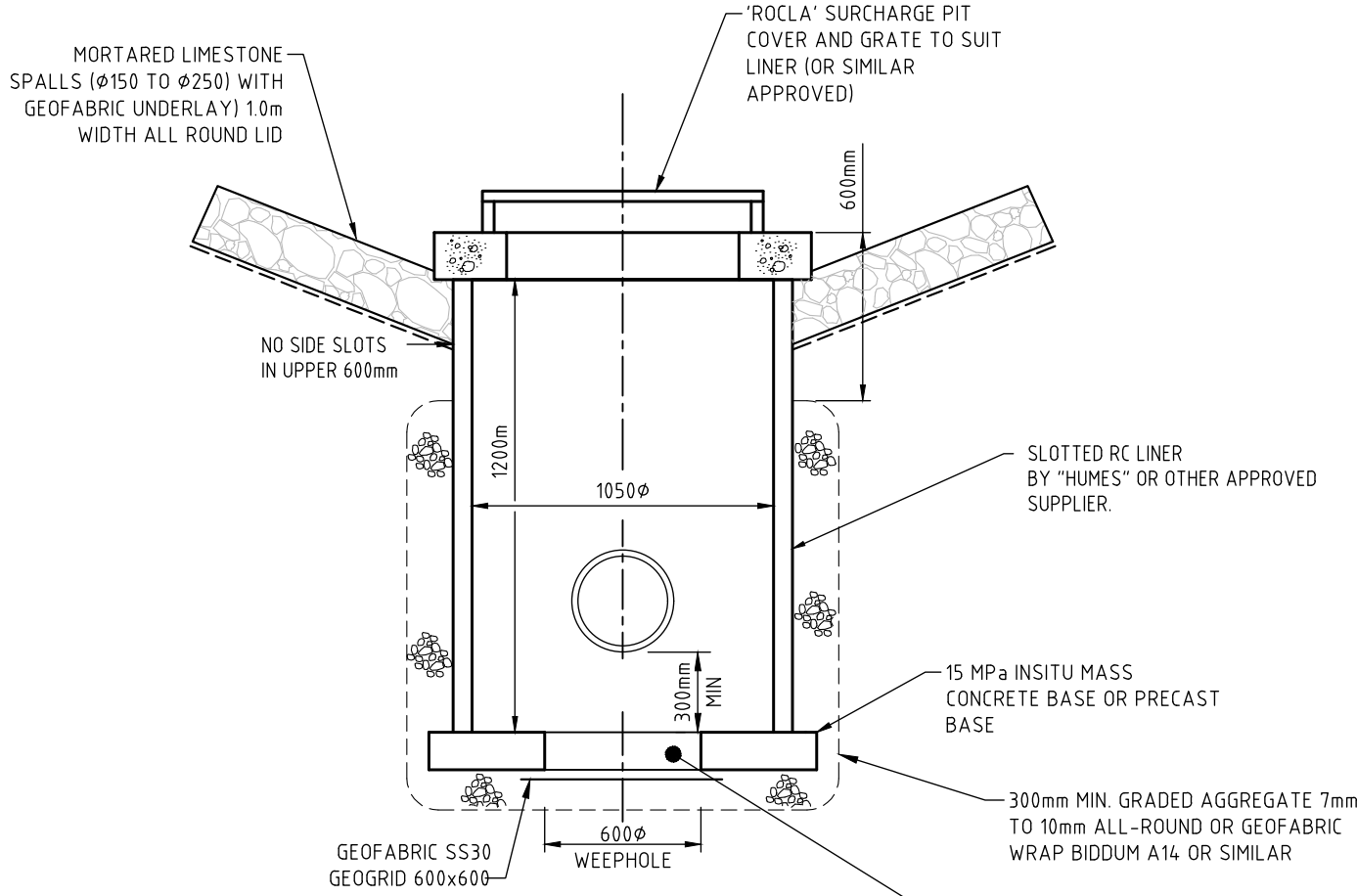
■ TIMBER BOLLARDS ADJACENT PUBLIC OPEN SPACE	1/30
■ STANDARD DRAINAGE	2/30
■ STANDARD SUBSOIL DRAINAGE	3/30
■ FOOTPATH DETAIL	4/30
■ HEADWALL DESIGN	6/30
■ KERB DETAILS	7A/30
■ MOUNTABLE KERB DETAIL	7B/30
■ SEMI MOUNTABLE KERB DETAIL	7C/30
■ BARRIER AND FLUSH KERB DETAIL	7D/30
■ BRICK MANHOLE/GULLY PITS (BENCHED)	8/30
■ MANHOLE DETAIL - PIPES 300-750 DIAMETER	9/30
■ MANHOLE/FOOTPATH DETAIL	10/30
■ PIPE BEDDING DETAILS	11/30
■ PRAM RAMP	12/30
■ TYPICAL ROAD CROSS SECTION - URBAN	13/30
■ STORMWATER - SEWER CROSSING (TYP)	14/30
■ TYPICAL SLOT LAYOUT - SUBSOIL DRAINAGE	15/30
■ STEP IRON DETAILS	16/30
■ SIDE ENTRY PIT DETAIL	17/30
■ TYPICAL CROSSOVERS - PLAN VIEW	1/3
■ TYPICAL CROSSOVERS	2/3
■ TYPICAL CROSSOVERS - INDUSTRIAL CROSSOVER	3/3

REFER CITY OF KALAMUNDA WEBSITE TO CHECK FOR CURRENT REVISIONS
<https://www.kalamunda.wa.gov.au/building-development/city-assets/engineering-services>



PAVEMENT RECONSTRUCTION AND WIDENING DETAIL
(ON SAND SUB-GRADE)

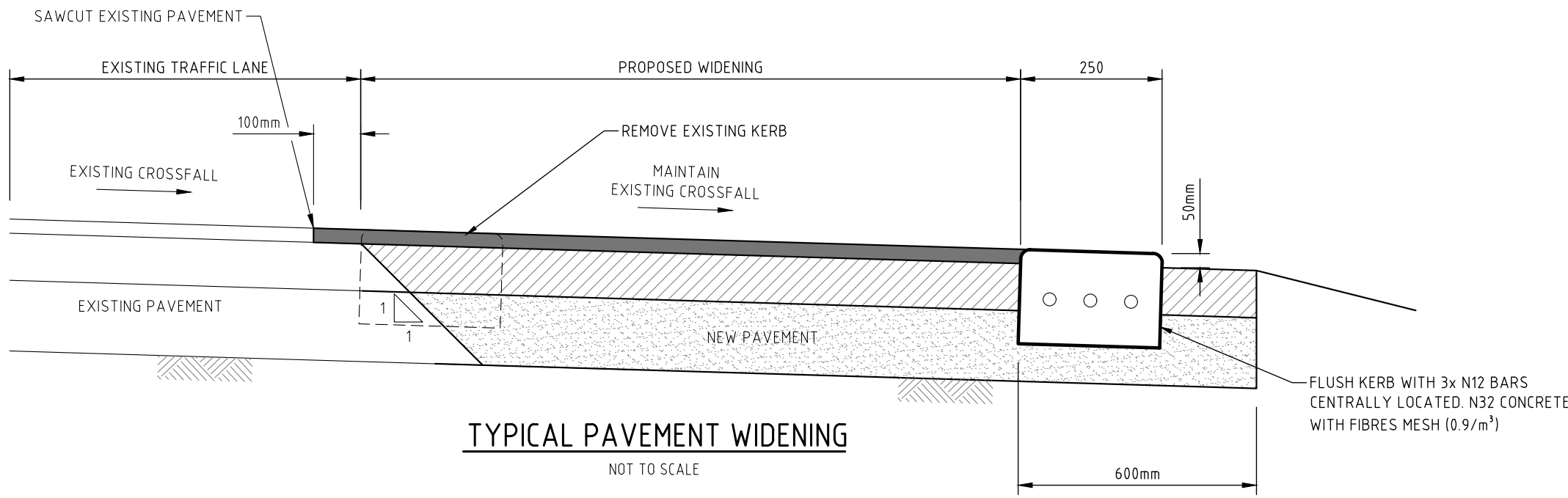
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NOTE:
STEP IRONS (NOT SHOWN) SHALL BE HOT DIP GALV. & PROVIDED
IN ALL MANHOLES GREATER THAN 1000mm DEEP. STEP IRONS
SHALL BE FIXED TO WALL UNITS BEFORE INSTALLATION

BUBBLE UP PIT

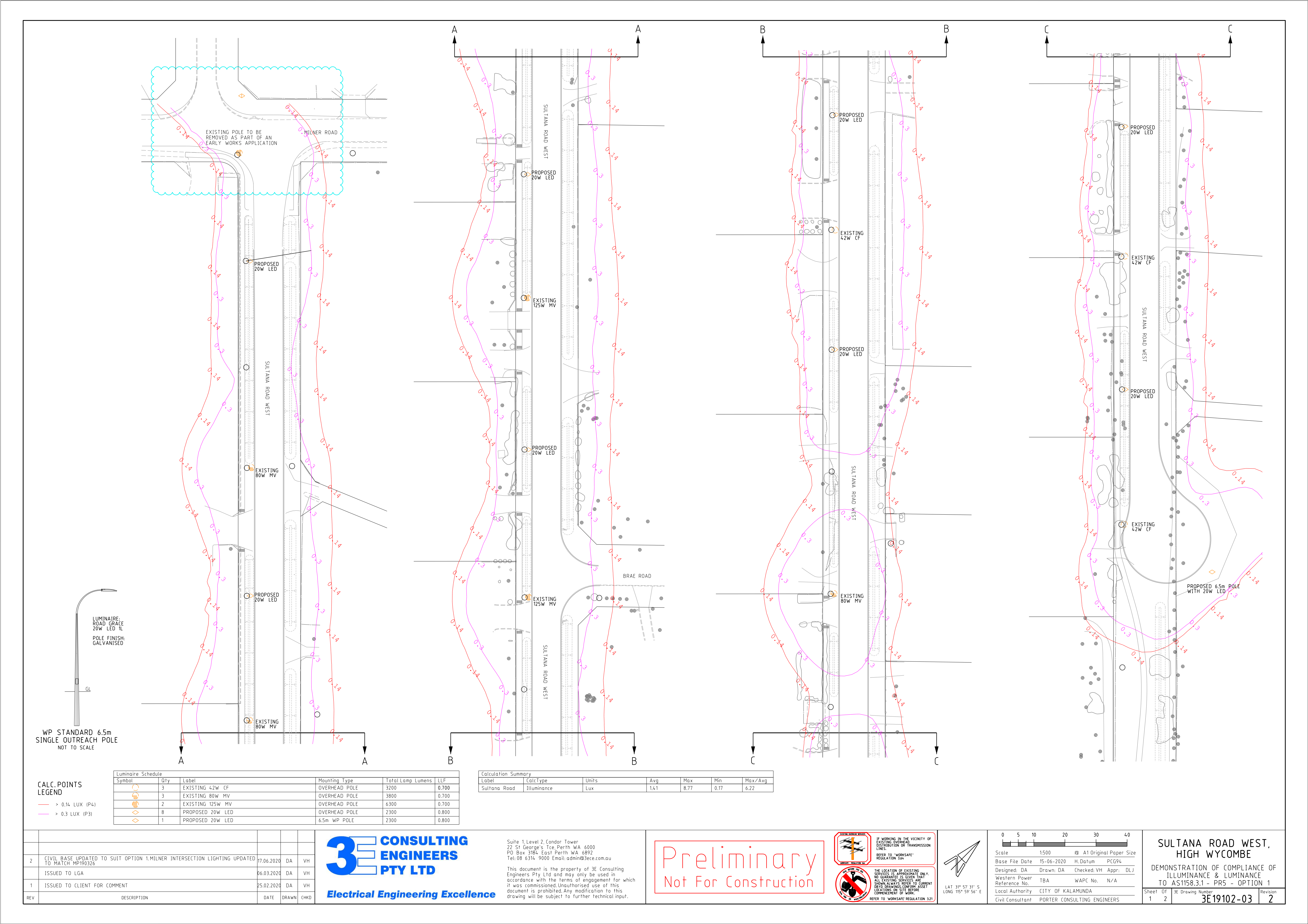
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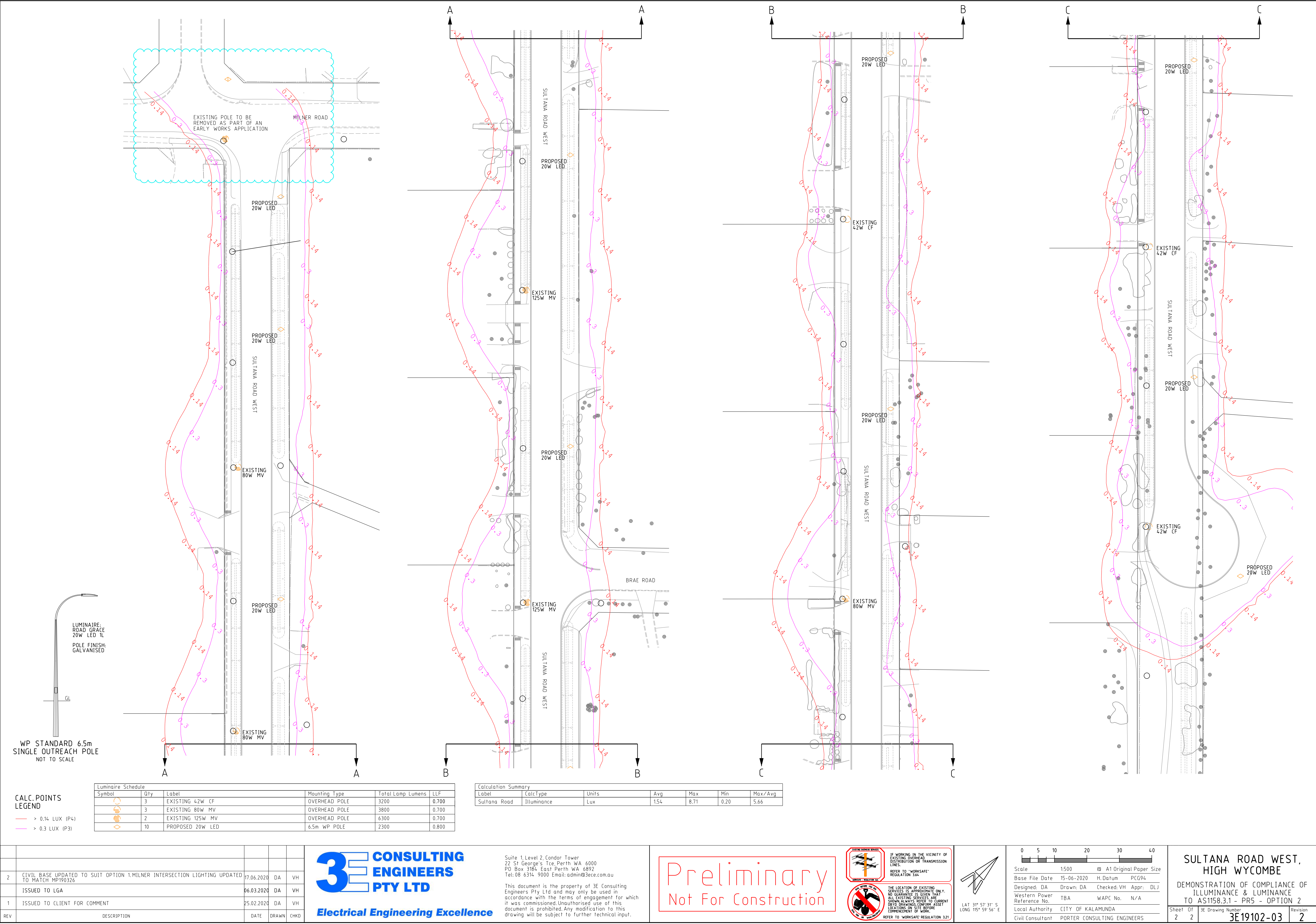


TYPICAL PAVEMENT WIDENING

NOT TO SCALE

PROJECT:	SULTANA ROAD WEST HIGH WYCOMBE	DATE: 08-06-2020	ISSUED FOR 85% DESIGN STATUS	DESIGNER: DPE	COPYRIGHT: PORTER CONSULTING ENGINEERS	CLIENT: CITY OF KALAMUNDA	DRAWING: ROAD WIDENING CONCEPT STANDARD DETAILS	SCALE: 1:1000	DATE: NOV 2019	DESIGN: DPE	DRAWN: DPE	CHECK: DPE	DRAWING NO: 19-11-135/804	REV NO: A	ORIGINAL DRAWING SIZE: A1
STATUS:	FOR COMMENT														

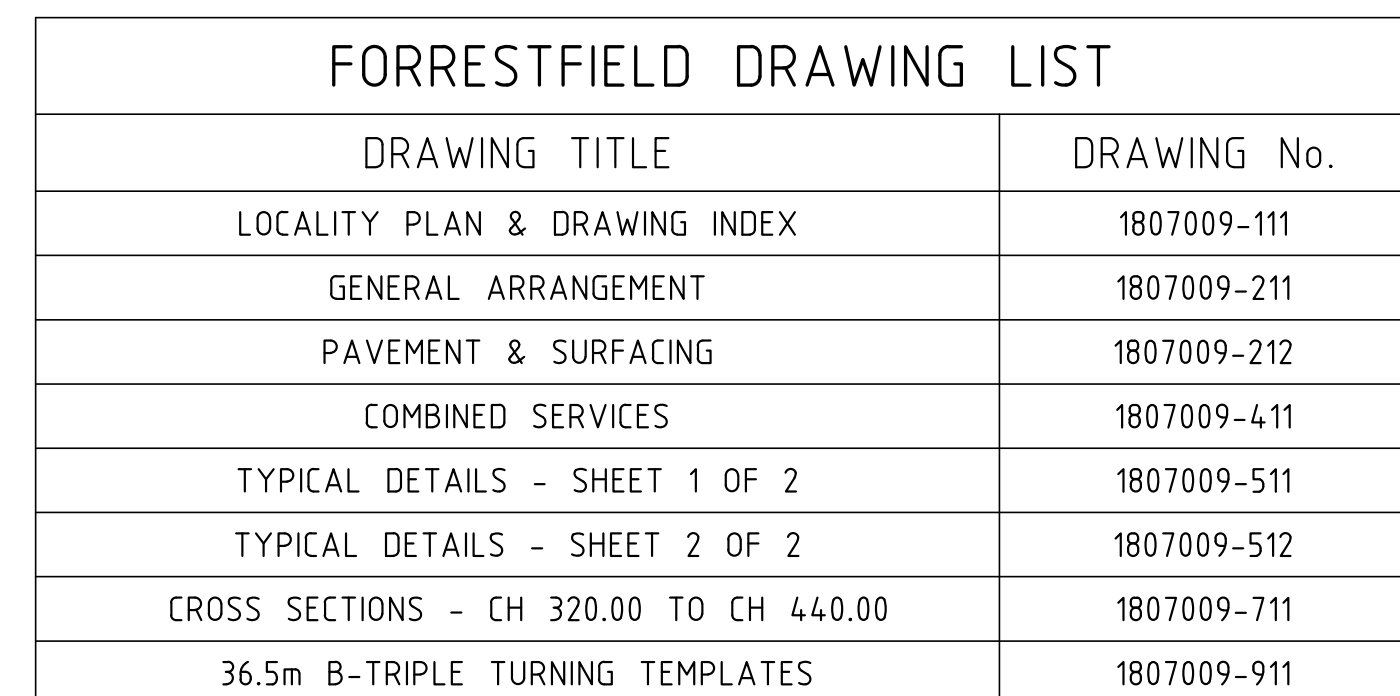




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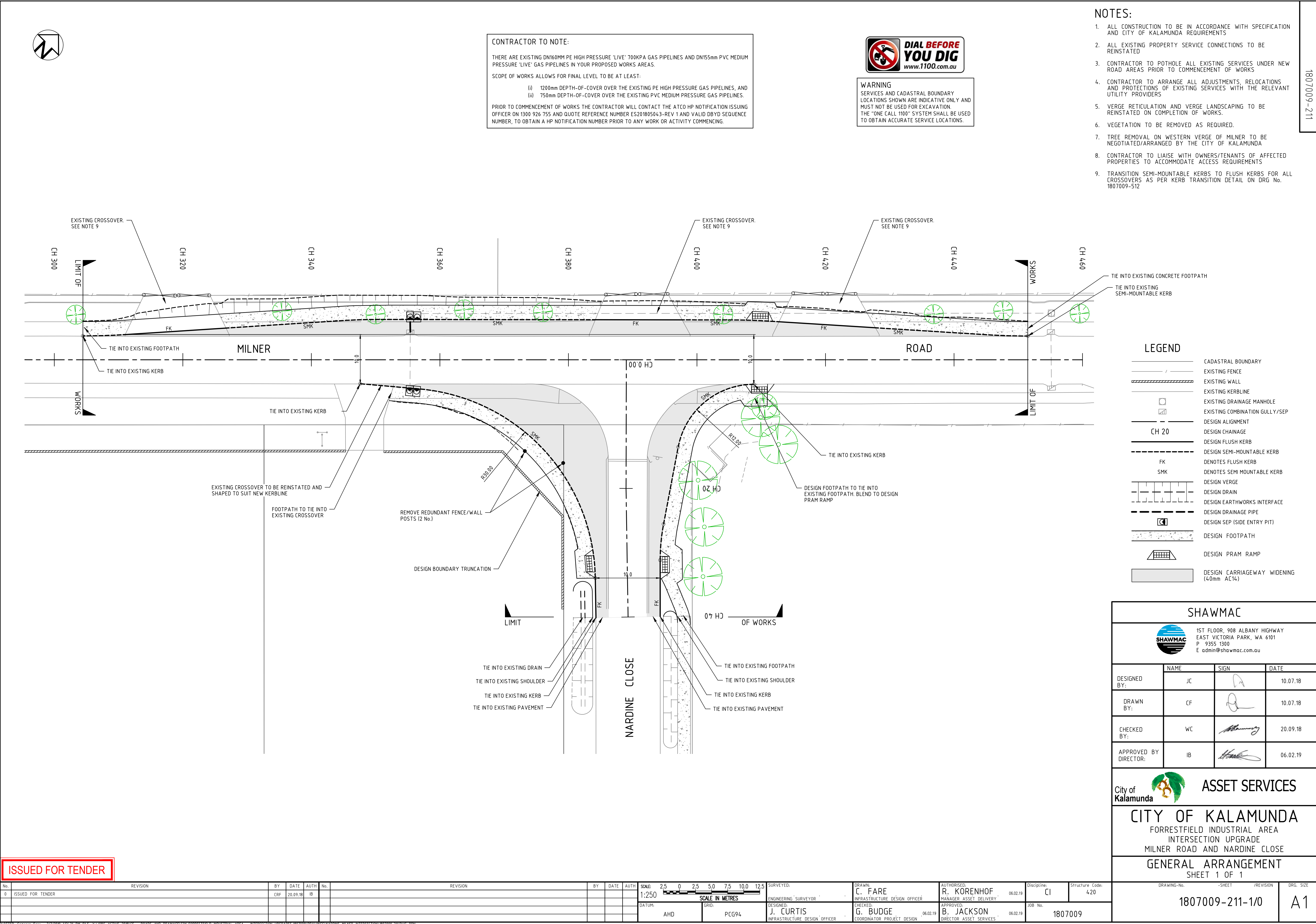
Milner Road / Nardine Close intersection drawings

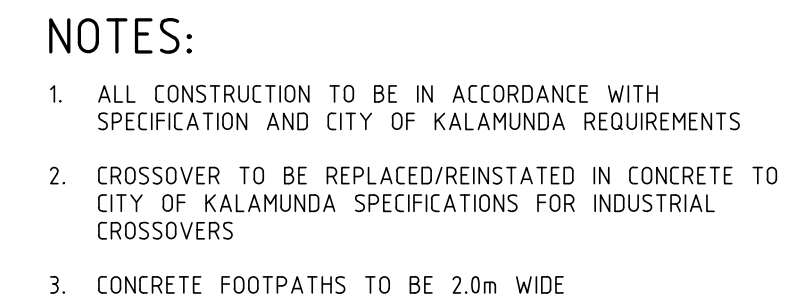
1807009-111



ISSUED FOR TENDER










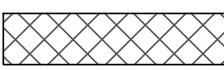


NTS		SURVEYED: ENGINEERING SURVEYOR		DRAWN: C. FARE INFRASTRUCTURE DESIGN OFFICER		AUTHORISED: R. KÖRENHOF MANAGER ASSET DELIVERY		Discipline: CI		Structure Code: 420	
DATE: AHD		GRID: PC694		DESIGNED: J. CURTIS MANAGER ASSET DELIVERY		CHECKED: G. BUDGE MANAGER ASSET DELIVERY		APPROVED: B. JACKSON MANAGER ASSET DELIVERY		JOB No. 1807009	











1807009-212

LEGEND

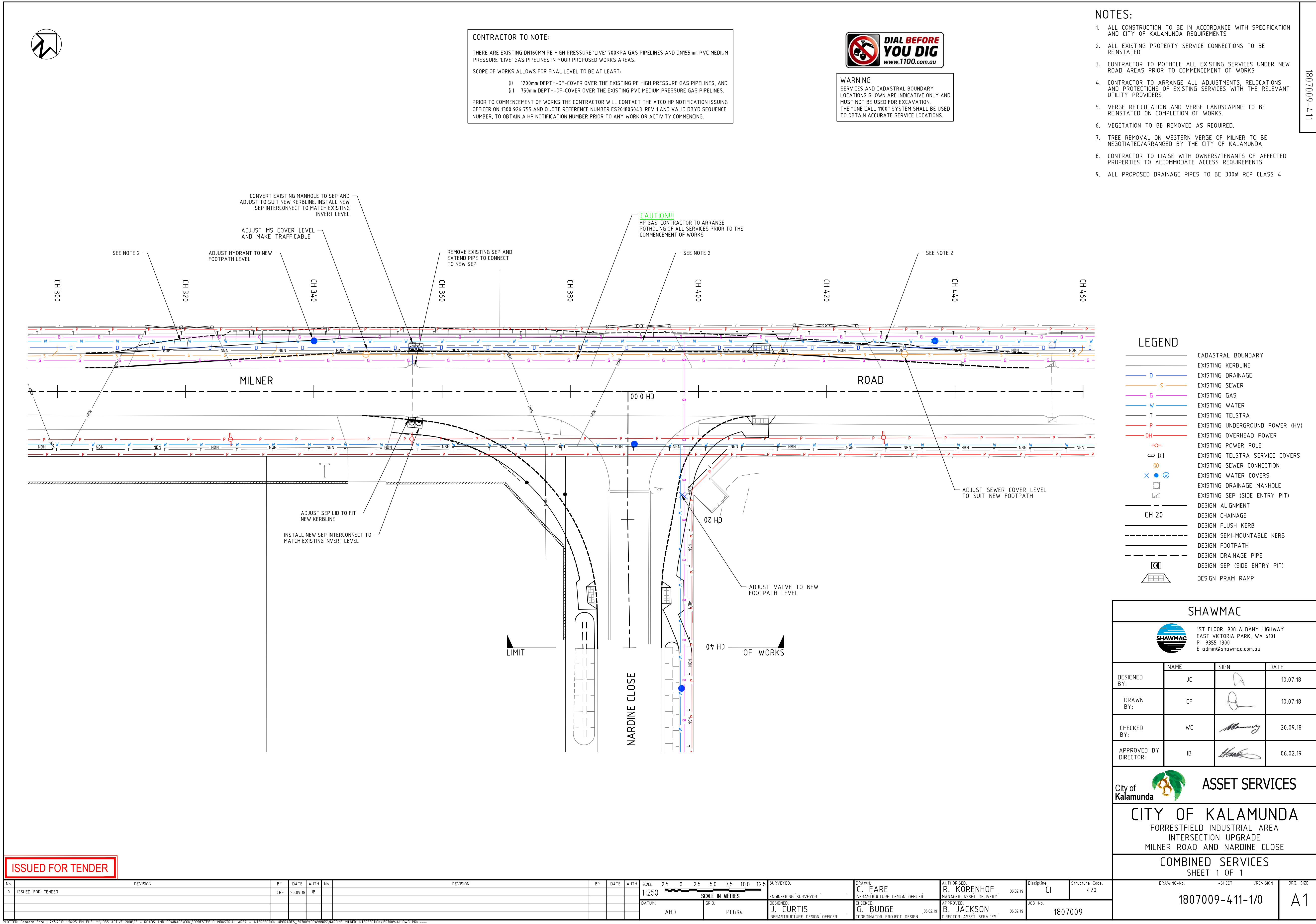
	CADASTRAL BOUNDARY
	EXISTING KERB
	EXISTING FOOTPATH
	DESIGN CUTLINE
	DESIGN KERB FACE
FK	DENOTES FLUSH KERB
SMK	DENOTES SEMI-MOUNTABLE KERB
	DEMOLISH AND DISPOSE OF 100mm PAVEMENT AND REPLACE WITH 100mm NEW BASECOURSE
	DEMOLISH AND DISPOSE OF EXISTING PAVEMENT, INSTALL 100mm BASECOURSE ON 220mm SUB-BASE
	DESIGN CARRIAGEWAY WIDENING, NEW 100mm BASECOURSE ON 220mm SUB-BASE
	7mm PRIMERSEAL AND 30mm ASPHALT AC10
	7mm PRIMERSEAL AND 40mm ASPHALT AC14 INTERSECTION MIX
	EXISTING INDUSTRIAL CROSSOVER TO BE MODIFIED TO SUIT NEW KERB ALIGNMENT
	DESIGN CONCRETE FOOTPATH

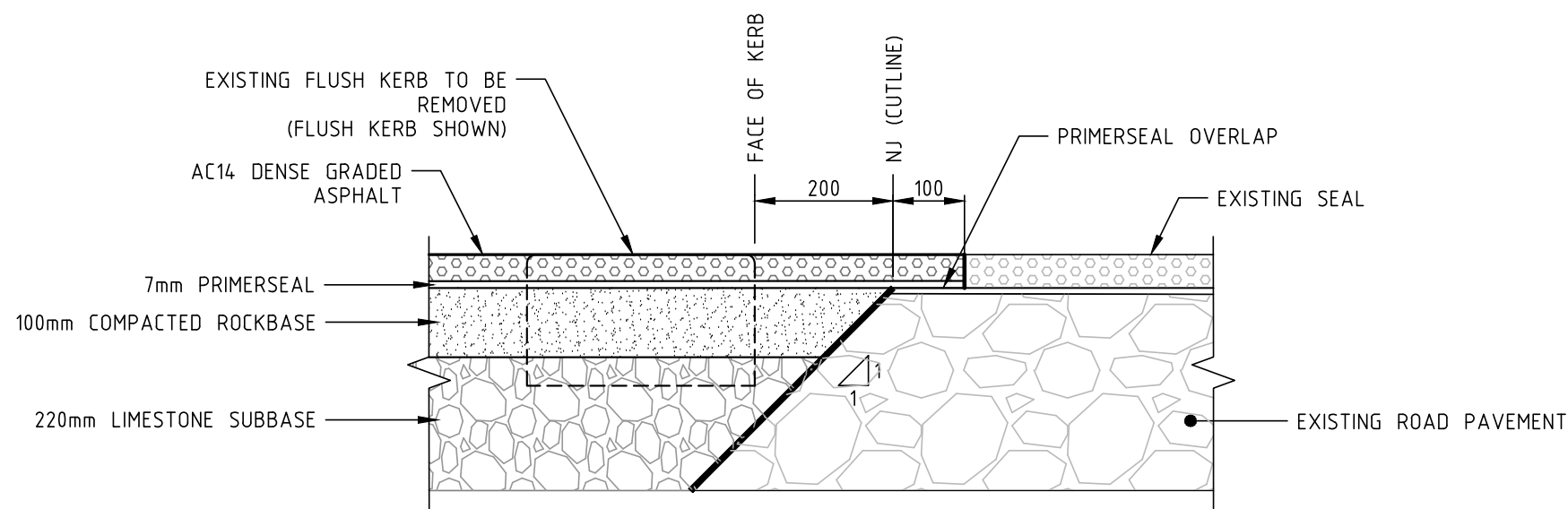
SHAWMAC			
		1ST FLOOR, 908 ALBANY HIGHWAY EAST VICTORIA PARK, WA 6101 P 9355 1300 E admin@shawmac.com.au	
DESIGNED BY:	NAME	SIGN	DATE
	JC		10.07.18
DRAWN BY:	CF		10.07.18
	WC		20.09.18
APPROVED BY DIRECTOR:	IB		06.02.19
	<div><div><div>City of Kalamunda</div></div><div>ASSET SERVICES</div></div>		
CITY OF KALAMUNDA FORRESTFIELD INDUSTRIAL AREA INTERSECTION UPGRADE MILNER ROAD AND NARDINE CLOSE			
PAVEMENT & SURFACING SHEET 1 OF 1			
DRAWING No.	-SHEET	REVISION	DRG. SIZE
1807009-212-1/0			A1

ISSUED FOR TENDER

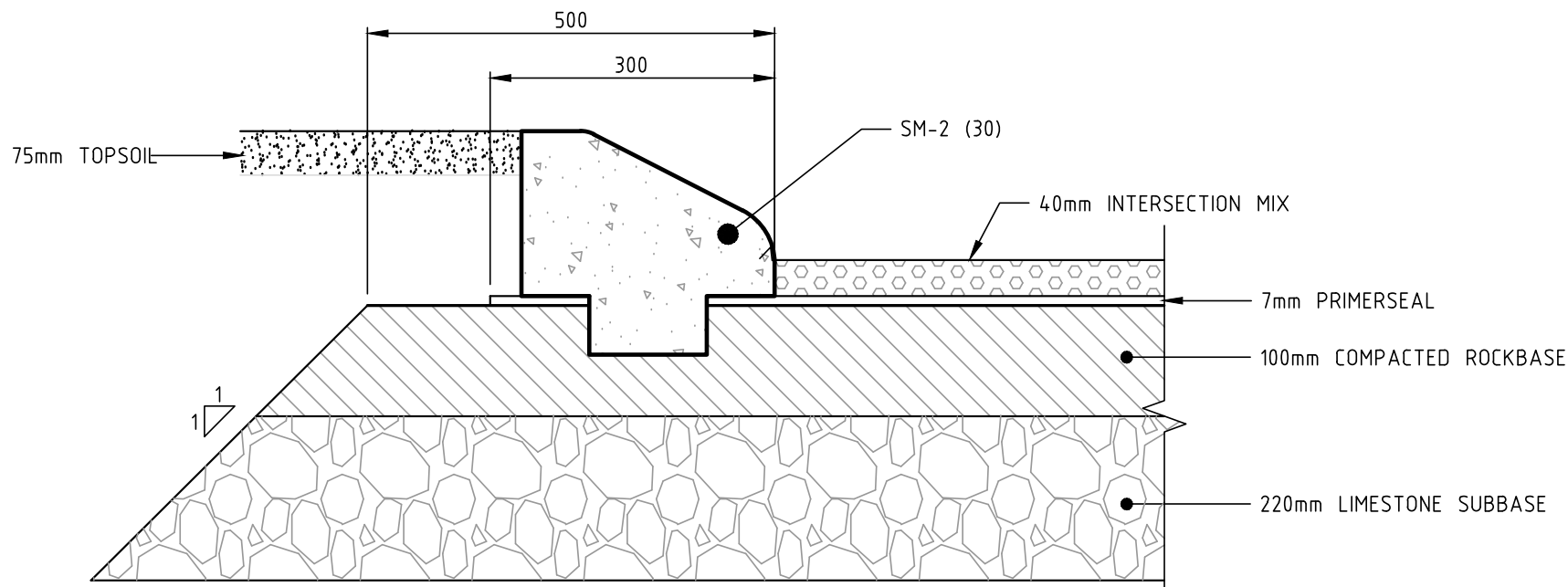
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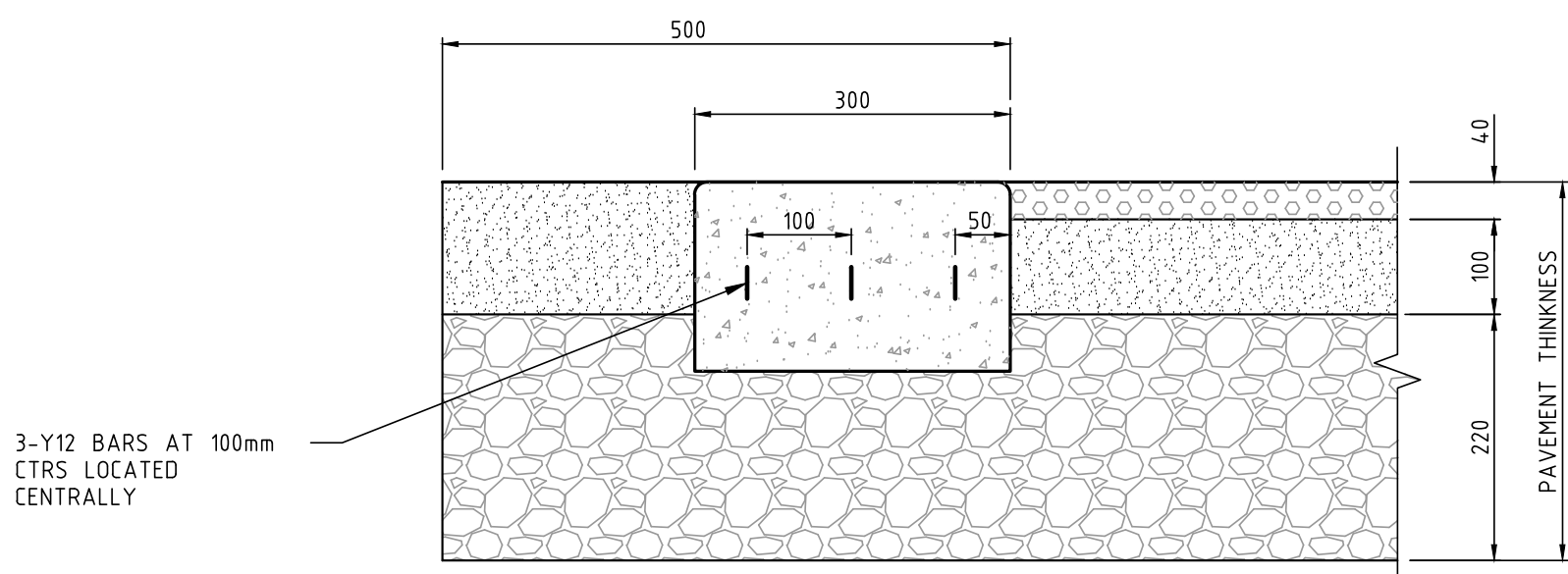




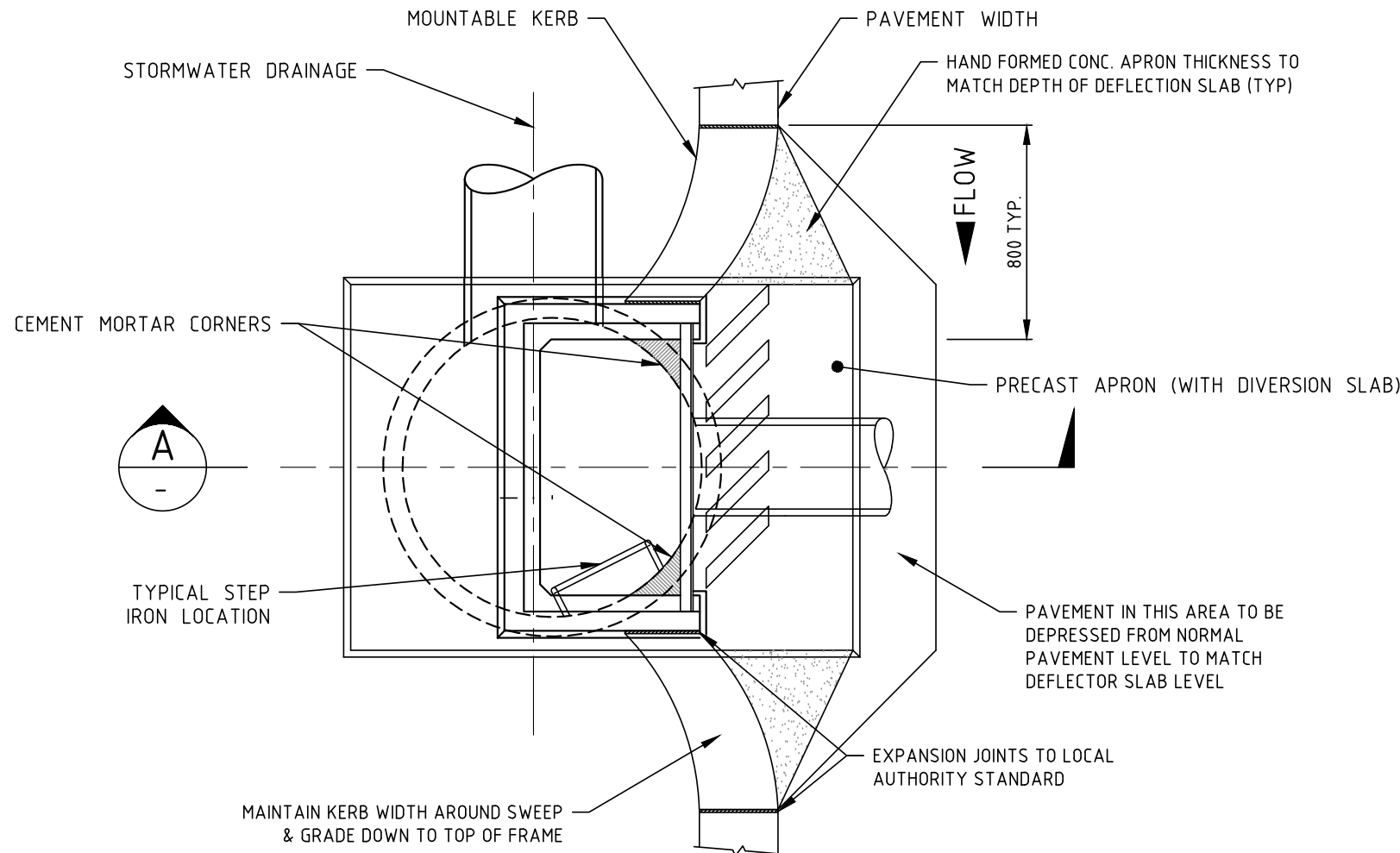
TYPICAL PAVEMENT WIDENING
NTS



TYPICAL PAVEMENT AND SEMI-MOUNTABLE KERBING DETAIL
NTS

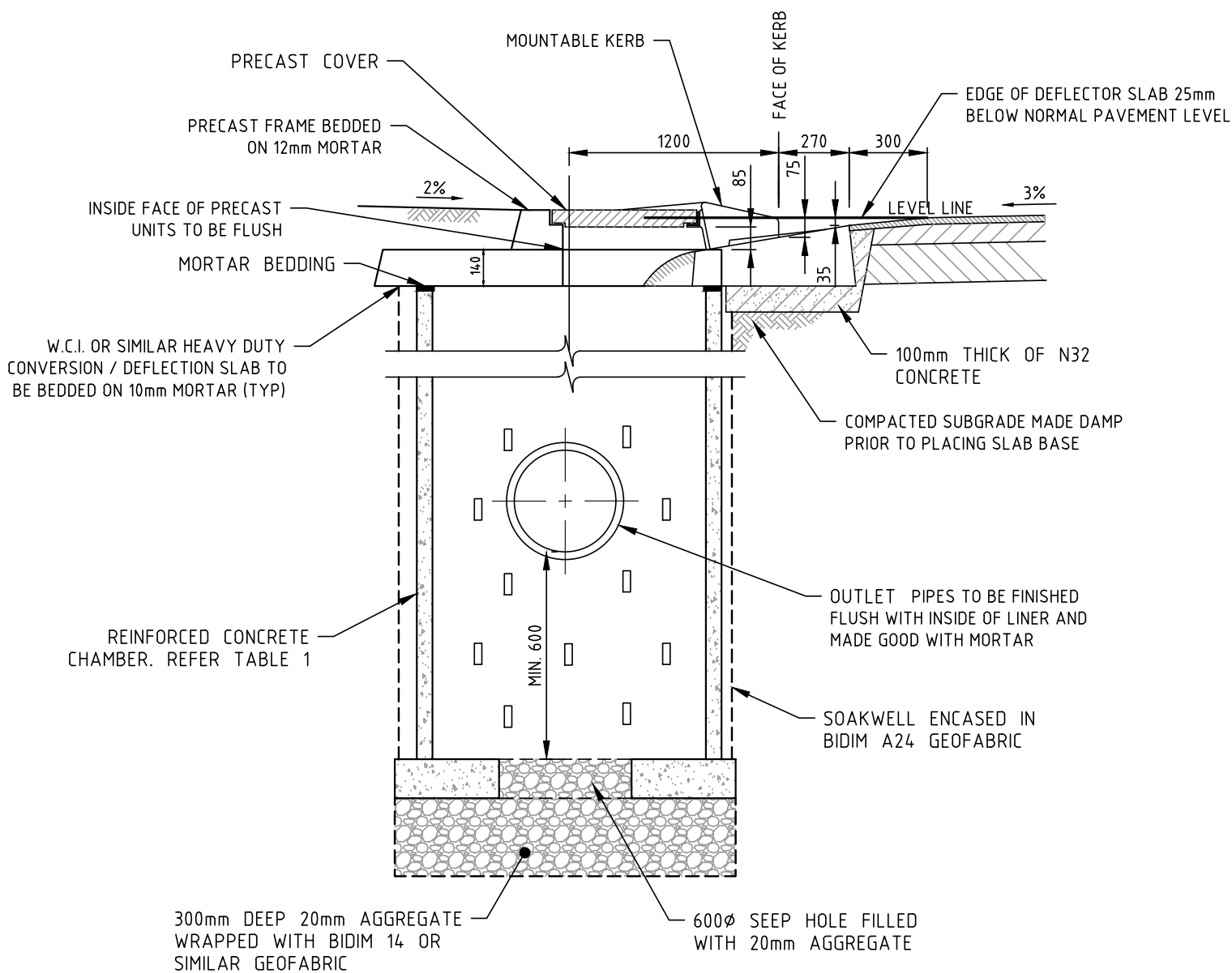


TYPICAL PAVEMENT AND FLUSH KERB DETAIL
NTS



PLAN - SIDE ENTRY PIT
NTS

- NOTES
- a) THE CLEAR OPENING IS $\pm 85\text{mm}$.
 - b) THE MEAN DEVIATION ACROSS THE FACE OF OPENING $\pm 2\text{mm}$.




SECTION A TYPICAL SEP WITH SOAKWELL
NTS

NOTES

- 1. ALL DIMENSIONS SHOWN ARE IN MILLIMETERS UNLESS NOTED OTHERWISE
- 2. DEMOLISH AND DISPOSE OF ALL EXISTING KERBING AND PATHS U.N.O
- 3. DESIGN LEVELS ARE TO TOP OF SEAL
- 4. CONTRACTOR TO REFER TO THE CITY OF KALAMUNDA STANDARD DRAWINGS FOR:
 - (a) CROSSOVERS: DRAWING No. 3/3
 - (b) PRAM RAMP: DRAWING No. 12/3
- 5. ALL PRAM RAMP TO INCLUDE TACTILE PAVERS


1807009-511

TABLE 1 - LINER DETAILS	
LINER ϕ	MAX. ϕ PIPE CONNECTING TO LINER
NOM. 900	NOM. 450
NOM. 1050	NOM. 525
NOM. 1200	NOM. 600



1ST FLOOR, 908 ALBANY HIGHWAY
EAST VICTORIA PARK, WA 6101
P 9355 1300
E admin@shawmac.com.au

DESIGNED BY:	JC	SIGN	DATE
DRAWN BY:	CF	SIGN	DATE
CHECKED BY:	WC	SIGN	DATE
APPROVED BY DIRECTOR:	IB	SIGN	DATE



ASSET SERVICES

CITY OF KALAMUNDA

FORRESTFIELD INDUSTRIAL AREA
INTERSECTION UPGRADE
MILNER ROAD AND NARDINE CLOSE

TYPICAL DETAILS

SHEET 1 OF 2

DRAWING-No. 1807009-511-1/0

-SHEET /REVISION ORG. SIZE A1

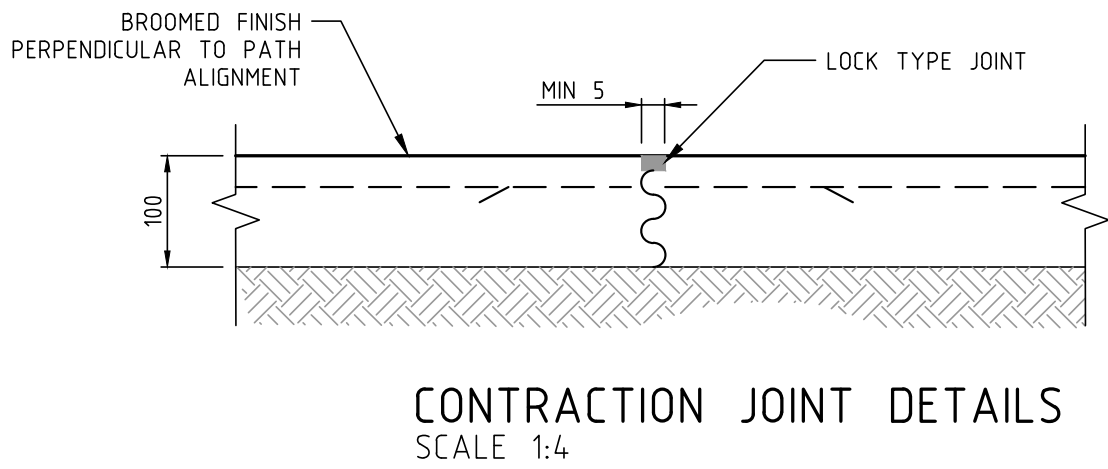
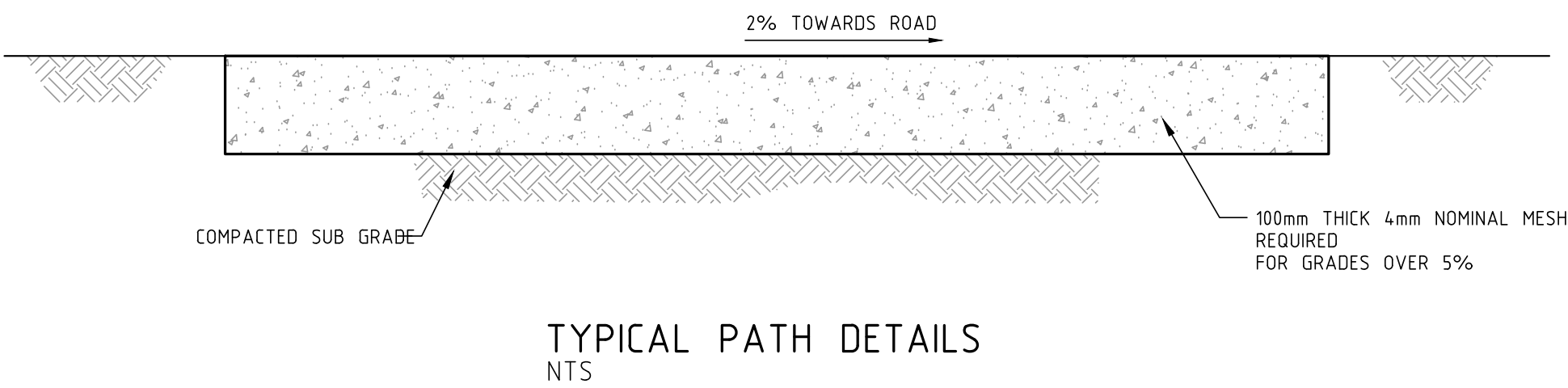
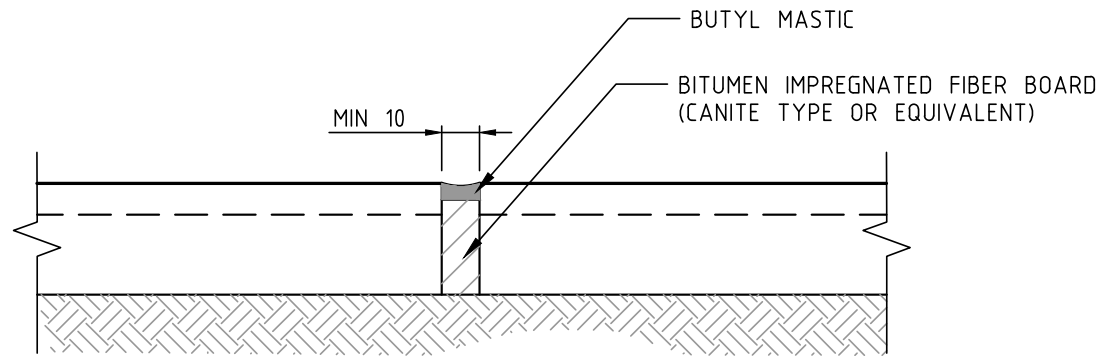
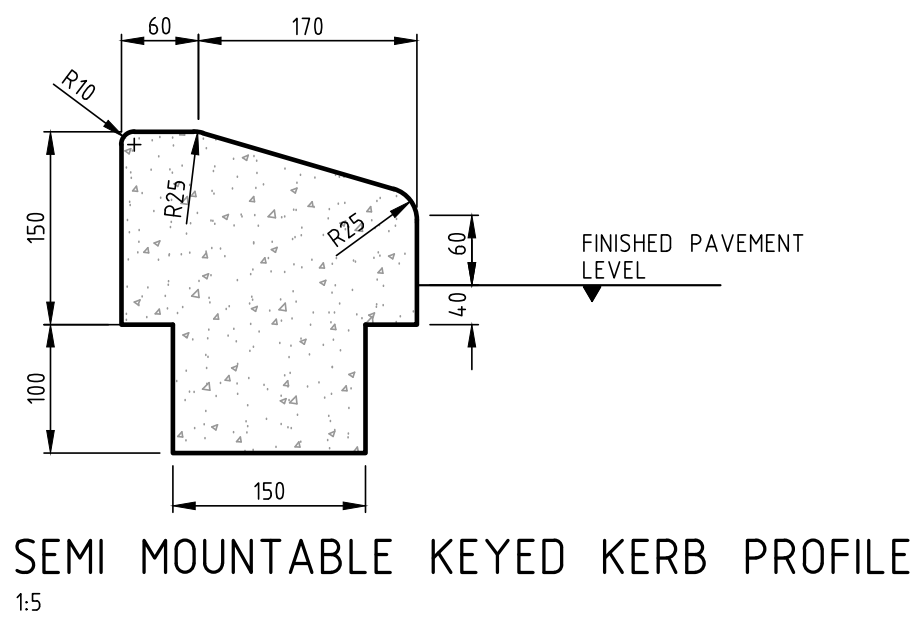
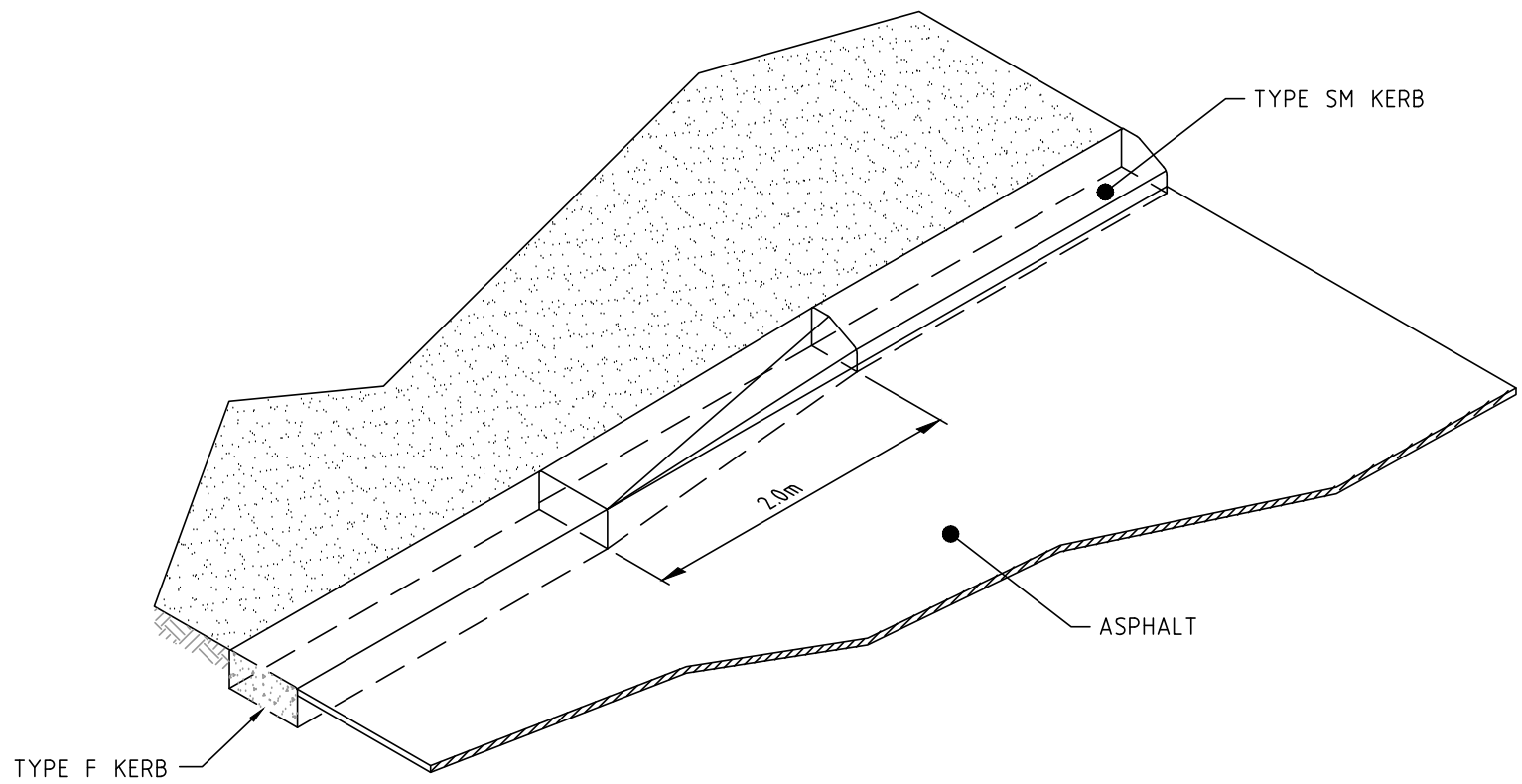
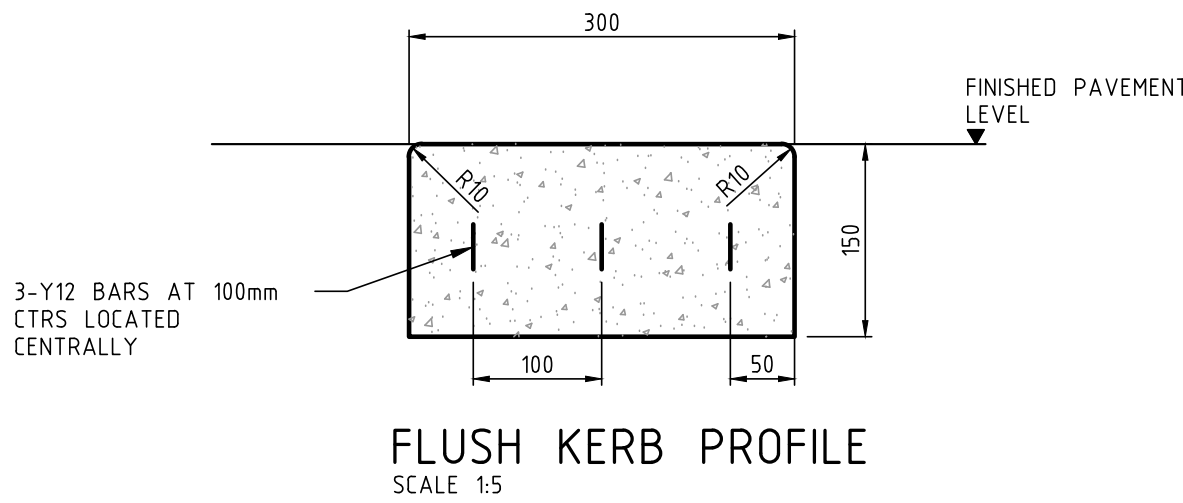
ISSUED FOR TENDER

No.	REVISION	BY	DATE	AUTH	No.	REVISION	BY	DATE	AUTH	NTS	SURVEYED:	DRAWN:	AUTHORISED:	Discipline:	Structure Code:
0	ISSUED FOR TENDER	CRF	20.09.18	IB							ENGINEERING SURVEYOR	C. FARE	R. KORENHOF	CI	420
											DESIGNED:	CHECKED:	APPROVED:		
											J. CURTIS	G. BUDGE	B. JACKSON		
											INFRASTRUCTURE DESIGN OFFICER	COORDINATOR PROJECT DESIGN	DIRECTOR ASSET SERVICES		

PLOTTED: Geroni Fare ; 27/12/2019 15:26 PM FILE: Y:\JOBS ACTIVE 2019\CE - ROADS AND DRAINAGE\CE\KALAMUNDA INDUSTRIAL AREA - INTERSECTION UPGRADES\807009\DRAWINGS\NARDINE MILNER INTERSECTION\1807009-511 & 512.DWG PRN:.....

1807009-512


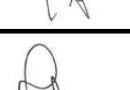

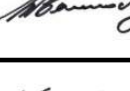


NOTES
1. ALL DIMENSIONS SHOWN ARE IN MILLIMETRES UNLESS NOTED OTHERWISE



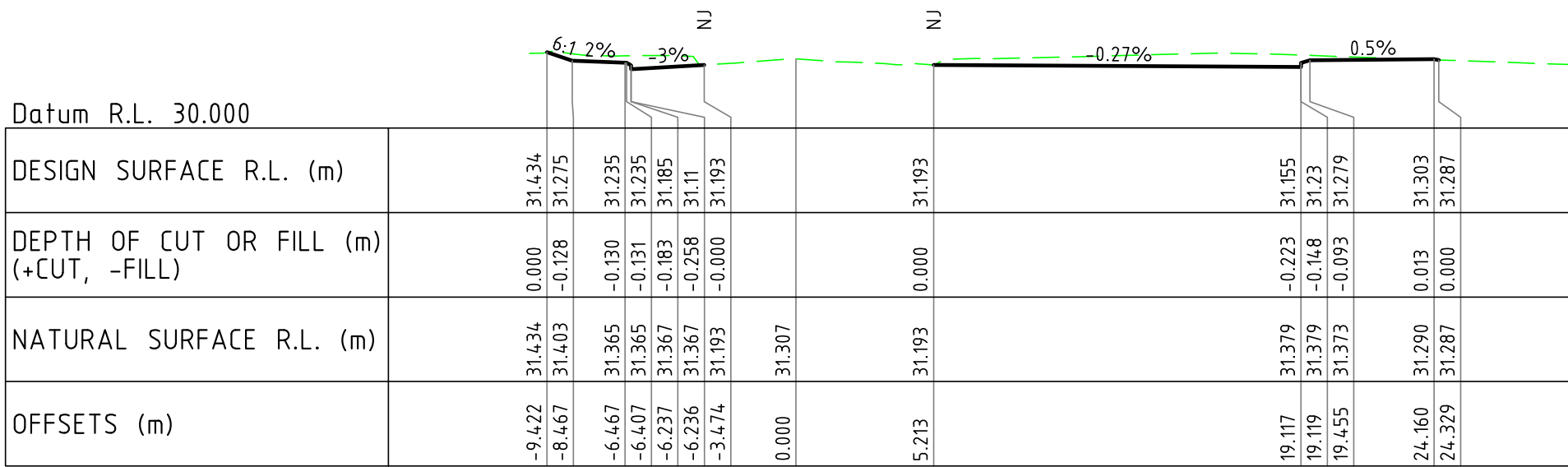
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0	ISSUED FOR TENDER	CRF	20.09.18	IB							ENGINEERING SURVEYOR	C. FARE INFRASTRUCTURE DESIGN OFFICER	R. KORENHOF MANAGER ASSET DELIVERY	CI	420
										DATUM:	J. CURTIS INFRASTRUCTURE DESIGN OFFICER	G. BUDGE COORDINATOR PROJECT DESIGN	B. JACKSON DIRECTOR ASSET SERVICES		
										AHD	PCG94				

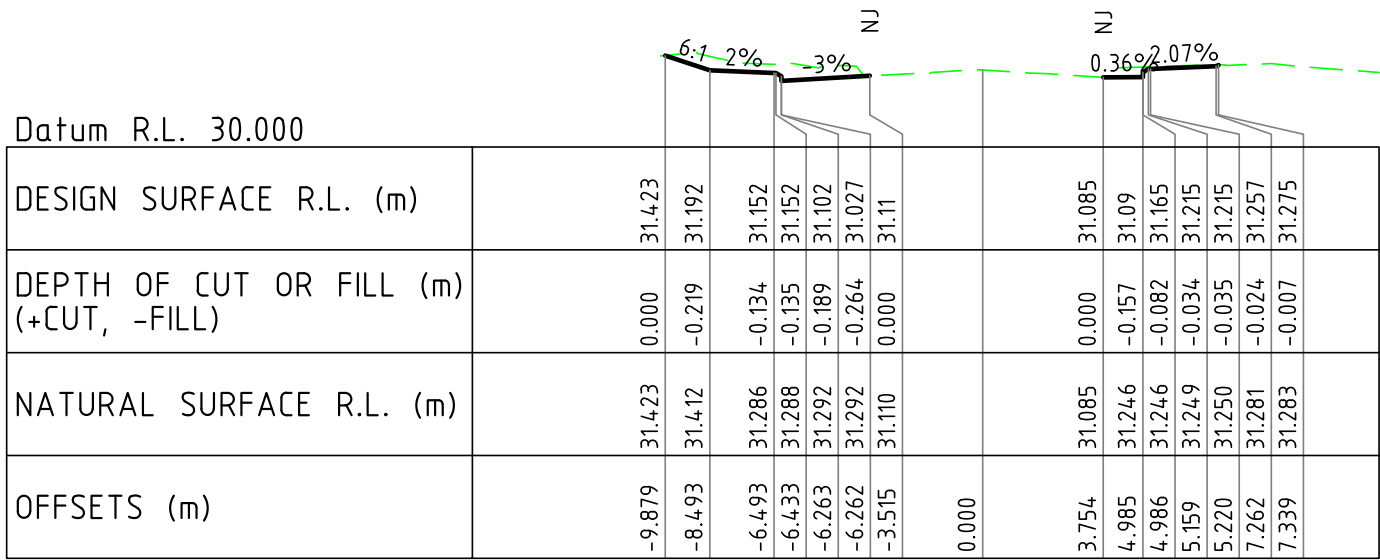
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SHAWMAC			
 1ST FLOOR, 908 ALBANY HIGHWAY EAST VICTORIA PARK, WA 6101 P 9355 1300 E admin@shawmac.com.au			
DESIGNED BY:	NAME	SIGN	DATE
	JC		10.07.18
DRAWN BY:	CF		10.07.18
CHECKED BY:	WC		20.09.18
APPROVED BY DIRECTOR:	IB		06.02.19
 ASSET SERVICES			
CITY OF KALAMUNDA FORRESTFIELD INDUSTRIAL AREA INTERSECTION UPGRADE MILNER ROAD AND NARDINE CLOSE			
TYPICAL DETAILS SHEET 2 OF 2			
DRAWING-No. -SHEET /REVISION ORG. SIZE			
1807009-512-1/0			A1

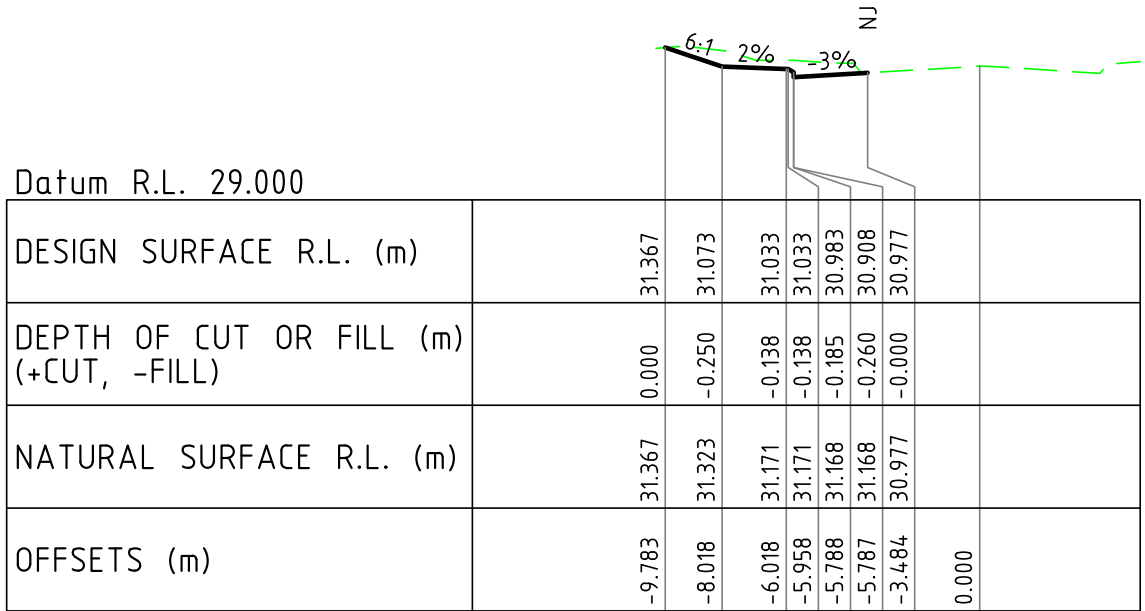
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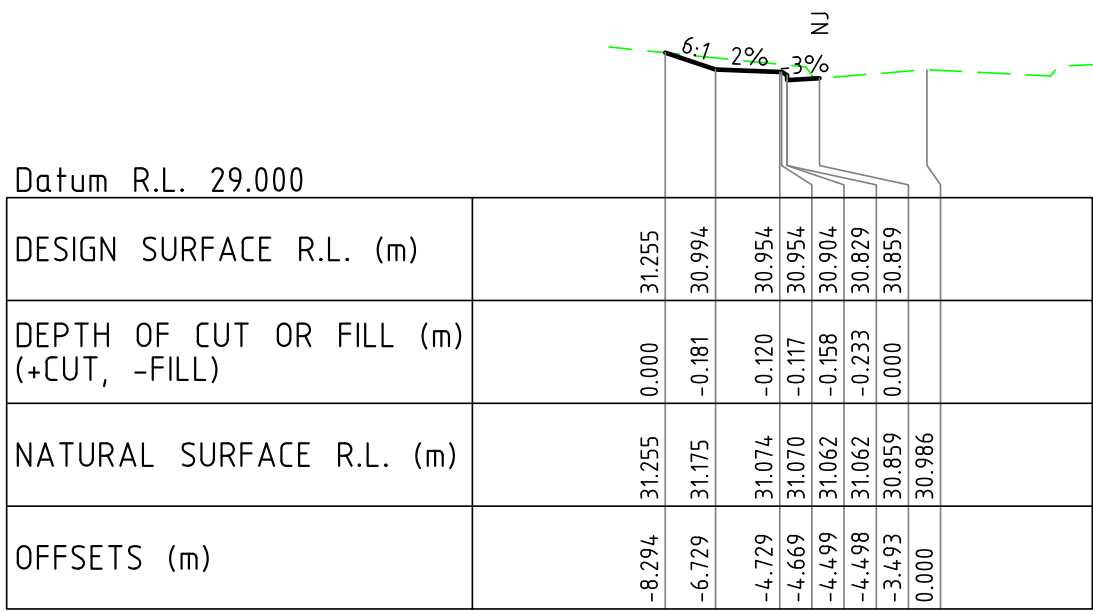
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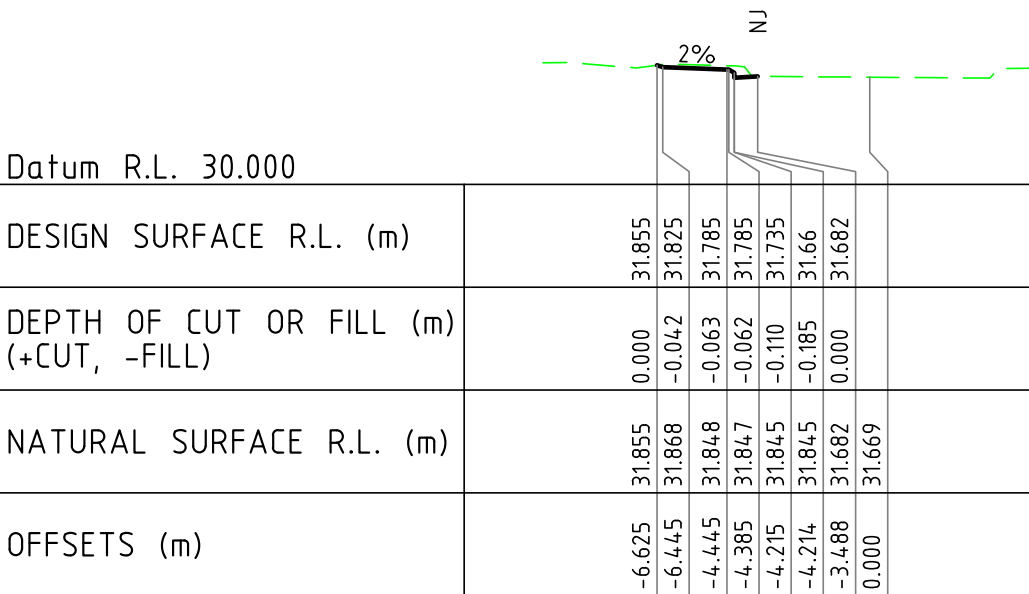
CHAINAGE 360.000



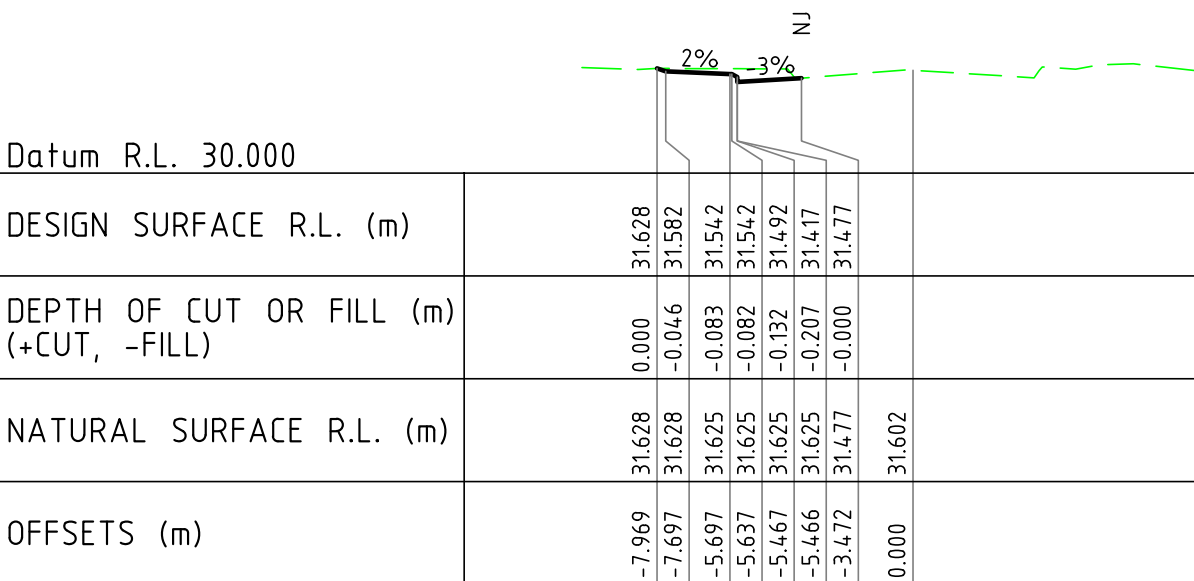
CHAINAGE 340.000



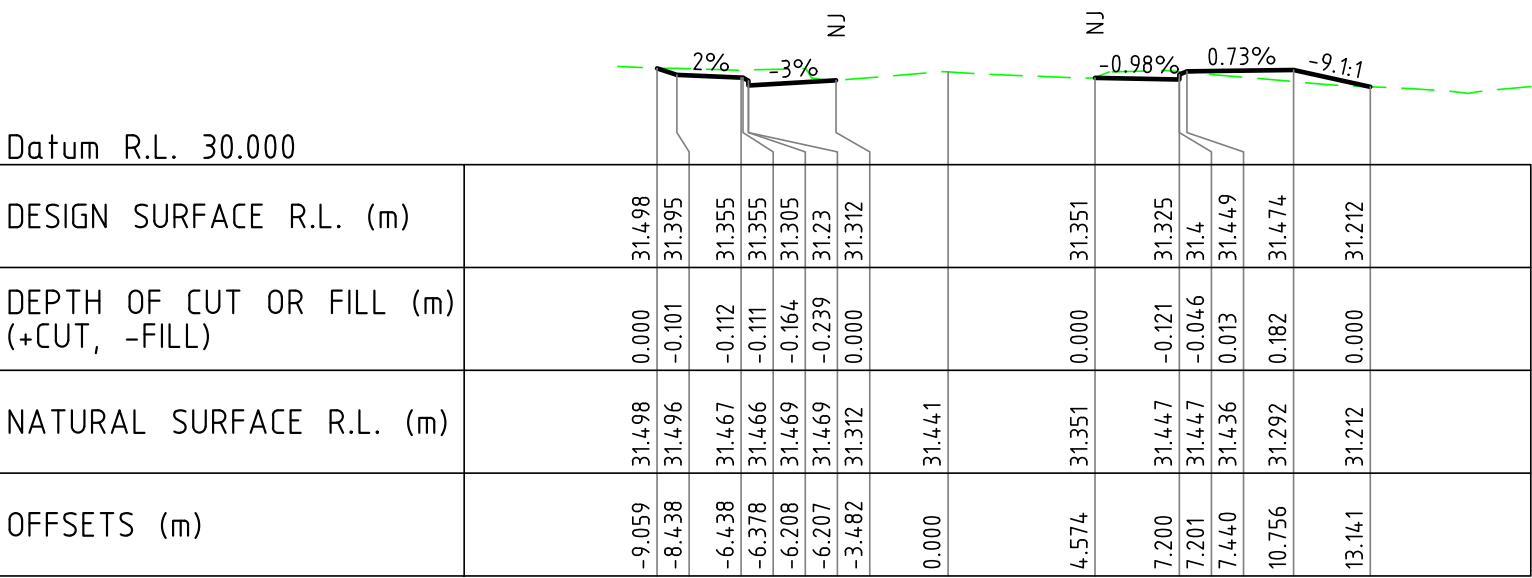
CHAINAGE 320.000



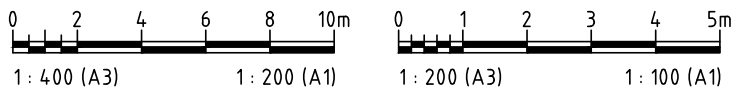
CHAINAGE 440.000



CHAINAGE 420.000



CHAINAGE 400.000



ISSUED FOR TENDER

No.	REVISION	BY	DATE	AUTH	No.	REVISION	BY	DATE	AUTH	1:200H 1:100V	SURVEYED:	DRAWN:	AUTHORISED:	Discipline:	Structure Code:
0	ISSUED FOR TENDER	CRP	20.09.18	IB							ENGINEERING SURVEYOR	C. FARE	R. KORENHOF	CI	420
										DATUM:	DESIGNED:	CHECKED:	APPROVED:	JOB No.	
										AHD	J. CURTIS	G. BUDGE	B. JACKSON	1807009	
										PGC94	INFRASTRUCTURE DESIGN OFFICER	COORDINATOR PROJECT DESIGN	DIRECTOR ASSET SERVICES		

PLOTTED: G:\csm\p\p\27722019\15628 PH FILE 11\0085 ACTIVE 2019\CE - ROADS AND DRAINAGE\CGK\J\FORRESTFIELD INDUSTRIAL AREA - INTERSECTION UPGRADES\807009\DRAWINGS\NARDINE MILNER INTERSECTION\N70109-711.DWG PRN:----

1ST FLOOR, 908 ALBANY HIGHWAY
EAST VICTORIA PARK, WA 6101
P 9355 1300
E admin@shawmac.com.au

DESIGNED BY:	JC	SIGN	DATE
DRAWN BY:	CF		
CHECKED BY:	WC		
APPROVED BY DIRECTOR:	IB		

ASSET SERVICES

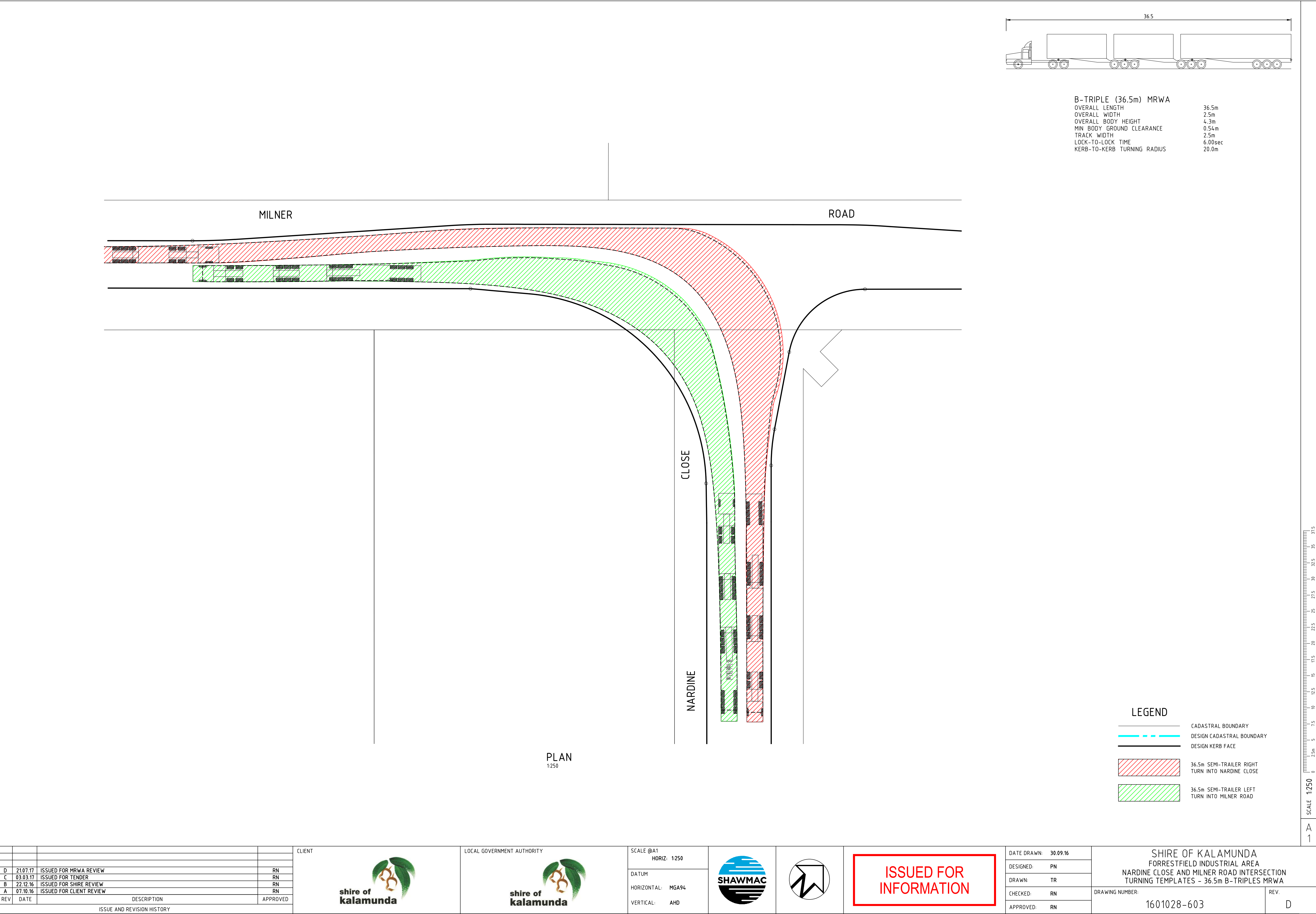
CITY OF KALAMUNDA

FORRESTFIELD INDUSTRIAL AREA
INTERSECTION UPGRADE
MILNER ROAD AND NARDINE CLOSE

NARDINE CLOSE CROSS SECTIONS
CH 320.00 TO CH 440.00

DRAWING-No. 1807009-711-1/0

ORIG. SIZE A1



Attachment 11:
Berkshire Road and Ashby Close intersection drawings

1807009-121


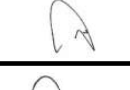
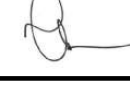



CITY OF KALAMUNDA

FORRESTFIELD INDUSTRIAL AREA

BERKSHIRE ROAD & ASHBY CLOSE INTERSECTION



FORRESTFIELD DRAWING LIST	
DRAWING TITLE	DRAWING No.
LOCALITY PLAN & DRAWING INDEX	1807009-121
GENERAL ARRANGEMENT	1807009-221
PAVEMENT & SURFACING PLAN	1807009-222
INTERSECTION PLAN	1807009-223
DRAINAGE PLAN	1807009-421
COMBINED SERVICES	1807009-422
TYPICAL DETAILS - SHEET 1 OF 2	1807009-521
TYPICAL DETAILS - SHEET 2 OF 2	1807009-522
ASHBY CLOSE CROSS SECTIONS - CH 15.00 TO CH 60.00	1807009-721
SIGNS & PAVEMENT MARKINGS - INTERIM	1807009-821
SIGNS & PAVEMENT MARKINGS - ULTIMATE	1807009-822
TURNING TEMPLATES - 36.5 B-TRIPLE ROAD TRAIN	1807009-921

SHAWMAC			
 <div>1ST FLOOR, 908 ALBANY HIGHWAY EAST VICTORIA PARK, WA 6101 P 9355 1300 E admin@shawmac.com.au</div>			
DESIGNED BY:	NAME JC	SIGN 	DATE 10.07.018
DRAWN BY:	CF		10.07.018
CHECKED BY:	RN		21.11.18
APPROVED BY DIRECTOR:	IB		06.02.19
 ASSET SERVICES			
CITY OF KALAMUNDA FORRESTFIELD INDUSTRIAL AREA INTERSECTION UPGRADE BERKSHIRE ROAD & ASHBY CLOSE			
LOCALITY PLAN & DRAWING LIST SHEET 1 OF 1			
DRAWING-No. -SHEET /REVISION		DRG. SIZE	
1807009-121-1/2		A1	

ISSUED FOR TENDER

No.	REVISION	BY	DATE	AUTH	No.	REVISION	BY	DATE	AUTH	NTS	SURVEYED:	DRAWN:	AUTHORISED:	Discipline:	Structure Code:
0	ISSUED FOR TENDER	CRF	06.09.18	IB							ENGINEERING SURVEYOR	C. FARE	R. KORENHOF	CI	420
1	GENERAL MINOR AMENDMENTS, RE-ISSUED FOR TENDER	CRF	21.11.18	IB							DESIGNED:	INFRASTRUCTURE DESIGN OFFICER	MANAGER ASSET DELIVERY	06.02.19	
2	SIGNS & PAVEMENT MARKING DRAWING ADDED	CRF	18.12.18	IB							J. CURTIS	G. BUDGE	B. JACKSON	06.02.19	1807009
											INFRASTRUCTURE DESIGN OFFICER	COORDINATOR PROJECT DESIGN	DIRECTOR ASSET SERVICES		

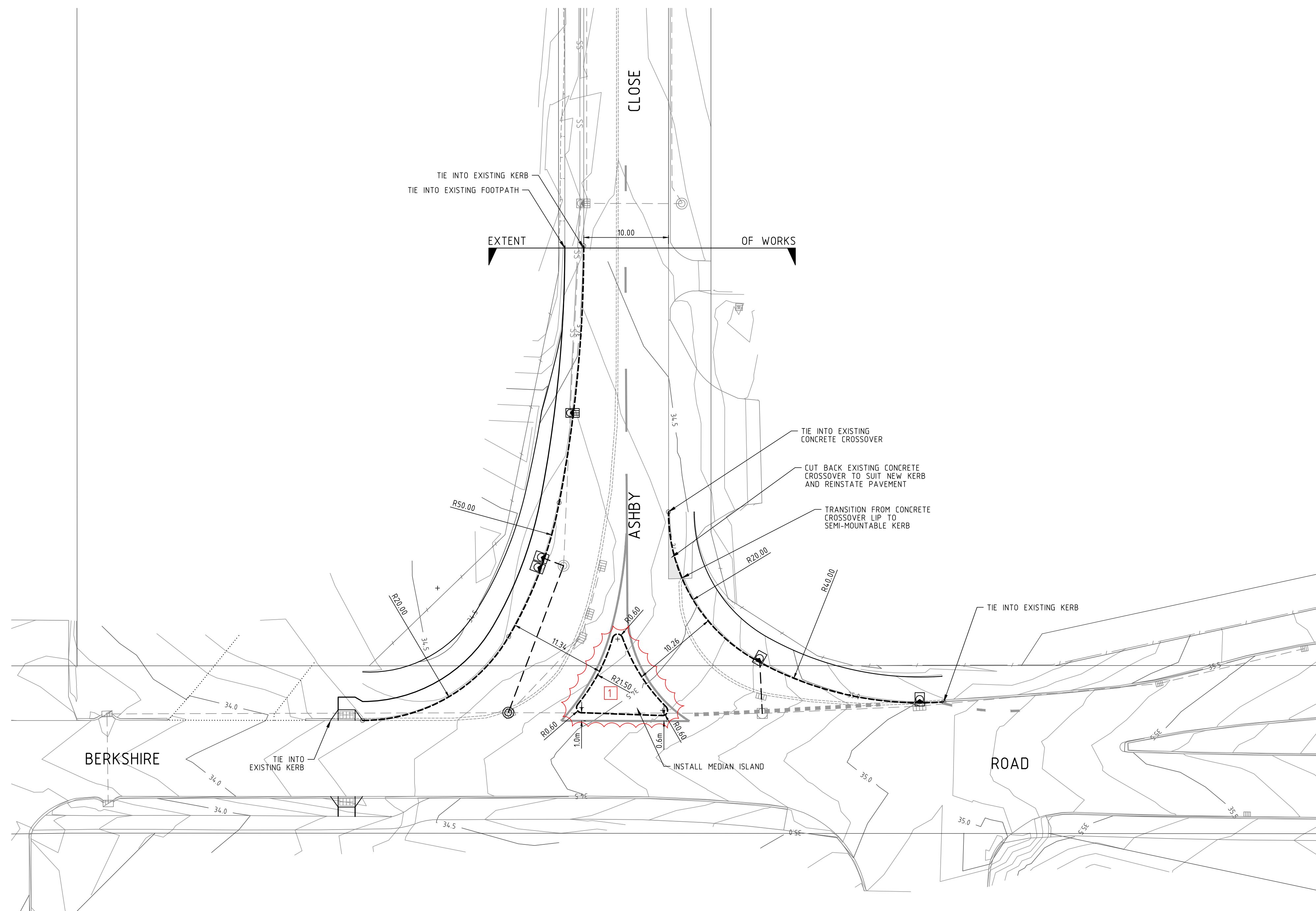
PLOTTED: Common File ; 27/7/2019 14:22:27 PR FILE: Y:\J085 ACTIVE 20\WCE - ROADS AND DRAINAGE\CDK\FORRESTFIELD INDUSTRIAL AREA - INTERSECTION UPGRADES\807009\DRAWINGS\BERKSHIRE ASHBY INTERSECTION\807009-121.DWG PRN:-----












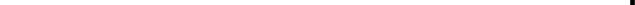
1807009-223



	CADASTRAL BOUNDARY
	EXISTING FENCE
	EXISTING KERB
	EXISTING KERB TO BE REMOVED
	EXISTING DRAINAGE PIPE
	EXISTING SUBSOIL DRAINAGE PIPE
	EXISTING DRAINAGE GULLY
	EXISTING COMBINATION GULLY/SEP
	EXISTING DRAINAGE MANHOLE
	DESIGN FLUSH KERB
	DESIGN SEMI-MOUNTABLE KERB
	DESIGN FOOTPATH
	DESIGN VERGE
	DESIGN DRAINAGE PIPE
	DESIGN LINEMARKING
	DESIGN SEP (SIDE ENTRY PIT)
	DESIGN DRAINAGE MANHOLE
	COMBINED CONTOURS

<div>SHAWMAC</div> <div>1ST FLOOR, 908 ALBANY HIGHWAY EAST VICTORIA PARK, WA 6101 P 9355 1300 E admin@shawmac.com.au</div> <div>CONSULTING CIVIL AND TRAFFIC ENGINEERS</div>				
DESIGNED BY:	NAME	SIGN	DATE	
	JC		10.07.18	
	DRAWN BY:	CF		10.07.18
	CHECKED BY:	RN		21.11.18
	APPROVED BY DIRECTOR:	IB		05.02.19
<div>City of Kalamunda</div> 		ASSET SERVICES		
CITY OF KALAMUNDA FORRESTFIELD INDUSTRIAL AREA INTERSECTION UPGRADE BERKSHIRE ROAD & ASHBY CLOSE				
INTERSECTION PLAN SHEET 1 OF 1				
DRAWING-No.		-SHEET	/REVISION	
1807009-223-1/2		A1		

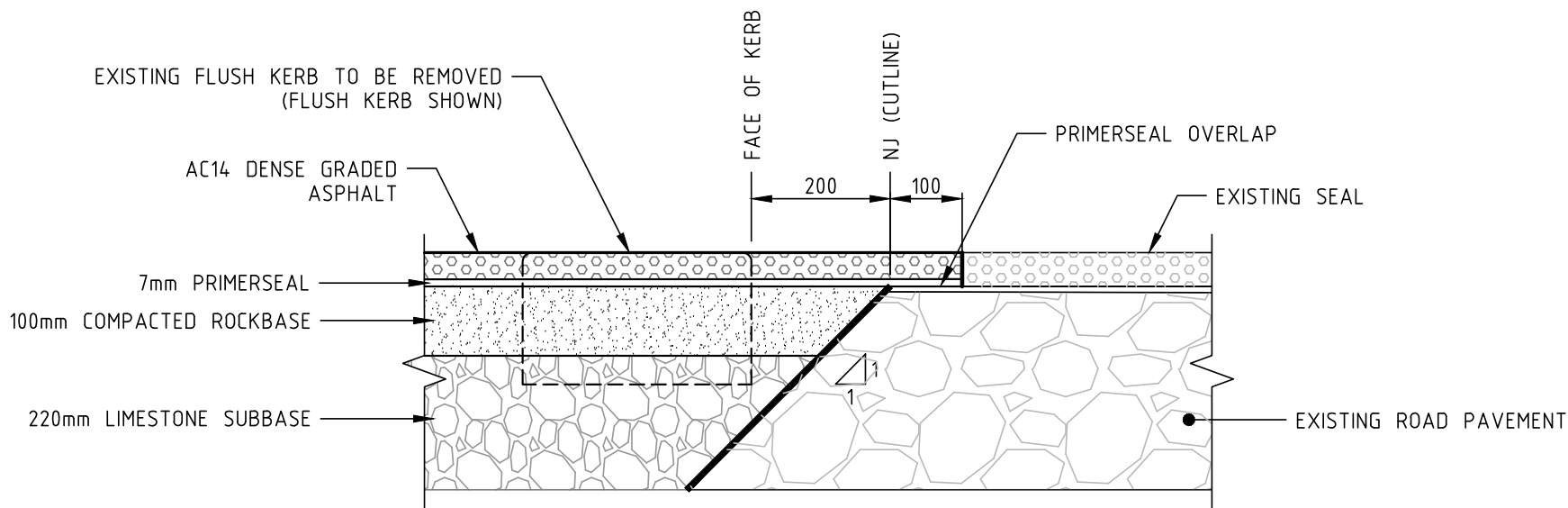
ISSUED FOR TENDER

REVISION					BY	DATE	AUTH	No.	REVISION					BY	DATE	AUTH	No.	SCALE: 2.5 0 2.5 5.0 7.5 10.0 12.5	SURVEYED:	DRAWN:	AUTHORED:	Discipline:	Structure Code:	DRAWING-No.	-SHEET / REVISION	DRG. SIZE	
0	ISSUED FOR TENDER								CRF	06.09.18	IB							1:250			C. FARE	R. KORENHOF	CI	420			
1	GENERAL MINOR AMENDMENTS, RE-ISSUED FOR TENDER								CRF	21.11.18	IB							SCALE IN METRES	ENGINEERING SURVEYOR	INFRASTRUCTURE DESIGN OFFICER	MANAGER ASSET DELIVERY	06.02.19			1807009-223-1/2	A1	
2	SEAGULL ISLAND RETAINED AS OPTION								CRF	18.12.18	IB								CHECKED	APPROVED							
																		AHD	PCG94	J. CURTIS	G. BUDGE	B. JACKSON	06.02.19	06.02.19	1807009		
																				COORDINATOR PROJECT DESIGN	INFRASTRUCTURE DESIGN OFFICER	DIRECTOR ASSET SERVICES					

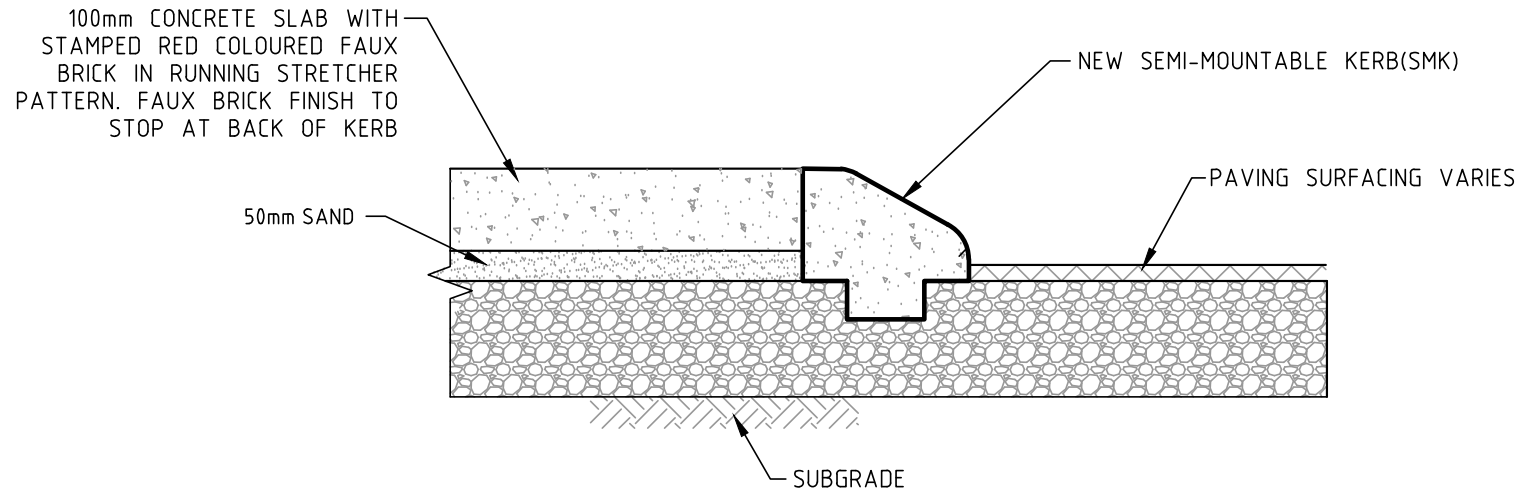
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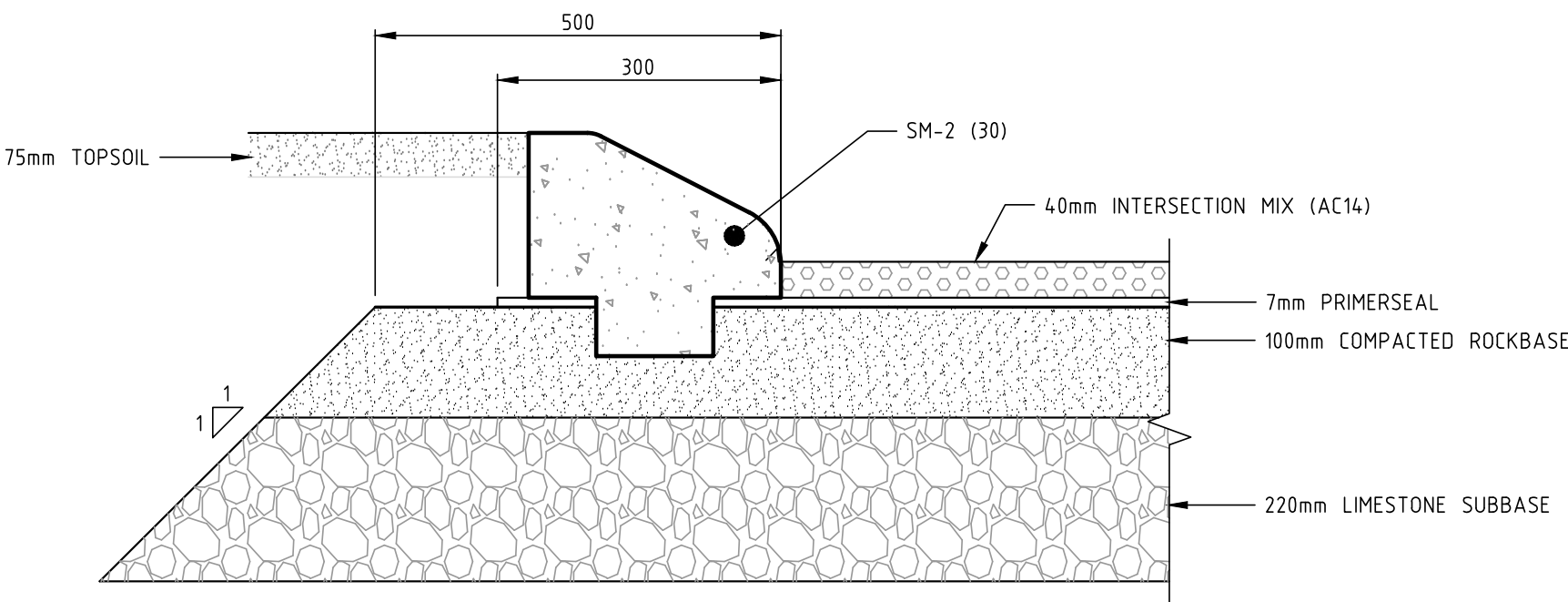




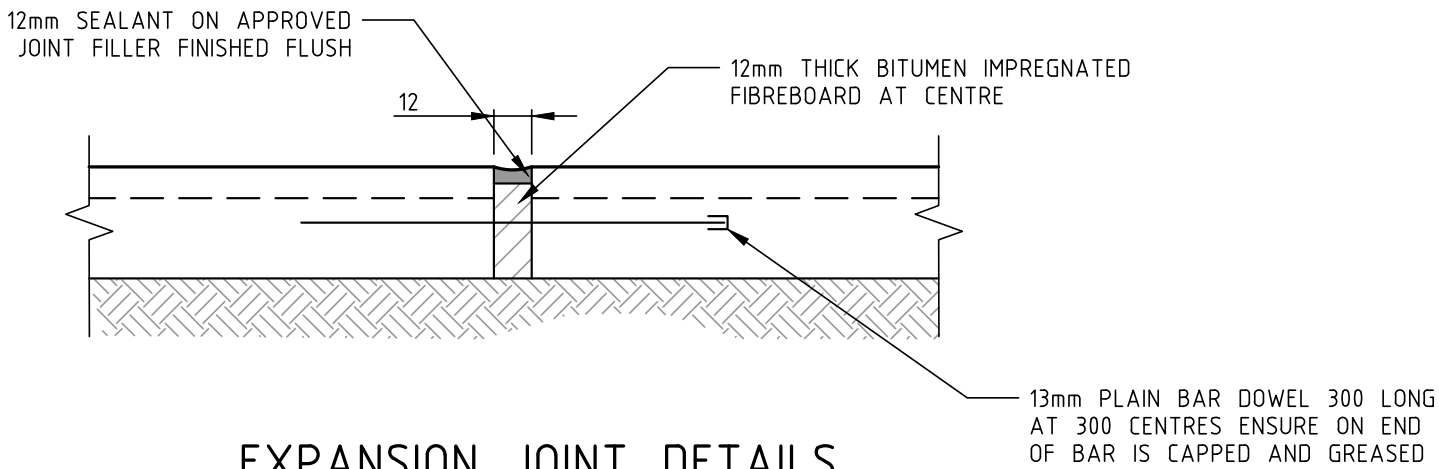
TYPICAL PAVEMENT WIDENING



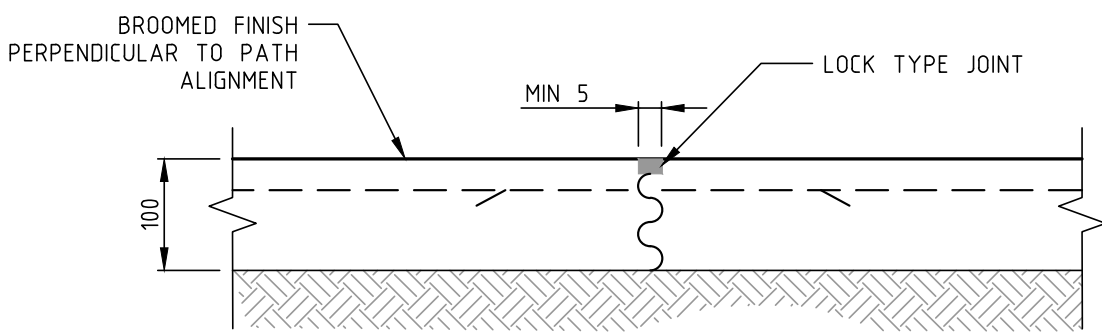
PAVED MEDIAN INFILL DETAILS
SCALE: NTS



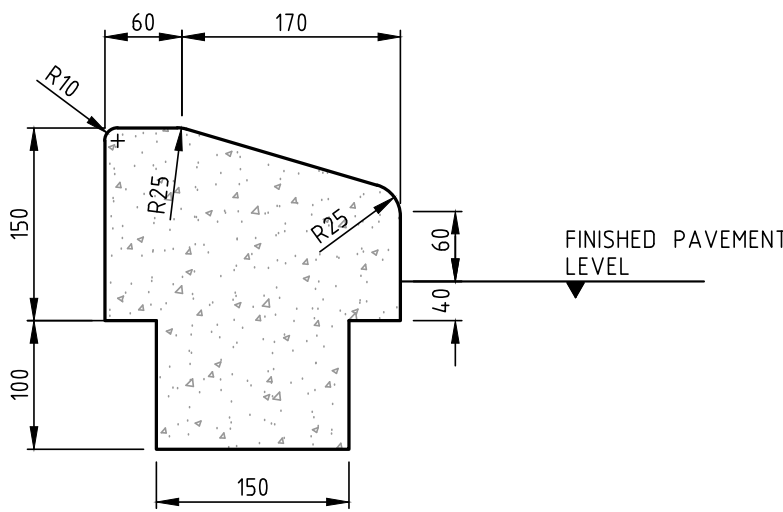
TYPICAL PAVEMENT AND SEMI-MOUNTABLE KERBING DETAIL
NTS



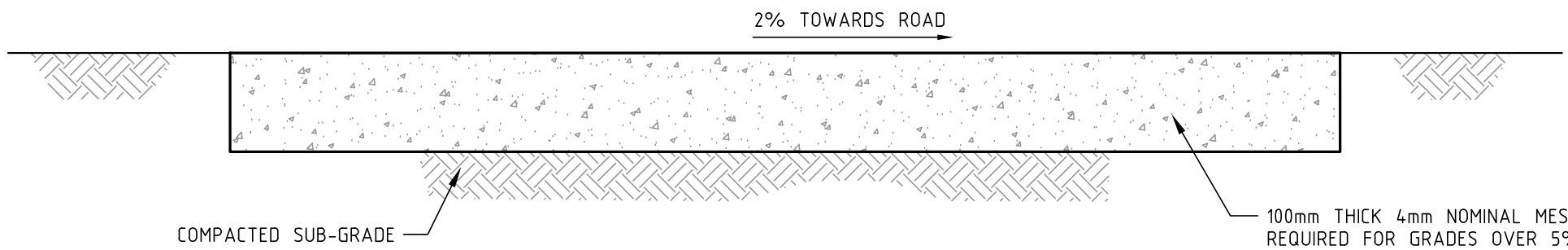
EXPANSION JOINT DETAILS
SCALE 1:4



CONTRACTION JOINT DETAILS
SCALE 1:4



SEMI MOUNTABLE KEYED KERB PROFILE
1:5



TYPICAL PATH DETAILS
NTS

NOTES

1. ALL DIMENSIONS SHOWN ARE IN MILLIMETERS UNLESS NOTED OTHERWISE
2. DEMOLISH AND DISPOSE OF ALL EXISTING KERBING AND PATHS U.N.O
3. DESIGN LEVELS ARE TO TOP OF SEAL.
5. REFER TO CITY OF KALAMUNDA STANDARD DRAWINGS FOR PRAM RAMP DETAILS (SHEET 12/30)

1807009-521

SHAWMAC



1ST FLOOR, 908 ALBANY HIGHWAY
EAST VICTORIA PARK, WA 6101
P 9355 1300
E admin@shawmac.com.au

	NAME	SIGN	DATE
DESIGNED BY:	JC		10.07.018
DRAWN BY:	CF		10.07.018
CHECKED BY:	RN		21.11.18
APPROVED BY DIRECTOR:	IB		06.02.19



ASSET SERVICES

CITY OF KALAMUNDA
FORRESTFIELD INDUSTRIAL AREA
INTERSECTION UPGRADE
BERKSHIRE ROAD & ASHBY CLOSE

TYPICAL DETAILS
SHEET 1 OF 2

DRAWING-No. 1807009-521/1

A1

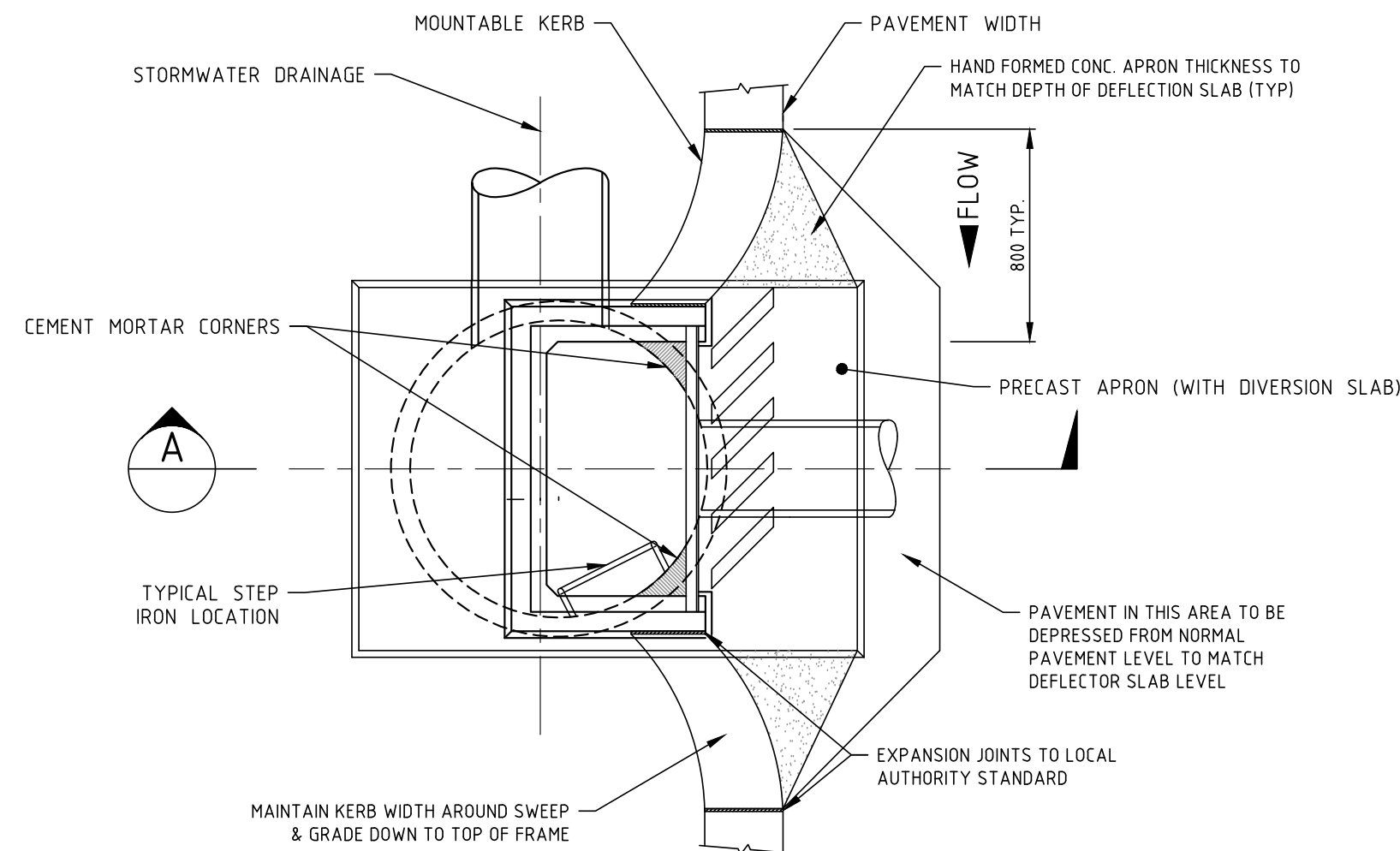
ISSUED FOR TENDER

No.	REVISION	BY	DATE	AUTH	No.	REVISION	BY	DATE	AUTH	NTS	SURVEYED:	DRAWN:	AUTHORISED:	Discipline:	Structure Code:
0	ISSUED FOR TENDER	CRF	06.09.18	IB							ENGINEERING SURVEYOR	C. FARE	R. KORENHOF	CI	420
1	GENERAL MINOR AMENDMENTS, RE-ISSUED FOR TENDER	CRF	21.11.18	IB							DESIGNED:	INFRASURTURE DESIGN OFFICER	MANAGER ASSET DELIVERY		
											CHECKED:	G. BUDGE	B. JACKSON		
											INFRASURTURE DESIGN OFFICER	COORDINATOR PROJECT DESIGN	DIRECTOR ASSET SERVICES		

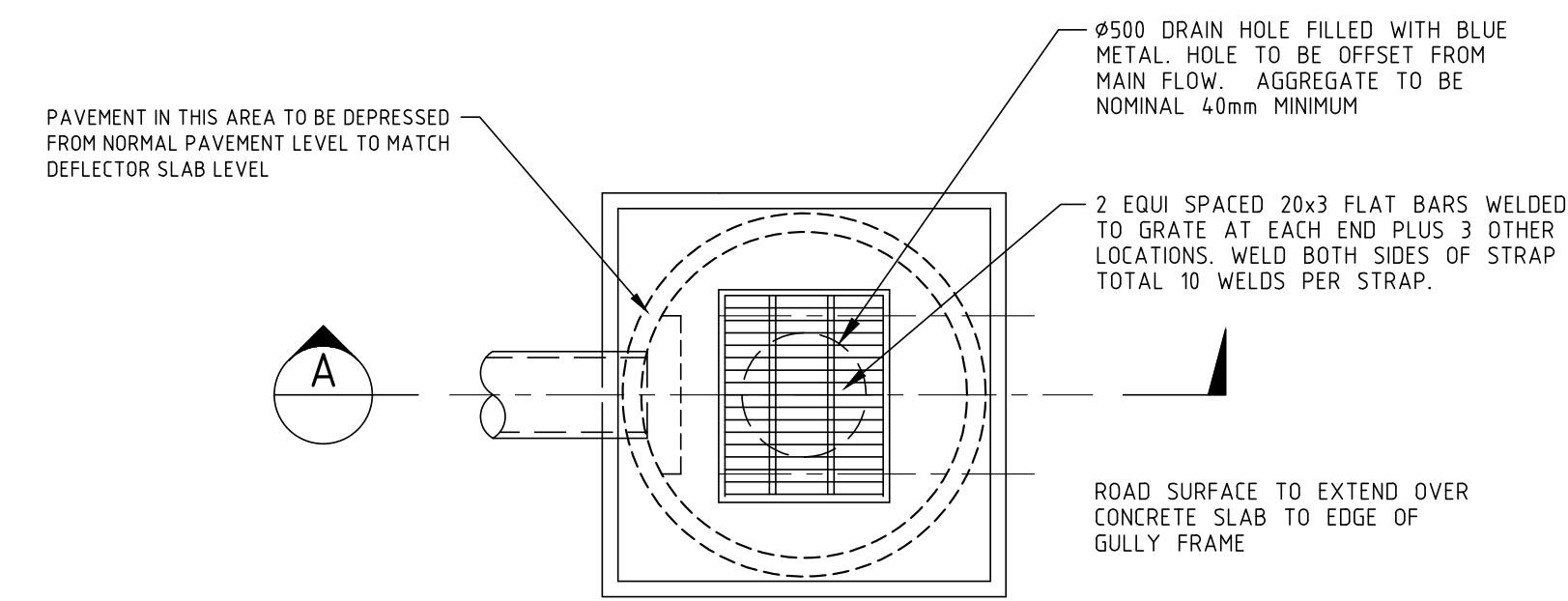
PLOTTED: Common File ; 27/7/2019 14:23:39 PM FILE: Y:\JOBS ACTIVE 2019\CE - ROADS AND DRAINAGE\CDK\FORRESTFIELD INDUSTRIAL AREA - INTERSECTION UPGRADES\807009\DRAWINGS\BERKSHIRE ASHBY INTERSECTION\807009-521 & 522.DWG PRN:----

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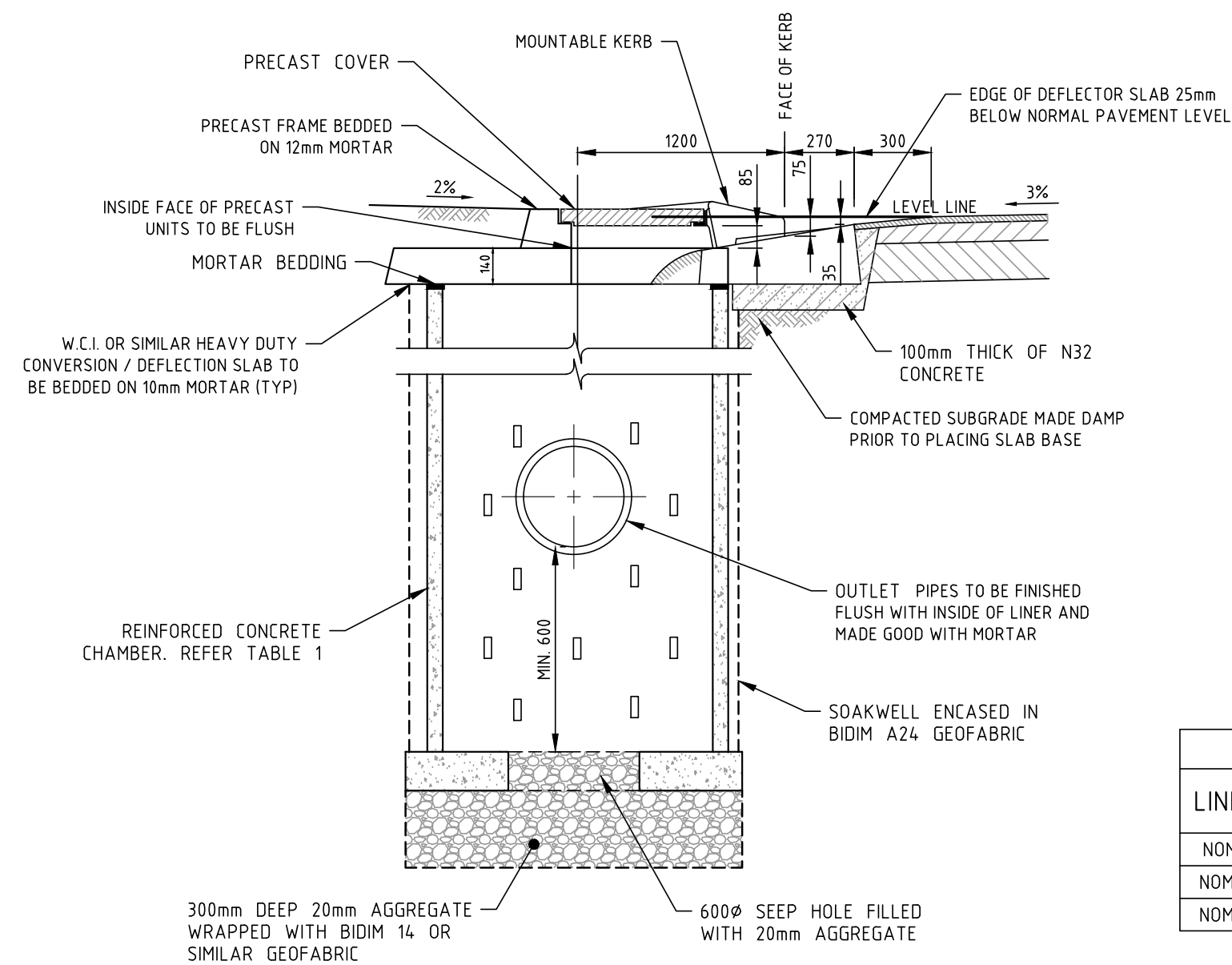
a) THE CLEAR OPENING IS $\pm 85\text{mm}$.
b) THE MEAN DEVIATION ACROSS THE FACE OF OPENING $\pm 2\text{mm}$.



PLAN - SIDE ENTRY PIT
NTS

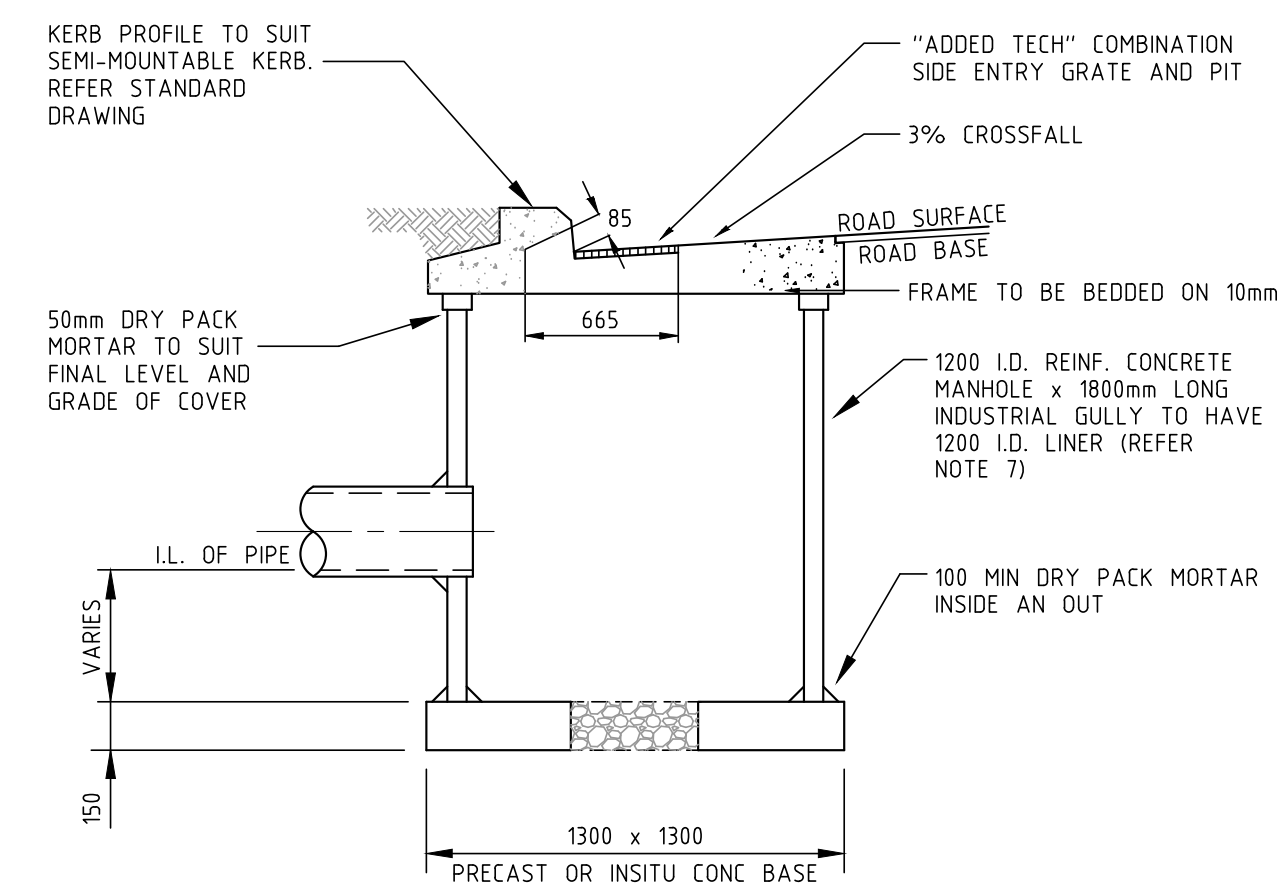


PLAN - COMBINATION SULLY SEP PIT
NTS



SECTION A TYPICAL SEP WITH SOAKWELL





LINER Ø	MAX. Ø PIPE CONNECTING TO LINER
NOM. 900	NOM. 450
NOM. 1050	NOM. 525
NOM. 1200	NOM. 600



SECTION B COMBINATION GULLY/SEP PIT
NTS -



1ST FLOOR, 908 ALBANY HIGHWAY
EAST VICTORIA PARK, WA 6101
P 9355 1300
E admin@shawmac.com.au

	NAME	SIGN	DATE
DESIGNED BY:	JC		10.07.018
DRAWN BY:	CF		10.07.018
CHECKED BY:	RN		21.11.18
APPROVED BY DIRECTOR:	IB		06.02.19

City of
Kalamunda

ASSET SERVICES

CITY OF KALAMUNDA
FORRESTFIELD INDUSTRIAL AREA
INTERSECTION UPGRADE
BERKSHIRE ROAD & ASHBY CLOSE

TYPICAL DETAILS
SHEET 2 OF 2

DRAWING-NO.	-SHEET	/REVISION
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1807009-522/1

A1

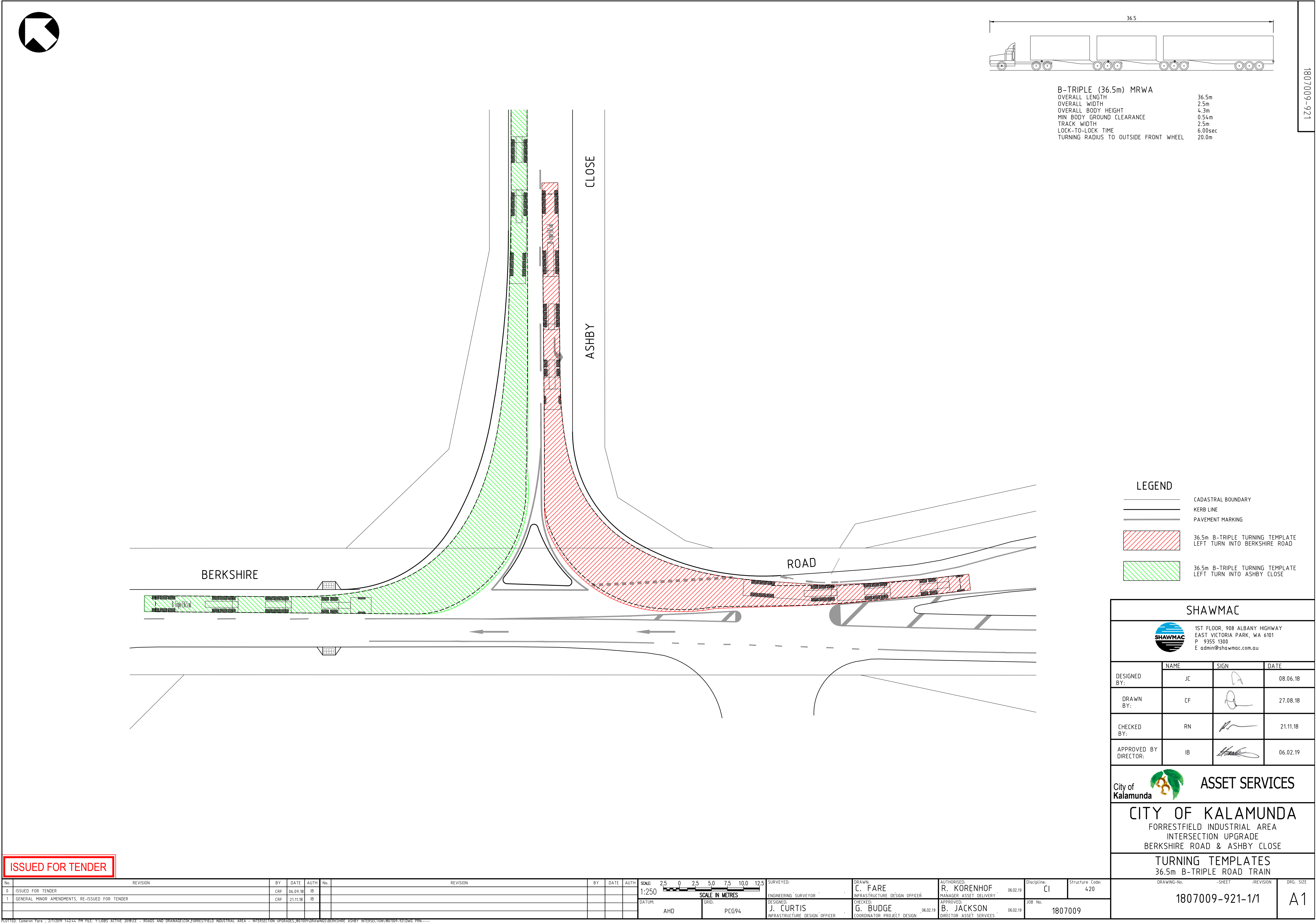
ISSUED FOR TENDER

REVISION										REVISION										NTS										SURVEYED:										DRAWN:										AUTHORISED:										Discipline:										Structure Code:										DRAWING NO.:										SHEET										/REVISION										DRG. SIZE																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				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KORENHOF										06.02.19										CI										420										1807009-522/1										A1																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		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TENDER										CRF										06.09.18										IB																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	



ISSUED FOR TENDER





Attachment 12:

Dundas Road, Berkshire Road and Milner Road Intersection Drawings

CITY OF KALAMUNDA

FORRESTFIELD INDUSTRIAL AREA


DUNDAS ROAD/BERKSHIRE ROAD/MILNER ROAD INTERSECTION

1807009-131

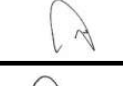
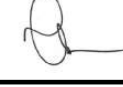




FORRESTFIELD DRAWING LIST	
DRAWING TITLE	DRAWING No.
LOCALITY PLAN & DRAWING LIST	1807009-131
GENERAL ARRANGEMENT	1807009-231
PAVEMENT & SURFACING PLAN	1807009-232
COMBINED SERVICES PLAN	1807009-233
DRAINAGE PLAN	1807009-431
TYPICAL DETAILS - SHEET 1 OF 2	1807009-531
TYPICAL DETAILS - SHEET 2 OF 2	1807009-532
DUNDAS ROAD CROSS SECTIONS - CH 100.00 TO CH 230.00	1807009-731
BERKSHIRE ROAD CROSS SECTIONS - CH 10.00 TO CH 100.00	1807009-732
MILNER ROAD CROSS SECTIONS - CH 20.00 TO CH 90.00	1807009-733
MILNER ROAD CROSS SECTIONS - CH 100.00 TO CH 145.00	1807009-734
SIGNS & PAVEMENT MARKING	1807009-831
TURNING TEMPLATES - SHEET 1 OF 3	1807009-931
TURNING TEMPLATES - SHEET 2 OF 3	1807009-932
TURNING TEMPLATES - SHEET 3 OF 3	1807009-933


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1ST FLOOR, 908 ALBANY HIGHWAY
EAST VICTORIA PARK, WA 6101
P 9355 1300
E admin@shawmac.com.au

DESIGNED BY:	NAME	SIGN	DATE
	JC		31.08.18
DRAWN BY:	CRF		31.08.18
CHECKED BY:	WC		06.09.18
APPROVED BY DIRECTOR:	IB		06.02.19

City of Kalamunda



ASSET SERVICES

CITY OF KALAMUNDA

FORRESTFIELD INDUSTRIAL AREA

INTERSECTION UPGRADE

BERKSHIRE ROAD/MILNER ROAD/DUNDAS ROAD

LOCALITY & DRAWING LIST

SHEET 1 OF 1

DRAWING-No.

-SHEET

/REVISION

ORG. SIZE

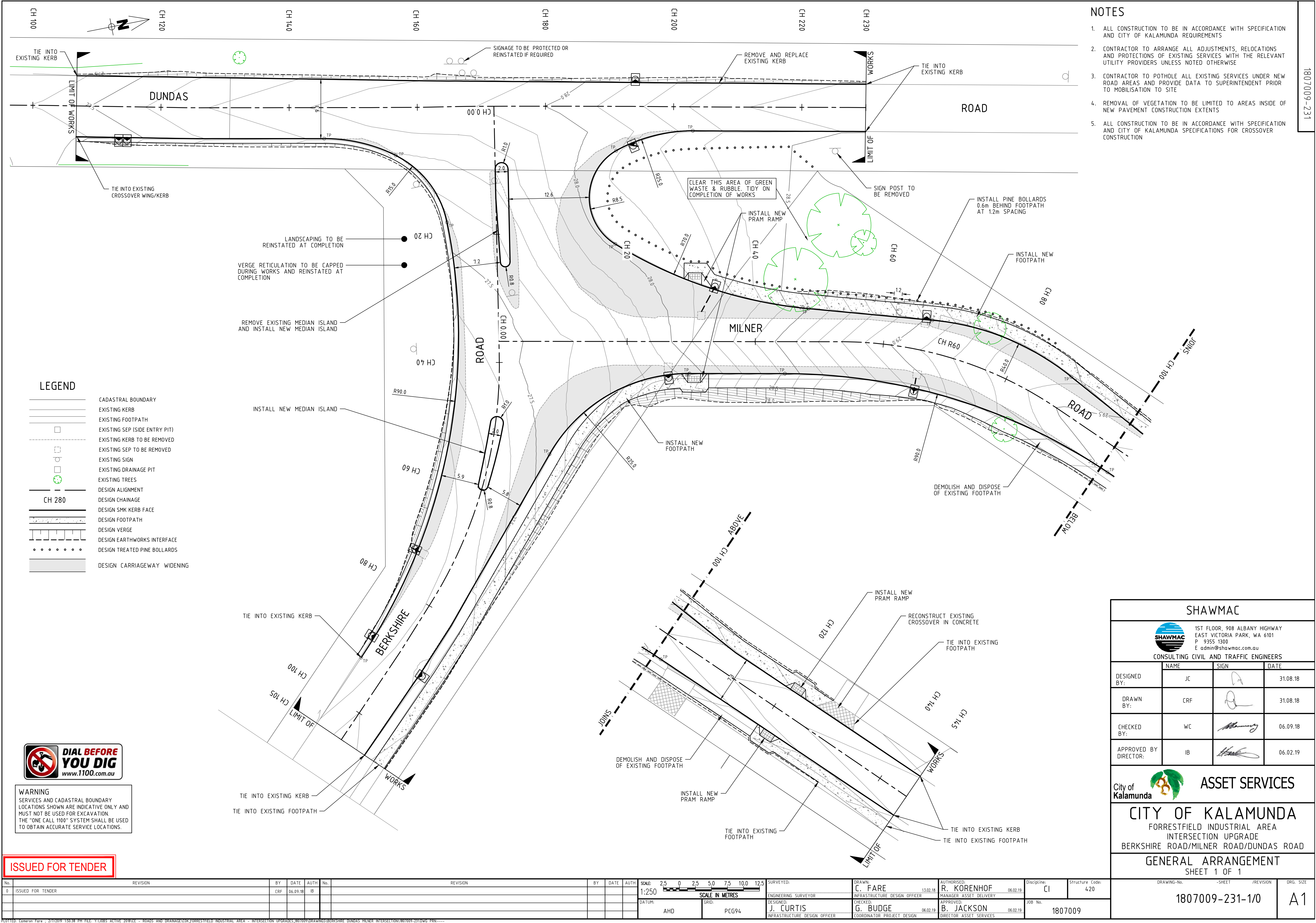
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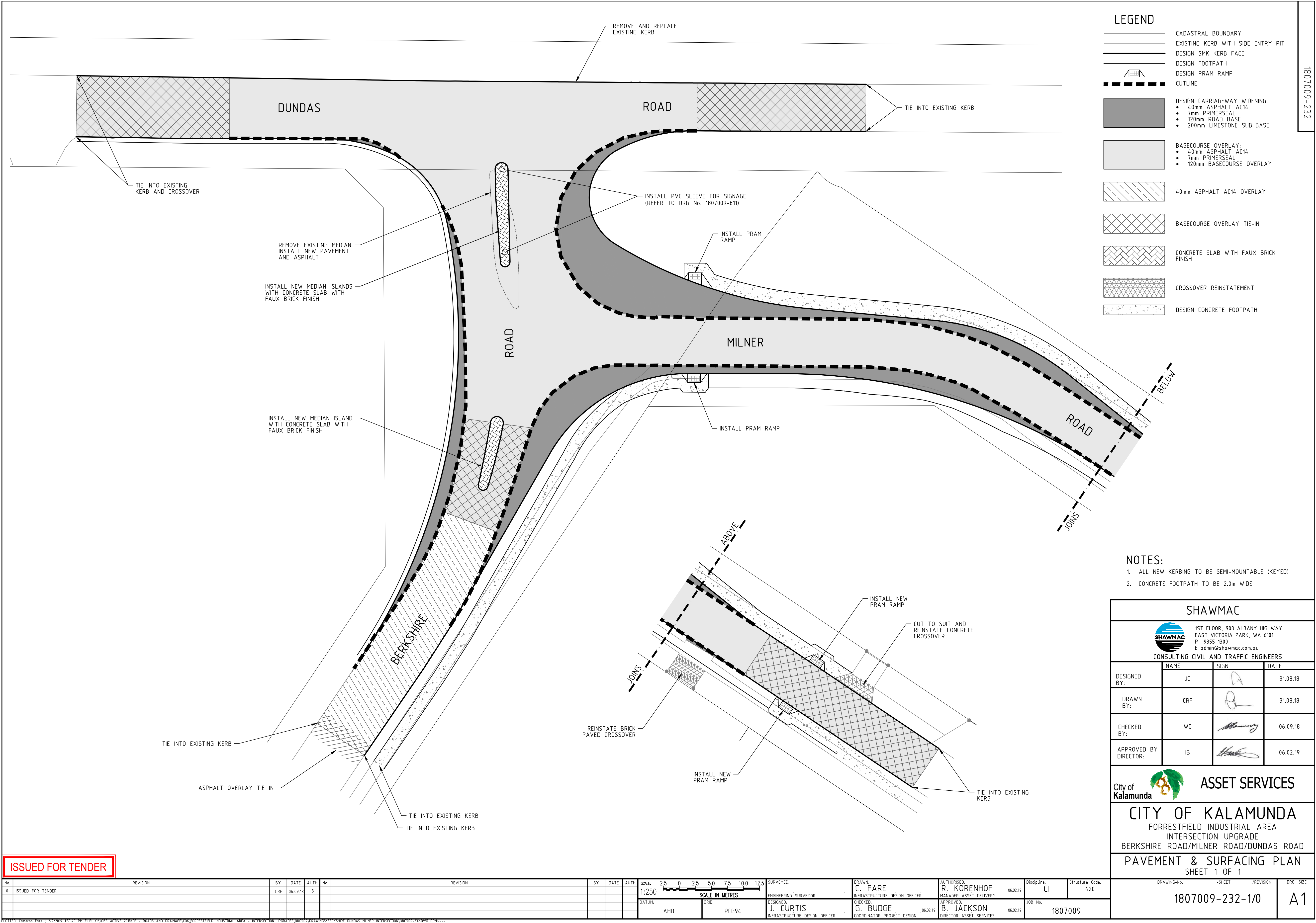
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ISSUED FOR TENDER

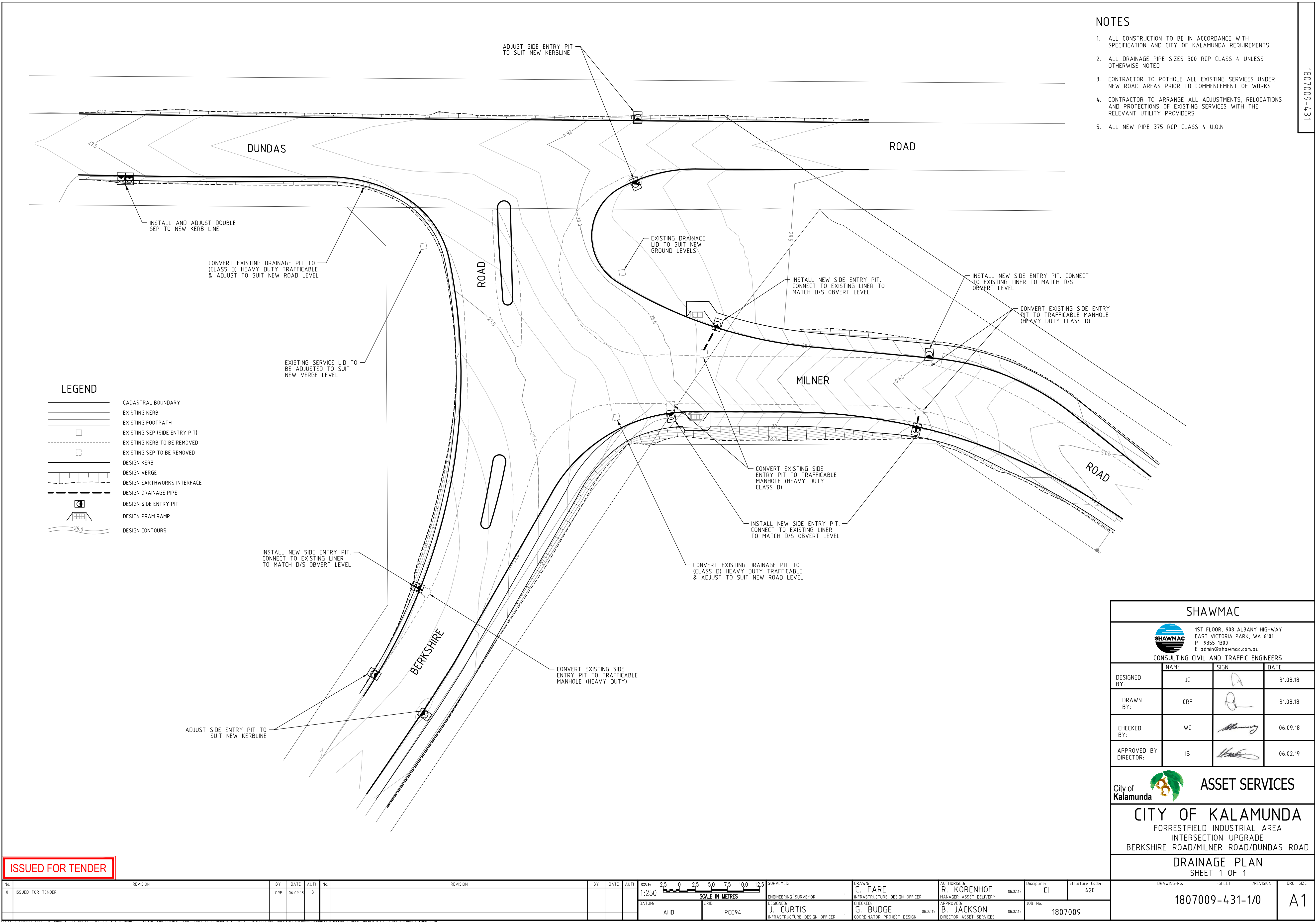
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										DATUM:	J. CURTIS	G. BUDGE	B. JACKSON		
										GRID:	INFRASTRUCTURE DESIGN OFFICER	COORDINATOR PROJECT DESIGN	DIRECTOR ASSET SERVICES		

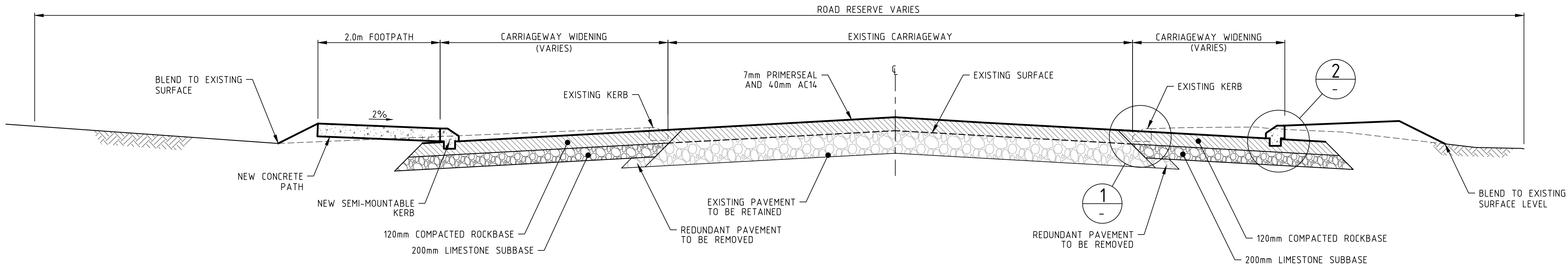
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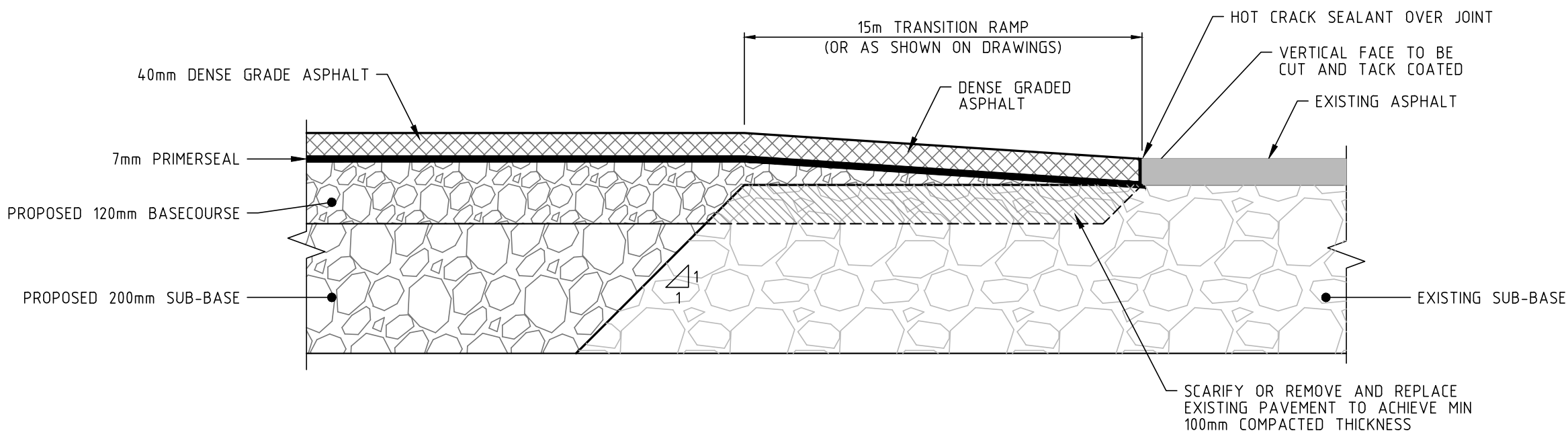




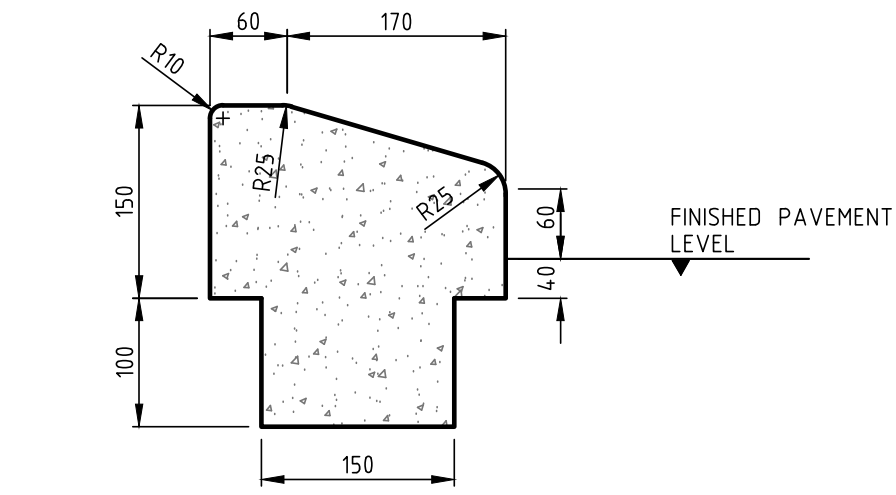




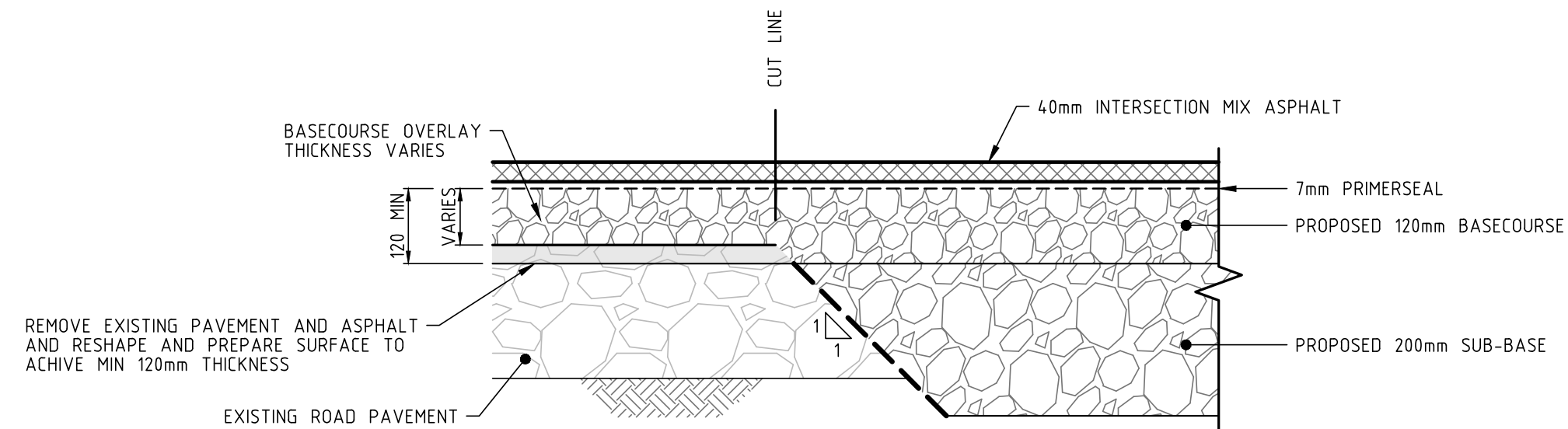
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NTS



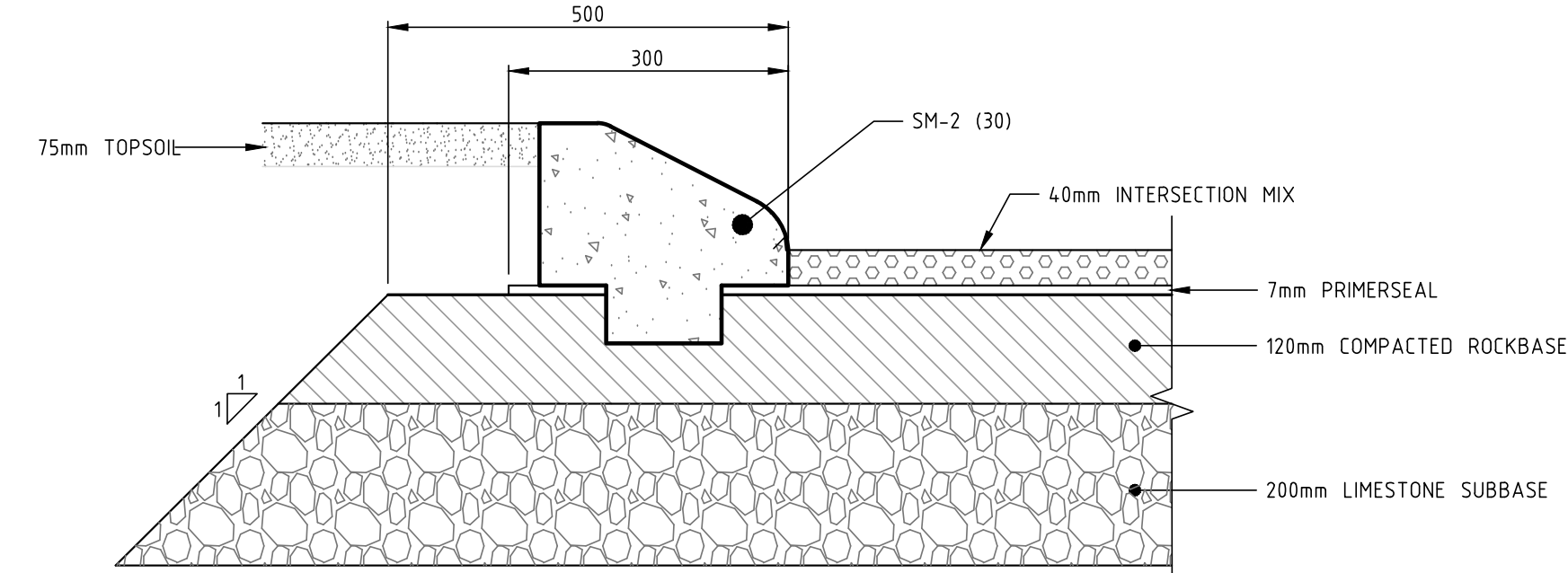
PAVEMENT OVERLAY TIE-IN DETAIL
NTS



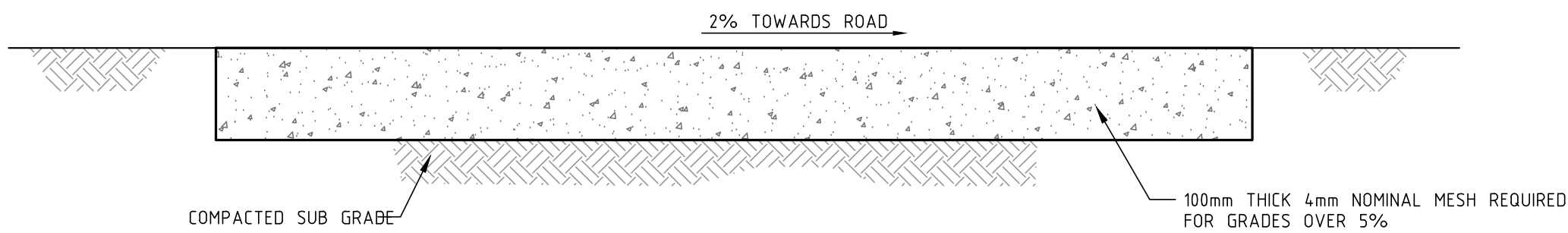
SEMI MOUNTABLE KEYED KERB PROFILE
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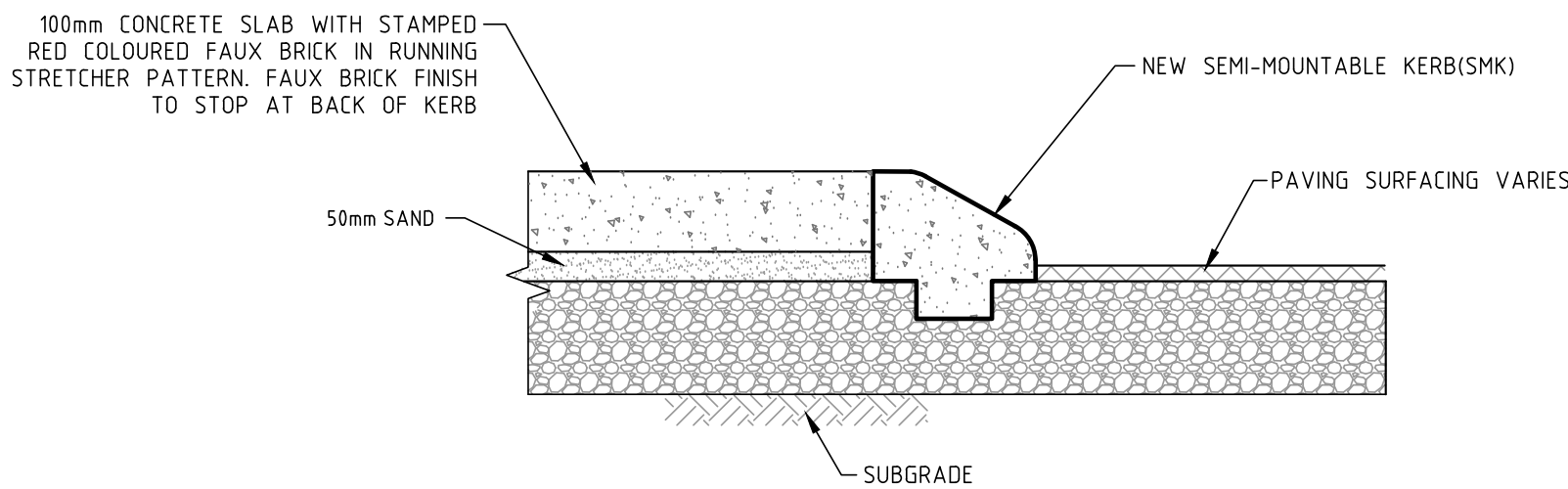
DETAIL 1 PAVEMENT WIDENING DETAIL - OVERLAY & 40mm ASPHALT
NTS



DETAIL 2 TYPICAL PAVEMENT AND SEMI-MOUNTABLE KERBING DETAIL
NTS



TYPICAL PATH DETAILS
NTS



PAVED MEDIAN INFILL DETAILS
SCALE: NTS

NOTES

1. ALL DIMENSIONS SHOWN ARE IN MILLIMETERS UNLESS NOTED OTHERWISE
2. DEMOLISH AND DISPOSE OF ALL EXISTING KERBING AND PATHS UNLESS NOTED OTHERWISE
3. DESIGN LEVELS ARE TO TOP OF SEAL.
4. REFER TO CITY OF KALAMUNDA STANDARD DRAWINGS FOR PRAM RAMP DETAILS.
5. REFER TO CITY OF KALAMUNDA STANDARD DRAWINGS FOR BOLLARD INSTALLATION
6. ALL PRAM RAMPS TO HAVE TACTILE PAVERS

1807009-531

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1ST FLOOR, 908 ALBANY HIGHWAY
EAST VICTORIA PARK, WA 6101
P 9355 1500
E admin@shawmac.com.au

CONSULTING CIVIL AND TRAFFIC ENGINEERS

DESIGNED BY:	NAME	SIGN	DATE
JC	JC	JC	31.08.18
DRAWN BY:	CRF	CRF	31.08.18
CHECKED BY:	WC	WC	06.09.18
APPROVED BY DIRECTOR:	IB	IB	06.02.19



ASSET SERVICES

CITY OF KALAMUNDA

FORRESTFIELD INDUSTRIAL AREA
INTERSECTION UPGRADE
BERKSHIRE ROAD/MILNER ROAD/DUNDAS ROAD

TYPICAL DETAILS
SHEET 1 OF 1

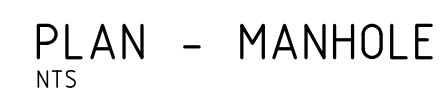
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A1

ISSUED FOR TENDER

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0	ISSUED FOR TENDER	CRF	06.09.18	IB							ENGINEERING SURVEYOR	C. FARE	R. KORENHOF	CI	420
											DESIGNED:	INFRASTRUCTURE DESIGN OFFICER	MANAGER ASSET DELIVERY		
											J. CURTIS	G. BUDGE	B. JACKSON		
											INFRASTRUCTURE DESIGN OFFICER	COORDINATOR PROJECT DESIGN	DIRECTOR ASSET SERVICES		

PLOTTED: Canon Plot ; 27/7/2019 15:04:5 PR FILE: Y:\JOBS ACTIVE 2019\ - ROADS AND DRAINAGE\CDK\FORRESTFIELD INDUSTRIAL AREA - INTERSECTION UPGRADES\807009\DRAWINGS\BERKSHIRE DUNDAS MILNER INTERSECTION\807009-531 & 532.DWG PRN:-----



1. ALL DIMENSIONS SHOWN ARE IN MILLIMETERS UNLESS NOTED OTHERWISE
2. DEMOLISH AND DISPOSE OF ALL EXISTING KERBING AND PATHS U.N.O
3. DESIGN LEVELS ARE TO TOP OF SEAL.







1807009-532

ISSUED FOR TENDER

No.	REVISION	BY	DATE	AUTH	No.	REVISION	BY	DATE	AUTH	NTS		SURVEYED:	DRAWN:	AUTHORIZED:	Discipline:	Structure Code:	Drawing No.	SHEET / OF	REVISED	DRG. SIZE
0	ISSUED FOR TENDER	CRF	06.09.18	IB								R. KORENHOF MANAGER ASSET DELIVERY	C. FARE INFRASTRUCTURE DESIGN OFFICER	R. KORENHOF MANAGER ASSET DELIVERY	CI	420	1807009-532-1/0			A1
												J. CURTIS COORDINATOR PROJECT DESIGN	G. BUDGE COORDINATOR PROJECT DESIGN	B. JACKSON DIRECTOR ASSET SERVICES						



1:200H 1:100V		SURVEYED: C. FARE INFRASTRUCTURE SURVEYOR		DRAWN: C. FARE INFRASTRUCTURE DESIGN OFFICER		AUTHORISED: R. KORENHOF MANAGER ASSET DELIVERY		Discipline: CI		Structure Code: 420	
DATE:		GRID:		DESIGNED: J. CURTIS INFRASTRUCTURE DESIGN OFFICER		CHECKED: G. BUDGE COORDINATOR PROJECT DESIGN		APPROVED: B. JACKSON DIRECTOR ASSET SERVICES		JOB No: 1807009	
AHD		PCG94									





 <div style="margin-left: 20px;"> 1ST FLOOR, 908 ALBANY HIGHWAY EAST SHAWMACK PARK, WA 6011 P 9355 1300 E admin@shawmac.com.au </div>			
DESIGNED BY: DRAWN BY: CHECKED BY: APPROVED BY DIRECTOR:	NAME	SIGN	DATE
	JC		31.08.18
	CRF		31.08.18
	WC		06.09.18
	IB		06.02.19
City of Kalamunda 		<h1>ASSET SERVICES</h1>	
<h1>CITY OF KALAMUNDA</h1> <p>FORRESTFIELD INDUSTRIAL AREA INTERSECTION UPGRADE DUNDAS ROAD</p>			
<h2>CROSS SECTIONS</h2> <p>CH 100.00 TO CH 230.00</p>			
DRAWING No.		-SHEET	REVISED
1807009-731-1/0		ORG. SIZE	
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EAST VICTORIA PARK, WA 6101
P 9355 1300
E admin@shawmac.com.au

	NAME	SIGN	DATE
DESIGNED BY:	JC		31.08.18
DRAWN BY:	CRF		31.08.18
CHECKED BY:	WC		06.09.18
APPROVED BY DIRECTOR:	IB		06.02.19



ASSET SERVICES

CITY OF KALAMUNDA
FORRESTFIELD INDUSTRIAL AREA
INTERSECTION UPGRADE
BERKSHIRE ROAD

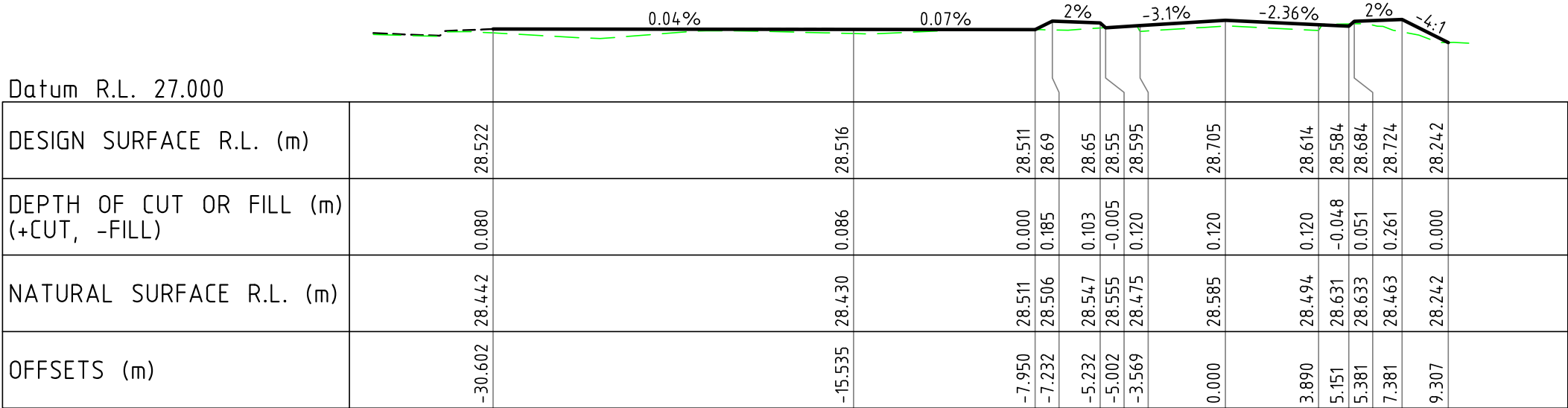
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CH 10.00 TO CH 100.00

DRAWING-No. -SHEET /REVISION

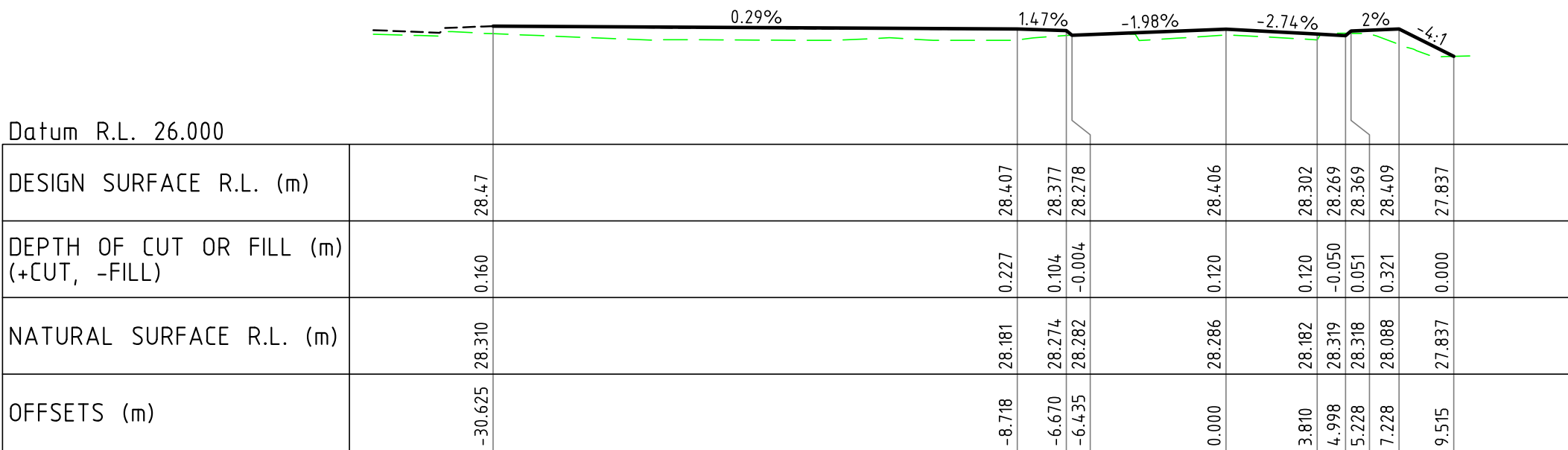
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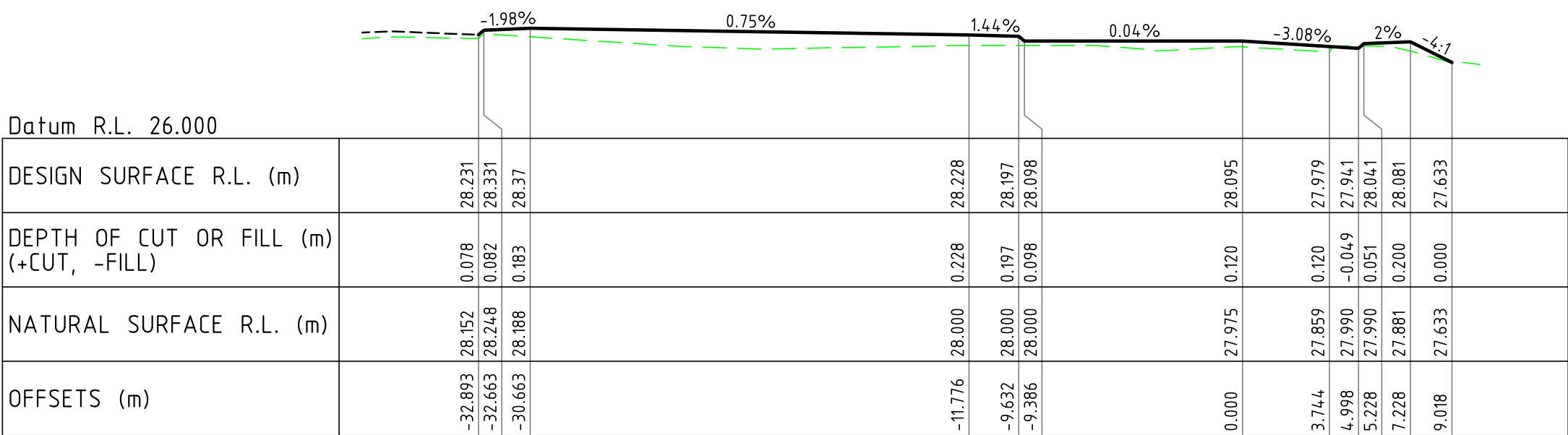
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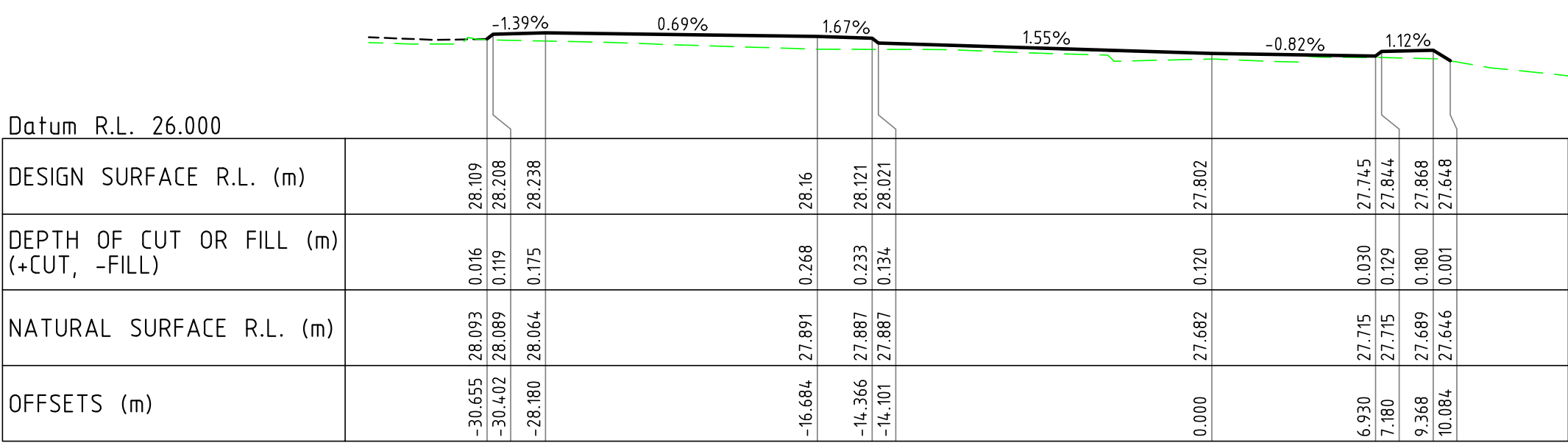
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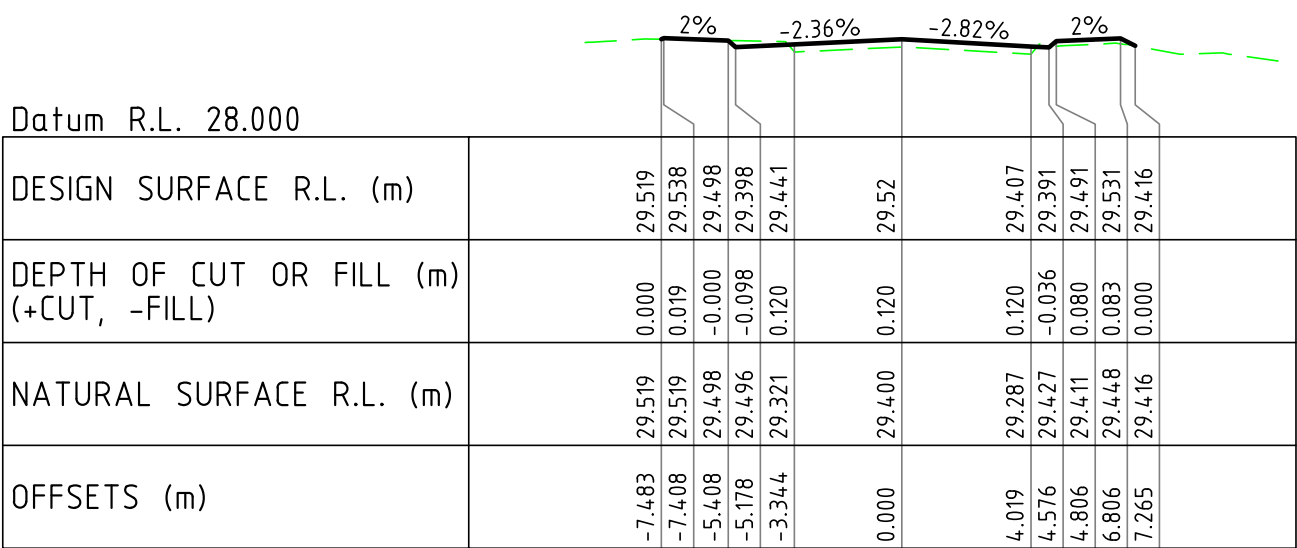
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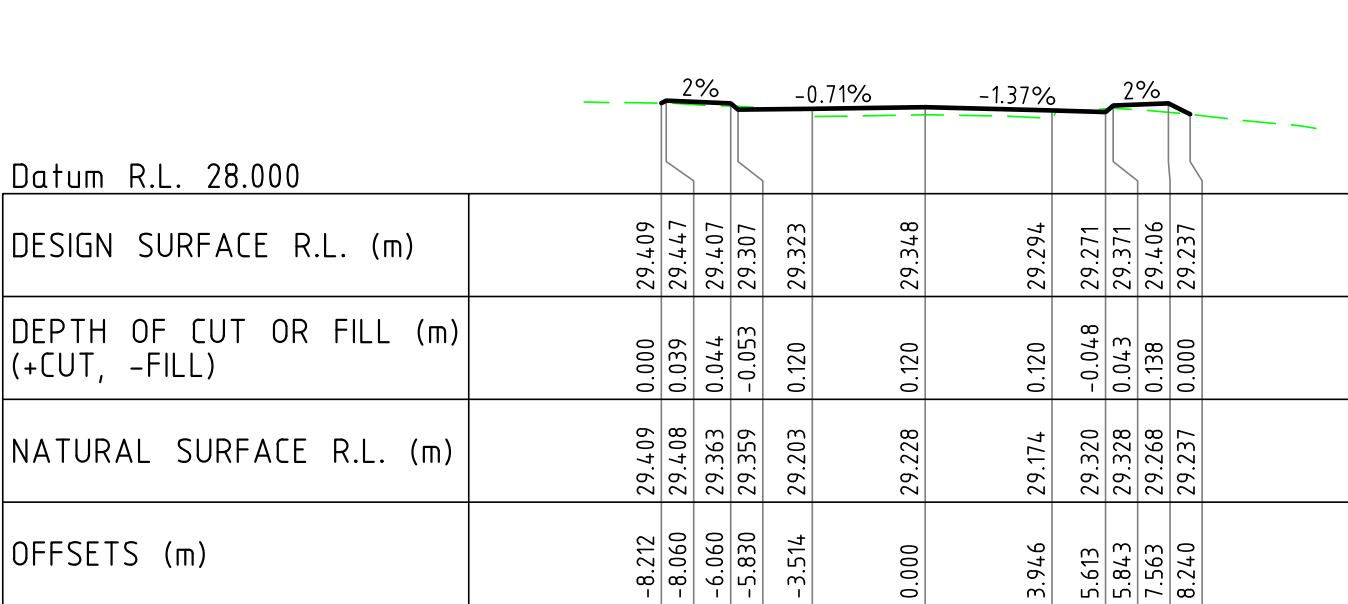
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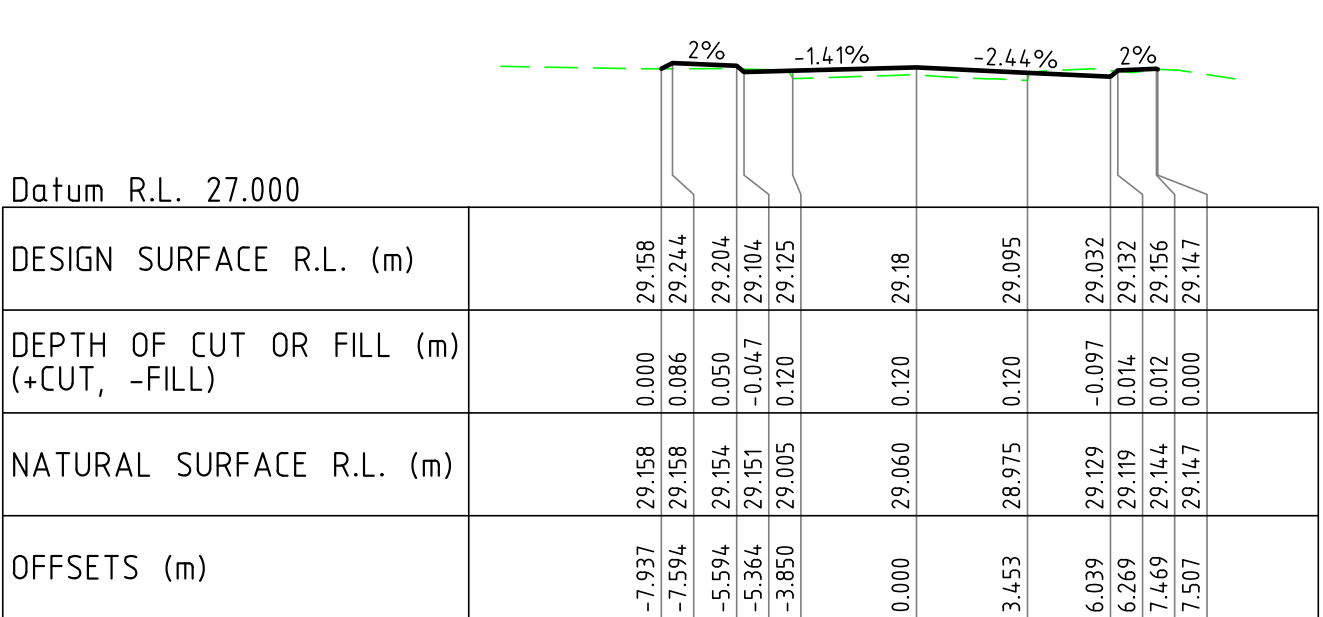
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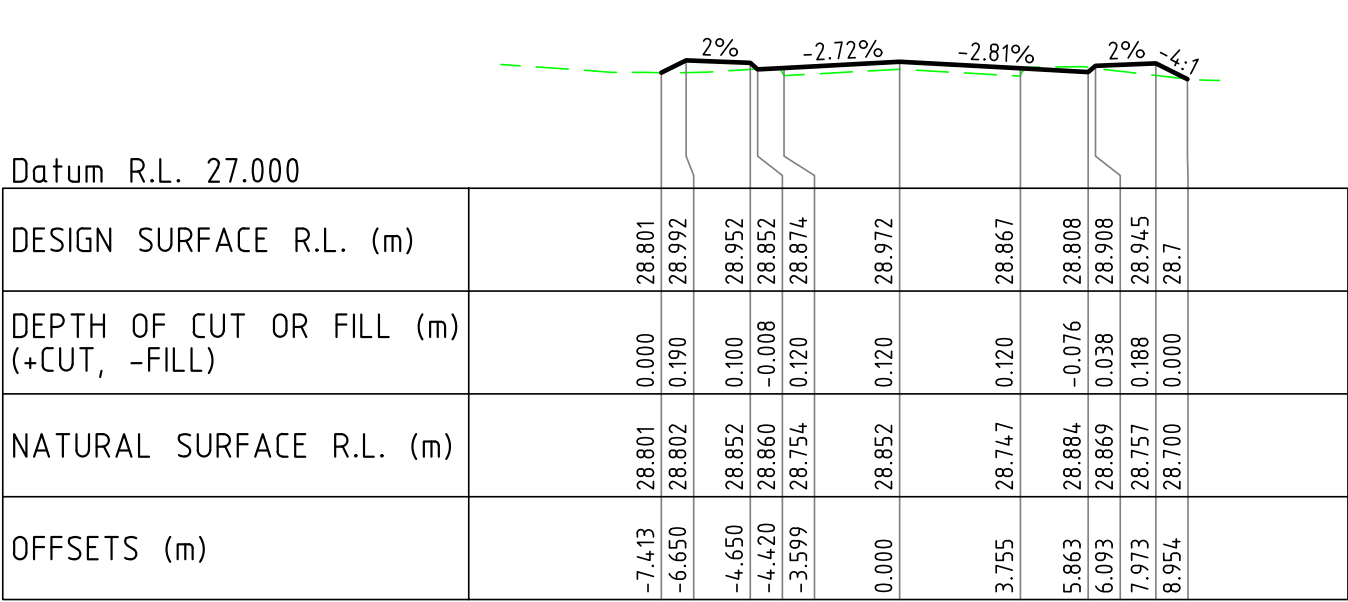
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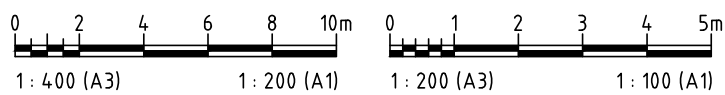
CHAINAGE 80.000



CHAINAGE 70.000



CHAINAGE 60.000



ISSUED FOR TENDER

No.	REVISION	BY	DATE	AUTH	No.	REVISION	BY	DATE	AUTH
0	ISSUED FOR TENDER	CRF	06.09.18	IB					

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1:200H 1:100V	SURVEYED: J. CURTIS	DRAWN: G. BUDGE	AUTHORIZED: R. KORENHOF	Discipline: CI	Structure Code: 420
DATUM: AHD	GRID: PCG94	CHECKED: J. CURTIS	APPROVED: B. JACKSON	JOB No. 1807009	
		INFRASTRUCTURE DESIGN OFFICER	COORDINATOR PROJECT DESIGN	DIRECTOR ASSET SERVICES	

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1ST FLOOR, 908 ALBANY HIGHWAY
EAST VICTORIA PARK, WA 6101
P 9355 1300
E admin@shawmac.com.au

City of Kalamunda

ASSET SERVICES

CITY OF KALAMUNDA

FORRESTFIELD INDUSTRIAL AREA
INTERSECTION UPGRADE
MILNER ROAD

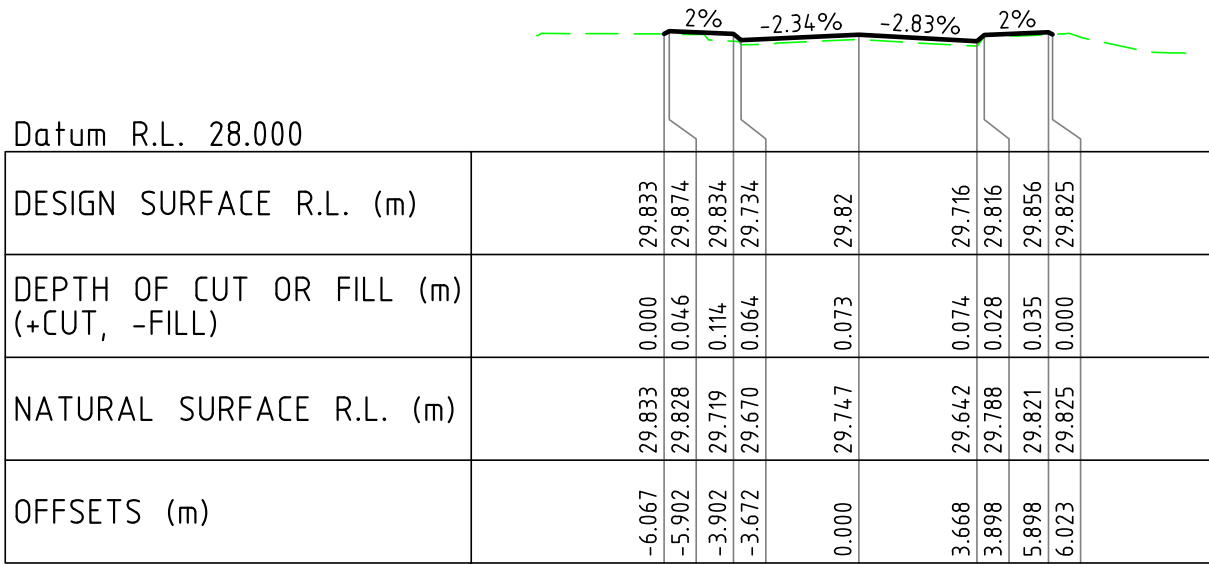
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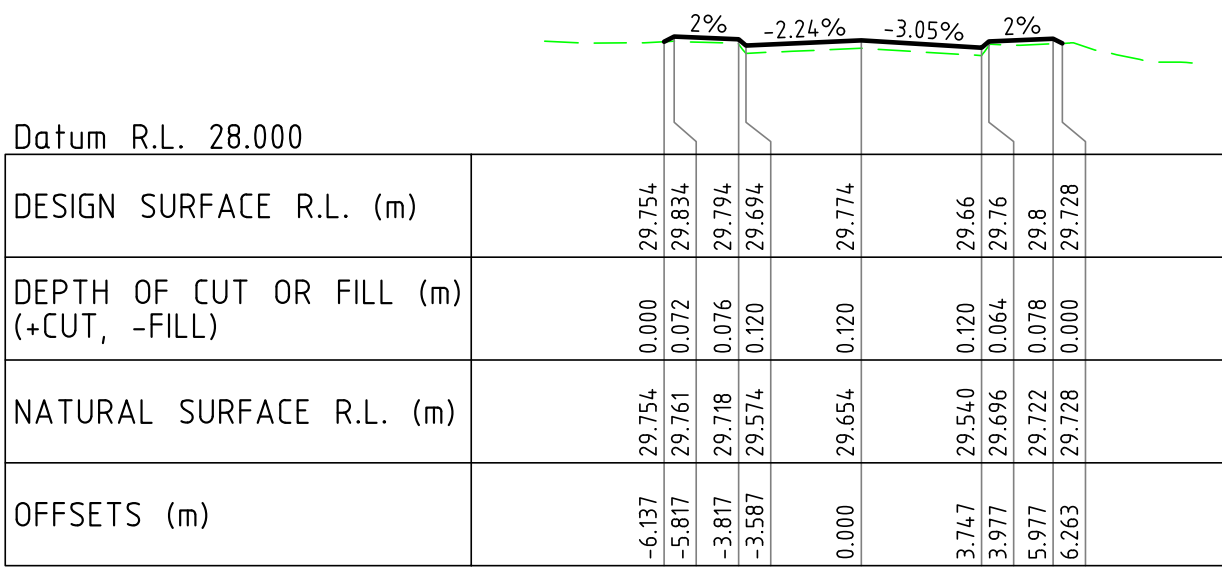
SHEET /REVISION

ORG. SIZE A1

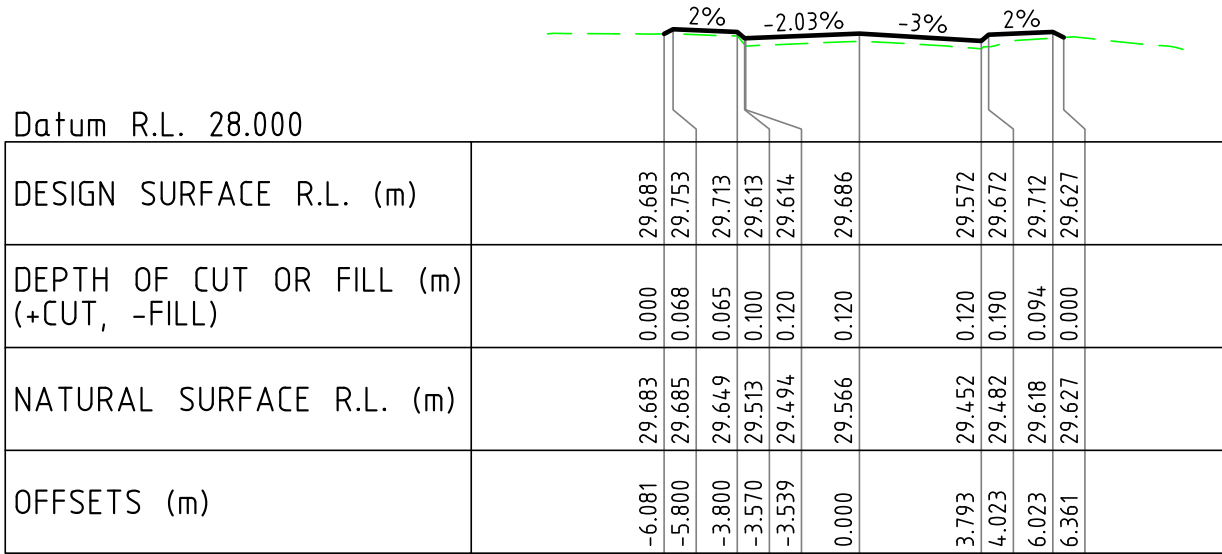
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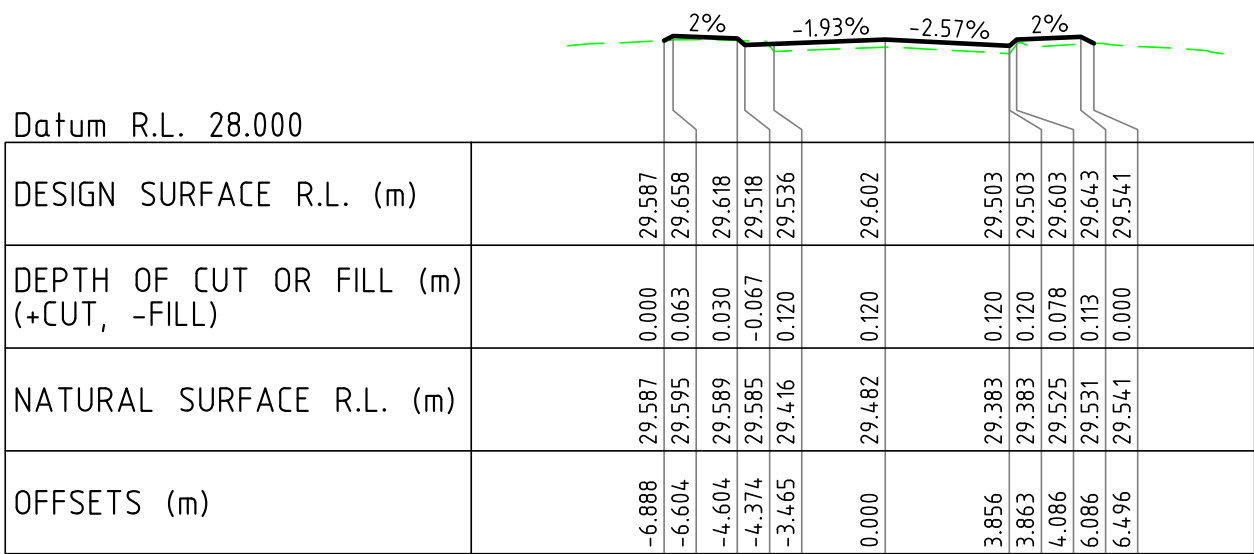
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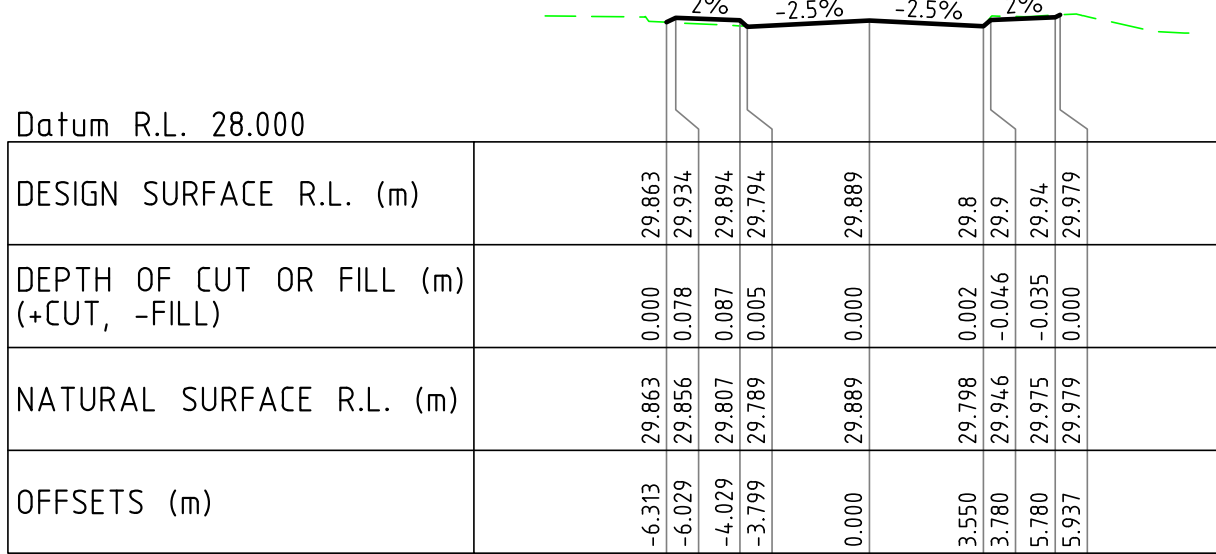
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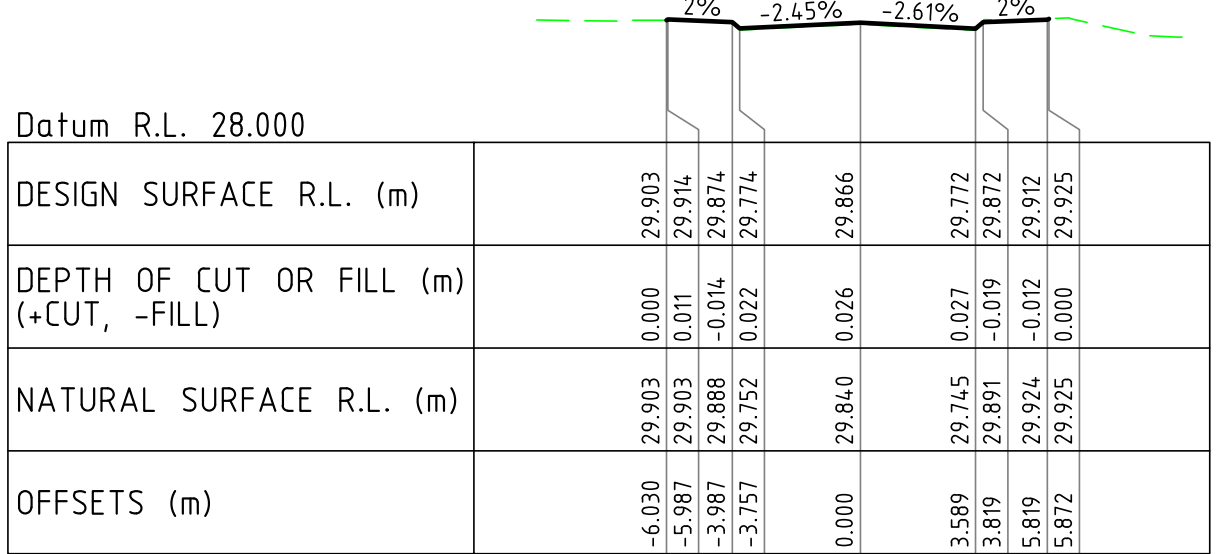
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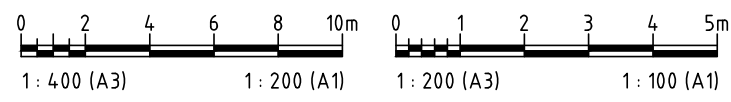


CHAINAGE 145.000



CHAINAGE 140.000

ISSUED FOR TENDER



REVISION				REVISION				REVISION			
No.	BY	DATE	AUTH	No.	BY	DATE	AUTH	No.	BY	DATE	AUTH
0	CRF	31.08.18	IB								

1:200H 1:100V		SURVEYED:	DRAWN:	AUTHORISED:	Discipline:	Structure Code:
		ENGINEERING SURVEYOR	C. FARE	R. KORENHOF	CI	420
		DESIGNED:	INFRASTRUCTURE DESIGN OFFICER	MANAGER ASSET DELIVERY		
		CHECKED:	J. CURTIS	G. BUDGE		
		APPROVED:	06.02.19	B. JACKSON	06.02.19	
		INFRASTRUCTURE DESIGN OFFICER	COORDINATOR PROJECT DESIGN	DIRECTOR ASSET SERVICES		

DATUM:	GRID:	JOB No.
AHD	PCG94	1807009

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1ST FLOOR, 908 ALBANY HIGHWAY
EAST VICTORIA PARK, WA 6101
P 9355 1300
E admin@shawmac.com.au

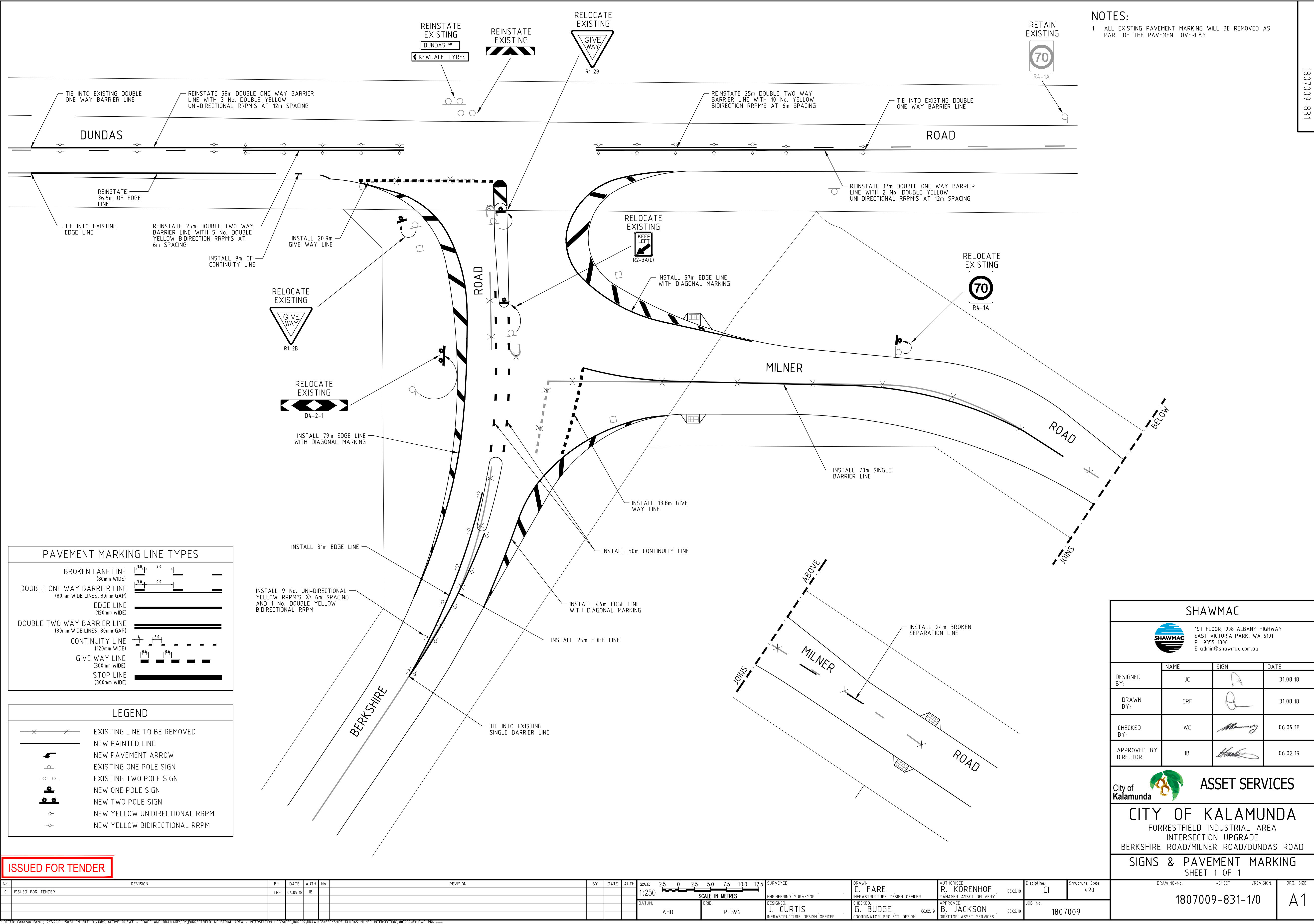
DESIGNED BY:	NAME	SIGN	DATE
	JC		31.08.18
DRAWN BY:	CRF		31.08.18
CHECKED BY:	WC		06.09.18
APPROVED BY DIRECTOR:	IB		06.02.19

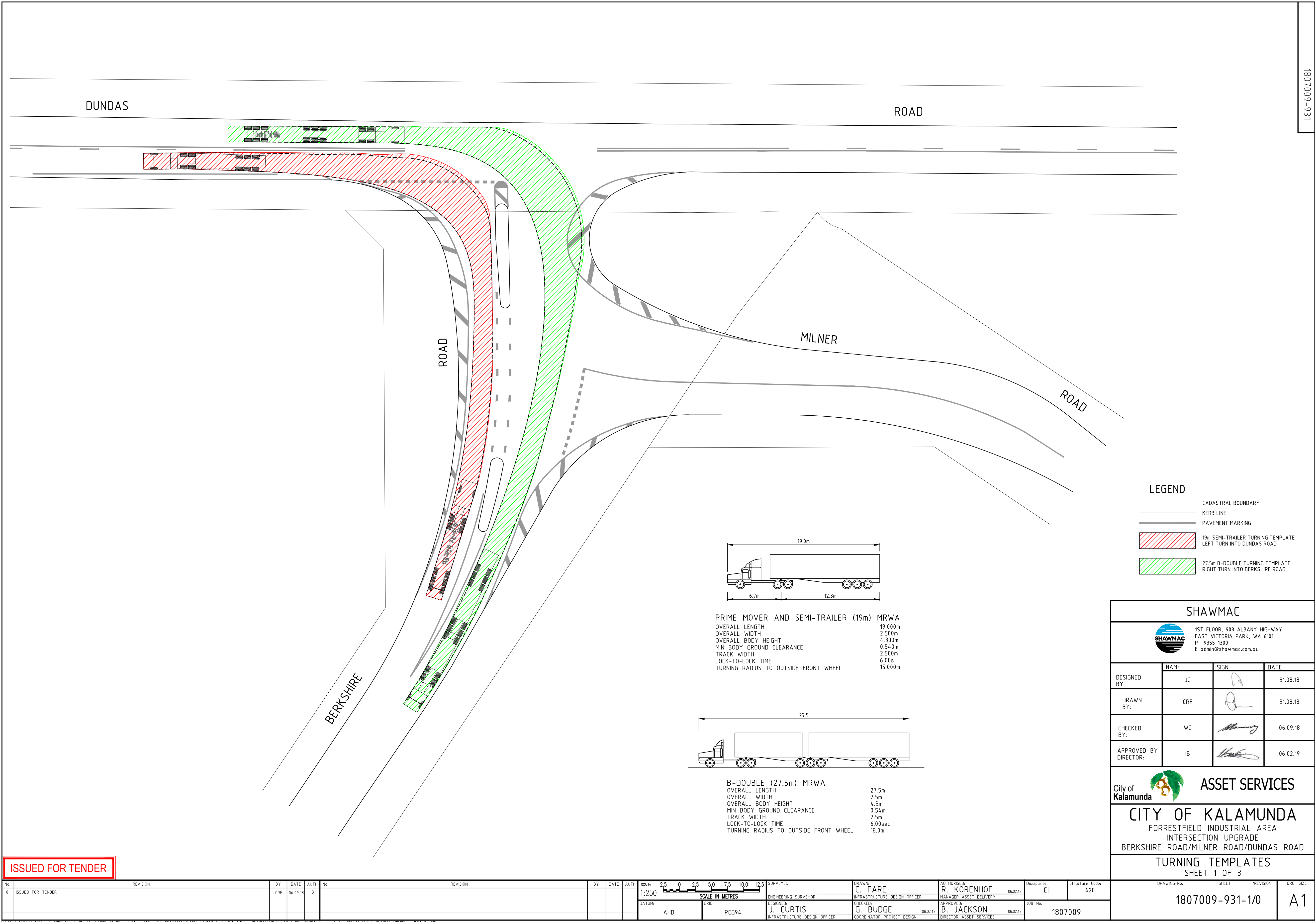
ASSET SERVICES

CITY OF KALAMUNDA
FORRESTFIELD INDUSTRIAL AREA
INTERSECTION UPGRADE
MILNER ROAD

CROSS SECTIONS
CH 100.00 TO CH 145.00

DRAWING-No.	-SHEET	/REVISION	DRG. SIZE
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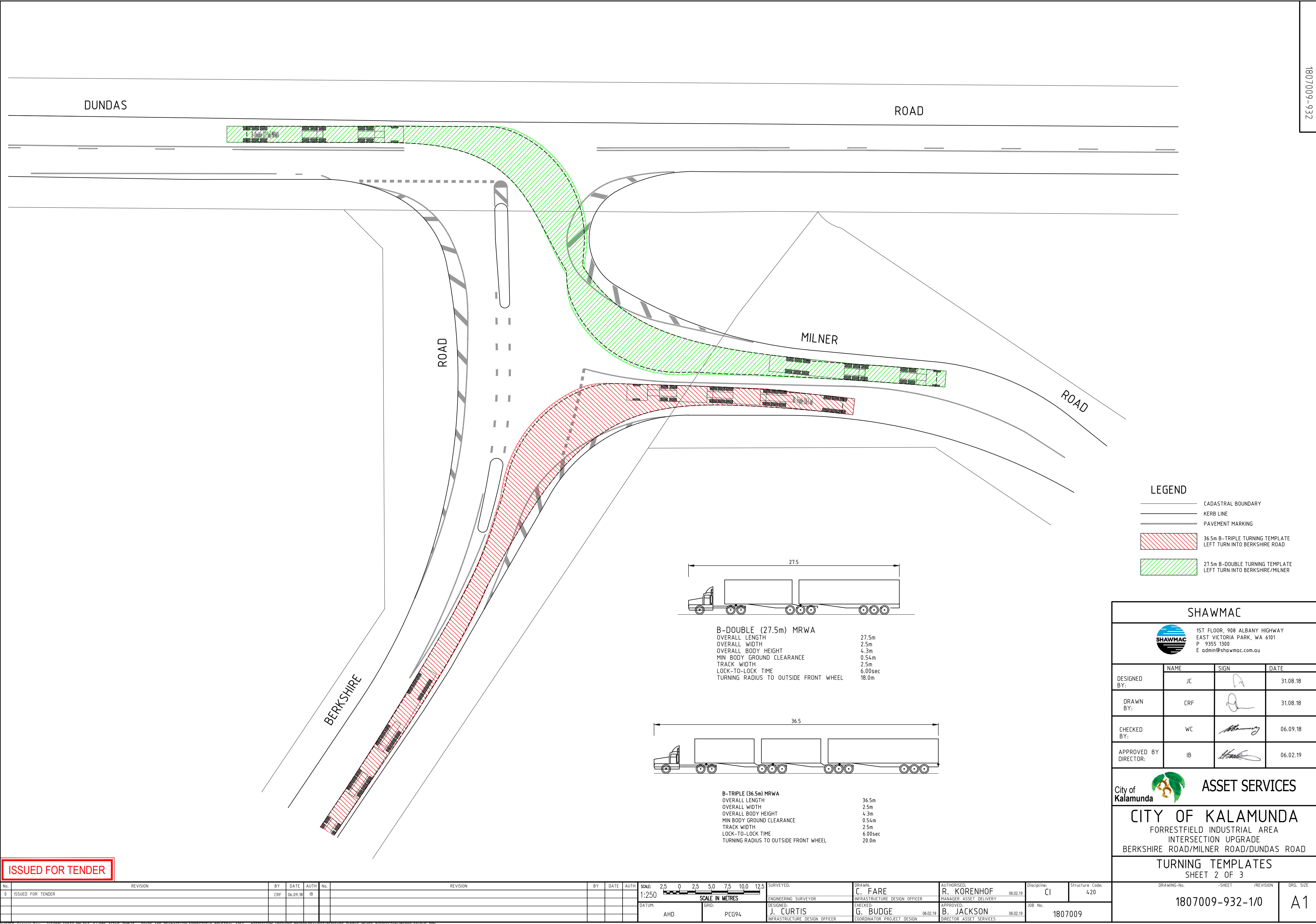




ISSUED FOR TENDER

No.	REVISION	BY	DATE	AUTH	No.	REVISION	BY	DATE	AUTH	SCALE: 2.5 0 2.5 5.0 7.5 10.0 12.5	SURVEYED:	DRAWN:	AUTHORISED:	Discipline:	Structure Code:
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LEGEND

- CADASTRAL BOUNDARY
- KERB LINE
- PAVEMENT MARKING
- 36.5m B-TRIPLE TURNING TEMPLATE LEFT TURN INTO BERKSHIRE ROAD
- 27.5m B-DOUBLE TURNING TEMPLATE LEFT TURN INTO BERKSHIRE/MILNER

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1ST FLOOR, 908 ALBANY HIGHWAY
EAST VICTORIA PARK, WA 6101
P 9355 1300
E admin@shawmac.com.au

	NAME	SIGN	DATE
DESIGNED BY:	JC		31.08.18
DRAWN BY:	CRF		31.08.18
CHECKED BY:	WC		06.09.18
APPROVED BY DIRECTOR:	IB		06.02.19

ASSET SERVICES

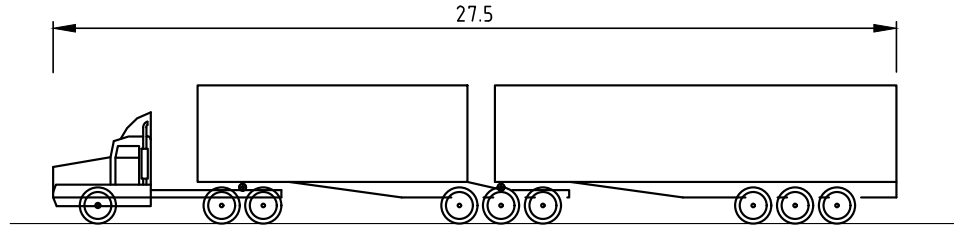
CITY OF KALAMUNDA

FORRESTFIELD INDUSTRIAL AREA
INTERSECTION UPGRADE
BERKSHIRE ROAD/MILNER ROAD/DUNDAS ROAD

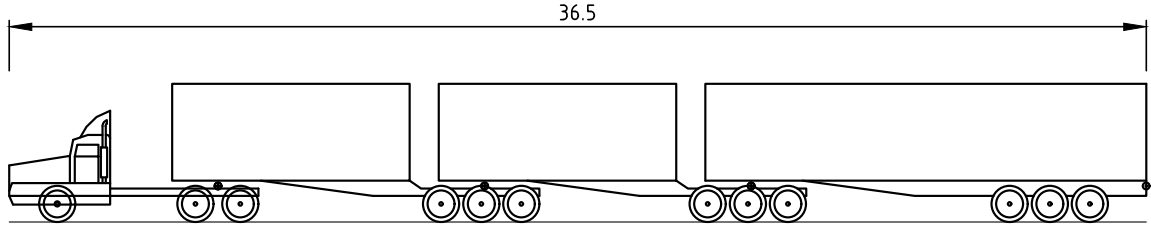
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SHEET 2 OF 3

DRAWING-No. 1807009-932-1/0

A1



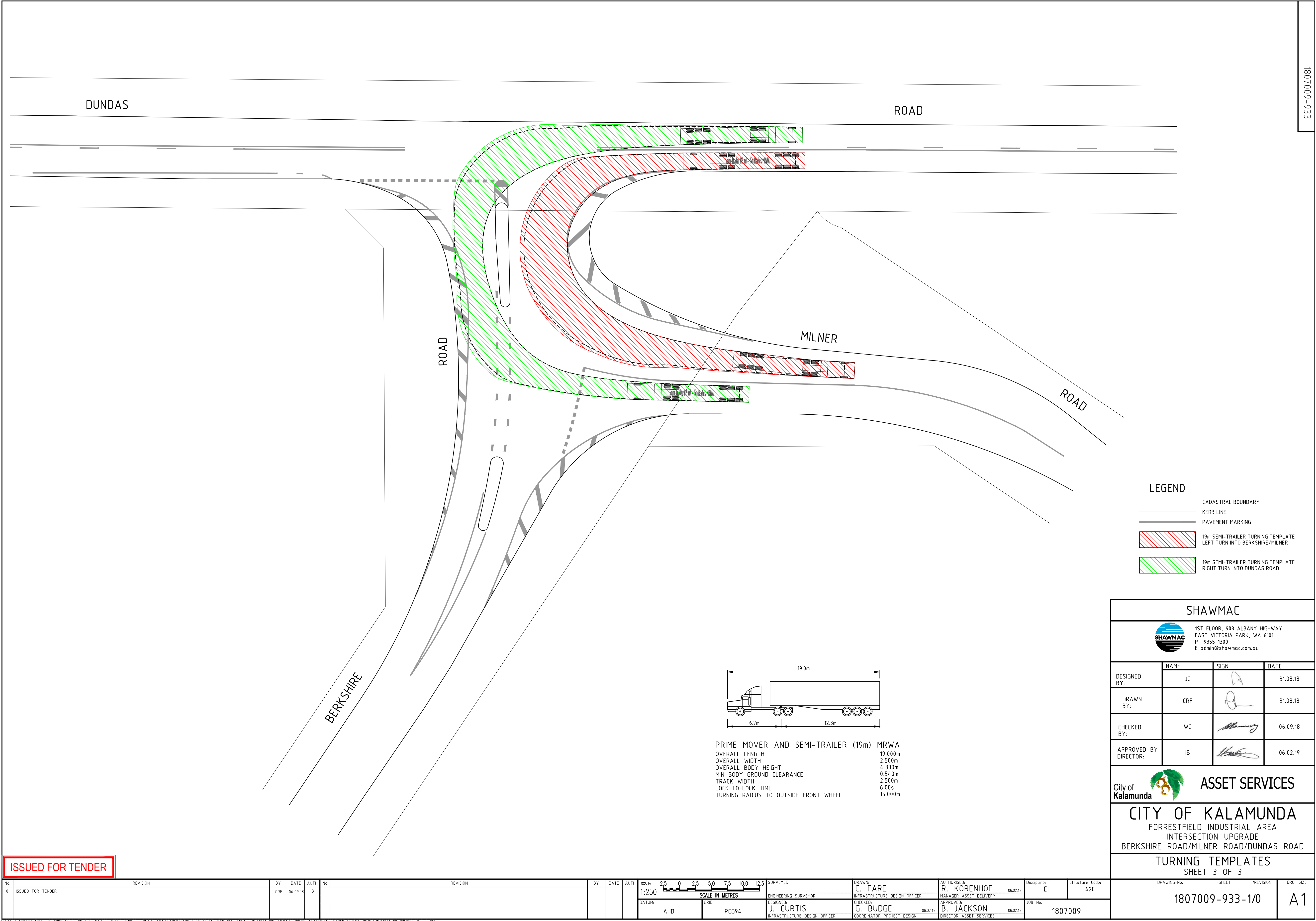
B-DOUBLE (27.5m) MRWA
OVERALL LENGTH 27.5m
OVERALL WIDTH 2.5m
OVERALL BODY HEIGHT 4.3m
MIN BODY GROUND CLEARANCE 0.54m
TRACK WIDTH 2.5m
LOCK-TO-LOCK TIME 6.00sec
TURNING RADIUS TO OUTSIDE FRONT WHEEL 18.0m



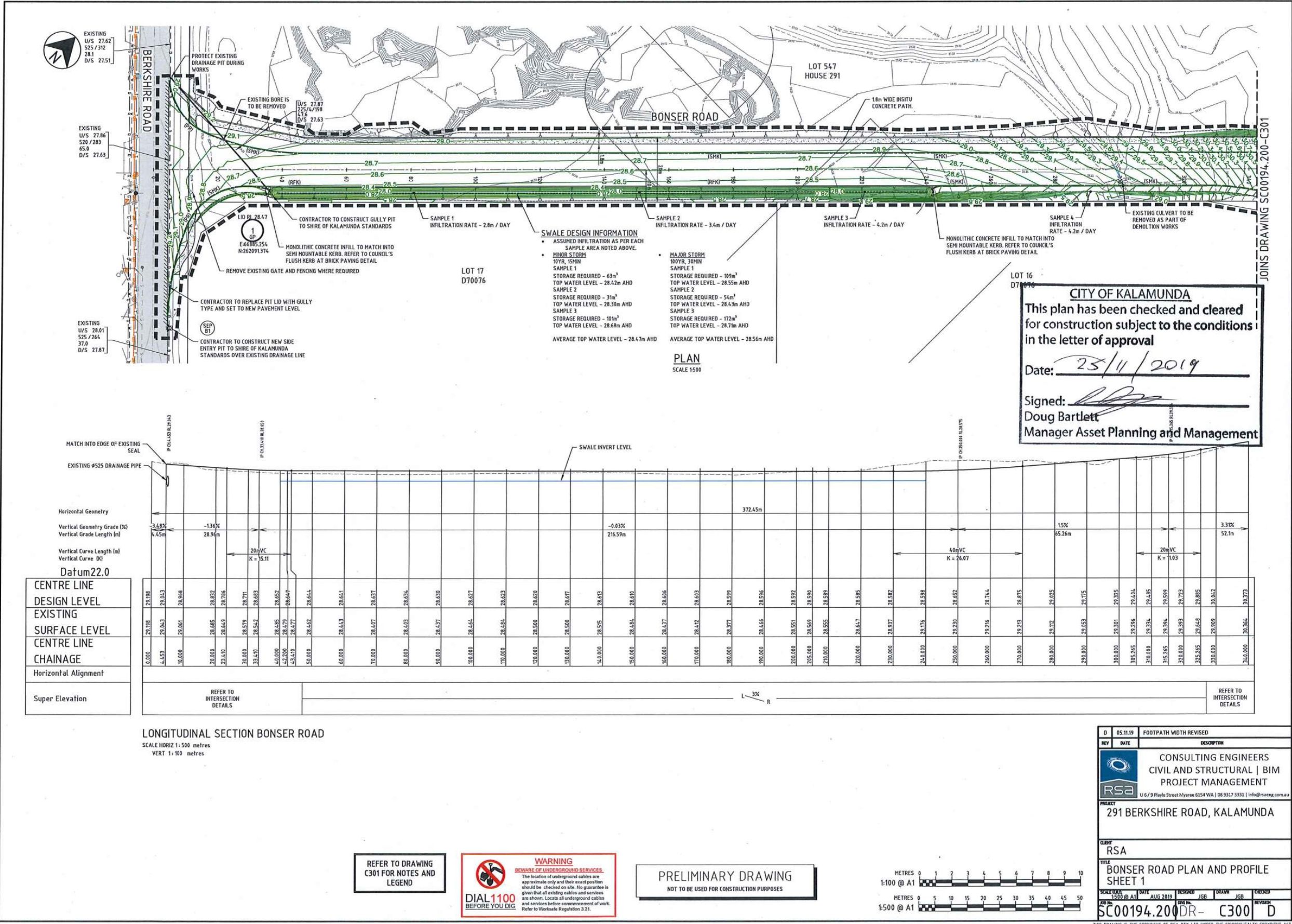
B-TRIPLE (36.5m) MRWA
OVERALL LENGTH 36.5m
OVERALL WIDTH 2.5m
OVERALL BODY HEIGHT 4.3m
MIN BODY GROUND CLEARANCE 0.54m
TRACK WIDTH 2.5m
LOCK-TO-LOCK TIME 6.00sec
TURNING RADIUS TO OUTSIDE FRONT WHEEL 20.0m

No.	REVISION	BY	DATE	AUTH	No.	REVISION	BY	DATE	AUTH	SCALE	0 2.5 5.0 7.5 10.0 12.5	SURVEYED:	DRAWN:	AUTHORISED:	Discipline:	Structure Code:
0	ISSUED FOR TENDER	CRF	06.09.18	IB						1:250		ENGINEERING SURVEYOR	C. FARE	R. KORENHOF	CI	420
										DATUM:	AHD	DESIGNED:	ENGINEERING SURVEYOR	MANAGER ASSET DELIVERY		
											ENG:	J. CURTIS	G. BUDGE	B. JACKSON		
											PG94	INFRASTRUCTURE DESIGN OFFICER	COORDINATOR PROJECT DESIGN	DIRECTOR ASSET SERVICES	JOB No.	1807009

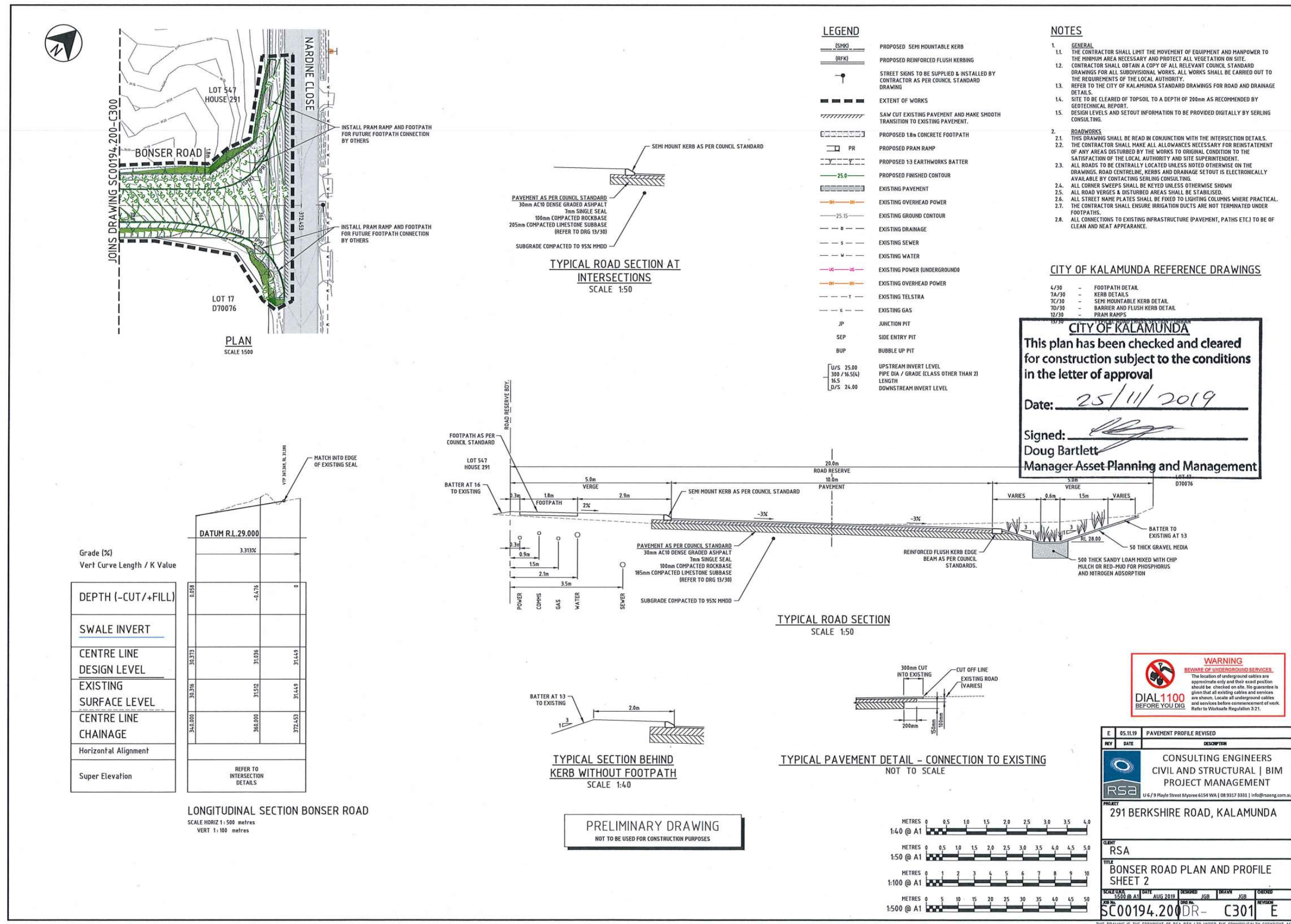
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Attachment 13:
Bonser Road drawings

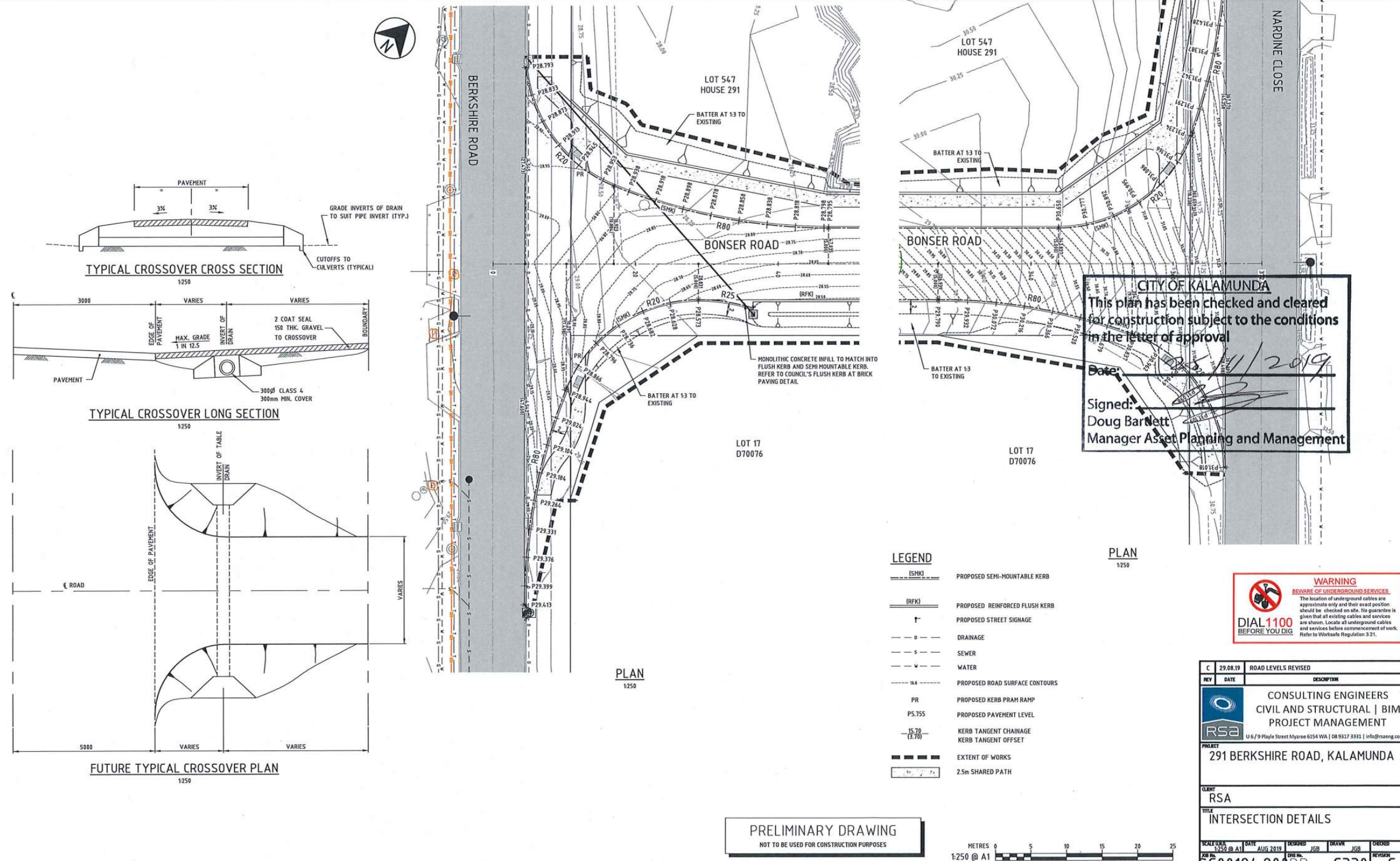


PRODUCED BY AN AUTODESK EDUCATIONAL PRODUCT



PRODUCED BY AN AUTODESK EDUCATIONAL PRODUCT

PRODUCED BY AN AUTODESK EDUCATIONAL PRODUCT



PRODUCED BY AN AUTODESK EDUCATIONAL PRODUCT

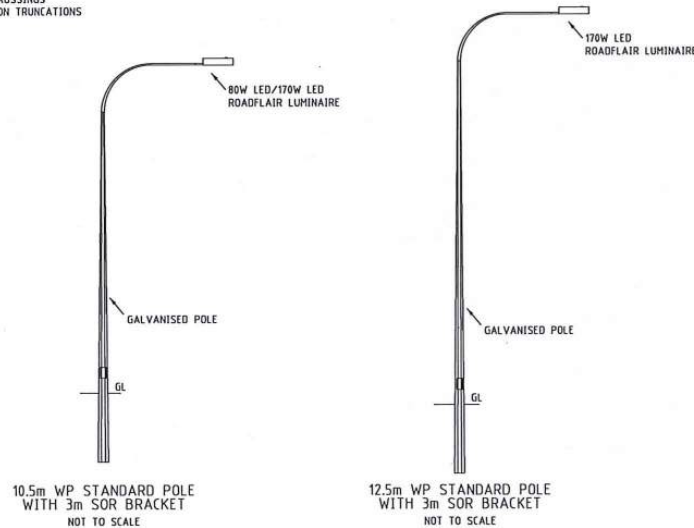
DESIGNED TO BE CONSTRUCTED DE-ENERGISED

NOTES FOR CONTRACTOR:

1. FOLLOW ALL PROCEDURES AND INSTALL EQUIPMENT AS PER THE LATEST EDITION OF WESTERN POWER'S UNDERGROUND DISTRIBUTION SCHEMES MANUAL.
2. CABLE TO BE INSTALLED AS PER WESTERN POWER'S NETWORK STANDARD NS 14.2 (UNDERGROUND CABLE INSTALLATION MANUAL).
3. VERIFY ALL MATERIAL QUANTITIES AGAINST SITE CONDITIONS PRIOR TO QUOTATION AND ADVISE ELECTRICAL CONSULTANTS OF ANY VARIATIONS.
4. ORGANISE ON SITE MEETING WITH WP PRIOR TO COMMENCEMENT OF WORK.
5. ALL AS CONSTRUCTED DRAWINGS AND RECORDS TO BE SUBMITTED TO ADMIN@APDENG.COM.AU PRIOR TO HANDOVER BEING SCHEDULED. REFER TO UDS MANUAL SECTION 6.2.2.
6. COMMENCE LAYING CABLES FROM THE TRANSFORMER OR SWITCHGEAR.
7. LOCATE AND PROTECT EXISTING SERVICES DURING CONSTRUCTION.
8. MAKE ALLOWANCE FOR TERRACING OF CABLES WHERE REQUIRED.
9. CONTRACTOR TO CONTACT WESTERN POWER CONSTRUCTION MANAGER TO CONFIRM CABLE TERMINATION DETAILS FOR WESTERN POWER INTERCONNECTION WORKS TO EXISTING NETWORK.
10. PLAN CABLE RUNS TO LIMIT THE NUMBER OF STRAIGHT JOINTS.
11. ALL WORK WITHIN ROAD RESERVE TO BE DONE IN ACCORDANCE WITH THE UTILITY PROVIDER'S CODE OF PRACTICE.
12. CABLE PROTECTOR SLABBERS REQUIRED WHEN THE CABLE LEAVES THE STANDARD WESTERN POWER ALIGNMENT:
 - A. TERMINATE AT STREETLIGHT POLE.
 - B. ENTER ROAD CROSSING CONDUIT.
 - C. TERMINATE AT CABLE POLE.
13. ALL CABLES LAID NEXT TO RETAINING WALLS TO BE IN CONDUIT.
14. REFER TO WP SUBDIVISION GUIDELINE NUMBER 04 FOR BEDDING SAND BACKFILL AROUND CABLES.
15. INSTALL HEATSHRINK "END CAP" AT ALL CABLE ENDS AND HEATSHRINK GLOVES ON ALL LV CABLE TERMINATION ENDS.
16. STREETLIGHT POLES MUST NOT BE INSTALLED IN FOOTPATHS. CONTACT APD IF ANY CONFLICTS ARE FOUND ON SITE PRIOR TO INSTALLATION.
17. THRUST/BORE UNDER EXISTING ROAD.
18. ALL ABOVE GROUND ASSETS INCLUDING SERVICE PILLARS, STREETLIGHTS AND LOW VOLTAGE (LV) FRAMES ARE TO BE LOCATED ON GROUND LEVEL 300mm ABOVE 100 YEAR FLOOD LEVEL AND NOT IN A PRECARIOUS POSITION. HIGH VOLTAGE EQUIPMENT AND SUBSTATIONS TO BE LOCATED 500mm ABOVE THE 100 YEAR FLOOD LEVEL.
19. ALL STREETLIGHT LOCATIONS TO BE SURVEYED BY CONTRACTOR PRIOR TO INSTALLATION TO ENSURE CORRECT LOCATIONS.
20. STREET LIGHT SL11-1 TO BE INSTALLED ON 2.7m ALIGNMENT AS SHOWN.
21. STREET LIGHTS SL11-2 AND SL9-1 TO SL9-6 TO BE INSTALLED ON 2.9m ALIGNMENT AS SHOWN TO AVOID CLASH WITH PROPOSED NEW FOOTPATH.
22. RETAINING WALLS TO HAVE DEEPER FOOTINGS FOR:
 - A. CABLE ROAD CROSSINGS
 - B. CABLE BENDS ON TRUNCATIONS
 - C. CABLE JOINTS

WP SCOPE OF WORKS:

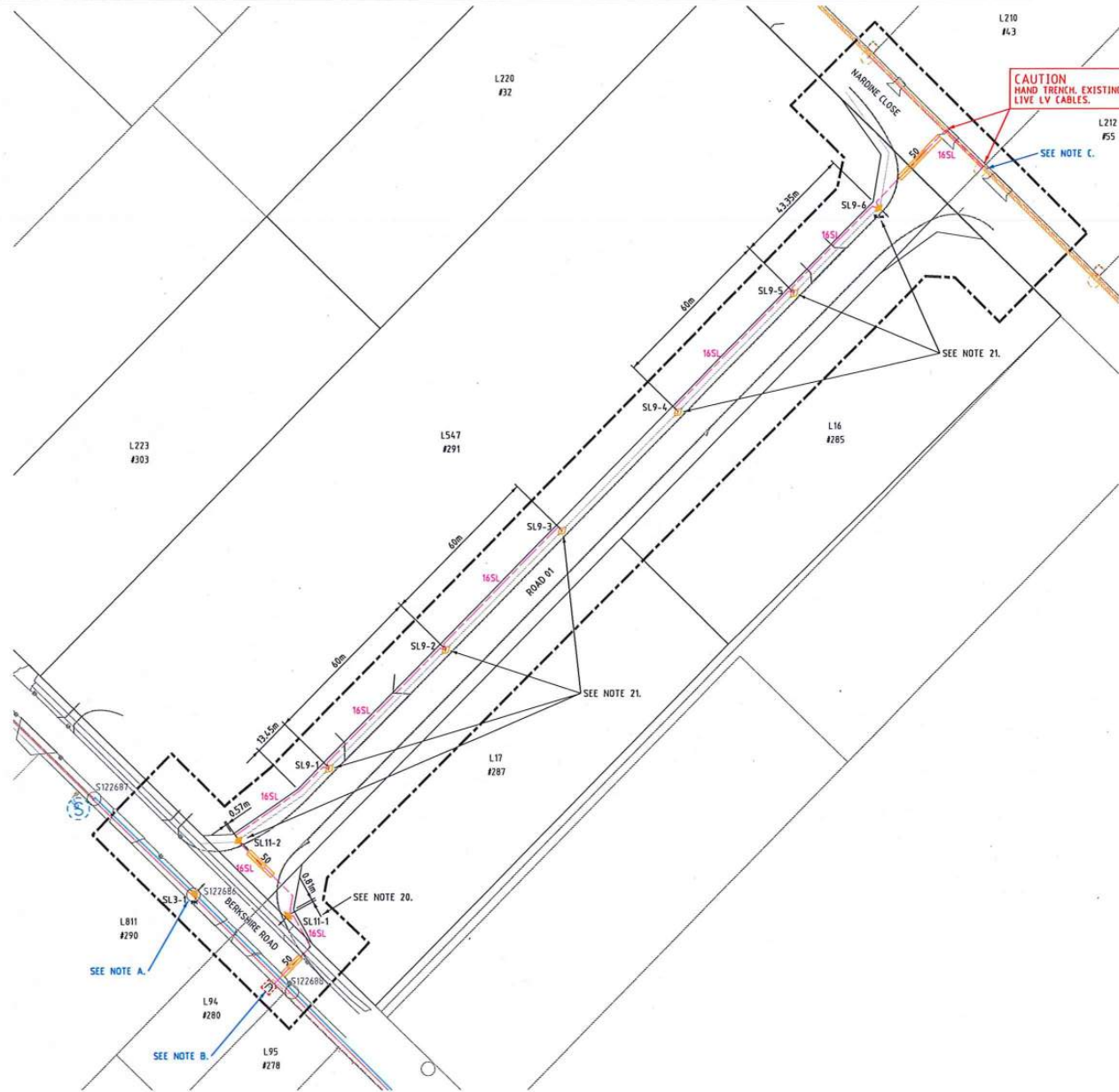
- A. WP TO COST TO SUPPLY & INSTALL SL3 250W HPS ARTERIAL ROAD POLE-MOUNTED STREET LIGHT ONTO POLE S122686 AS SHOWN.
- B. WP TO COST TO TERMINATE NEW 16SL CABLE INTO EXISTING LOT 94 (#280) UNI-PILLAR AND SUPPLY & INSTALL RED SPOT FUSE.
- C. WP TO COST TO TERMINATE NEW 16SL CABLE INTO EXISTING STREET LIGHT AND SUPPLY & INSTALL RED SPOT FUSE.



NOTE: ALL UNMETERED SUPPLIES (INCLUDING CUSTOMER AND WESTERN POWER STREETLIGHTING ASSETS)

TYPE OF EQUIPMENT (GALVANISED POLES & LUMINAIRES)	NO OF UNITS	UNIT WATTAGE	TOTAL WATTAGE	DAILY HRS OPERATION	WP Asset Yes / No
10.5m WP STANDARD POLE WITH 3m SOR BRACKET + 80W LED ROADFLAIR LUMINAIRE	5	80W	400W	DUSK/DAWN	YES
10.5m WP STANDARD POLE WITH 3m SOR BRACKET + 170W LED ROADFLAIR LUMINAIRE	1	170W	170W	DUSK/DAWN	YES
12.5m WP STANDARD POLE WITH 3m SOR BRACKET + 170W LED ROADFLAIR LUMINAIRE	2	170W	340W	DUSK/DAWN	YES
EXISTING WP POWER POLE WITH ARTERIAL ROAD SOR BRACKET + 170W LED ROADFLAIR LUMINAIRE	1	170W	170W	DUSK/DAWN	YES

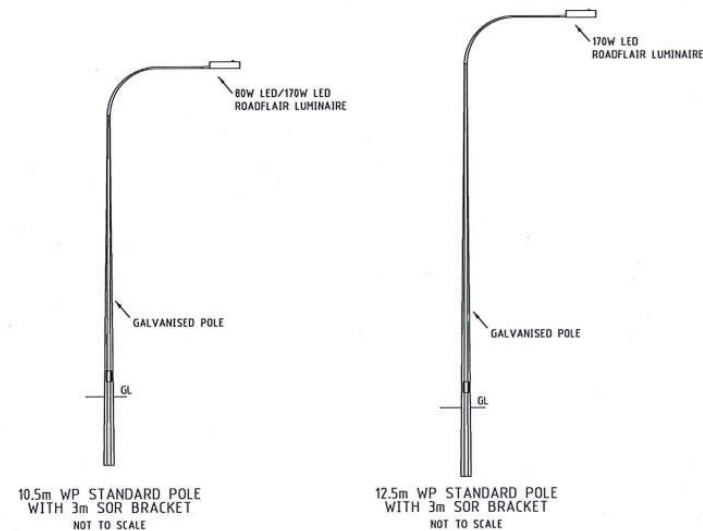
NOTE: ALL UNMETERED SUPPLIES AND STREETLIGHTS MUST BE INCLUDED IN DESIGN DRAWING



DESIGNED TO BE CONSTRUCTED DE-ENERGISED

NOTES FOR CONTRACTOR:

1. FOLLOW ALL PROCEDURES AND INSTALL EQUIPMENT AS PER THE LATEST EDITION OF WESTERN POWER'S UNDERGROUND DISTRIBUTION SCHEMES MANUAL.
2. LOCATE AND PROTECT EXISTING SERVICES DURING CONSTRUCTION.
3. ALL WORK WITHIN ROAD RESERVE TO BE DONE IN ACCORDANCE WITH THE UTILITY PROVIDER'S CODE OF PRACTICE.
4. REFER TO ML010486-W-APD05235 ELECTRICAL DESIGN DRAWING FOR ELECTRICAL SUPPLY DETAILS OF PROPOSED WP STREET LIGHTS.
5. STREET LIGHT POLES MUST NOT BE INSTALLED IN FOOTPATHS. CONTACT APD IF ANY CONFLICTS ARE FOUND ON SITE PRIOR TO INSTALLATION.
6. ALL STREET LIGHT LOCATIONS TO BE SURVEYED & PEGGED BY CONTRACTOR PRIOR TO INSTALLATION.
7. EASTING AND NORTHING COORDINATES PROVIDED MAY CONTAIN TRANSLATION ERRORS FROM CONVERSION OF CLIENT PRECAL LAYOUT TO MGA94-50 COORDINATE SYSTEM. CONTRACTOR TO VERIFY SURVEYED STREET LIGHT LOCATIONS AGAINST DIMENSIONS & INSTRUCTIONS PROVIDED.
8. ALL SURVEYED STREET LIGHT POLE AND POWER POLE LOCATIONS ARE ASSUMED TO BE TO THE CENTRE OF THE POLE.
9. STREET LIGHT SL11-1 TO BE INSTALLED ON 2.7m ALIGNMENT AS SHOWN.
10. STREET LIGHTS SL11-2 AND SL9-1 TO SL9-6 TO BE INSTALLED ON 2.9m ALIGNMENT AS SHOWN TO AVOID CLASH WITH PROPOSED NEW FOOTPATH.



NOTE: ALL UNMETERED SUPPLIES (INCLUDING CUSTOMER AND WESTERN POWER STREETLIGHTING ASSETS)

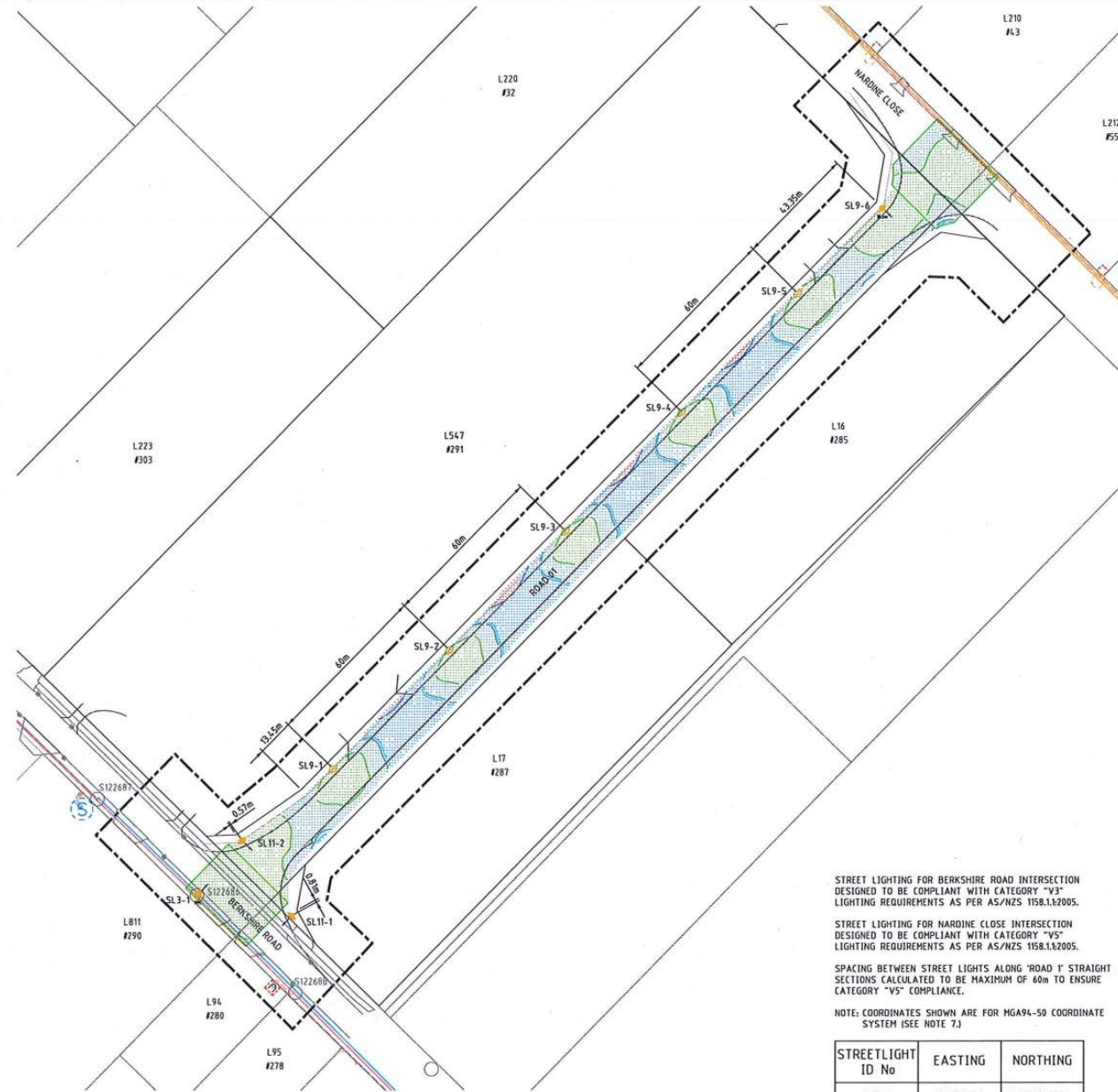
TYPE OF EQUIPMENT (GALVANISED POLES & LUMINAIRES)	NO OF UNITS	UNIT WATTAGE	TOTAL WATTAGE	DAILY HRS OPERATION	WP Asset Yes / No
10.5m WP STANDARD POLE WITH 3m SOR BRACKET • 80W LED ROADFLAIR LUMINAIRE	5	80W	400W	DUSK/DAWN	YES
10.5m WP STANDARD POLE WITH 3m SOR BRACKET • 170W LED ROADFLAIR LUMINAIRE	1	170W	170W	DUSK/DAWN	YES
12.5m WP STANDARD POLE WITH 3m SOR BRACKET • 170W LED ROADFLAIR LUMINAIRE	2	170W	340W	DUSK/DAWN	YES
EXISTING WP POWER POLE WITH ARTERIAL ROAD SOR BRACKET • 170W LED ROADFLAIR LUMINAIRE	1	170W	170W	DUSK/DAWN	YES

NOTE: ALL UNMETERED SUPPLIES AND STREETLIGHTS MUST BE INCLUDED IN DESIGN DRAWING

LIGHTING CALCULATION SUMMARY

STATISTICS AREA ID	STATISTICS AREA LABEL	CALCULATION TYPE	UNITS	AVG	MAX	MIN	MIN/AVG	MAX/MIN	MAX/AVG
1	BERKSHIRE INTERSECTION 3m VERGE (V3)	ILLUMINANCE	LUX	20.50	41.3	5.6	0.27	7.38	2.01
2	BERKSHIRE INTERSECTION (V3)	ILLUMINANCE	LUX	20.31	44.9	7.5	0.37	5.99	2.21
3	HARDINE INTERSECTION 3m VERGE (V5)	ILLUMINANCE	LUX	10.95	22.8	3.6	0.33	6.33	2.08
4	HARDINE INTERSECTION (V5)	ILLUMINANCE	LUX	10.58	26.7	4.3	0.41	6.21	2.52

Rev.	DESCRIPTION	DRN	DESIGN	CHKD	ENG	ISSUED BY	ISSUED DATE
B	250W HPS LUMINAIRES CHANGED TO LATEST 170W LED LUMINAIRES AS PER LGA REQUEST	ML	RP/BTL	BTL	-	BTL	22/01/2019
A	PRELIMINARY DESIGN ISSUED TO CLIENT FOR COMMENT & APPROVAL.	ML	RP/BTL	BTL	-	BTL	16/11/2018
Rev.	AMENDMENT	DRN	DESIGN	CHKD	ENG	ISSUED BY	ISSUED DATE



10.5m WP STANDARD POLE WITH 3m SOR AND 80W LED ROADFLAIR LUMINAIRE

10.5m WP STANDARD POLE WITH 3m SOR AND 170W LED ROADFLAIR LUMINAIRE

12.5m WP STANDARD POLE WITH 3m SOR AND 170W LED ROADFLAIR LUMINAIRE

WP POLE-MOUNTED ARTERIAL ROAD SOR BRACKET & 170W LED ROADFLAIR LUMINAIRE

ALL STREETLIGHT CABLE TO BE IN CONDUIT IF OUTSIDE WP ALIGNMENT.

WP STREETLIGHTS TO BE LOCATED IN-LINE WITH LOT BOUNDARY ON 2.7m ALIGNMENT OR IN ACCORDANCE WITH AS/NZS158.1.2:2010.

STREETLIGHT POLE LOCATION

STREET LIGHTING FOR BERKSHIRE ROAD INTERSECTION DESIGNED TO BE COMPLIANT WITH CATEGORY "V3" LIGHTING REQUIREMENTS AS PER AS/NZS 158.1.2:2005.

STREET LIGHTING FOR HARDINE CLOSE INTERSECTION DESIGNED TO BE COMPLIANT WITH CATEGORY "V5" LIGHTING REQUIREMENTS AS PER AS/NZS 158.1.2:2005.

SPACING BETWEEN STREET LIGHTS ALONG "ROAD 1" STRAIGHT SECTIONS CALCULATED TO BE MAXIMUM OF 60m TO ENSURE CATEGORY "V5" COMPLIANCE.

NOTE: COORDINATES SHOWN ARE FOR MGA94-50 COORDINATE SYSTEM (SEE NOTE 7.)

STREETLIGHT ID No	EASTING	NORTHING
SL3-1	405018.8810	6463058.4430
SL11-1	405052.8107	6463050.5888
SL11-2	405034.6839	6463077.7195
SL9-1	405067.7511	6463103.6721
SL9-2	405109.7374	6463146.5342
SL9-3	405151.7236	6463189.3962
SL9-4	405193.7099	6463232.2582
SL9-5	405235.6962	6463275.1202
SL9-6	405266.8332	6463306.0900

Dimensions and scales to be checked prior to measuring cable lengths

METRES (SCALE 1:1000)

GOLDEN SAFETY RULES ARE INDICATIVE ONLY

ALWAYS PERFORM DETAILED HAZARD ANALYSIS

LEGEND

SCHEME BOY, RETAINING WALL, RESTRICTED ZONE, EASEMENT, DEEPER RETAINING WALL FOOTINGS

HV CABLES

LV-SL CABLES

EXISTING HV CABLES (SIZE AND TYPE INDICATED)

EXISTING LV CABLES (SIZE AND TYPE INDICATED)

STREET LIGHTS

LEGEND DEFINES TYPE & WATTAGE - NOT COLOUR

PILLARS / PITS / ETC

TRANSFORMER EXISTING SWITCHGEAR

AERIAL CONDUCTORS AND POLES

ISOLINES & ILLUMINANCE VALUES

WARNING

BEWARE OF EXISTING SERVICES

THE LOCATION OF EXISTING SERVICES IS APPROXIMATE ONLY. NO GUARANTEE IS GIVEN THAT ALL EXISTING SERVICES ARE SHOWN. ALWAYS REFER TO CURRENT DAYD DRAWINGS, CONFIRM ASSET LOCATIONS ON SITE BEFORE COMMENCEMENT OF WORK. REFER TO "WORKSAFE" REGULATION 3.21

DIAL1100

BEFORE YOU DIG

WARNING

IF WORKING IN THE VICINITY OF EXISTING OVERHEAD DISTRIBUTION OR TRANSMISSION LINES CONTRACTOR TO COMPLY WITH "WORKSAFE" CLEARANCES DURING CONSTRUCTION

RESTORATION & REINSTATEMENT REQUIREMENTS

RESTORATION & REINSTATEMENT REQUIRED FOR THIS PROJECT TO BE COMPLETED AS PER THE RESTORATION AND REINSTATEMENT SPECIFICATION FOR LOCAL GOVTS IN WA. THE CONSTRUCTION MANAGER IS RESPONSIBLE FOR ALL RESTORATION AND REINSTATEMENT UNTIL FORMALLY ACCEPTED BY WESTERN POWER OR LOCAL GOV'T AUTHORITY AS APPROPRIATE. SEE FIELD INSTRUCTION 2.21.

INSTRUCTION TO CONSTRUCTION CREWS

IT IS A REQUIREMENT OF WESTERN POWER THAT ALL EXISTING CONDUCTOR / CABLES SIZES ARE CONFIRMED ON SITE TO ENSURE THAT ALL FITTINGS ARE OF THE APPROPRIATE SIZE AND ARE INSTALLED CORRECTLY IN ACCORDANCE TO Distribution Construction Standards Handbook

ALL WORKS ON EXISTING WESTERN POWER ASSETS ARE TO BE UNDERTAKEN BY WESTERN POWER

Preliminary

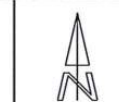
Not For Construction

APD

ENGINEERING

T: 1300 273 797 | E: admin@APDeng.com.au
www.APDeng.com.au

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SITE LOCATION
Lat: 31° 57' 47.9" S
Long: 115° 59' 47.0" E

LOT DETAILS

Residential Lots : 0
Group Housing : 0
Commercial : 0
Pumps : 0
Other : 0

STREET SMART

Page : 376
Map Ref : B4

PROJECT NAME
FORRESTFIELD-HIGH WYCOMBE
INDUSTRIAL AREA - ROAD 1 LIGHTING
STREET LIGHTING LAYOUT

LOCAL AUTHORITY
CITY OF KALAMUNDA

CLIENT/DEVELOPER
JEANETTA PTY LTD

W.A.P.C. REFERENCE No.
TBA

WESTERN POWER REFERENCE No.
ML010486

SCALE: AS NOTED 1:1000 @ A1

DATE: 20/08/2018

DRAWING No.
W-APD05235-L01

A1

SHT 1 OF 1

REV

B



Our Ref: DA17/0587

25 November 2019

Brendon Scott
RSA Perth
6/9 Playle Street
MYAREE WA 6154

Dear Brendan,

Creation of Bonser Road - Acceptance of Civil Works Drawings

Thank you for submitting your revised engineering design drawings for the above development. The drawings received by the City are approved and signed accordingly.

This approval applies to the following drawings, and is subject to the requirements below:

- SC00194-200-C300 Rev D
- SC00194-200-C330 Rev D
- SC00194-200-C301 Rev D, subject to amending the road base thickness as per MRWA's road note 9.
- For Information only: ML010486-W_APD05235 and ML010486-W_APD05235-L01.

The approval of these drawings does not imply approval of any subsequent designs or revisions.

This approval does not represent or imply approval for costs associated with the work. Separate correspondence will be provided by the City in respect of the cost of work under the Agreement for the Funding and Construction of Bonser Road.

Please ensure the following requirements are met during the delivery of the works:

1. Notify in writing the business operators and residents, who are impacted by the work, advising them of the proposed works, scope of works, route of works and scheduled start and completion dates.
2. A Traffic Management Plan is required for any works in the road reserve.
3. Organize a pre-start meeting prior to start of construction with the City representative.

kalamunda.wa.gov.au

T 9257 9999 F 9293 2715 E enquiries@kalamunda.wa.gov.au

2 Railway Road KALAMUNDA WA 6076 PO Box 42, KALAMUNDA WA 6926

ABN 60 741 095 678

4. Notify the City representative for inspections as specified in the "City of Kalamunda Works inspection Requirements".
5. Control access to the site and manage safety in accordance with the OH&S Act and Regulations.
6. Manage dust and drainage during the works in accordance with the WAPC conditions and the Legal Agreement.
7. Reinstate any damaged public infrastructure to its original condition.
8. The hours of construction work shall be limited to 6.00 am to 8.00 pm. No work is to occur on Sundays and public holidays.
9. Approval is sought and received from Western Power and the Water Corporation for assets covered under their jurisdiction.

The City representative for the works is Partha Deb, Engineering Technical Officer Developments. Please contact Partha on 9257 9929 to arrange inspections.

If you have any queries regarding the above, please contact Raktim Barua, Coordinator of Development Engineering Services on 9257 9630.

Yours sincerely,



Doug Bartlett

Manager Asset Planning

Enc: Approved drawings.

Attachment 14:
Full Mastersheet

- Berkshire Road
- Milner Road
- Bonser Road
- Nardine Close extension (Road 2A) – Stages 1 and 2.
- Sultana Road West

BERKSHIRE ROAD - ASHBY CLOSE TO MILNER ROAD												
Revised Cost August 2018 - Based on Currow Portion B rates, road widening removed												
Item	Description	New Quantity	Unit	Rate	Amount	Heading subtotal	Notes	PCE Quantity	PCE Rate	PCE Amount	PCE Subtotal	PCE comment
Based on drawings (85% status) prepared by Porter Consulting Engineers 19-11-135810 Rev C, 19-11-135811 Rev C, 19-11-135812 Rev B												
1	Preliminaries											
1.1	All Preliminaries (Mobilisation, Supervision, Insurances, Safety etc.)			6%	\$3,876.57			6%	\$	7,743		
	Subtotal - Preliminaries					\$3,877					\$ 7,743	
2	Survey Control and Testing											
2.1	All Survey (Setout, As-Cons, Compaction Testino etc.)			5%	\$3,230.48			5%	\$	6,453		
	Subtotal - Survey Control and Testing					\$3,230					\$ 6,453	
3	Clearing and Demolition											
3.1	Clear Large Trees inc Grubbing	0	ea	\$246.00	\$0.00			-	\$	246.00	\$ -	
3.2	Clear Small Trees inc Grubbing	0	ea	\$179.00	\$0.00			-	\$	179.00	\$ -	
3.3	Clear shrubs/brass	0	m2	\$1.62	\$0.00			-	\$	1.62	\$ -	
3.4	Demolish and Dispose redundant footpaths	0	m2	\$20.00	\$0.00		Existing footpath to be retained and widened.	80	\$	20.00	\$ 1,590	Removed 30m of damaged path from Section 2, and removed 13m of 1.5m wide path from Section 3.
	Subtotal - Clearing and Demolition					\$0					\$ 1,590	
4	Earthworks											
4.1	Remove 100mm Topsoil to spoil for footpath widening	630	m2	\$3.00	\$1,890.00		Calculated based on 0.7m stripping for footpath widening for 900m assumed length. 0.7x900=630	364	\$	3.00	\$ 1,093	Mainly topsoil stripping will be needed for Section 4 where there is no existing path.
4.2	Cut to spoil for footpath widening		m3					36	\$	25.00	\$ 911	From path boxout.
	Subtotal - Earthworks					\$1,890					\$ 2,004	
5	Roadworks											
5.1	Widen existing concrete footpaths (from 1.8m wide to 2.5m wide)	630	m2	\$47.65	\$30,019.50		Assumed existing footpath to be retained and widened to 2.5m. New footpath widening of 0.7 m for 900m assumed length. 0.7x900=630		\$	47.65	\$ -	
5.2	Install new 100mm thick concrete footpath, 2m wide		m2					424	\$	47.65	\$ 20,218	Remove and replace 30m of damaged path from Section 2, and 13m of 1.5m wide path from Section 3.
5.3	Supply and Install Pram Ramps	4	ea	\$550.00	\$2,200.00		Allowed for 2 road crossings. 2x2=4	6	\$	550.00	\$ 3,300	Pram ramps only needed where crossovers have edge kerling.
5.4	Install diagonal pavement line markings to crossovers		Width of crossover					194	\$	10.00	\$ 1,941	The City specified diagonal pavement markings to delineate path through crossovers.
	Subtotal - Roadworks					\$32,220					\$ 25,459	
6	Miscellaneous											
6.1	Clean up	1	ITEM	\$3,500.00	\$3,500.00			1	\$	3,500.00	\$ 3,500	
6.2	Adjust Testate Pit	1	ITEM	\$3,000.00	\$3,000.00		Quantity based on aerial image.	-	\$	3,000.00	\$ -	Assessed as not required.
6.3	Adjust stay poles	1	ITEM	\$5,000.00	\$5,000.00		Quantity based on aerial image.	-	\$	5,000.00	\$ -	Assessed as not required.
6.4	Adjust hydrant	1	ITEM	\$3,000.00	\$3,000.00		Quantity based on data from Water Corporation.	-	\$	3,000.00	\$ -	Assessed as not required.
6.5	Provision for misc.identified service relocations	1	ITEM	\$10,000.00	\$10,000.00		A conservative allowance for minor works to existing services	1	\$	3,000.00	\$ 3,000	Reduce the allowance from \$10k to \$3k for provision for unidentified service relocation.
6.6	Crossover adjustments and reinstatements - allow \$1500 per crossover.	4	ITEM	\$1,500.00	\$6,000.00		Although the original Mastersheet notes this \$6000 amount, it is not included in the summation amount of \$24,500	4	\$	1,500.00	\$ 6,000	Although crossover adjustments are likely to be minimal within Section 4, consideration has been had for crossovers needing adjustment where a pram ramp is installed. City of Kalamunda has confirmed that there is no need for additional street lighting for Berkshire Rd.
6.7	Supply and install street lighting											
	Subtotal - Miscellaneous					\$24,500					\$ 12,500	
7	Conversion of overhead consumer lines to underground lines to provide RAV clearance requirements.											
7.1	Convert overhead electrical lines (5 consumer lines) that conflict with RAV clearance requirements to underground lines							5	\$	15,000.00	\$ 75,000	Refer to 3E's review of the overhead lines to Berkshire Road. (Doc: SE-19102-1911)
7.2	Ancillary works in relation to conversion to overhead to underground within the private property							5	\$	2,500.00	\$ 12,500	Private cabling from the new pillars to the customer switchboards may be required.
	Subtotal - Convert overhead consumer lines					\$ -	The Mastersheet did not allow for conversion of the overhead lines				\$ 87,500	
8	Subtotal											
8.1	Construction Subtotal ex Prelims, Survey				\$64,610					\$ 129,053		
8.2	Construction Subtotal				\$71,717					\$ 143,248		
9	Allowances and Charges											
9.1	Traffic Management		5%		\$3,586			5%		\$ 7,162.42		
9.2	BC/TF Levy		0.2%		\$143			0.2%		\$ 286		
9.3	Council Supervision		1.5%		\$1,076			1.5%		\$ 2,149		
9.4	Design and Superintendence		10%		\$7,172			10.0%		\$ 14,324.83		
9.5	Contingency		10%		\$7,172			5%		\$ 7,162.42		
	Subtotal - Allowances and Charges				\$19,148						\$ 31,885	
10	TOTAL				\$90,865						\$ 174,333	
Notes							Notes					
1. The estimates are provided as an order of magnitude of cost only and are subject to detailed design and agency approvals (Western Power, Water Corporation, etc.).							1. The estimates are provided as an order of magnitude of cost only and are subject to 100% detailed design status and agency approvals (Western Power, etc.).					
2. It is assumed that there is no requirement for imported fill.							2. All costing exclude GST.					
3. It is assumed that ground conditions do not require improvement for the construction of the footpath.												
4. It is assumed the existing footpath is generally 1800mm Wide, and is in good condition.												
5. It is noted that communications, gas and gas services are not required consistent with Portions A & B.												
6. The estimate does not include land acquisition costs.												
7. All costing exclude GST.												
Prepared by RM. Reviewed by WC.							Prepared by Michael Cook of Porter Consulting Engineers					

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BONSER ROAD (LOCATED BETWEEN BERKSHIRE ROAD AND NARDINE CLOSE)							BONSER ROAD (LOCATED BETWEEN BERKSHIRE ROAD AND NARDINE CLOSE)						
Revised Cost August 2019 - Based on Current Portion B rates							Costs as advised by Chris Lodge (CoKalamunda), email 24 June 2020						
Approximate Length 350m							Approximate Length 350m						
Item	Description	New Quantity	Unit	Rate	Amount	Actual	Notes	Quantity	Rate	Amount	Subtotal	Comments	Drawing reference
1	Preliminaries												
1.1	All Preliminaries (Mobilisation, Supervision, Insurances, Safety etc.)			6%	\$20,706.47								
	Subtotal - Preliminaries						\$ 20,706				\$ 44,974	Includes mobilisation, demobilisation, site establishment, supervision and management, survey and set out, construction water, traffic management, insurances, BCTF levy	
2	Survey Control and Testing												
2.1	All Survey (Setout, As-Cons, Compaction Testing etc.)			5%	\$17,255.39								
	Subtotal - Survey Control and Testing						\$ 17,255				\$ -	Survey Control and Testing considered to be included in the Preliminaries section	
3	Clearing and Demolition												
3.1	Clear Large Trees inc Grubbing	0	ea	\$346.00	\$0.00								
3.2	Clear Small Trees inc Grubbing	20	ea	\$179.00	\$3,580.00		Quantity based on aerial imagery.						
3.3	Clear shrubs/grass	4725	m2	\$1.82	\$8,599.50		Allowed for 13.5m clearing for the assumed length of 350m. 13.5x350=4725						
3.4	Demolish and Dispose redundant footpaths	0	m2	\$20.00	\$0.00								
3.5	Demolish and Dispose redundant kerbing	0	m	\$20.24	\$0.00								
3.6	Remove and Dispose redundant drainage pits	0	ea	\$460.00	\$0.00								
3.7	Remove and Dispose redundant pavements	0	m2	\$35.65	\$0.00								
3.8	Existing drainage culvert to be removed & disposed		m										
	Subtotal - clearing and demolition						\$ 12,180				\$ -	Clearing and Demolition considered to be included in the Preliminaries section	
4	Earthworks												
4.1	Remove 100mm Topsoil to spoil	4725	m2	\$3.00	\$14,175.00		Allowed for 13.5m wide of topsoil stripping for the assumed length of 350m. 13.5x350=4725						
4.2	Form, Shape, Compact Subgrade	3850	m2	\$4.00	\$15,400.00		Allowed for 11m wide for the assumed length of 350m. 11x350=3850						
4.3	Form and Compact Embankment Foundation	3850	m2	\$2.70	\$10,395.00		Allowed for 11m wide for the assumed length of 350m. 11x350=3850						
4.4	Import Fill, Shape, Compact	0	m3	\$30.00	\$0.00								
4.5	Cut to spoil	385	m3	\$24.64	\$9,486.40		Allowed for 100mm of cut for topsoil area. (13.5x350)x0.1=385						
4.6	Dust Control	1	ITEM	\$3,000.00	\$3,000.00								
	Subtotal - Earthworks						\$ 52,456				\$ -	Earthworks included in the Roadworks section	
5	Roadworks												
5.1	Supply and Install 220mm limestone sub-base	847	m3	\$50.00	\$42,350.00		Allowed for a 220mm depth for an area of 11m wide for the assumed length of 350m. 11x350=3850. (11x350)x0.22=847						
5.2	Supply and Install 150mm limestone sub-base		m2										
5.3	Supply and Install 100mm road base	385	m3	\$65.00	\$25,025.00		Allowed for a 100mm depth for an area of 11m wide for the assumed length of 350m. 11x350=3850. (11x350)x0.1=385						
5.4	Supply and Install 7mm Primer Seal	3950	m2	\$2.60	\$10,270.00		Allowed for 11m wide for the assumed length of 350m plus 100m for contingency. 11x350+100=3950						
5.5	Supply and Install 30mm AC10	3600	m2	\$12.19	\$43,884.00		Allowed for 10m wide for the assumed length of 350m plus 100m for contingency. 10x350+100=3600						
5.6	Supply and Install FK	625	m	\$55.20	\$34,500.00		Flush kerbing assumed for road length minus the intersections which will have semi mountable kerbing. Estimated road length of 350m. 2x350-50M value=2x350-79=625						
5.7	Supply and Install MK (refer note B)	0	m	\$35.00	\$0.00								
5.8	Supply and Install SMK (refer note B)	75	m	\$20.48	\$1,536.00		Allowed for semi mountable kerbing at the intersections. Assuming 12m radius at intersections for 4 corners approximate kerb length is the circumference of a circle with a radius of 12. 2xpi(x)12=75.38 rounded down to 75.						
5.9	Key kerbs												
5.10	Reversible existing Crossovers	0	m2	\$90.00	\$0.00								
5.11	Supply and Install new concrete footpaths (2.5m wide)	875	m2	\$38.12	\$33,355.00		Assumed footpath will only be on one side of the road. Estimated length of new footpath 350m with a width of 2.5m.						
5.12	Supply and Install Prem Ramps	2	ea	\$550.00	\$1,100.00		Allowed for one road crossing.						
	Subtotal - roadworks						\$ 192,029				\$ 312,248		
6	Stormwater Drainage												
6.1	Supply and Install new 300dia culverts	0	ea	\$2,000.00	\$0.00								
6.2	Remove and Replace existing culverts	0	ea	\$1,120.00	\$0.00								
6.3	Convert Existing SEP's to Gully's	0	ea	\$2,500.00	\$0.00								
6.4	Convert Existing SEP's to Manholes	0	ea	\$2,000.00	\$0.00								
6.5	Supply and Install new SEP's	0	ea	\$3,000.00	\$0.00								
	Subtotal - drainage						\$ -				\$ 30,792		
7	Miscellaneous												
7.1	Supply and Install street lighting	350	m	\$110.00	\$38,500.00		Based on adopted road length of 350m and Portion A & B prices.						
7.2	Supply and Install miss line marking and Signage	1	ITEM	\$5,000.00	\$5,000.00								
7.3	Supply and Install vegetation for swales	700	m2	\$10.00	\$7,000.00		Assumed swale running down one side of the road. Allowed for a width of 2m. 2x350=700.						
7.4	Supply and Install trees	24	ea	\$450.00	\$10,800.00		Allowed for trees at 15m spacing for the entire road length. 350/15=23.33 rounded up.						
7.5	Maintenance of trees and verges for a 2 year period	2	Year	\$7,975.94	\$15,951.88								
7.6	Supply and Install select fill for swales	140	m3	\$30.00	\$4,200.00		Assumed swale running down one side of the road. Allowed for a width of 2m and 250mm fill depth. (2x350)x0.2=140.						
7.7	Supply & Install sandy loam mixed with chip mulch or red-mud for phosphorus & nitrogen absorption												
7.8	Supply and Install gravel for swales	0	m2	\$33.00	\$0.00								
7.9	Clean up	1	ITEM	\$2,000.00	\$2,000.00								
7.10	Provision for misc. unidentified service relocations	1	ITEM	\$5,000.00	\$5,000.00								
	Subtotal - Miscellaneous						\$ 86,452				\$ 42,823		
XX	For construction of truncations once land is acquired from Lots 16 and 17 Berkshire Road (Stage 2)											\$ 70,038	
8	Subtotal												
8.1	Construction Subtotal ex Prelims, Survey				\$345,108						\$ 453,980		
8.2	Construction Subtotal				\$383,079						\$ 500,874		
9	Allowances and Charges												
9.1	Traffic Management	5%			\$18,153.48								
9.2	BCTF Levy	0.2%			\$766.14								
9.3	Council Supervision	1.5%			\$5,745.04								
9.4	Design and Superintendence	10%			\$38,306.96								
	Superintendence												
9.5	Contingency	10%			\$38,306.96								
	Subtotal - Allowances and Charges												
10	Total				\$485,349						\$ 587,657		
Notes							Notes						
1. This estimate is based on current project information and is preliminary only.							1. Based on the Serling Consulting drawings provided.						
2. The estimates are provided as an order of magnitude of cost only and are subject to detailed design and agency approvals (Western Power, Water Corporation, etc.).							2. The estimates are provided as an order of magnitude of cost only and are subject to detailed design and agency approvals (Western Power, Water & Co).						
3. It is assumed that there is no requirement for imported fill.							3. It is assumed that ground conditions do not require improvement for the construction of road pavement.						
4. It is assumed that ground conditions do not require improvement for the construction of road pavement.							4. Assumes there is no need for water, gas or communication installation works.						
5. It is assumed that communications, gas and gas services are not required as per Portion A & B.							5. The estimate does not include land acquisition costs.						
6. The estimate does not include land acquisition costs.							6. All costing excludes GST.						
7. All costing excludes GST.													
8. No allowance for key of kerbing (add \$17 to linear rate)													
							Prepared by Michael Cook of Potter Consulting Engineers						

BONSER ROAD (LOCATED BETWEEN BERKSHIRE ROAD AND NARDINE CLOSE)			
Costs as advised by Chris Lodge (CoKalamunda), email 24 June 2020			
Approximate Length 350m			
Item	Description		Notes
1	Preliminaries	\$ 44,974	Includes mobilisation, demobilisation, site establishment, supervision and management, survey and set out, construction water, traffic management, insurances, BCITF levy
2	Road Construction	\$ 312,248	
2.1	Clearing and Earthworks	\$ 21,398	Includes clearing and grubbing, topsoil removal, cut to fill, cut to spoil
2.2	Roadworks	\$ 213,625	Includes subgrade preparation, subbase 150mm limestone, basecourse roadbase, primer seal and asphalt
2.3	Kerbing and Footpath	\$ 71,053	Includes semi mountable kerb, flush edge beam, backfill behind kerbs, concrete footpath, pram ramps
2.4	Miscellaneous	\$ 6,171	includes pavement testing, kerb removal, footpath removal (Nardine), saw out and remove asphalt
3	Stormwater	\$ 30,792	
3.1	Excavation and Pipework	\$ 4,460	Includes excavation and backfill
3.2	Concrete Pits	\$ 6,003	Includes gully pit, side entry pit over existing drainage line, replace existing pit cover with gully lid
3.3	Swale Drain	\$ 19,243	Includes excavation and trimming of swale, supply and install chip mulch, supply and install gravel media, plantings
3.4	Miscellaneous	\$ 1,085	Includes the removal of existing culvert
4	Street Lighting	\$ 42,823	
4.1	Excavation and Cabling	\$ 12,294	Includes excavation, supply, install and backfill for cable
4.2	Conduit	\$ 562	Includes supply and install of conduit, misc caps, nuts, bolts etc.
4.3	Street Lights	\$ 14,677	Supply and install street light poles
4.4	Miscellaneous	\$ 13,325	Liaison with Western Power, transport materials, testing and commissioning, under road boring.
4.5	Additional Electrical Design Costs due to Staging	\$ 1,975	Refer to RSA Engineering email 7.2.2020
Subtotal 1		\$ 430,837	Excludes Stage 2 separable portion
5	Stage 2 - Separable Portion	\$ 70,038	For construction of truncations once land is acquired from Lots 16 and 17 Berkshire Road (Stage 2)
5.1	Preliminaries	\$ 12,825	Includes mobilisation and demobilisation, site establishment, supervision, management, survey and setout, construction water, traffic management
5.2	Clearing and Earthworks	\$ 1,737	Includes clearing and grubbing, topsoil removal.
5.3	Roadworks	\$ 28,840	Includes subgrade preparation, subbase limestone, basecourse roadbase, primer seal and asphalt.
5.4	Kerbing and Footpath	\$ 6,670	Includes semi mountable kerb, backfill behind kerbs, concrete footpath, pram ramps.
5.5	Concrete Pits	\$ 3,730	Includes site entry pit over existing drainage line, replace existing pit cover with gully type lid.
5.6	Power Reticulation	\$ 9,688	
5.7	Miscellaneous	\$ 5,049	Includes pavement testing, removal of kerbs, removal of existing crossover, saw cut and remove asphalt.
5.8	Additional Electrical Design Costs due to Staging	\$ 1,500	Refer to RSA Engineering email 7.2.2020
Subtotal 2		\$ 500,874	Includes Stage 2 separable portion
6	Allowances and Charges		
6.1	Council Supervision	\$ 7,513	1.5% of subtotal 2
6.2	Design and Superintendence	\$ 39,200	includes \$39,200 of design costs to date
6.3	Superintendence	\$ 15,026	3% of subtotal 2
6.4	Contingency	\$ 25,044	5% of subtotal 2
Total		\$ 587,657	Includes Stage 2 and allowances/charges
Notes			
1. Costs based on tender prices and design costs incurred to date as advised by the City of Kalamunda. Refer C.Lodge email 24-6-2020			
2. The estimate does not include land acquisition costs.			
3. All costing exclude GST.			
4. Construction of Bonser Road subject to prefunding agreement with landowner			

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SULTANA ROAD WEST (MILNER ROAD TO BRAND ROAD)											
Revised Cost August 2018 - Based on Curmow Portion B rates Approximate Length 800m											
Item	Description	New Quantity	Unit	Rate	Amount	Notes	PCE Quantity	PCE Rate	PCE Amount	PCE Subtotal	PCE comment
							Based on 85% design status drawings prepared by Porter Consulting Engineers. 19-11-138/800 Rev C, 801 Rev C, 802 Rev C, 803 Rev B, 804 Rev A, 3E19102-03 Rev 2 (sheet 1), 3E19102-03 Rev 2 (sheet 2)				
1	Preliminaries										
1.1	All Preliminaries (Mobilization, Supervision, Insurances, Safety etc.)			6%	\$59,530.61			6%	\$ 74,414.46		
	Subtotal - Preliminaries									\$ 74,414	
2	Survey Control and Testing										
2.1	All Survey (Setout, As-Cons, Compaction Testing etc.)			5%	\$49,692.18			5%	\$ 62,012.05		
	Subtotal - Survey Control and Testing									\$ 62,012	
3	Clearing and Demolition										
3.1	Clear Large Trees inc Grubbing	10	ea	\$246.00	\$2,460.00	approximate only based on aerial imagery	5	\$ 500.00	\$ 2,500		PCE has adopted for a higher rate due to likely presence of existing services near trees to be removed & grubbed.
3.2	Clear Small Trees inc Grubbing	27	ea	\$179.00	\$4,833.00	approximate only based on aerial imagery	8	\$ 250.00	\$ 2,000		PCE has adopted for a higher rate due to likely presence of existing services near trees to be removed & grubbed. Based on 85% designs
3.3	Clear shrubs/grass	4000	m2	\$1.82	\$7,280.00	Length of road taken as 800m with 4m road widening (2x 0.5m extra for topsoil stripping). 800x5=4000	0	\$ 1.82	\$ -		There are very few scrubs along this length. Topsoil removal accounted for in item 4.1
3.4	Trim / lop branches to shrubs.		Item				1	\$ 2,000.00	\$ 2,000		From a site visit, there is likely to be a need for some overhanging branches to be immediately topped to facilitate the works.
3.5	Demolish and Dispose redundant footpaths	0	m2	\$20.00	\$0.00		0	\$ 20.00	\$ -		The Milner Road costings accounts for any paths that need removal by the Sultana Road intersection.
3.6	Demolish and Dispose redundant kerbing	1600	m	\$2.73	\$4,368.00	Quantity based on assumed length. Removal on both sides of road. 800x2=1600	1565	\$ 9.00	\$ 14,085		Remove existing flush kerbing along full length.
3.7	Remove and Dispose redundant drainage pits	0	ea	\$460.00	\$0.00		0	\$ 460.00	\$ -		Appears no drainage pits along the road.
3.8	Remove and Dispose existing asphalt offsite.		m2				5100	\$ 9.50	\$ 48,450		For works to existing pavement areas
3.9	Remove and Dispose redundant pavements	0	m2	\$97.37	\$0.00		480	\$24.64	\$ 11,827		Redundant pavement between cul-de-sac to Brand St.
	Subtotal - Clearing and Demolition									\$ 80,862	
4	Earthworks										
4.1	Remove 100mm Topsoil to spoil	4000	m2	\$3.00	\$12,000.00	Length of road taken as 800m with 4m road widening (2x 0.5m extra for topsoil stripping). 800x5=4000	993.9	\$3.00	\$ 2,982		Based on 85% designs
4.2	Form, Shape, Compact Subgrade	4000	m2	\$4.00	\$16,000.00	Length of road taken as 800m with 4m road widening (2x 0.5m extra for topsoil stripping). 800x5=4000	8096	\$4.00	\$ 32,384		Length of road taken as 800m with 2m wide pavement extension to both sides, plus a further 0.5m extension beyond the edge of pavement, as shown on the drawings.
4.3	Import Fill, Shape, Compact	0	m3	\$30.00	\$0.00		60	\$ 30.00	\$ 1,800		And the existing overment being reconstructed. Minor fill batter into lot 1563 by Milner Road/Sultana Road West intersection.
4.4	Cut to spoil and disposal	400	m3	\$24.64	\$9,856.00	Allowed for 100mm of cut for topsoil area. (5x800)x0.1=400.	2447	\$24.64	\$ 60,300		Includes disposal of topsoil and borrow material.
4.5	Dust Control	1	ITEM	\$10,000.00	\$10,000.00	Assumed Rate	1	\$10,000.00	\$ 10,000		
	Subtotal - Earthworks									\$ 107,465	
5	Roadworks										
5.1	Remove existing base course for possible reuse		m2				4620	\$ 4.00	\$ 18,480		For existing pavements to be reconstructed
5.2	Supply and Install 220mm limestone sub-base	880	m3	\$50.00	\$44,000.00	Road area with 220mm depth. (5x800)x0.22=880			\$ -		
5.3	Supply and instal 125mm limestone subbase		m2				8096	\$10.50	\$ 85,008		Based on 85% designs
5.4	Supply and Install 100mm road base	400	m3	\$65.00	\$26,000.00	Road area with 100mm depth. (5x800)x0.1=400	0		\$ -		
5.5	Supply and instal 125mm roadbase		m2				8096	\$11.25	\$ 91,080		Based on 85% designs
5.6	Supply and Install 7mm Primer Seal	4000	m2	\$2.60	\$10,400.00	Road area. 5x800=4000.	7376	\$2.60	\$ 19,178		Based on 85% designs
5.7	Supply and Install 30mm AC14	3200	m2	\$12.19	\$39,008.00	Length of road (800m) x road widening (4m). 800x4=3200	7376	\$12.19	\$ 89,913		Based on 85% designs
5.8	Supply and Install 40mm AC14		m2				879	\$18.00	\$ 15,822		Based on 85% designs
5.9	Supply and Install FK	1529	m	\$55.20	\$84,400.80	781m south side, 748m north side	1490	\$60.00	\$ 89,400		Based on 85% designs
5.10	Supply and Install MK (refer note 8)	0	m	\$35.00	\$0.00		0	\$ -	\$ -		Based on 85% designs
5.11	Supply and Install SMK (refer note 8)	0	m	\$35.00	\$0.00		157	\$35.00	\$ 5,495		Based on 85% designs
5.12	Reinstate existing Crossovers	1160	m2	\$90.00	\$104,400.00	29 crossovers at 40m2 each. 29x40=1160m2		\$90.00	\$ -		See below for crossovers being reinstated in varying materials
5.13	Key kerbs						157	\$17.00	\$ 2,669.00		
5.14	Reinstated Concrete Crossovers for commercial/industrial properties to be: 150mm thick N32MPa concrete with SL62 mesh centrally located with a 100mm limestone basecourse.		m2				261	\$110.00	\$ 28,710.00		Based on 85% designs
5.15	Reinstate Asphalt crossovers for commercial/industrial properties to be: 150mm thick rock roadbase, 7mm primer seal with 30mm asphalt wearing course.		m2				43	\$18.79	\$ 807.97		Based on 85% designs
5.16	Reinstate concrete crossovers to residential properties to be: 100mm thick N32MPa with 150mm limestone base.		m2				28	\$100.00	\$ 2,800.00		Based on 85% designs
5.17	Reinstate Asphalt crossovers to residential properties to be: 100mm thick rock roadbase, primer seal with 30mm asphalt wearing course.		m2				158	\$18.79	\$ 2,968.82		Based on 85% designs
5.18	Reinstate Existing block paving crossovers is to have the existing bricks retained for reuse towards reinstating the crossover on a 150mm limestone base.		m2				20	\$54.00	\$ 1,080.00		Based on 85% designs
5.19	Reinstate gravel crossover 150mm thick		m2				177	\$16.00	\$ 2,832.00		Based on 85% designs
5.20	Supply and Install new concrete footpaths	2000	m2	\$38.12	\$76,240.00	800x2.5 = 2000m2	1621	\$38.12	\$ 61,796		As part of Revision B to the DCA report (R34.19), the City has instructed that the path in Sultana Road West is to be reduced from 2.5m to 1.8m. Quantity based on 85% designs.
5.21	Supply and Install Pram Ramps	8	ea	\$550.00	\$4,400.00	6 @ Milner, 2x @ Brae	2	\$550.00	\$ 1,100		
	Subtotal - Roadworks									\$ 519,139	
6	Drainage										
6.1	Supply and Install new 300dia(CL2) culverts	0	ea	\$2,000.00	\$0.00		361.4	\$ 85.00	\$ 30,719		drainage pipe under crossovers
6.2	Remove and Replace existing culverts OR extend existing culvert	1	ea	\$5,000.00	\$5,000.00	Brae Road		\$ 5,000.00	\$ -		See item below
6.3	Remove existing drainage pipework		m				29	\$ 30.00	\$ 870		Remove the pipework at the intersection with Brae Road. This is at a local high point so no need to have the drainage pipe in place.
6.4	Convert Existing SEPs to Gully's	0	ea	\$2,500.00	\$0.00		1	\$ 2,500.00	\$ 2,500		
6.5	Convert Existing SEPs to Manholes	1	ea	\$2,000.00	\$2,000.00	Quantity based on aerial imagery.	0	\$ 2,000.00	\$ -		
6.6	Supply and Install new SEPs	1	ea	\$3,000.00	\$3,000.00	Quantity based on aerial imagery.	0	\$ 3,000.00	\$ -		
6.7	Supply and install bubble inlet soakwell pits						41	\$ 3,000.00	\$ 123,000		pits in swales by crossovers
6.8	Supply and Install 375 dia. RCP	5	m	\$400.00	\$2,000.00	Quantity based on aerial imagery.	0	\$ 400.00	\$ -		
6.9	Headwalls						0	\$ 500.00	\$ -		
6.10	Form roadside swales		m				1098	\$ 18.00	\$ 19,764		Based on 85% designs
	Subtotal - Drainage									\$ 176,853	

SULTANA ROAD WEST (MILNER ROAD TO BRAND ROAD)											
Revised Cost August 2018 - Based on Current Portion B rates											
Approximate Length 800m											
Item	Description	New Quantity	Unit	Rate	Amount	Notes	PCE Quantity	PCE Rate	PCE Amount	PCE Subtotal	PCE comment
7	Miscellaneous										
7.1	Supply and install misc linemarking and Signage	1	ITEM	\$5,000.00	\$5,000.00		1	\$1,000.00	\$ 1,000		Chevrons by Brand Rd
7.2	Supply and install street lighting	800	m	\$110.00	\$88,000.00	Length of road		\$110.00	\$ -		
7.3	Supply and install street lighting including cabling		ea pole				9	\$3,000.00	\$ 27,000		
7.4	Supply and install trees	54	ea	\$450.00	\$24,300.00	Allowed for trees at 15m spacing for the entire road length: 800/15=53.33 rounded up.	0	\$450.00	\$ -		City confirms that having street trees located in the proposed swales would be suboptimal, and therefore exclude street trees from the design and costs.
7.5	Maintenance of trees and verges for a 2 year period	2	Year	\$16,948.86	\$33,897.72		0	\$16,948.86	\$ -		City confirms that having street trees located in the proposed swales would be suboptimal, and therefore exclude street trees from the design and costs.
7.6	Supply and install select fill for swales	0	m3	\$30.00	\$0.00		0	\$30.00	\$ -		Discussed that proposed roadside swales do not require any specific select filter media. The swales shall consist of the in situ soils which has high permeability characteristics.
7.7	Supply and install gravel for swales	0	m2	\$33.00	\$0.00		0	\$33.00	\$ -		Discussed that proposed roadside swales do not require any specific select filter media. The swales shall consist of the in situ soils which has high permeability characteristics.
7.8	Clean up	1	ITEM	\$5,000.00	\$5,000.00		1	\$5,000.00	\$ 5,000		
7.9	Relocation of power pole at Milner Road Intersection (based on Dundas/Milner/Berkshire Quote)	1	ITEM	\$350,000.00	\$350,000.00		1	\$270,921	\$ 270,921		Refer to the Western Power feasibility Study (MF011894 / GPVSUJ 22 May 2020) and design drawing (MP190326) for the removal of the power pole #132866. Costs are inclusive of all works shown on the design drawing MP190326, including the switchgear and LV kiosk. For unidentified services relocation. There may be a need to adjust services, in particular where services are perpendicular to proposed swales. Although it is expected that most of the existing communication pit lids currently match proposed levels, an allowance has been made for some lids needing adjusting. As the verge level of Sultana Road will be adjusted slightly, lids and spindles will need to be raised.
7.10	Provision for misc./unidentified service relocations / adjustments			\$20,000.00	\$20,000.00		1	\$ 20,000.00	\$ 20,000		
7.11	Adjustment of Telstra or NBN lids to suit finished levels (Provisional)						1	\$ 10,000.00	\$ 10,000		
7.12	Adjustment of Water Corp lids (valves, hydrants) to suit finished levels (Provisional)						11	\$ 2,000.00	\$ 22,000		
	Subtotal - Miscellaneous									\$ 355,921	
8	Subtotal										
8.1	Construction Subtotal ex Prelims, Survey				\$993,843.52				\$ 1,240,241		
	Construction Subtotal				\$1,163,166.31				\$ 1,376,668		
9	Allowances and Charges										
9.1	Traffic Management		5%		\$55,158.32		3%		\$ 41,300		Traffic management percentage reduced from 5% to 3% to reflect cost of around \$44k.
9.2	BCITF Levy		0.2%		\$2,206.33		0.2%		\$ 2,753		
9.3	Council Supervision		1.5%		\$16,547.49		1.5%		\$ 20,650		
9.4	Design and Superintendence		10%		\$110,316.63		7.5%		\$ 103,250		Design and superintendence fee reduced from 10% to 7.5%, includes locating/survey of services that cross swales
9.5	Contingency		20%		\$220,633.26	Refer Note 12 below	5%		\$ 68,833		Contingency reduced from 20% to 5% as part of preparing Revision B of the DCA report (R34.19), as instructed by the City, and is reflective of the investigations and designs undertaken to date.
	Subtotal - Allowances and Charges									\$ 236,787	
10	Subtotal - entire width, approx 800m length				\$1,508,028				\$ 1,613,454		
11	TOTAL to Scheme (50%)				\$754,014.17				\$ 806,727		
Notes						Notes					
1. This estimate is based on current project information and is preliminary only.						1. This estimate is based on the 85% design status drawings					
2. The estimates are provided as an order of magnitude of cost only and are subject to detailed design and agency approvals (Western Power, Water Corporation, etc.).						2. The design and estimates are subject to Authority approvals.					
3. It is assumed that there is no requirement for imported fill.						3. It is assumed that ground conditions do not require improvement for the construction of road pavement. The pavement investigation report suggests the subgrade is suitable.					
4. It is assumed that ground conditions do not require improvement for the construction of road pavement.						4. The estimate does not include land acquisition costs.					
5. A geotechnical assessment of pavement condition has not been undertaken. It is assumed the existing pavement does not require improvement/upgrade.						5. As discussed with the City, no allowance has been made for street trees or landscaping.					
6. It is assumed that communications, gas and gas services are not required as per Portions A & B.						6. All costing exclude GST.					
7. The estimate does not include land acquisition costs.											
8. All costing exclude GST.											
9. No allowance for key of kerling (add \$17 to linear rate)											
10. This item estimate is consistent with advice provided on the 24/7/17 to Jordan Korovesi via email.											
11. The estimate is based on the length proposed under the Forrestfield North Residential Precinct (800m).											
12. A contingency of 20% has been applied. The added contingency recognises the unknown condition of the pavement, and the need for a geotechnical assessment of the pavement condition prior to the preparation of design drawings.											
Prepared by RN.						Prepared by Michael Cook of Porter Consulting Engineers					



Level 2 Kishorn Court
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Submission Table – Forrestfield / High Wycombe Industrial Area – Stage 1 – Development Contribution Plan Review

Submission		Officer Comment
Submission 1 - Objection		
	a) Clearly the incompetence of the City of Kalamunda is why we are in this situation and they should be held accountable for all past errors in estimations and calculation of the DCP.	The Local Planning Scheme No. 3 (LPS 3) provides for adjustments of Cost Contributions based on estimated costs, and for estimated costs to be independently certified. While it is acknowledged that there have been instances where estimated costs have changed, these costs were adjusted and reviewed independently in accordance with the provisions of LPS 3.
	b) The current proposal for the DCP is completely unacceptable and I cannot believe what the City of Kalamunda is trying to get away with. The Guidelines state: Payment by an owner...including a cost contribution based upon estimated costs.. constitutes full and final discharge of the owners liability... This suggestion of asking for a further payment is therefore not legally possible. The idea of collecting extra money by the end of the life of the DCP to “pay back” aggrieved landowners is also not permitted by the Guidelines.	<p>It is understood that the submitter is referring to clause 6.5.14.3 of LPS 3, which states:</p> <p><i>“Payment by an Owner of the cost contribution, including a cost contribution based upon estimated costs in a manner acceptable to the local government, constitutes full and final discharge of the Owner's liability under the development contribution plan and the local government shall provide certification in writing to the owner of such discharge if requested by the Owner.”</i></p> <p>It is noted that, for a cost contribution to be deemed to be a full and final discharge of the Owner's liability, it must be made in a manner acceptable to the local government.</p> <p>LPS 3 also establishes that the contributions that have been paid, or the initial contributions to be paid, are an interim payment based on estimated costs, or a combination of estimated and actual costs unless, pursuant to Clause 6.5.11.4, the City enters into a specific agreement with the owner stipulating the payment based on estimates is a final payment.</p>
	c) The Guidelines state: Contributions are for the initial capital requirements only.... The Guidelines also state: All development contributions should be clearly identified and methods of accounting for escalation agreed upon at the commencement of a DCP. This clause doesn't give any room for changing the method of accounting after 7 years. Please stop wasting our time and money, when I thought the City of Kalamunda could not possible ruin the situation any more than they have over the past 10 years, you continue to surprise me.	<p>It is understood that the submitter is referring to State Planning Policy 3.6 – Development Contributions for Infrastructure (SPP 3.6). The following is included under section 5.1 – Scope of SPP 3.6:</p> <p><i>“The contributions are for initial capital requirements only and not for ongoing maintenance and/or operating costs of the infrastructure”.</i></p> <p>There is no proposal under the current DCP to fund ongoing maintenance or operating costs of the infrastructure items included.</p> <p>Under section 5.2 – Principles underlying development contributions, principle number 4 (Certainty) in SPP 3.6, the following is stated:</p> <p><i>“All development contributions should be clearly identified and methods of accounting for escalation agreed upon at the commencement of a development.”</i></p> <p>This principle provides for methods of accounting to be agreed upon the commencement of a development. The City has adopted an approach to enter</p>

		into an agreement with landowners as a condition of development approval. The agreement will be to formalize the contribution process and ensure security over future payments, as well as providing certainty for any potential credits that may be due at the end of the operation of the DCP. In this regard it is considered the proposed approach is in accordance with the Certainty principle under SPP 3.6. Furthermore, the approach ensures that all landowners contribute to the cost of infrastructure in a fair and equitable manner.
Submission 2 - Objection		
1.	<p>I refer to your letter of 25 March 2020 regarding the above and am pleased to provide this submission on the 2020 DCP Review Report, on behalf of my client – [Client name removed].</p> <p>In this submission, unless stated otherwise, references to “Sections” relate to Sections of the advertised 2020 DCP Review Report for the Forrestfield/High Wycombe Industrial Area Stage 1.</p>	Noted.
	a) In the first part of Section 2 (page 6), the letter sequence k) – o) should be relabelled (a) – e).	This error has been corrected in the latest version of the DCP report.
	b) Section 2.1 refers to a Valuation Report undertaken in July 2019. This is some 6 months prior to the DCP Review date of 31 January 2020 and will be closer to 12 months old when Council reconsiders this review after public advertising. Does the City have a more recent valuation, or confirmation from its Valuer that the July 2019 valuation is still considered valid, having regard to the possible market impacts of COVID-19?	The land value estimate is generally obtained at the time that infrastructure costs are estimated. In this case, the land value was obtained in July 2019 when the City initiated DCP review. The City has received an updated Valuation Report completed in March 2020. This has been attached to the latest version of the DCP report.
	c) Section 2.2.1 states that if external funding is received for the construction of a shared path on Berkshire and Dundas Roads, then “the City will consider the removal of the shared path item from the DCP”. We contend that if external funding is secured for this infrastructure item, then the City must remove this cost from the DCP, rather than merely ‘considering’ its removal. We recommend the wording of Section 2.2.1 be amended to reflect this.	<p>The phrasing of Section 2.2.1 has been amended as follows:</p> <p>“In anticipation of construction funding being provided for this project, the City has amended Berkshire Road to remove the shared path item and instead include the completion of, and necessary repairs to, the existing 2m wide footpath to fulfil the intent of the LSP.”</p>
	d) Section 2.2.6 refers to a development application for Lot 50 Sultana Road West, which will not require access via Nardine Close. This would suggest that future development can be accommodated on Lot 50 without accessing Nardine Close. That being the case, we encourage the City to consider amending the Agreed Structure Plan for the area, to – replace Stage 2 with an emergency access/egress route on the north-west side of Lots 50 and 51 Sultana Road West, thereby eliminating the cost burden on the DCP to fund Stage 2 of the Nardine Close extension. We estimate this would generate a substantial saving to the DCP in the order of \$300,000 to \$400,000.	<p>The City has investigated the cost implications associated with not constructing Stage 2 of the Nardine Close, including land acquisition and an emergency accessway. This will be presented to the Council for consideration and any LSP amendments can proceed following a decision on the matter.</p> <p>The phrasing of Section 2.2.6 has been amended accordingly.</p>
	e) There appears to be a calculation error in the “Total” column of the Costs Table	This is correct, the discrepancy is due to the \$80,000 State Government

	<p>included in Section 2.5. This Table lists the Total DCP Costs as \$14,998,969.34, whereas the individual cost items that make up this figure actually sum to \$15,078,969.35 – a difference of \$80,000. We understand this variance is attributable to the \$80,000 State Government contribution towards the Milner/Berkshire Road Intersection, described in section 2.2.10 as having already “been accounted for in the costs included in the DCP”. If this is the case, for added transparency, a line item should be included in the Table to more overtly identify this deduction (e.g. Less State Govt. Contribution - \$80,000).</p>	<p>contribution towards the Dundas / Berkshire / Milner intersection. The Estimates Cost Table under Section 2.5 of the DCP Report has been amended to include a line item for the \$80,000 contribution.</p>
f)	<p>Section 3.2 (Area Inputs) identifies the Total Contribution Area as 690,411m2, inclusive of 38,326.50m2 of Road Reserves. This Total Contribution Area is the same as that stated in Section 3.1 of the previous DCP Report (Revised October 2018), although the area of Road Reserves in the DCP Area is now 10,011m2 more than previously stated. There is no detail provided in the DCP Report to explain this variation. We therefore request this information for further consideration. Additionally, any future variations between successive DCP Report calculations should be documented in detail in those reports.</p>	<p>The inclusion of the additional 10,011m2 is an administrative error. The table under Section 3.2 of the DCP Report has been updated to remove the error. A new table has been included under Section 2.3 to reflect the areas historically acquired, which should clearly outline the area inputs that make up the total road reserve areas.</p>
g)	<p>The following comments relate to the Table in Appendix H:</p> <ul style="list-style-type: none"> a. In the left-hand column, the Financial Year labelled “20/21 YTD” should be “2019/20 YTD”. b. The date adopted for the YTD costs (31 January 2020) is some 6 years and 9 months (or 81 months in total) after the DCP gazettal date in May 2013. The Actual costs listed in the column second from the left sum to \$562,328.55, which reconciles with the Cumulative Admin Costs in the column second from the right. This figure (\$562,328.55) divided by 81 months equates to an average monthly Administration cost of \$6,942.33; multiplied by 12 months this equates to an average annual Administration cost of \$83,307.93, rather than \$89,581.40 as stated in the second column from the left. We therefore recommend that the Average Admin Cost amount is reduced to reconcile with this calculation. c. Further to b. above, if the average annual Administration cost in Appendix H is based on calculations to the end of the 2018/19 financial year rather than to the period ending 31 January 2020, then the calculation periods used in the DCP review will not align with each other and some costs will therefore be distorted (either understated or overstated). This has proven to be problematic in other local government DCP reviews and should be addressed. To rectify this, a single calculation and reporting period must be used for each DCP review. In this case, that period would best be the 2019/20 year to date ending 31 January 2020. d. The word Cumulative has been misspelled in the column second from the right. e. We object to the Future Administration Costs, for the following reasons: <ul style="list-style-type: none"> i. The amount listed for “Agreements for future contributions” (\$50,000/year over three years) is excessive, unjustified and would apply 	<ul style="list-style-type: none"> a. The table under 8.11 Appendix H has been amended with “2019/20 YTD”. b. The average admin cost in the advertised version of the DCP report was calculated up to the end of the 2018/19 financial year and did not include the 19/20 YTD to 31 Jan 2020. The method included in this submission is considered sound and will be adopted for the purposed for finalizing the DCP report. c. It is agreed that there should be a single calculation and reporting period. The administrative costs will be included up until the end of March 2020. d. This spelling error has been corrected in the updated DCP report. e. Responses to i-vi: The City has reconsidered the estimated amount for Agreements. It is noted that not all agreements will be identical, although it is acknowledged that there will be similar elements to these agreements that might over time reduce the cost of preparing the agreements. The estimated cost for preparing these agreements has been updated to approximately \$3,000 per agreement (\$90,000 for total cost of preparing agreements for the remaining 31 contributors), which is considered to appropriately account for professional fees, search fees, caveat lodgement fees and PEXA fees. It is further noted that there is no nexus between the amount of remaining infrastructure work and administrative costs. f. A reduction of administrative costs to the extent suggested in this submission would not appropriately cover the costs of preparing the required agreements. Refer to response (e) above.

	<p>in addition to the numerous other Administration cost items listed. These 'other' Administration costs in themselves sum to \$85,000 p.a. which exceeds the City's actual average Administration costs by almost \$2,000.</p> <p>ii. If the cost to prepare the aforementioned "Agreements" is based on a quote from one of the City's legal providers, then we urge Council to obtain a separate quote(s), as that amount is entirely unacceptable.</p> <p>iii. Paragraph 46 of the report to Council on 25 February 2020 states that 31 lots remain to be developed in the DCP Area. We presume (from Paragraph 54 of that report) that the legal agreements are intended to apply just to those 31 lots, equating to a cost of \$4,838.71/lot. This cost might be considered acceptable for a unique, 'one-off' legal agreement, however in reality only a single legal agreement will need to be prepared for this DCP, which will then be applied uniformly to all 31 lots. Even if the cost of preparing this single template legal agreement is inflated to \$10,000 p.a. for the remaining three years of the DCP, the resultant cost saving to the DCP will be \$40,000 p.a. or \$120,000 over the next three years.</p> <p>iv. The total future Administration cost of \$135,000 p.a. represents an unsubstantiated 62% increase on the City's actual average annual Administration costs referred to in b. above.</p> <p>v. The total future Administration cost of \$405,000 for the remaining three years of the DCP represents 72% of the City's total actual Administration costs over the preceding 6 years and 9 months of the DCP. This does not reconcile with the fact that – most of the DCP infrastructure has been completed or has been commenced and is soon to be completed, thereby reducing (not increasing) future Administration costs towards conclusion of the DCP.</p> <p>vi. The future annual and total Administration costs would likely represent one of the highest (if not the highest) Administration costs levied under any DCP in Western Australia.</p> <p>f. For the reasons set out in e. above, we recommend that the cost of "Agreements for future contributions" be reduced to \$10,000 p.a. and \$30,000 overall, representing a total cost saving to the DCP of \$120,000. This will result in a future Administration cost of \$95,000 p.a., which is still considered excessive at more than \$10,000 greater than the average annual Administration costs to date, but less unreasonable than what is currently proposed.</p>	
	<p>h) The DCP Report should include a financial report of the Forrestfield Industrial Scheme Stage 1 Reserve Account, as at the review date (31 January 2020). This would provide greater transparency and accountability over the management of DCP funds and would enable affected stakeholders to identify account balances; transfers to and from the reserve; interest earnings and contributions collected. A high-level summary of the City's Cash Backed Reserves as at 31</p>	<p>A report with the latest financial statements has been attached to the DCP Report.</p>

	<p>January 2020 was included in Attachment 10.5.4.4 of the Ordinary Council Meeting Agenda of 24 March 2020. That summary identified a closing balance of \$580,041 in the DCP Reserve Account as at 31 January 2020.</p>	
	<p>i) Beyond the comments provided in Paragraph 46 of the report to Council on 25 February 2020, the DCP Report should include an assessment of the rate of development and collection of contributions to date, and projections of the same for the future. This will allow the City to publish a forecast cashflow model and to calibrate the DCP priorities and infrastructure expenditure against the DCP's capacity to collect contributions for those purposes. By way of example:</p> <ul style="list-style-type: none"> • Since gazettal of the DCP in May 2013, it has taken some 6 years and 9 months to develop 49.62% of the DCP Area (being 323,546.50m², equating to an average rate of development of 3,994.40m²/month). Based on this past rate of development it would take more than 6 years and 10 months to develop the remaining 328,538m² of land in the DCP Area. • Even if future development in the DCP Area occurred at twice the right of past development, all contributions would still not be collected for another 3 years and 5 months – this would be beyond the current life of the DCP. • In our opinion and in the wake of COVID-19, it is unlikely that the remaining 50.38% of land in the DCP Area will be developed in the final 3 years of the DCP's life. • Whilst the provision of additional shared infrastructure will incentivise some additional development in the DCP Area, we do not expect that development will be so accelerated as to achieve completion of the area by May 2023. 	<p>The lifespan of this DCP is limited at 10 years from its adoption in 2013. In the event that there is a need to extend the timeframe for this DCP an amendment to the Local Planning Scheme No. 3 will be required.</p> <p>Indicative projections will be provided in the DCP report.</p>
	<p>j) According to the Tables in Section 2.5 and Appendix H of the DCP Report, the total remaining (future) cost of all infrastructure and administrative items is \$6,547,533.01, ignoring any prospective or recommended cost savings referred to in this submission. The remaining developable area is quoted in Paragraph 46 of the report to Council on 25 February 2020 as being 328,538m², which will yield future contributions of \$7,556,374 based on the advertised contribution rate of 23.00/m². Added to this income will be interest earnings, which are conservatively estimated at a total of \$15,000 for the life of the DCP, plus cash-in-bank in the DCP reserve account of \$580,041 (as at 31 January 2020). The resultant estimated future DCP income amounts to \$8,151,415 – an excess of \$1,603,881.99 over the funding that is actually needed to deliver all remaining infrastructure items and pay all the City's future administration costs. This excess will only increase as a result of any cost savings applied over the remaining term of the DCP. This funding excess essentially represents the earlier overpayment of DCP contributions by past developers, and the unnecessary withholding of those surplus contributions until conclusion of the DCP. We contend this is not a fair, equitable, or sustainable outcome.</p> <p>As a suitable way forward, Council could apply a contingency of (say) 10% to the total remaining DCP costs, which would result in a total adjusted cost (including</p>	<p>As outlined in the Council report on 25 February 2020, it is only once all the final infrastructure costs have been established (constructed and paid for) can a final contribution rate for all landowners be determined. In order to equitably distribute costs for all landowners, it is not possible to reconcile cost contributions based on estimated costs. The final contribution rate needs to be determined based on actual costs.</p>




	<p>contingency) of \$7,202,286.31. This generous 10% contingency would amount to \$654,753.30 and would apply in addition to the individual contingency amounts already included for each infrastructure item in Appendices A – F of the DCP Report. Despite the addition of this contingency, the forecast future DCP income would still exceed this amount by \$949,128.69. In the interim, pending the formal conclusion and reconciliation of the DCP, this amount could comfortably be refunded back to earlier developers (such as [developer name removed]), who overpaid their DCP contributions. We therefore recommend that Council applies this approach in order to truly bring fairness, equity, and currency to the DCP now, rather than deferring this outcome for a further three years (or more), once the DCP has been concluded.</p>	
	<p>k) We note and agree with the comments in Paragraphs 20, 21, 22 and 23 of the Report to Council on 25 February 2020, which recognise the need to bring parity and equity to the DCP by correcting the disproportionate and unfair cost burden borne by earlier developers in the DCP Area. To ensure this is appropriately addressed in the DCP Report, we recommend that Council include as a priority in Section 4 of the DCP Report, the reimbursement of excess contributions paid by previous developers in the DCP Area. We further request Council's:</p> <ol style="list-style-type: none"> Formal written agreement of the reimbursement owed to my client; and Inclusion of a prioritised cost item in Section 4 of the DCP Report for the gradual payment of this reimbursement to my client (and other affected stakeholders) over the remaining three years of the DCP, with the final refund amount payable upon conclusion and reconciliation of the DCP. 	<p>Refer to response to (j) above. The City is prepared to enter into an agreement to reconcile costs when all cost contributions have been made or accounted for and a final cost contribution is determined.</p>
	<p>l) Based on the figures included in the advertised DCP Report, we have calculated that [Client name removed] is owed a DCP refund of \$477,418. This has been determined as follows:</p> <ol style="list-style-type: none"> [Client name removed] (through development entity [Client name removed]) paid the following cash contributions to the City under the DCP (totalling \$1,189,829): <ol style="list-style-type: none"> \$624,796.00 paid on 8 January 2016 \$520,233.00 paid on 9 June 2016 \$44,800.00 paid on 14 June 2016 In addition to the payments above, [Client name removed] also ceded land (free of cost) for the purposes of road reserves, which would have otherwise needed to be acquired by the DCP to the value of \$635,180. The combination of a) and b) above amount to a total cash and in-kind contribution of \$1,825,009. [Client name removed] contributions were paid in respect of its combined landholdings in the DCP Area (at that time), which totalled 58,579m² (Net Lot Area). The total contribution value in c) divided by the net developable area in d) results in an average overall contribution rate of \$31.15m². The revised contribution rate specified in the current DCP review is 	<p>Noted. When a final cost contribution rate is determined, a full assessment of the previous contributions made will be undertaken and any surplus or shortfall will be reconciled with landowners accordingly.</p>

	<p>\$23.00/m2 for the Net Developable Area of all land across the entire DCP Area. By comparison, ([Client name removed]) average contribution amount of \$31.15m2 represents an overpayment of \$8.15/m2. When multiplied over ([Client name removed]) total Net Lot Area of 58,579m2 this equates to an overpayment of \$477,418.</p>	
	<p>m) Further to the preceding Items 10 and 11, we implore Council to draw on the current DCP account balance and any cost savings identified through this review to begin reimbursing past contributing landowners in the DCP Area who have contributed excessively to shared costs and have therefore unduly subsidised the contributions paid by subsequent developers in the area. Repayment of these excess contributions has never been more important than now, given the severe economic impacts being experienced in the property and development sector as a result of the global COVID-19 pandemic. Issuing a reimbursement now (whether partly or wholly) will:</p> <ul style="list-style-type: none"> • be at no cost to the City or its community; • complement Council's COVID-19 response and recovery initiatives by sustaining and then stimulating economic activity; • support the continuation of land development projects within and beyond the City of Kalamunda; • support the full spectrum of employment in the property and land development sector; • bolster the financial resilience of landowners and developers with current and potential future projects in the City of Kalamunda to withstand the impacts of COVID-19; and • align with recent State Government announcements encouraging local governments to use their reserve funds for economic stimulus. 	<p>The economic benefits of issuing a reimbursement now are noted, however to facilitate a final contribution rate and reconcile costs for landowners, there is a need to prioritise infrastructure. Refer to response to (j) above.</p>
	<p>n) Moving forward, in the interests of equity, transparency and accountability, we recommend that all future DCP Review Reports and informing documents be made publicly available. If that documentation includes legitimate confidential information pursuant to the <i>Local Government Act 1995</i>, then that confidential information should be provided to Council Members under separate cover, such that the Officer Report (with or without redacting) is available for public inspection ahead of any decision being made.</p>	<p>Noted.</p>
	<p>o) Council at its meeting on 26 November 2019 (Resolution 281/2019) invited my client to provide particularised information outlining the development contribution refund amount that my clients assert they are entitled to and the legal basis for the same. This was provided by letter dated 18 February 2020 although we are unsure if or how this was considered by Council in the context of the current DCP Review.</p> <p>We look forward to Council's consideration of this submission and continuing our positive engagement with City staff, with a view to formalising the quantum and timing of a DCP refund for my client.</p>	<p>A letter was provided to the submitter on 20 February 2020 advising that the City has undertaken an annual review of the DCP Report as well as a thorough review of the method of calculation of the contribution rate for the DCP. The letter further advised that the review, and the recommended way forward, is documented in a report to the Council that was presented at the Ordinary Council meeting on 25 February 2020. The requests for a development contribution refund will be considered in the context of the approach outlined through this DCP review.</p>

Submission 3		
	<p>Forrestfield / High Wycombe Industrial Area Stage 1 DCP Development Plan Report 2020 Submission</p> <p>a) 2.2.1 Berkshire Rd.</p> <p>Remove: <i>Adjusting power line crossing to provide unrestricted clearance for RAV 7 vehicles.</i></p> <p>Berkshire Rd is already a designated, unrestricted RAV 7 route. RAV routes are determined by vehicle length, not by height. There are no developments, now or planned within Stage 1 that will require over height permits. This item does not meet the Need & Nexus criteria.</p> <p>Remove: Construction of shared path. Funding has been granted. Refer: Perth Bicycle Network Grants project #12 2020-21 & 21-22.</p>	<p>Regarding the six consumer aerals that cross Berkshire Road, these range between 4.99m and 7.32m in height. Five of the six consumer aerals fall within a 'Danger Zone' under Wester Power policies (within 1m of a maximum vehicle height). These consumer aerals are required to be undergrounded to provide unrestricted access for RAV7 vehicles.</p> <p>Regarding footpaths, the phrasing of Section 2.2.1 has been amended as follows:</p> <p>"In anticipation of construction funding being provided for this project, the City has amended Berkshire Road to remove the shared path item and instead include the completion of, and necessary repairs to, the existing 2m wide footpath to fulfil the intent of the LSP."</p>
	<p>b) 2.2.3 Milner Rd.</p> <p>Only a portion of the cost of upgrading of Milner Rd should be borne by Stage 1 DCP.</p> <p>The original LSP had Milner Rd with a cul-de-sac at the Berkshire intersection and widened on one side only by 1.5 m.</p> <p>The Berkshire cul-de-sac was only removed and replaced with the original full movement intersection as a result of the commencement of the Airport Link rail project and Forrestfield North development proposal. Both of these projects will generate significant increased traffic numbers. Refer: TBB LSP review. This review also stated that Road 1 should "probably" be left in the Stage 1 LSP because it would assist to relieve the pressure on the Milner/Berkshire intersection as a result of the increased traffic created by these other projects that are outside the LSP area. The result is that the DCP is totally funding 2 major road upgrades, Road 1 and Milner Rd because of projected major traffic flows passing through Stage 1 from external sources.</p> <p>Milner Rd not only services commercial traffic from Stage 1 but also from properties on the opposite side of Milner Rd and both Imperial and Eureka Rds. Aerial photos clearly show 17 properties that are associated with trucks and machinery. 2 of them are clearly used to store and refurbish oversize school class rooms that come and go on a regular basis and others currently operate road trains.</p>	<p>Since the inception of the DCP, it has identified Milner Road as being wholly funded by the DCP. Milner Road is required to be upgraded to the standard of construction for industrial purposes to facilitate the development of the Forrestfield / High Wycombe Industrial Area. The development of the industrial area to the north of the Forrestfield / High Wycombe Industrial Area has historically developed without a DCP serviced by the existing road network.</p> <p>Future upgrades, beyond those prescribed through the existing DCP, will be required to facilitate development within the Forrestfield North Residential and Transit Oriented Development precinct.</p> <p>The City is advised that a minimum carriageway width of 10m should be provided for Milner Road.</p>

	<p>Though I have no complaint with widening Milner Rd to 10m (providing the total cost is not paid by the DCP), I would point out that RAV route suitability is not dependent on road width. There are many 7m and 8m wide RAV routes throughout the state, meaning that a 10m wide Milner Rd is not essential to satisfy Stage 1 requirements. Dundas Rd north of Berkshire is a RAV 4 route and it is only 7m wide.</p> <p>The requirement for the Stage 1 DCP to pay for the total upgrade of Milner Rd does not go anywhere near satisfying the Need & Nexus criteria.</p> <p>SPP 3.6 addresses this matter quite clearly: <i>Development contribution plans will, therefore, need to identify growth trends based on service catchment areas, translate these trends into the infrastructure and facilities necessary to meet these increasing needs within the catchment, and allocate the costs of meeting these needs to existing residents and new residents proportional to their need for the infrastructure and facilities. This will ensure fairness and equity. It will mean that existing residents (through councils) and new residents (through developers) will share the burden of the cost of the additional infrastructure and facilities proportional to the need.</i></p> <p>The cost of this item to the DCP should only be a pro rata amount of probably 50% or less of the stated \$1,022,590 not the full cost.</p>	
	<p>c) 2.2.4 Nardine / Ashby Close Development cost quoted at Dec OCM is \$1,624,459 not \$1,613,941.60 as stated.</p>	<p>Noted. The actual costs have been verified and adjusted accordingly.</p>
	<p>d) 2.2.5 Bonser Rd. I note that the initial agreement with the landowner was for a road cost of \$485,349 in Feb 2019. This has already blown out by 21% to \$587,657 in 12 months and the road is only about 50% completed. How can this be justified if latest and best available figures were used in Feb 2019?</p>	<p>The estimated costs presented at the OCM on 25 February 2020 were based on tender and contract prices. The previous amount was based on estimates.</p> <p>Through the finalisation of the design of Bonser Road, it was made evident that levels were required to be raised to ensure feasible integration with adjoining properties and drainage outcomes. The increases in costs are reflective of this finalised design.</p>
	<p>e) 2.2.6 Nardine Close Extension (Road 2A) I look forward to the removal of this item subject to development of lot 50. Please note further comment under appendix E regarding allocation of costs should this go ahead.</p>	<p>Noted.</p>
	<p>f) 2.2.10 Milner / Dundas / Berkshire Intersection. The total cost of this item should never have been included in the DCP. The City should not have accepted a \$430,000 fee to pay for the complete</p>	<p>While Dundas Road itself is not specifically included, the upgrades to the intersection of Berkshire / Milner Roads does necessitate road upgrades over the Dundas Road section of the intersection, including utility relocations.</p>

<p>undergrounding of cables at that intersection. The cables include HT wires that pass through the LSP area connecting the Forrestfield switch yard to suburban High Wycombe and to Forrestfield. They do not service the area of the DCP. DCPs in other areas specifically preclude H.T. power lines that pass through their area. Examples of these can be seen in new subdivisions all over the metro area. The DCP should only have been charged a pro rata amount.</p> <p>Upgrade of Dundas Rd was previously removed from the DCP (see section 1.4 of the DCP report) because it was irrelevant to the DCP. LSP modification report of February 2017 states: <i>Remove all recommended upgrades to Dundas Rd.</i> The cost of rebuilding the Dundas Rd part of the intersection should be reimbursed to the DCP.</p> <p>Of the commercial traffic at this intersection, 15% is through traffic north and south in Dundas Rd. None of these vehicles enter or leave Berkshire Rd or Stage 1. Of the rest of the commercial traffic using this intersection, just 13% is generated by the Stage 1 LSP area.</p> <p>SPP 3.6 addresses this matter quite clearly: <i>Development contribution plans will, therefore, need to identify growth trends based on service catchment areas, translate these trends into the infrastructure and facilities necessary to meet these increasing needs within the catchment, and allocate the costs of meeting these needs to existing residents and new residents proportional to their need for the infrastructure and facilities. This will ensure fairness and equity .It will mean that existing residents through councils and new residents (through developers) will share the burden of the cost of the additional infrastructure and facilities proportional to the need.</i></p> <p>The City is negligent, having never undertaken comprehensive studies of traffic flow at this intersection to ascertain usage attributable to Stage 1, especially since Milner Rd has only been left open because of predicted increasing traffic from the station and FFN.</p> <p>The City must reimburse the DCP with a co-payment relative to the actual Need and Nexus of the Stage 1 area.</p>	<p>The Berkshire/Milner intersection is required to be upgraded to the standard of construction for industrial purposes to facilitate the development of the Forrestfield / High Wycombe Industrial Area.</p> <p>Future upgrades will be required to facilitate development within the Forrestfield North Residential and Transit Oriented Development precinct.</p> <p>Accordingly the DCP has not been structured to reimburse landowners as requested by this submission.</p>
<p>g) 2.2.11 Bush Forever Fencing. The Bush Forever has been owned and maintained by the government since 1999, 14 years before this LSP was ratified. The latest edition of this LSP approved on 24 Feb 2020, states in section 7.8 Bush Forever: <i>The current intention is to fence those sections of the Bush Forever land that abut public roads with fencing consisting of pine posts and rails with a chainmesh infill between the</i></p>	<p>The matter regarding Bush Forever fencing has been discussed with the Department of Planning, Lands and Heritage and it is their expectation that the DCP repay the cost of the fencing. This infrastructure item is also included in Schedule 12 (k) of the Local Planning Scheme No. 3.</p>

	<p>posts.</p> <p><i>It is considered that this interface solution offers the following advantages:</i></p> <p><i>It will limit the capacity for any rubbish to go into the Bush Forever land...</i></p> <p><i>It will limit readily available public access to the Bush Forever land....</i></p> <p>Fencing on Sultana Rd is already pine post and chainmesh.</p> <p>On the Nardine Cl and Road 2A boundaries are 2m high chainmesh and barbwire fences that have been there since before the road reserve was purchased. This fence is far superior in achieving the desired outcomes than one of pine posts.</p> <div><p>Nardine Cl</p></div> <div><p>Road 2A</p></div> <div><p>Sultana Rd West</p></div> <p>This item should be deleted from the DCP because it is unnecessary.</p>	
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	<p>h) 2.3 Land for Road Reserve. Lot 547 Berkshire Rd: If an agreement was reached with the owner in February 2019 regarding land exchange in lieu of fees of \$17.01/m², why is this land listed at a price of \$240/m² and not at the Feb 2019 price of \$220/m²?</p> <p>Land acquisition of 670m² on lot 50 Sultana Rd was supposed to have been removed at the last review as any access for subdivision purposes on that lot is the responsibility of the owner. The un-subdivided lot will have road access from the cul-de-sac at the end of Road 2A on lot 51.</p>	<p>The agreement relating to Lot 547 provided that the value of road land is in accordance with the requirements of the DCP Report as at the date of vesting of the road land in the Crown.</p> <p>The 670m² for Lot 50 relates to the land required to facilitate the construction of a cul-de-sac head associated with stage 2 of Nardine Close extension (Road 2a). Should stage 2 process, the cul-de-sac head is proposed to be located centrally over lots 50 and 51. Approximately 670m² would be required.</p>
	<p>i) 2.4 Administrative Items. The scheme was adopted at the beginning of 2013 after probably 2 years or more of detailed planning. That is now a total of 9 years of planning. The OCM report para 27 states: <i>The major infrastructure items within the DCP have been constructed....</i> SPP 3.6 says rate reviews are: <i>...to be based on the best and latest estimated costs available...</i> In order to have the best estimates available, then surely detailed plans for remaining infrastructure items should have already been completed. Why then are the remaining administration costs over the remaining 3 years still 41% of the total?</p>	<p>The City has progressed designs for the two remaining major infrastructure items Milner Road and Sultana Road West to 85%.</p> <p>The remaining administration costs have increased because of additional costs for preparing legal agreements associated with the revised approach adopted at OCM on 25 February 2020.</p>
	<p>j) 3. Development Contribution Methodology. The formula shown is not the method for Calculating Contributions as stated in Schedule 12 of LSP3.</p> <p>Removing the description of the factors of the formula is a blatant misrepresentation of what Schedule 12 actually says.</p>	<p>As outlined in the OCM report on 25 February 2020, the approach (method of calculation) applied previously has resulted in a situation that is inconsistent with the overarching principles of determining infrastructure contributions (outlined in State Planning Policy 3.6) and specifically the principle of equity. Accordingly, the interpretation and application of the calculation methodology is required to be reviewed to ensure the arrangement is administered in an equitable manner.</p>
	<p>k) 8.1 Appendix A: Berkshire Rd All costs relating to footpaths should be deleted as Government funding has already been approved. 6.7: Berkshire Rd is an existing unrestricted RAV 7 route. All vehicles have the same maximum height limit of 4.3m and as the cable has not been pulled down by any of the 670 trucks and road trains that pass through Berkshire Rd every day, one would assume it is more than 4.3m high. This item should be removed by the Need and Nexus clause.</p>	<p>Regarding footpaths, the phrasing of Section 2.2.1 has been amended as follows:</p> <p>"In anticipation of construction funding being provided for this project, the City has amended Berkshire Road to remove the shared path item and instead include the completion of, and necessary repairs to, the existing 2m wide footpath to fulfil the intent of the LSP."</p> <p>Regarding the six consumer aerials that cross Berkshire Road, these range between 4.99m and 7.32m in height. Five of the six consumer aerials fall within a 'Danger Zone' under Wester Power policies (within 1m of a maximum vehicle height). These consumer aerials are required to be undergrounded to provide unrestricted access for RAV7 vehicles.</p>

	<p>l) 8.2 Appendix B: Milner Rd. I note that after 9 years of planning, no detailed design drawings have been prepared. This item states that cost estimates are still based on a “typical” drawing and are not specific to Milner Rd. Item 5.4 includes asphaltting the existing road surface as well as any widened section. Over the last 3 years there have been approximately 100,000 semitrailer movements on this road surface attributable to the railway project. The City has been collecting funds, on a regular basis, from the railway project especially to pay for the required resurfacing because of pavement damage. It should not be a cost to the DCP.</p>	<p>Designs for Milner Road have been progressed to 85% and the costs have been updated accordingly.</p> <p>The contribution from the joint venture constructing the Forrestfield Airport Link project is for maintenance associated with additional vehicle movements in the area. These vehicle movements will likely conclude prior to Milner Road being upgraded. The item listed under Milner Road is for a new surface, not for maintenance.</p>
	<p>m) 8.5 Appendix E: Road 2A Stage 1 of this road is approximately 290m in length at a cost of \$562,565 Stage 2 should be only about 120m but is estimated at \$540,658, 2½ times the rate. Does this estimate still include the extension at the rear of lot 50 that was supposed to be removed at the last review, as the quantities indicate a road length of about 200m?</p>	<p>It is confirmed that the extension at the rear of Lot 50 were removed from the estimated costs.</p>
	<p>n) 8.6 Appendix F: Sultana Rd Remove 7.3 Maintenance for trees. This is not a capital expense and SPP 3.6 expressly prohibits charges for maintenance so it should be removed. Relocation of power pole 7.8. (price based on Dundas/Milner/Berkshire quote). After 2 years of initial planning, and 7 annual reviews, the “latest and best” estimate is still relying on a Shawmac guestimate. And we know how accurate they have been! Why has there never been a W/P quote obtained to find out the actual price?</p>	<p>Schedule 12 (J) of the Local Planning Scheme No. 3 includes the provision of maintenance. Where trees are required to be installed, it is an established practice that landscaping is maintained for a minimum period of two years to optimise survival rates. The two year period commences at the time of planting.</p> <p>Notwithstanding the above, the item for supplying, installing and maintaining trees has been removed in light of detailed designs for Sultana Road West and insufficient room on the verge to accommodate trees, without locating the trees within (at the lowest point of) the drainage swales.</p>
	<p>o) 8.11 Appendix H: Administration Items. Agreements for future contributions of \$150,000 equates to about \$6,500 per remaining contributor or more than 10% of the extra \$60,000 you are planning to charge each of them. This change of methodology has not come about because of anything any landowner has done and any subsequent legal costs should be borne by the City.</p>	<p>The estimated cost for agreements for future contributions (\$150,000), when divided by the 31 remaining contributors, amounts to approximately \$4,838.</p> <p>This estimated cost has been reconsidered and reduced to approximately \$3,000 for each remaining contributor.</p> <p>The legal agreements are required to administer the DCP in accordance with the Local Planning Scheme No. 3 and therefore form an administration cost under the DCP.</p>
	<p>OCM Council Report Feb 25 2020 [note numbers below relate to corresponding paragraph numbers in OCM report 25 February 2020]</p> <p>The following should be read in conjunction with the OCM 25 February 2020 report 10.5.11</p>	<p>The inclusion of contributions collected (funds held as money), based on higher estimates, as part of the equation also reduced the cost contributions of later landowners, raising issues of equity to those early contributors.</p>

	<p>p) 14. This is exactly what is supposed to happen according to LSP3 schedule 12. <i>Cost of infrastructure = remaining infrastructure costs – funds held as money</i> <i>Net lot area = Contribution area – (Area of road reserve + Developed area)</i></p> <p>SPP 3.6: 4. Certainty <i>methods of accounting for escalation agreed upon at the commencement of a development.</i></p>	
	<p>q) 15. It is used elsewhere and in Cell 9 because it is the correct method.</p>	<p>Cell 9 operates under separate provisions of the Local Planning Scheme No. 3 and is not subject to the requirements and principles under State Planning Policy 3.6.</p>
	<p>r) 20. Over the years items of infrastructure have been added and removed. Land prices have similarly risen and fallen. The LSP is subject to a 5 year review. These reviews allow for major changes to the LSP as a result of changed circumstances within the area. There is nothing written anywhere that says the methodology of cost calculation should, or can be altered. There will always be a differential of rate between early and late payers. The gamble always will be, will it go up or down.</p>	<p>There is no specific reference to a requirement to review the method of calculating the development contribution. As outlined in the OCM report on 25 February 2020, the approach (method of calculation) applied previously has resulted in a situation that is inconsistent with the overarching principles of determining infrastructure contributions (outlined in State Planning Policy 3.6) and specifically the principle of equity. Accordingly, the interpretation and application of the calculation methodology is required to be reviewed to ensure the arrangement is administered in an equitable manner.</p>
	<p>s) 21. There is no basis for this comment. The very first landowner to pay, on 9 July 2013, has waited 7 years to gain any benefit. Two landowners in Sultana Rd paid their contributions in 2014. The DCP report says that there will be no upgrade to Sultana Rd until co-funding is available to complete the upgrade. As this will now need to come from the FFN DCP. They probably won't see any benefit for their contribution during my lifetime.</p>	<p>It is correct that the calculation method that was previously applied would result in landowners, who are yet to contribute, only making a contribution towards infrastructure that is yet to be built, and not infrastructure that has already been built. In the interest of equity, all landowners should make a contribution towards all of the infrastructure identified in the DCP and required to facilitate the industrial development envisaged, irrespective of whether the infrastructure was built prior to or after the development occurs and the contribution is made.</p>
	<p>t) 22. While the system allows for infrastructure to be added and removed, land prices to fluctuate, inflation movement and demand variation in the cost of infrastructure construction, it is not possible to evenly distribute the costs over the 10 year DCP life.</p>	<p>A the end of the DCP's lifespan, or when all cost contributions have been made or accounted for, the final contribution rate will have captured the fluctuations to land value and infrastructure cost, which will provide the most equitable, consistent and accountable outcome possible.</p>
	<p>u) 23. Where is this "requirement to review the calculation" written?</p> <p>The "Certainty" principle says: <i>All development contributions be clearly identified and methods of accounting for cost adjustments determined at the commencement of a development.</i></p> <p>The "consistency" principle says: <i>...the methodology for applying contributions should be consistent.</i></p>	<p>There is no specific reference to a requirement to review the method of calculating the development contribution. As outlined in the OCM report on 25 February 2020, the approach (method of calculation) applied previously has resulted in a situation that is inconsistent with the overarching principles of determining infrastructure contributions (outlined in SPP3.6) and specifically the principle of equity. Accordingly, the interpretation and application of the calculation methodology is required to be reviewed to ensure the arrangement is administered in an equitable manner.</p>

	<p>v) 24. Perhaps there have not been any significant drops in infrastructure estimates in other DCPs because the administrators did their job properly from the beginning. As an example, even though the WAPC notified the city in June 2012, before the original DCP was adopted, that all properties had to have a road frontage, this was not included in the LSP and the DCP until the next annual review in December 2013.</p> <p>That is one of the reasons that the rate increased from \$23.03 to \$28.49 at that time.</p>	<p>It is understood that this comment relates to the inclusion of Nardine Close extension (Road 2a) in the DCP. It is noted that infrastructure costs did increase between Councils adoption of the cost contribution (OCM 183/2012) in December 2012 and in the subsequent review in December 2013 (OCM 211/2013). This was as a consequence of the WAPC's modifications to the LSP to require road access to the lots located where Road 2a is currently proposed.</p>
	<p>w) 25. These are not "supplementary notes". They are the definitions of the factors of the formula. You cannot just delete them and change the meaning or intent of the formula at any time, just to suit your own ends.</p>	<p>This is inconsistent with advice received by the City.</p>
	<p>x) 26. By attempting to address an equity issue in this way goes completely against the "Certainty" and "Consistency" and possibly the "Transparency" principles. I would point out that the "Equity" principle refers only to:</p> <p><i>...contributions should be levied from all developmentsbased on their relative contribution to need.</i></p> <p>There is no way that this suggests all contributions should be equal at the end of 10 years.</p> <p>The City of Wanneroo charged everybody the same rate for 10 years, and that didn't end happily!</p>	<p>In the case of this DCP, the "relative contribution to need", the unit of charge is based on the total area of the owner's land.</p> <p>The approach outlined in the OCM report on 25 February 2020 is considered to provide the most equitable, consistent and accountable outcome possible.</p>
	<p>y) 29. It is amazing that Milner Rd went from a simple closure and Cul-de-sac at Berkshire Rd to a \$1 million RAV 7 intersection. The rest of Milner Rd went from a 1½m widening on one side, to 1½m on both sides and in spite of these and other additions the contribution rate dropped from \$31.23 to \$17.01 at the last review.</p>	<p>It is acknowledged that changes in the planning framework for the locality resulted in changes to the road system, which impacted on the infrastructure works required in the DCP including Milner Road. The reduction of the contribution rate is principally a result of reduced infrastructure costs (principally utility relocation cost estimates) and the interpretation of the method for calculating the contribution rate in the DCP.</p>
	<p>z) 31. SPP 3.6 states quite categorically; <i>6.3.14.3 Payment by an owner of the cost contribution, including a cost contribution based upon estimated costs....constitutes full and final discharge of the owner's liability under the development contribution plan....</i> It can't be any simpler than that!</p>	<p>Clause 6.5.14.3 of Local Planning Scheme No. 3 (LPS 3) States:</p> <p><i>"Payment by and Owner of the cost contribution, including a cost contribution based upon estimated costs in a manner acceptable to the local government, constitutes full and final discharge of the Owner's liability under the development contribution plan and the local government shall provide certification in writing to the owner of such discharge if requested by the owner. "</i></p> <p>Note that the payment of a cost contribution is required to be in a manner acceptable to the local government and CI 6.5.11.4 of LPS 3 requires the City to</p>

		enter into an agreement with landowners in order to accept a cost contribution based on estimates as a final contribution. The City has not entered into agreements with landowners who have previously made cost contributions to finalise those cost contributions.
aa)	32. In light of the previous paragraph and with reference to LSP3, the annual reviews are to review “estimated infrastructure costs” and to “reflect changes in funding and revenue sources”. There is no mechanism or ability to establish a final contribution rate after all infrastructure has been constructed and paid for.	The Local Planning Scheme No. 3 Cl. 6.5.11.1 states: <i>“The determination of Infrastructure Costs and Administrative Costs is to be based on amounts expended, but when expenditure has not occurred, it to be based on the best and latest estimated costs available to the local government and adjusted accordingly, if necessary.”</i>
bb)	33. There is an assumption that all landowners will have commenced development and paid a contribution by 2023. The report accompanying Amendment 88 assumed (wrongly) that most properties in the area would be developed within 5-7 years after the commencement of the scheme. This report shows that only 50% of the land is developed after 7 years and that is sure to slow in the next 2 years or so, based on the latest economic outlook. You won't have collected all the money, or completed all of the infrastructure or indeed have any way to reconcile anything. How long will it take to credit higher contributors?	The lifespan of this DCP is limited at 10 years from its adoption in 2013. In the event that there is a need to extend the timeframe for this DCP an amendment to the Local Planning Scheme No. 3 will be required. The City will include some indicative forecasts for development and cashflow in the DCP Report.
cc)	34. See paragraph 31. If you cannot persuade the lower contributors to donate more for the cause, all the effort for equity goes out the window. Some will still have paid more and some will have paid less.	The approach outlined in the OCM report on 25 February 2020 is considered to provide the most equitable outcome possible
dd)	35. This obviously will make the reconciliation very difficult, or impossible, depending on how many are involved.	Noted.
ee)	39. Lands for roads have been purchased from landowners at different prices. Is there equity in that?	Purchasing land by negotiation requires land valuations to be prepared by a qualified Land Valuer. The determination of land value is in accordance with Cl. 6.5.12 of Local Planning Scheme No. 3 and is not required to meet the DCP equity principle.
ff)	40. The landowners that have paid at a lower rate will still be unequal to all the rest as there is no legal ability for the City to demand any further funds from these landowners.	Cl 6.5.11.4 of LPS 3 requires the City to enter into an agreement with landowners in order to accept a cost contribution based on estimates as a final contribution. Given the City has not entered into agreements with landowners, the previous cost contributions are not deemed to be final. This is a matter that will require the City's further consideration leading up to and during the time that the final costs are reconciled.
gg)	42. The payments cannot be considered as interim, retrospectively. LSP3 part 6.5.14.3 ... <i>a payment of contributions constitutes full and final discharge of</i>	Clause 6.5.14.3 of Local Planning Scheme No. 3 (LPS 3) States:

	<p><i>the owners liability.</i></p>	<p><i>"Payment by and Owner of the cost contribution, including a cost contribution based upon estimated costs in a manner acceptable to the local government, constitutes full and final discharge of the Owner's liability under the development contribution plan and the local government shall provide certification in writing to the owner of such discharge if requested by the owner. "</i></p> <p>Note that the payment of a cost contribution is required to be in a manner acceptable to the local government and Cl 6.5.11.4 of LPS 3 requires the City to enter into an agreement with landowners in order to accept a cost contribution based on estimates as a final contribution. The City has not entered into agreements with landowners who have previously made cost contributions to finalise those cost contributions.</p>
	<p>hh) 43. See above. LSP3 part 6.5.14.3 states: .. <i>the local government shall provide certification in writing to the owner of such discharge if requested by the owner.</i> It does not say that final discharge is dependent on receiving notification in writing. There is no mention in either SPP 3.6 or LSP3 of the word "interim" in any clause.</p>	<p>The submitter is correct regarding Cl. 6.5.14.3, however Cl. 6.5.11.4 states:</p> <p>"Where a Cost Contribution has been calculated on the basis of an estimated cost, the local government –</p> <p>a) Is to adjust the Cost Contribution of any Owner in accordance with the revised estimated costs; and</p> <p>b) May accept a Cost Contribution, based upon estimated costs, as a final Cost Contribution and enter into an agreement with the Owner accordingly.</p> <p>While there is no specific mention of the word "interim", Cl 6.5.11.4 (a) allows for cost contributions to be adjusted in accordance with revised estimated costs.</p>
	<p>ii) 44. Unfortunately this solution is based on the misguided assumption that there will be enough money in the cash account to complete all infrastructure by 2023 and that all owners will have paid. As I pointed out be in paragraph 21, co-funding for Sultana Rd is highly unlikely by 2023, and so "all actual infrastructure costs" still won't be known.</p>	<p>The lifespan of this DCP is limited at 10 years from its adoption in 2013. In the event that there is a need to extend the timeframe for this DCP an amendment to the Local Planning Scheme No. 3 will be required.</p>
	<p>jj) 47/48. If an agreement was reached in February 2019 with owners of Lot 547 Berkshire Rd for land in- lieu when the valuation was \$220/m², why is this land included at the proposed future valuation of \$240/m²?</p>	<p>The agreement provided that the value of road land is in accordance with the requirements of the DCP Report as at the date of vesting of the road land in the Crown.</p>
	<p>kk) 53. See comments under 8.11 Appendix H.</p>	<p>Response provided to (O) above.</p>
	<p>ll) 54/55. By definition in LSP3, <i>"Cost Contributions" means the contributionpayable by an owner pursuant to a Developer Contribution Plan.</i></p> <p>LSP3 6.5.13.2 ... <i>An owners liability to pay the Cost Contribution arises on the earlier of (a), (b), (c) or (d). The liability arises only once upon the earliest of the listed events.</i></p>	<p>Clause 6.5.14.3 of Local Planning Scheme No. 3 (LPS 3) States:</p> <p><i>"Payment by and Owner of the cost contribution, including a cost contribution based upon estimated costs in a manner acceptable to the local government, constitutes full and final discharge of the Owner's liability under the development contribution plan and the local government shall provide certification in writing to the owner of such discharge if requested by the owner. "</i></p>

	<p>LSP3 6.5.14.3: <i>Payment by an owner of the cost contribution, including based on estimated costs Constitutes full and final discharge.</i></p> <p>There is no mechanism in the DCP to allow the City to force an agreement for future additional payments as a condition for Development Approval.</p>	<p>Note that the payment of a cost contribution is required to be in a manner acceptable to the local government.</p> <p>Clause 11.1.1 (a) of LPS 3 provides the for the local government to enter into agreements with owners:</p> <p><i>"11.1.1 The local government in implementing the Scheme has the power to –</i> <i>1. Enter into an agreement with any owner, occupier or other person having an interest in land affected by the provisions of the Scheme in respect of any matters pertaining to the Scheme;"</i></p>
	<p>mm) 63. The "Cost Contribution" referred to, is by definition, the amount "still to be paid" by an owner. It is not an amount that "has already been paid."</p> <p>Therefore by definition, 6.5.11.4 simply means to adjust the Cost Contribution (the amount still payable) by any Owner in accordance with the revised estimated costs. This does not include any contribution that has already been paid in full and satisfied all further obligation.</p>	<p>The definition of Cost Contribution is: <i>"Cost Contribution" means the contribution to Infrastructure Costs and Administrative Costs payable by an Owner pursuant to a Development Contribution Plan"</i></p> <p>The definition does not refer to the amount as "still to be paid" and the term "payable" does not necessarily define the time of payment as being past or future tense.</p>
	<p>nn)67. The intent and principles are far from met by these changes. It trashes most of the Guiding Principles in the pursuit of equality. There is nothing in any of the overarching documents that gives the slightest hint that every landowner should pay at the same rate.</p>	<p>The principles underlying development contributions, namely equity, consistency and accountability as provided under Local Planning Scheme No. 3 and State Planning Policy 3.6 have guided the approach taken by the City in this review. It is not considered reasonable or in line with principles for the City to accept contributions at a rate, knowing that in doing so, owners will be required to bear more or less than their fair share of the DCP costs.</p>
	<p>oo)71. SPP 3.6 has clear methods for dealing with over or under funding at the end of the life of a scheme. The proposed process is not one of the stated methods.</p> <p>SPP 3.6 states: <i>Development Contributions can only be for the provision of capital items. The costs associated with design and construction of infrastructure (including land costs) and the cost of administration are considered capital items and can be included in the DCP.</i></p> <p>This does not leave any room to raise extra funds for any other purpose including to credit some land owners.</p>	<p>Ultimately this DCP is consistent with SPP3.6 in its intent to ensure each land owner will, at the conclusion of the DCP, have been required to make an equitable contribution towards the design and construction of infrastructure and administrative items.</p>
	<p>pp)72. This is not possible.</p>	<p>CI 6.5.11.4 of LPS 3 requires the City to enter into an agreement with landowners in order to accept a cost contribution based on estimates as a final contribution. Given the City has not entered into agreements with landowners, the previous cost contributions are not deemed to be final. This is a matter that will require the City's further consideration leading up to and during the time that the final costs are reconciled.</p>

	<p>qq) 84. The existing methodology, through the annual reviews is designed to ensure that the Scheme balances with the final payment.</p>	<p>Ultimately the method being applied through this DCP review will result in the contributions balancing against infrastructure costs and administrative costs.</p>
	<p>rr) Conclusion. The City appears to be basing its argument for changing the calculation methodology on clause 6.5.11.4 of the scheme, but this must be read in conjunction with the whole document, not in isolation. The “Cost Contribution” is defined as the amount “owing” not an amount previously “paid.” If contributions have been paid before an adjustment of estimates, and they have been paid in full at that time, then that constitutes a final discharge of liability. That liability arises at any one of the events listed in 6.5.13.2, not at some later review, years down the track. It also says that contribution liability arises only once at the earliest of the listed events. There is no clause anywhere in the Scheme that allows for provisional payments before or after any annual review. With reference to “Agreements” for future “Interim” payments, I fail to see any legal standing in an agreement of liability for an undetermined amount to be payable at an undetermined time, perhaps years down the track. This is just not possible. I cannot see any clause anywhere in either LPS3 or SPP3.6 that would give any legal ability for the City to change the Methodology during the life of this Scheme. There is no provision in either LSP3 or SPP 3.6 to collect contributions for any other purpose than “initial capital requirements only.” There is a “utopian” assumption that at the end of 3 years almost every landowner will have paid their contributions and you will sit down at the table and “square up.” By your figures, in order just to pay for all remaining infrastructure items, contributions on a further 290,000m² will have to be paid. While this is possible to achieve in 3 years, current economic outlook shows it will be difficult. Current indications are that in the foreseeable future, contributions will be collected on only about 100,000m², which is a long way short of even finishing the required infrastructure. If this situation was to occur, then how will you ever reconcile with “actual cost figures,” and how will you ever be able to offer credits? The thrust of the argument appears to be to ensure all landowners pay at the same contribution rate. The Guidelines and the Scheme don’t allow for this to happen.</p>	<p>Noted. The conclusion summarises the detailed questions above, see responses provided above in this regard.</p>

	<p>That is why there must be annual reviews and a total review of the Scheme at least every 5 years. Even if the City had borrowed the necessary funds to complete the infrastructure up front, later contributors would pay more than earlier ones because interest would continue to accrue on their unpaid contributions. The letter to landowners notifying of this public submission says that any credit or refund is anticipated to be directed to the original contributing owner, subject to a subsequent owner not objecting.</p> <p>Section 6.3.17.2 of SPP 3.6 states: <i>If there is an excess of funds...when all cost contributions have been made and accounted for....the local government is to refund excess funds to contributing owners for that DCA. To the extent, if any, that it is not reasonably practicable to identify owners.....any excess funds shall be applied, to the provision of additional facilities....</i></p> <p>Not only is that quite clear, but why would the City want to create or buy into any dispute between the current and former owners of any property? On the matter of equity between contributors, I draw your attention to Cell 9. Contribution Rate = Net Outstanding Costs divided by Remaining Lot Yield. Cell 9 contribution rate has risen from \$7,100 per block to as high as \$27,816 in 2015 and back to \$24,187 currently on ever shrinking block sizes. Are there any inequity issues there, or is that just the way it is?</p> <p>The City must not, and cannot legally pursue any change to the Stage 1 DCP during its agreed 10 year life time. Any issue highlighted by any landowner over previous higher rates is an issue for the City to deal with itself.</p>	
Submission 4		
	<p>RE: Forrestfield/High Wycombe Industrial Are a -Stage 1 - Development Contribution Plan (DCP)</p> <p>Further to a letter received dated the 25th March 2020 in relation to the above please find below my submission on the DCP report:</p> <p>Introduction</p> <p>a) These submission are prepared for and on behalf of:</p> <p style="padding-left: 40px;">a. [Company name removed]; and</p> <p style="padding-left: 40px;">b. [Company name removed], (Developer).</p> <p>b) The Developer seeks to develop a warehouse and office on the land located at Lots 220 & 221 (32 & 26) Nardine Close, High Wycombe WA 6057 (Property).</p>	Noted. These are introductory statements.

	<p>c) The Developer submitted a planning application to the City of Kalamunda (City) on 2 December 2019.</p> <p>d) The City granted a planning approval on 12 March 2020 subject to a number of conditions (Planning Approval).</p> <p>e) The Property is located within the City of Kalamunda's "Forrestfield I High Wycombe Industrial Area - Stage 1", which is subject to a Development Contribution Plan (DCP).</p> <p>f) The City held an Ordinary Council Meeting on 25 February 2020 (OCM).</p> <p>g) At that OCM, the City's Council passed the following resolutions:</p> <ol style="list-style-type: none"> 1. <i>"NOTE the confidential advice in the Confidential Attachment.</i> 2. <i>NOTE the interpretation of the Method for Calculating Contributions in Schedule 12 of Local Planning Scheme No. 3.</i> 3. <i>NOTE the approach to deem all Cost Contributions as interim, until the final Cost Contribution rate is known based on actual costs of infrastructure, as outlined in this report.</i> 4. <i>NOTE the proposed process to reconcile Cost Contributions for all landowners of the of the Development Contribution Scheme (scheduled for 2023), as outlined in this report.</i> 5. <i>ADOPT the Forrestfield I High Wycombe Industrial Area Development Contribution Plan Report (Attachment 1) for the purposes of public advertising.</i> 6. <i>ADOPT the interim Cost Contribution Rate of \$23/m2, for the purposes of public advertising.</i> 7. <i>NOTE that the interim rate will be applied immediately to enable the timely issue of development approvals and building licences.</i> 8. <i>AUTHORISE the Chief Executive Officer advertise the interim Cost Contribution Rate and issue correspondence to landowners accordingly."</i> <p>h) In respect of the City's decisions made at the OCM to adopt the DCP Report and adopt the "Interim Cost Contribution Rate of \$23/m2" (for the purposes of public advertising), the City seeks submissions by 24 April 2020.</p> <p>i) Set out below are the Developer's submissions on the matter.</p>	
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	<p>Submissions</p> <p>Method for Calculating Contributions - amendment made to DCP without due process</p> <p>j) The Development Contribution Area is described in Schedule 12 of the City's Local Planning Scheme No. 3 (LPS 3).</p>	<p>Noted.</p>
	<p>k) Under the heading "Method for Calculating Contributions" in Schedule 12 of LPS 3, the DCP states:</p> <p><i>"Contribution rate = Cost of infrastructure items + cost of administrative items (\$)</i> <i>Net lot area of OCA (m2)</i> <i>Net lot area = Contribution Area - (Area of Road Reserve + Developed Area)</i></p> <p><i>Cost Contribution Schedule adopted by the local government for DCA 1 which will be reviewed annually.</i></p> <p><i>Cost of infrastmcture items = remaining infrastructure costs - funds held as money AMO 88 GG 1/5/18"</i></p>	<p>Noted.</p>
	<p>l) At pages 124 - 126 of the OCM Minutes, the City details its "new" method for calculating contributions purportedly under the DCP calculation method.</p>	<p>The word "new" was not used in the 25 February 2020 OCM report in the context of describing the method for calculating contributions.</p>
	<p>m) In particular, the City states at page 126 of the OCM Minutes (emphasis added):</p> <p><i>"25. In order to comply with the requirements of LPS3 and SPP3.6, and to proceed with the operation of the DCP in a practical and equitable manner, the equation included in the above Method should still be used, <u>but the City should not have regard to the supplementary notes included below the equation</u> (in particular the use of 'funds held as money' or contributions collected).</i></p> <p><i>26. This will result in all infrastructure and administrative costs (based on both estimates and on actual costs) being divided by the net lot area (all developable area minus road reserves) and will address the equity issues."</i></p>	<p>Noted.</p>
	<p>n) Contrary to the statement in the paragraph 25 that the words below the equation are mere "supplementary notes", there is nothing in Schedule 12 of LPS 3 to that effect or that the additional words below the equation are not part of the substantive "Method for Calculating Contributions" itself.</p>	<p>Cl. 6.5.10.2 of LPS 3 provides that the DCP Report and the Cost Apportionment Schedule are to set out in detail the calculation of the cost contribution for each owner in the DCA, "... <u>based on the methodology provided in the Development Contribution Place ...</u> " (emphasis underlined).</p> <p>The clause does not require the methodology in the DCP necessarily to be strictly and literally applied in working out cost contributions, but rather the</p>

		calculation of the cost contribution for each owner is to be based on the methodology. As outlined in the OCM report on 25 February 2020, the supplementary notes result in an outcome that is not consistent with the principles underlying development contribution plans.
	o) The City also stated on page 126 of the OCM Minutes: "the interpretation and application of the calculation methodology is required to be reviewed to ensure the arrangement is administered in an equitable manner."	Noted.
	p) That is, the City wishes to re-interpret the DCP - but by omitting words within the DCP as to the calculation method. In effect, the Council Resolutions seek to repeal parts of the calculation method.	Refer to response to (n) above.
	q) This is also reflected in the DCP Report itself at page 16 under the heading "3. Development Contribution Methodology".	Noted.
	r) Under that heading, the City sets out the equation from Schedule 12 of LPS 3 but omits the words below the equation.	Noted.
	s) This is in stark contrast to the 2018 DCP Report at page 11, which sets out the full calculation method from Schedule 12 of LPS 3 and applies the full calculation method to determine the rate.	The reasons for this change in the calculation method is outlined in paragraphs 12 – 26 of the Ordinary Council Meeting minutes 25.2.2020.
	t) What the City is now saying in the DCP Report with respect to the calculation method (ie ignoring words and "defined terms" within the DCP as to the calculation method) amounts to an amendment of the DCP (which is a part of LPS 3) without following the due process for amending a local planning scheme.	The City has received advice that an amendment is not necessary in order to apply the method of calculation without the supplementary notes, noting the response to (n) above. However, the City will clarify the approach adopted at the Council on 25 February 2020 through an amendment in the future.
	u) Clause 5.4 of State Planning Policy 3.6 - Development Contributions for Infrastructure (SPP 3.6) states: <i>"A development contribution plan does not have effect until it is incorporated into a local planning scheme. As it forms part of the scheme, the Town Planning Regulations 1967, including <u>advertising procedures and the requirement for Ministerial approval, will apply to the making or amendment of a development contribution plan.</u>"</i>	Noted.
	v) Also see the comment at the top of page 4696 of SPP 3.6, which is to the same effect.	Noted.
	w) The Town Planning Regulations 1967 (WA) have since been repealed and amendments to local planning schemes are now dealt with by Part 5 of the Planning and Development (Local Planning Schemes) Regulations 2015 (WA).	Noted.

x) Part 5 regulation 34 and Part 7 regulation 72 of the Planning and Development (Local Planning Schemes) Regulations 2015 (WA) require any amendment to a DCP to follow a "complex" scheme amendment process as per Part 5, Division 2 of the said regulations.	Refer to responses to (n) and (t) above.
y) The City has not complied with those procedural requirements prior to taking the position that the words within the DCP as to the calculation method should now be ignored.	Refer to responses to (n) and (t) above.
<p>z) That the DCP Report is to conform with the actual DCP text was acknowledged by the City in its 2018 DCP Report at page 14 as follows:</p> <p><i>"6.2 Matters Addressed in Development Contribution Plan - Scheme Amendment 88</i></p> <p><i>Through implementation of the DCP there have been a number of interpretations of the DCP Report that are inconsistent with the DCP Scheme. This section of the DCP Report identifies the matters that have been addressed in a review of the DCP Scheme to ensure the DCP Report operates in conformance with the DCP Scheme.</i></p> <p><i>Subsequent to adoption of this DCP Report the City will initiate the process to ensure the DCP Scheme is brought into alignment.</i></p> <ul style="list-style-type: none"> ○ <i>Methodology for the valuation of land. The DCP Scheme refers to the static feasibility model in order to determine the value of land. This has not been the case for implementation of the DCP where a direct comparison approach has been utilised. The DCP Scheme needs to reflect the land value approach taken to date. It is not uncommon for the valuation approach to be deferred to the DCP Report.</i> ○ <i>Cul-de-sac at the intersection of Berkshire Road and Milner Road has been modified to a through connection.</i> ○ <i>Include the construction of Bonser Road (Road 1) and not just the land component.</i> ○ <i>Calculation methodology changed to Net Lot Area not Total Lot Area and additional definition provided for clarity."</i> 	The reasons for this change in methodology is outlined in paragraphs 12 – 26 of the Ordinary Council Meeting minutes 25 February 2020.
aa) In short, section 6.2 of the 2018 DCP Report acknowledges that a DCP Report and its practical application must conform with the DCP text itself.	The reasons for this change in methodology is outlined in paragraphs 12 – 26 of the Ordinary Council Meeting minutes 25 February 2020.
bb) Alternatively, the City is required to follow the necessary procedural steps to amend a local planning scheme, such as was done for Local Planning Scheme No. 3 - Amendment No. 88, if the City wishes to amend the DCP to allow for a	Refer to responses to (n) and (t) above.

	new, amended application of the scheme.	
cc)	It is also noted that, despite the similarities in form and content between the 2018 and 2020 DCP Reports, section 6.2 has been omitted from the 2020 DCP Report.	The reasons for this change in methodology is outlined in paragraphs 12 – 26 of the Ordinary Council Meeting minutes 25 February 2020. A summary of these reasons will be inserted into the DCP Report.
dd)	Section 6 of the 2020 DCP Report merely states, on page 19: "6. Operational Matters <i>This section of the DCP Report addresses various operational matters associated with the DCP.</i> 6.1 Principles <i>Refer Clause 6.5.6 of LPS3."</i>	Noted.
ee)	Deeming all cost contributions as "interim" - breach of planning principles The City now seeks to deem all cost contributions, including those already paid, as "interim" cost contributions to allow for a "new" reconciliation process at the conclusion of the DCP.	The word "new" was note used in the 25 February 2020 OCM report in the context of describing the reconciliation process at the conclusion of the DCP.
ff)	As stated on page 128 of the OCM Minutes: <i>"43. In summary, based on the requirements of LPS3 and SPP3.6, Cost Contributions that have been made to date are considered interim payments (in the absence of any formal agreement). Furthermore, all future contributions will be considered interim payments until the end of the DCP.</i> <i>44. At the conclusion of the DCP, when the final contribution rate is known (based on actual costs of all infrastructure), all previous interim contributions made will need to be reconciled against the final rate based on actual costs of the final list of infrastructure items delivered."</i>	Noted.
gg)	The 2020 DCP Report also states below the table of Estimated Costs on page 15: <i>"Initial versions of the DCP calculated contributions based on a gross area (calculated based on total land area) and collected on a net area (deducting areas for road reservations). This resulted in a short fall of contributions of approximately \$195,463. Under the previous DCP calculation methodology, the short fall was proposed to be dealt with by Council at the end of the DCP. As a result of the most recent review and with all payments being considered interim until the conclusion of the DCP, the shortfall will no longer occur as all</i>	Noted.

	<i>contributions will be reconciled to the final DCP amount. In this context, the deduction that was previously included has been removed from the calculation of the DCP rate."</i>	
	<p>hh) It is submitted that the City's proposed amendments to the calculation method and proposed deeming of all cost contributions as "interim" will result in a contributor's actual required cost contribution no longer being transparent or certain, in breach of planning principles.</p>	<p>The purpose of the adopted approach is to make a responsible and considerate provision enabling landowners to comply with the obligation to make a cost contribution, and ensuring that the cost contribution made will be equitable, consistent with contributions made by other owners, and transparent.</p> <p>Regarding the principle of certainty, the rate finally assessed by the method of calculation applied will be fair and equitable. A rate assessed before all costs are finally ascertained, should not be treated as a final rate to determine contributions for the simple reason that in doing so, a greater burden for the finally ascertained infrastructure costs may fall upon subsequent contributing landowners, and vice versa. A rate assessed early in the life of the DCP may result in an unrealistically high level of contributions operating unfairly against the interest of early contributors, and therefore to the unfair advantage of later contributors. The approach in this case is a pathway to achieving an ultimate fair outcome, and therefore provides ultimate certainty and fairness/equity.</p>
	<p>ii) There is a breach of SPP 3.6 planning principles under the following emphasised parts:</p> <p><i>"4. OBJECTIVES OF THE POLICY</i></p> <p><i>The objectives of this policy are-</i></p> <ul style="list-style-type: none"> <i>• to promote the efficient and effective provision of public infrastructure and facilities to meet the demands arising from new growth and development;</i> <i>• to ensure that development contributions are necessary and relevant to the development to be permitted and are charged equitably among those benefiting from the infrastructure and facilities to be provided;</i> <i>• to ensure consistency and transparency in the system for apportioning, collecting and spending development contributions;</i> <i>• to ensure the social well-being of communities arising from, or affected by, development.</i> <p><i>5.2 Principles underlying development contributions</i></p> <p><i>Development contributions must be levied in accordance with the following principles-</i></p>	<p>Comments provided in the below following rows.</p>

	<p>1. <i>Need and the nexus</i></p> <p><i>The need for the infrastructure included in the development contribution plan must be clearly demonstrated (need) and the connection between the development and the demand created should be clearly established (nexus).</i></p> <p>2. <i>Transparency</i></p> <p><i>Both the method for calculating the development contribution and the manner in which it is applied should be clear, transparent and simple to understand and administer.</i></p> <p>3. <i>Equity</i></p> <p><i>Development contributions should be levied from all developments within a development contribution area, based on their relative contribution to need.</i></p> <p>4. <i>Certainty</i></p> <p><i>All development contributions should be clearly identified and methods of accounting for escalation agreed upon at the commencement of a development.</i></p> <p>5. <i>Efficiency</i></p> <p><i>Development contributions should be justified on a whole of life capital cost basis consistent with maintaining financial discipline on service providers by precluding over recovery of costs.</i></p> <p>6. <i>Consistency</i></p> <p><i>Development contributions should be applied uniformly across a Development Contribution Area and <u>the methodology for applying contributions should be consistent.</u></i></p> <p>7. <i>Right of consultation and arbitration</i></p> <p><i>Land owners and developers have the right to be consulted on the manner in which development contributions are determined. They also have the opportunity to seek a review by an independent third party if they believe that the calculation of the contributions is not reasonable in accordance with the procedures set out in the draft Model Scheme Text in appendix 2.</i></p> <p>8. <i>Accountable</i></p> <p><i>There must be accountability in the manner in which development contributions</i></p>	
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	<p><i>are determined and expended.</i></p> <p><i>5.7 Development contributions not to be imposed as a condition of rezoning</i></p> <p><i>Local governments are not to impose development contributions beyond the scope of Western Australian Planning Commission policy as conditions or prerequisites for rezoning. The rezoning process is not to be used to impose unreasonable demands on land development outside the scope of Western Australian Planning Commission policy.</i></p> <p><u><i>Development contributions must be formulated through an open and transparent process, with the opportunity to comment in accordance with the process specified in 5.3. or through development contribution plans or voluntary agreements that are transparent and follow the due planning process."</i></u></p>	
	<p>jj) There is also a breach of LPS 3 planning principles at cl 6.5.6 (emphasis added):</p> <p><i>"6.5.6 Guiding principles for development contribution plans</i></p> <p><i>The Development Contribution Plan for any Development Contribution Area is to be prepared in accordance with the following principles -</i></p> <p><i>a) Need and the nexus</i></p> <p><i>The need for the Infrastructure included in the plan must be clearly demonstrated (need) and the connection between the development and the demand created should be clearly established (nexus).</i></p> <p><i>b) Transparency</i></p> <p><u><i>Both the method for calculating the development contribution and the manner in which it is applied should be clear, transparent and simple to understand and administer.</i></u></p> <p><i>c) Equity</i></p> <p><i>Development contributions should be levied from all developments within a Development Contribution Area, based on their relative contribution to need.</i></p> <p><u><i>d) Certainty</i></u></p> <p><u><i>All development contributions should be clearly identified and methods of accounting for cost adjustments determined at the commencement of a development.</i></u></p> <p><i>e) Efficiency</i></p>	<p>Comments provided below in the following rows.</p>

	<p><i>Development contribution should be justified on a whole of life capital cost basis consistent with maintaining financial discipline on service providers by precluding over recovery of costs.</i></p> <p><i>f) Consistency</i></p> <p><i>Development contributions should be applied uniformly across a development contribution area and <u>the methodology for applying contributions should be consistent.</u></i></p> <p><i>g) Right of consultation and review</i></p> <p><i>Owners have the right to be consulted on the manner in which development contributions are determined. They also have the opportunity to seek a review by an independent third party if they believe the calculation of the costs forming part of the contributions is not reasonable.</i></p> <p><i>h) Accountable</i></p> <p><i>There must be accountability in the manner in which development contributions are determined and expended."</i></p>	
	<p>kk) It is noted that the OCM Minutes stated on page 126:</p> <p><i>"23. The [previous] approach has resulted in a situation that is inconsistent with the overarching principles of determining infrastructure contributions (outlined in SPP3.6) and specifically the principle of equity. Accordingly, the interpretation and application of the calculation methodology is required to be reviewed to ensure the arrangement is administered in an equitable manner."</i></p>	<p>Noted.</p>
	<p>ll) However, it is submitted that in seeking to apply the principle of equity above all else, the City's revised method of calculating cost contributions, particularly the new automatic deeming of all cost contributions as "interim", breaches other planning principles, especially those of Transparency and Certainty.</p> <p>The proposed reconciliation process constitutes retrospective action in contravention of both SPP 3.6 and LPS 3</p>	<p>The purpose of the adopted approach is to make a responsible and considerate provision enabling landowners to comply with the obligation to make a cost contribution, and ensuring that the cost contribution made will be equitable, consistent with contributions made by other owners, and transparent.</p> <p>Regarding the principle of certainty, the rate finally assessed by the method of calculation applied will be fair and equitable. A rate assessed before all costs are finally ascertained, should not be treated as a final rate to determine contributions for the simple reason that in doing so, a greater burden for the finally ascertained infrastructure costs may fall upon subsequent contributing landowners, and vice versa. A rate assessed early in the life of the DCP may result in an unrealistically high level of contributions operating unfairly against the interest of early contributors, and therefore to the unfair advantage of later</p>

		contributors. The approach in this case is a pathway to achieving an ultimate fair outcome, and therefore provides ultimate certainty and fairness/equity.
	<p>mm) Clause 5.3 of SPP 3.6 sets out how development contributions are to be imposed (underlined emphasis added):</p> <p><i>"5.3 Imposition of development contributions</i></p> <p><i>Development contributions may relate to the requirements of public utility providers (such as water, sewerage, and electricity), state government requirements and the requirements of local government.</i></p> <p><i>Where local governments are seeking development contributions beyond the standard provisions outlined in appendix 1, they must be supported by a development contribution plan which identifies the need for such infrastructure for the relevant development contribution area or by a voluntary agreement between a developer and the relevant local government. This need may not arise where there is one development and the need for the development contribution is created by that development. Any condition for contributions in this case must be consistent with the principles outlined in section 5.2.</i></p> <p><u><i>There are three stages to the imposition of development contributions.</i></u></p> <p><u><i>5.3.1 Development contributions are formulated and agreed.</i></u></p> <p><u><i>The development contribution plan is used to prescribe the cost contributions for owners in a development contribution area. Areas requiring a development contribution plan, and the infrastructure needs and costs for such area, will genera/lv be identified as part of the process of developing or amending planning schemes.</i></u></p> <p><i>5.3.2. Development contributions are calculated and applied.</i></p> <p><i>Development contributions are generally calculated and applied by way of conditions of subdivision, strata subdivision or development, particularly in greenfield areas. Development contributions may also be sought in infill and redevelopment areas at the time of subdivision, strata subdivision or development.</i></p> <p><i>They may be calculated and applied as-</i></p> <ul style="list-style-type: none"> • <i>standard conditions of subdivision or strata subdivision;</i> • <i>conditions of development.</i> <p><i>Alternatively, contributions can be implemented through voluntary legal</i></p>	Noted.

	<p><i>agreements.</i></p> <p><i>This applies to subdivisional works such as roads, drainage and the provision of power, water and telecommunications and other items outlined in appendix 1. They may also be applied as conditions of development. The calculation will be to apply the detail of the developer contribution plan to the development, including any offsets for the ceding of land or construction of infrastructure.</i></p> <p><u>5.3.3. Development contributions become due and payable.</u></p> <p><u>Development contributions become due and payable as part of the subdivision clearance process or prior to the commencement of development. Clearance of deposited plans, or strata plans as the case may be, to enable the issuance of titles, should not occur until full payment, as calculated and applied, has been finalised. Development contributions are only payable on the proportion of land within a plan being requested for clearance in a development."</u></p>	
nn)	There is no provision in this cl 5.3 process for retrospective action under a reconciliation process. In particular, the first step refers to contributions being formulated and agreed, while the third and final step refers to the contribution becoming due and payable before the development commences.	At this stage in the life of the DCP, it would not be acceptable to the City unless there was a mechanism to ensure that a payment by the owner of a contribution estimated at a given time is capable of being revised at a later time when costs are no longer based on estimates, but have either been paid or otherwise ascertained with certainty. It is only upon receiving payment that is acceptable (based on actual costs) to the City that the City would deem the contribution as final. The provisions of LPS 3 provide for this process.
oo)	There is no fourth step that refers to reconciliation. Therefore, retrospective action, such as a payment reconciliation, is not allowed under SPP 3.6 in the absence of explicit words to the contrary, and there are no such explicit words in the DCP.	Refer to the response to (nn) above.
pp)	The Western Australian Planning Commission sought comment on a revised SPP 3.6 (Draft SPP 3.6) towards the end of 2019. The Draft SPP 3.6 has no bearing on the current matter because, by virtue of sections 29(2) and 31(3) of the Planning and Development Act 2005 (WA), an amendment of a State planning policy has no force or effect until it is approved by the Governor and published in the Government Gazette, which has not occurred with respect to Draft SPP 3.6.	Refer to the response to (nn) above.
qq)	In any event, it is noted that the City's proposed deeming of all cost contributions as "interim" to make way for a retrospective reconciliation process is also not contemplated under the Draft SPP 3.6 in its current form.	Refer to the response to (nn) above.
rr)	The Guidelines to the Draft SPP 3.6 refer to "Interim arrangements for DCP contributions" on page 13, but these "interim arrangements" concern the	Refer to the response to (nn) above.

	<p>situation where a developer or land owner seeks approval to subdivide or develop land after the DCP has been advertised but prior to finalisation and gazettal. That is not the situation here - the DCP is already established and well under way.</p>	
	<p>ss) It is also noted that the City has to date operated on the basis of estimated contributions required and then revising those estimates, as allowed under clauses 6.5.11.4 and 6.5.11.5 of LPS 3:</p> <p><i>"6.5.11.4 Where any Cost Contribution has been calculated on the basis of an estimated cost, the local government -</i></p> <p><i>(a) is to adjust the Cost Contribution of any Owner in accordance with the revised estimated costs; and</i></p> <p><i>(b) may accept a Cost Contribution, based upon estimated costs, as a final Cost Contribution and enter into an agreement with the Owner accordingly.</i></p> <p><i>6.5.11.5 Where an Owner's Cost Contribution is adjusted under clause</i></p> <p><i>6.5.11.4, the local government, on receiving a request in writing from an Owner, is to provide the owner with a copy of estimated costs and the calculation of adjustments."</i></p>	Noted.
	<p>tt) The City also refers to cl 6.5.11.4 of LPS 3 as its legal basis for the proposed reconciliation process. The OCM Minutes state on page 127 (emphasis added):</p> <p><i>"31. LPS3 and SPP3.6 establishes that the contributions that have been paid, or the initial contributions to be paid, are an interim payment based on estimated costs, or a combination of estimated and actual costs <u>unless, pursuant to Clause 6.5.11.4 of LSP3, the City enters into a specific agreement with the owner stipulating the payment based on estimates is a final payment.</u></i></p> <p><i>32. In the absence of a specific agreement, it is only once all the final infrastructure costs have been established (constructed and paid for) can a final contribution rate for all landowners be determined.</i></p> <p><i>33. At this time, which is estimated to be in approximately three years (at the conclusion of the 10- year DCP operative timeframe outlined in Schedule 12 of LSP3), final invoices or credits for the interim Cost Contributions made will need to be issued. This will mean that some landowners who have paid higher amounts will be provided a credit and some landowners who have paid lower amounts may be required to make an additional contribution."</i></p>	Noted.
	<p>uu) However, it is submitted that clauses 6.5.11.4 and 6.5.11.5 of LPS 3 are about</p>	Refer to the response to (nn) above.

	<p>varying the cost contributions after revising the "estimated costs" and nothing more. The "estimated costs" are the estimated costs of the development or infrastructure required. These clauses do not allow for a reconciliation process between developers, retrospectively, when the actual costs of the infrastructure have not changed, but that is what the City is now purporting to do.</p>	
	<p>vv) This submission accords with clause 6.5.14.3 of LPS 3, which states (emphasis added):</p> <p><i>"6.5.14.3 Payment by an Owner of the cost contribution, including a cost contribution based upon estimated costs in a manner acceptable to the local government, constitutes full and final discharge of the Owner's liability under the development contribution plan and the local government shall provide certification in writing to the owner of such discharge if requested by the Owner."</i></p>	<p>Refer to the response to (nn) above.</p>
	<p>ww) That is, liability is discharged even on the payment of a cost contribution based upon estimated costs. This clause does not allow for a developer's liability to be retrospectively revived because the City's estimate of costs was wrong or because the City has retrospectively deemed an already-discharged payment as merely "interim".</p>	<p>It is noted that, for a cost contribution to be deemed to be a full and final discharge of the Owner's liability, it must be made in a manner acceptable to the local government.</p> <p>LPS 3 also establishes that the contributions that have been paid, or the initial contributions to be paid, are an interim payment based on estimated costs, or a combination of estimated and actual costs unless, pursuant to Clause 6.5.11.4, the City enters into a specific agreement with the owner stipulating the payment based on estimates is a final payment.</p>
	<p>xx) Further, clause 6.5.17 of LPS 3 already deals with both shortfalls and excesses in cost contributions, without referring to reconciliations between developers:</p> <p><i>"6.5.17 Shortfall or excess in cost contributions</i></p> <p><i>6.5.17.1 If there is a shortfall in the total of Cost Contributions when all cost contributions have been made or accounted for in a particular Development Contribution Area, the local government may -</i></p> <p><i>(a) make good the shortfall;</i></p> <p><i>(b) enter into agreements with Owners to fund the shortfall; or</i></p> <p><i>(c) raise loans or borrow from a financial institution, to fund the shortfall, but nothing in this clause restricts the right or power of the local government to impose a differential rate to a specified Development Contribution Area in that regard.</i></p> <p><i>6.5.17.2 If there is an excess in funds available to the development contribution area when all Cost Contributions have been made or accounted for in a</i></p>	<p>Refer to the response to (ww) above.</p>

	<i>particular Development Contribution Area, the local government is to refund the excess funds to contributing Owners for that Development Contribution Area. To the extent, if any, that it is not reasonably practicable to identify Owners and/or their entitled amount of refund, any excess in funds shall be applied to the provision of additional facilities or improvements in that Development Contribution Area."</i>	
yy)	Essentially, by clause 6.5.17, no individual developer will be forced to make good a shortfall, while excesses are simply to be refunded to the original contributors and not reimbursed by another developer.	Refer to the response to (ww) above.
zz)	Since clause 6.5.17 does not refer to the reconciliation process that the City contemplates, where later developers will be forced to make good any shortfall or reimburse amounts paid by previous developers, the City's form of retrospective reconciliation is not allowed under LPS 3 as clause 6.5.17 is intended to be the sole avenue for dealing with such shortfalls and excesses.	Refer to the response to (ww) above.
	<i>Conditions on development approvals cannot be used to enforce the retrospective reconciliation process</i>	The City is advised that conditions can be used to require an adjustment of an owner's interim cost contribution.
aaa)	<p>The OCM Minutes state on page 130:</p> <p><i>"54. As part of the revised process, the applicant/owner of any proposed development will be required to enter into an agreement with the City as a condition of development approval for the provision of cost contributions. The administrative costs have been reviewed to include the cost of the preparation of the agreement for the remaining properties to be developed within the DCP area.</i></p> <p><i>55. To avoid any further under-payments, it is recommended that the new rate, and requirement for agreements, be applied immediately as a condition of development approval. This approach will also avoid unnecessary delays to the issue of development approvals and building licences."</i></p>	The purpose of the condition is to make a responsible and considerate provision enabling the developer to comply with the obligation to make a cost contribution, and ensuring that the cost contribution made will be equitable, consistent with contributions made by other owners, and transparent.
bbb)	The City proposes to impose conditions as part of development approvals to enforce developers' cost contributions, which, as already discussed, the City now deems "interim" and to be retrospectively reconciled at the conclusion of the DCP.	Refer to the response to (aaa) above.
ccc)	The City has sought to do so with respect to the Developer. Condition 2 of the Developer's Planning Approval requires the Developer to enter into an agreement with the City to secure the Developer's "interim" cost contributions by caveat.	Noted.
ddd)	As stated above, it is submitted that the City's new reconciliation process decided during the 25 February OCM constitutes illegal retrospective action.	Refer to the response to (ww) above.

	<p>eee) It is also submitted that the City cannot impose conditions as part of development or planning approvals to enforce such illegal retrospective action.</p>	Refer to the response to (aaa) above.
	<p>fff) The City can secure a developer's cost contribution via caveat under clause 6.5.15 of LPS 3:</p> <p><i>"6.5.15 Charge on land</i></p> <p><i>6.5.15.1 The amount of any Cost Contribution for which an Owner is liable under clause 6.5.13, but has not paid, is a charge on the Owner's land to which the Cost Contribution relates, and the local government may lodge a caveat, at the Owner's expense, against the certificate of title to that land.</i></p> <p><i>6.5.15.2 The local government, at the Owner's expense and subject to such other conditions as the local government thinks fit, can withdraw a caveat lodged under clause</i></p> <p><i>6.5.15.1 to permit a dealing and may then re-lodge the caveat to prevent further dealings.</i></p> <p><i>6.5.15.3 If the Cost Contribution is paid in full, the local government, if requested to do so by the Owner and at the expense of the Owner, is to withdraw any caveat lodged under clause 6.5.15."</i></p>	Noted.
	<p>ggg) However, while such a caveat can secure a developer's original liability to pay a cost contribution, the caveat cannot be used to enforce an additional future payment required by the City's reconciliation process, which is an illegal retrospective action.</p>	Cl. 6.5.15.1 of LPS 3 provides for a caveat to be lodged where the amount of any Cost Contribution for which an Owner is liable has not been paid. The Cost Contribution liability is also subject to Cl. 6.5.14.3, which requires the cost contribution to be <i>"... in a manner acceptable to the local government"</i> .
	<p>hhh) The same is submitted with respect to other conditions on development approvals that do not involve a caveat. As the City's proposed reconciliation process constitutes illegal retrospective action, a City decision to grant development approval subject to a condition that enforces the illegal retrospective action would be beyond the City's jurisdiction as a planning authority, and so subject to legal challenge.</p>	It is considered from the terms of cl.6.5 of the City's LPS 3 that it is open to the City, where cost contributions are based on estimates, to revise the estimate of an owner's cost contribution from time to time, to receive part payment of a cost contribution, and to make agreements with an owner as to the payment of the whole, or any balance, of a cost contribution. In this regard the City is acting in accordance with its statutory responsibilities.
	<p>iii) Further, the City should have regard to the document titled "Development Assessment Panel Practice notes: Making Good Planning Decisions" published by the Department of Planning, Lands and Heritage (Practice Note).</p>	Noted.
	<p>jjj) The Practice Note is primarily directed towards development assessment panels, but it is also intended as a guide to local governments that make planning decisions and includes the legal requirements for valid conditions on</p>	Noted.

	development approvals.	
	<p>kkk) As to what constitutes a valid condition on a development approval, the City should have regard to the following on page 44 of the Practice Note:</p> <p><i>"4.2 Test of validity</i></p> <p><i>The test of validity of a condition of planning approval is well known: Newbury District Council v Secretary of State for the Environment [1981] AC 578. This test was recently endorsed by the High Court of Australia in Western Australian Planning Commission v Temwood Holdings Pty Ltd (2004) 221 CLR 30 at [57].</i></p> <p><i>A condition is valid if</i></p> <ol style="list-style-type: none"> <i>1. it has a planning purpose;</i> <i>2. it fairly and reasonably relates to the development, and</i> <i>3. it is not so unreasonable that no reasonable planning authority could have imposed it.</i> <p><i>To this, we add a fourth limb, which is:</i></p> <ol style="list-style-type: none"> <i>4. the condition is certain and final."</i> <p>III) All four of the tests of validity are relevant here.</p>	Noted.
	mmm) Pages 49 - 51 of the Practice Note contains case law that supports the existence of the fourth test.	Noted.
	nnn) The Developer submits that imposing conditions on development approvals to enforce the proposed retrospective reconciliation process would not be certain or final, in breach of the fourth test of validity.	The City is advised that the condition satisfies the requirements for certainty and finality.
	<p>Applying the "interim" rate immediately - breach of planning principles</p> <p>ooo) At the OCM, the City's Council also resolved:</p> <p><i>"7. NOTE that the interim rate will be applied immediately to enable the timely issue of development approvals and building licences."</i></p>	Noted.
	ppp) It is submitted that the City's immediate application of the "interim" rate is a breach of planning principles.	Noted.

	<p>qqq) There is a breach of the following SPP 3.6 planning principles:</p> <p><i>"5.2 Principles underlying development contributions</i></p> <p><i>Development contributions must be levied in accordance with the following principles-</i></p> <p><i>1. Right of consultation and arbitration</i></p> <p><i>Land owners and developers have the right to be consulted on the manner in which development contributions are determined. They also have the opportunity to seek a review by an independent third party if they believe that the calculation of the contributions is not reasonable in accordance with the procedures set out in the draft Model Scheme Text in appendix 2.</i></p> <p><i>2. Accountable</i></p> <p><i>There must be accountability in the manner in which development contributions are determined and expended.</i></p> <p><i>5.7 Development contributions not to be imposed as a condition of rezoning</i></p> <p><i>Development contributions must be formulated through an open and transparent process, with the opportunity to comment in accordance with the process specified in 5.3, or through development contribution plans or voluntary agreements that are transparent and follow the due planning process."</i></p>	<p>There is no statutory requirement for the City to advertise a DCP review. As noted in the comments above in response to (t), the City does not consider that the interpretation of the method for calculating the cost contribution amounts to an amendment to the LPS 3. Notwithstanding this, the City does routinely undertake public advertising during a review of the DCP for good governance and transparency.</p>
	<p>rrr) Similarly, there is also a breach of the following LPS 3 planning principles at cl 6.5.6:</p> <p><i>"6.5.6 Guiding principles for development contribution plans</i></p> <p><i>The Development Contribution Plan for any Development Contribution Area is to be prepared in accordance with the following principles -</i></p> <p><i>g) Right of consultation and review</i></p> <p><i>Owners have the right to be consulted on the manner in which development contributions are determined. They also have the opportunity to seek a review by an independent third party if they believe the calculation of the costs forming part of the contributions is not reasonable.</i></p> <p><i>h) Accountable</i></p> <p><i>There must be accountability in the manner in which development contributions</i></p>	<p>Refer to the response to (qqq) above.</p>

	<i>are determined and expended."</i>	
	sss) That is, the immediate application of the "interim" rate, in advance and regardless of any submissions received in the subsequent advertising process, breaches the land owners' and developers' rights of consultation and arbitration, as well as accountability in the process of determining the immediate "interim" rate.	Refer to the response to (qqq) above.
	<p>Conclusion</p> <p>ttt) 72. In conclusion, the Developer submits that:</p> <ul style="list-style-type: none"> i. the City's "new" method for calculating contributions under the DCP calculation method (ie ignoring words and "defined terms" within the DCP as to the calculation method) amounts to an amendment of the DCP (ie an amendment to LPS 3); ii. the City has not undertaken the required process for amending a local planning scheme and is therefore not permitted to apply the existing calculation method within the DCP in the "new" way proposed; iii. until such an amendment has been made, the City must apply the existing calculation method within the DCP in the same way as it did in the 2018 DCP Report (ie by not ignoring words and "defined terms" within the DCP as to the calculation method); iv. in regard to the City attempting to deem all cost contributions, including those already paid, as "interim" cost contributions to allow for a "new" reconciliation process at the conclusion of the DCP: <ul style="list-style-type: none"> a. the City has not undertaken the required process for amending a local planning scheme and is therefore not permitted to do this; b. until such an amendment has been made, the City must apply the existing DCP, which does not provide for "interim" cost contributions and a final reconciliation between developers; c. (iii the existing DCP operates on the basis of estimated contributions required and then revising those estimates as allowed under clauses 6.5.11.4 and 6.5.11.5 of LPS 3; d. clauses 6.5.11.4 and 6.5.11.5 of LPS 3 are about varying the cost contributions after revising the "estimated costs" and nothing more. The "estimated costs" are the estimated costs of the development or infrastructure required. These clauses do not allow for a reconciliation process between developers, retrospectively; 	<p>This is a summary of the detailed submission provided in the rows above. Responses provided above.</p>

	<p>e. clause 6.5.17 of LPS 3 already deals with both shortfalls and excesses in cost contributions, without referring to reconciliations between developers;</p> <p>f. by clause 6.5.17 of LPS 3, no individual developer is required to make good a shortfall, while excesses are simply to be refunded to the original contributors and not reimbursed by another developer;</p> <p>g. deeming all cost contributions as "interim" will result in a contributor's actual required cost contribution no longer being transparent or certain, in breach of State Planning Policy 3.6 and the City's LPS 3; and</p> <p>v. in regard to the City's recently introduced planning approval conditions relating to "interim" cost contributions and a "new" reconciliation process, those conditions are unlawful as they seek to enforce illegal retrospective actions that are not provided for in the existing DCP;</p> <p>vi. the immediate application of the "interim" rate, in advance and regardless of any submissions received in the subsequent advertising process, breaches the land owners' and developers' rights of consultation and arbitration, as well as accountability in the process of determining the immediate "interim" rate, in breach of State Planning Policy 3.6 and the City's LPS 3;</p> <p>vii. for the reasons set out above:</p> <p>a. Council's decision to adopt the DCP Report and "interim cost contribution rate of \$23/m2 should be rescinded including the decision to "immediately" apply that rate; and</p> <p>b. the City should apply the DCP as per the 2018 DCP Report and adopt a contribution rate calculated in accordance with the DCP.</p>	
Submission 5 - Objection		
	<p>Re: Submission on DCP Report and method of calculation of the Contribution Rate</p> <p>In response to The City of Kalamunda's adjustments to the contribution rate and justifications for doing so, concerns on accountability of certain issues need to be addressed;</p>	Noted.
	<p>a) The City of Kalamunda has stated that "to comply with the requirements of the SPP3.6 that contributions that have been paid, or to be paid are an interim</p>	The purpose of the adopted approach is to make a responsible and considerate provision enabling landowners to comply with the obligation to

	<p>payment based on estimated costs or a combination of estimated and actual costs".</p> <p>No such clause to this effect can be found in SPP3.6. The City of Kalamunda's LPS3 must remain within the guidelines set out by SPP3.6 which clearly states under clause;</p> <p>6.3.14.3 Payment by an owner of the cost contribution, including a cost contribution based upon estimated costs in a manner acceptable to the local government, constitutes full and final discharge of the owner's liability under the development contribution plan and the local government shall provide certification in writing to the owner of such discharge if requested by the owner.</p> <p>This clause would suggest that the City of Kalamunda has no recourse to attain funds from owners whose contribution payments have fallen below the final contribution value. It appears that the Council is aware of this limitation with its adhoc reference to spread the equity of contribution payments with its vague reference to a case by case basis. Furthermore, it would not be until all these individual cases has been finalised and ALL owners agree to make additional payments that an even share across all landowners could be ascertained.</p> <p>It is not the approach as set out by the SPP3.6 that has created equity issues rather the City of Kalamunda has been negligent in its DCP calculation, which has led to significant variations impacting on some landowner's contributions. As set out in clause 6.3.11.6, these owners had the opportunity to have these cost contributions reviewed within the methods and timeframe outlined within this section. Any claims made after the completion of the contribution transaction, and any liability for them remains the responsibility of the City Of Kalamunda and such liability cannot be transferred to landowners under the guise of inequity. Nor can it be added to the cost of the DCP as clause 5.4 of SPP3.6 which states that "Development contributions can only be for the provision of capital items. The costs associated with design and construction of infrastructure (including land costs) and the cost of administration are considered capital items and can be included in the development contribution plan".</p>	<p>make a cost contributions under SPP 3.6 and LPS3, and ensuring that the cost contribution made will be, in line with these instruments, equitable, consistent with contributions made by other owners, and transparent.</p> <p>The comments raising concern regarding the process adopted are noted, however ultimately cost contributions are not being increased to facilitate the reconciliation process and, ultimately, cost contributions will be associated with capital items that are identified in the DCP.</p>
	<p>b) The City of Kalamunda has stated that "In summary, the cost of all infrastructure required to be delivered by the DCP has not been evenly distributed amongst all landowners over the course of the DCP's operation".</p> <p>Whilst the SPP3.6 refers to equitability of sharing of the costs of infrastructure and administrative items between owners, this is not to be confused with an</p>	<p>The comments regarding changes to land value, market conditions, economic conditions, and costs that influence the overall infrastructure estimates are noted.</p> <p>The City is progressing with the adopted approach to address inequitable outcomes associated with the method of calculation applied previously. This is</p>

<p>even share as stated and appears to be the aim by the council. Many variables in timing and market conditions would have also influenced changes or variances in contribution rates which cannot be ascertained to calculate an equitable share.</p> <p>Changes in land values, market conditions and costings, inflation rates, interest rates, benefits obtained through earlier payment of contributions, together with the City of Kalamunda land acquisition values (towards development of stage 1) which have been tied to values of DCP contributions are only a limited example of variables that would also need to be considered across the entire industrial development in any adjustment towards equitability between owners.</p> <p>The City of Kalamunda had followed the SPP3.6 guidelines, specifically 6.3.11.1 where the determination of Infrastructure costs and administrative costs is to be based on amounts expended, but when expenditure has not occurred, it is to be based on the best and latest estimated costs available to the local government and such estimated costs are to be reviewed at least annually by the local government. I am assuming that at the time of these calculations the City was operating on a fair and equitable basis one impartial to any bias. I would suggest that any changes to the DCP based on changing the calculation methodology after 7 years to supposedly evenly share the costs between landowners is inequitable, being that it is no longer impartial and being influenced by the bias of past owners and/or the City of Kalamunda's previous errors.</p>	<p>discussed in detail within the report to OCM on 25 February 2020. The approach is supported by advice that is considered to, at this stage of the life of the DCP, bring the matter into alignment with the principles outlined in SPP 3.6 and LPS3.</p>										
<p>c) The City of Kalamunda has stated that “The majority of major infrastructure items within the DCP have been constructed, including the Ashby/Nardine Close connection and major restricted Access Vehicle Classification 7 intersection upgrades”.</p> <p>This is in contradiction to the 2.5 Estimated Cost Table on the DCP Report presented at the Ordinary Council Meeting on the 25th February 2020 which shows 45% of the infrastructure is still to be completed. This highlights further inflated inaccuracies with the current DCP estimates.</p> <p>Specific areas of concern are;</p> <table><tr><th>Details</th><th>Value (\$)</th></tr><tr><td>Berkshire Road Footpath to be funded by State Government</td><td>128,000</td></tr><tr><td>Stage 1, only 50% contribution to Milner Road</td><td>511,295</td></tr><tr><td>Nardine Road Extension (Road 2A) Stage 2 not required</td><td>1,300,000</td></tr><tr><td>Bush forever Fencing – existing fencing is superior to required level and capital replacement not required - maintenance issue</td><td>105,000</td></tr></table>	Details	Value (\$)	Berkshire Road Footpath to be funded by State Government	128,000	Stage 1, only 50% contribution to Milner Road	511,295	Nardine Road Extension (Road 2A) Stage 2 not required	1,300,000	Bush forever Fencing – existing fencing is superior to required level and capital replacement not required - maintenance issue	105,000	<p>Regarding Berkshire Road, in January 2020, the City received State Government funding to undertake a design for shared paths on Berkshire and Dundas Road. Subject to the designs and construction estimates being finalised in 2021, construction funding is expected to follow. In anticipation of construction funding being provided for this project, the City has amended Berkshire Road to remove the shared path item and instead include the completion and necessary upgrades to the existing 2m wide footpath.</p> <p>Berkshire Road also includes costs associated with adjustments to consumer line crossings to provide for unrestricted clearance for RAV7 vehicles.</p> <p>Since the inception of the DCP, it has identified Milner Road as being wholly funded by the DCP. Milner Road is required to be upgraded to the standard of construction for industrial purposes to facilitate the development of the Forrestfield / High Wycombe Industrial Area. The development of the industrial area to the north of the Forrestfield / High Wycombe Industrial Area has historically developed without a DCP serviced by the existing road network.</p> <p>Regarding the Nardine Close extension, it is not recommended that this item be removed from the DCP until the City is certain that this road is not required</p>
Details	Value (\$)										
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	<table><tr><td>Nardine Close / Milner Road Intersection</td><td>27,605</td></tr><tr><td>Berkshire / Milner Road Intersection</td><td>85, 528</td></tr><tr><td>TOTAL</td><td>1,697,428</td></tr></table> <p>Further concerns regarding estimations of an amount of 41% still outstanding in administration costs for a near completed project needs to be addressed.</p>	Nardine Close / Milner Road Intersection	27,605	Berkshire / Milner Road Intersection	85, 528	TOTAL	1,697,428	<p>and development has commenced for the place of worship at Lot 50 Sultana Road West.</p> <p>The matter regarding Bush Forever fencing has been discussed with the Department of Planning, Lands and Heritage and it is their expectation that the DCP repay the cost of the fencing. This infrastructure item is also included in Schedule 12 (k) of the LPS 3.</p> <p>It is unclear what is being referred to regarding the intersection works listed.</p> <p>Administrative costs have been reduced given the cost of legal agreements has decreased following a reconsideration of these costs.</p>
Nardine Close / Milner Road Intersection	27,605							
Berkshire / Milner Road Intersection	85, 528							
TOTAL	1,697,428							
	<p>d) The City of Kalamunda has changed and purposefully omitted key information from the Development Contribution of Methodology calculation which has been used over the previous 7 years of the Forrestfield/High Wycombe Industrial Area DCP, and outlined as being used by other metropolitan DCP's.</p> <p>Given that the methodology originally outlined is commonly used by other DCP's would suggest that the method is standard and acceptable practice. The fact that the City of Kalamunda has failed to correctly adjust costs and hence the DCP contribution correctly on an annual basis does not warrant changing the methodology to suit the current requirements of the council, to justify errors that have been made on their behalf.</p> <p>i. Failing to deduct the Developed Area from the Contribution Area in calculating Net Lot Area</p> <p>a. and</p> <p>ii. The Representation of remaining infrastructure costs as total cost of infrastructure</p> <p>These two changes together with the omission in the 2020 DCP report on how these terms have been previously defined within a DCP is clearly a misrepresentation to owners accessing this report. The change in this calculation manipulates the accepted practice of DCP calculation methodology to distribute the cost of the DCP evenly it does not reflect an equitable distribution based on the many variables aforementioned.</p> <p>These issues outlined are only some concerns with the City of Kalamunda's ability to competently manage the Forrestfield / High Wycombe Industrial Development over the past 7 years. The City of Kalamunda needs to take responsibility for any errors made on their behalf rather than transferring costs to land owners who they assume can afford to fund their mistakes.</p>	<p>The approach adopted by the Council on 25 February 2020 to exclude the supplementary notes from its calculation of the cost contribution was not due to an incorrect adjustment of costs, but rather to ensure the principles equity are maintained in the administration of the DCP moving forward.</p> <p>The DCP report does not misrepresent the approach outlined in the Council report on 25 February 2020. The reasons for applying the calculation method are clearly explained in this report.</p>						

Submission 6		
	<p>a) Complete mismanagement of DCP and its funds.</p> <p>Kalamunda Council is the administrator of the DCP and should be held accountable for errors in calculations and estimates and all you will do is pass on the financial stuff up to existing landowners.</p>	<p>The purpose of the adopted approach is to make a responsible and considerate provision enabling landowners to comply with the obligation to make a cost contribution, and ensuring that the cost contribution made will be equitable, consistent with contributions made by other owners, and transparent.</p>
	<p>b) How can the contribution rate fluctuate so much, Administration incompetency?</p> <p>Why are we copping the whole 1.022 million cost upgrade of Milner road when it should be 50% cost like Sultana Rd west?</p>	<p>The principal reason for fluctuations to the contribution rate is that some infrastructure items have either been removed or modified, and other items have been more accurately estimated over time. This has occurred in the context of changes to the planning framework for the area.</p> <p>The apportionment of infrastructure costs for the DCP area identified that, at the time that the DCP was prepared, 50% of infrastructure costs for Sultana Road West would be funded by future stages of industrial development.</p>
	<p>c) The upgrade to Berkshire, Milner, Dundas road intersection was originally going to be a cul de sac but now we have an extra \$980,636.00 cost, to be fair it should be 50%.</p>	<p>This intersection was required to be upgraded to the standard of construction for industrial purposes to facilitate the development of the Forrestfield / High Wycombe Industrial Area. Future upgrades will be required to facilitate development within the Forrestfield North Residential and Transit Oriented Development precincts.</p>
	<p>d) The Bush forever "chain mesh" fencing is already there and doesn't need replacing and why is there an estimated remaining cost there for \$105,875.33 inflating the contribution rate?</p>	<p>The matter regarding Bush Forever fencing has been discussed with the Department of Planning, Lands and Heritage and it is their expectation that the DCP repay the cost of the fencing. This infrastructure item is also included in Schedule 12 (k) of the LPS 3.</p>
	<p>e) The \$128,913.71 footpath on Berkshire road has been approved and funded by the state government and so why is that still in our remaining costings inflating the contribution rate?</p>	<p>In January 2020, the City received State Government funding to undertake a design for shared paths on Berkshire and Dundas Road. Subject to the designs and construction estimates being finalised in 2021, construction funding is expected to follow. In anticipation of construction funding being provided for this project, the City has amended Berkshire Road to remove the shared path item and instead include the completion, and necessary upgrades, to the existing 2m wide footpath.</p>
	<p>f) Why does Sultana rd west have "maintenance of trees for 2 year period" at a cost of \$33 898.00 when the guidelines SPP3.6 (5.4)"contributions are for initial capital requirements" ?</p>	<p>Schedule 12 (j) of the LPS 3 includes the provision of maintenance. Where trees are required to be installed, it is an established practice that landscaping is maintained for a minimum period of two years to optimise survival rates. The two year period commences at the time of planting.</p> <p>Notwithstanding the above, the item for supplying, installing and maintaining trees has been removed in light of detailed designs for Sultana Road West and insufficient room on the verge to accommodate trees, without locating the</p>

		trees within (at the lowest point of) the drainage swales.
	g) The relocation of 1 power pole on the corner of Sultana and Milner road has a quoted figure of \$350,000.00, that is ridiculous. You have based it on quote from Dundas/Milner/Berkshire but you think after all this time you would get a proper quote from Western Power? The cost to relocate a power power on the corner of Nardine and Milner was about \$43,000.00	This item has been reviewed in the context of bringing the Sultana Road West and Milner Road designs up to an 85% engineering design standard. The revised cost is approximately \$271,000.
	h) The SPP3.6 (6.3.6) states Certainty- "All development contributions should be clearly identified and methods of accounting for cost adjustments determined at the commencement of a development" and not change the accounting method after 7 years.	The purpose of the adopted approach is to make a responsible and considerate provision enabling landowners to comply with the obligation to make a cost contribution, and ensuring that the cost contribution made will be equitable, consistent with contributions made by other owners, and transparent.
	i) The SPP3.6(6.3.14.3) states "Payment by an owner of the cost contribution... . constitutes full and final discharge of the owners liability" and SPP3.6 (5.4) "Development Contributions can only be for the provision of capital items" and not to pay back developers or landowners who have paid the higher rate. Should the disgruntled owners who paid the higher rate ask for reimbursement or take court action this should be out of the councils own pocket due to mismanagement.	Ultimately cost contributions are not being increased to facilitate the reconciliation process and cost contributions will be associated with capital items that are identified in the DCP. It is noted that, for a cost contribution to be deemed to be a full and final discharge of the Owner's liability, it must be made in a manner acceptable to the local government.
Submission 7		
	a) Thankyou for the opportunity to present our comments and objections to the DGP report 2020 for the Forrestfield/High Wycombe Industrial Development. We are the owners and live at 166 Sultana Road West, High Wycombe (lot 308 formerly lot 52). Our property is involved in Nardine Close extension stage 1 and Stage 2.	Noted.
	b) We object to the scheduled priorities (page 17). We believe settlement of land acquisition required for public purposes (ie Bushfire access driveway lot 308) and land not able to be developed (Nardine Culdersac on Private land lot 308) should be prioritised higher than Bonser Road Construction. As Clearly stated in DCP review in December 2018 and DCP review 2020 (page 17, Section 4(b)), acquisition of land for public use is a high priority for the DCP.	Further consideration will be given to the priority of purchasing the remaining portion of lot 308 in the context of the Council's decision whether to keep stage 2 of the Nardine Close extension (Road 2a) in the DCP and having regard to the principles for prioritisation under the DCP.
	c) We object to the purchase of land for public purpose (ie Bushfire access, driveway of lot 308) being included in the budget for Nardine Close Extension Stage 2 and strongly feel the land acquisition should be part of Nardine Extension Stage 1 (ie bushfire access for Stage1) and the land acquisition should have been settled when the road for stage1 was completed (July 2019). This portion of our land is currently required for	Noted. Refer to the officer comment regarding (b) above. The alleged safety issues are currently being investigated.

	<p>Bushfire access for the surrounding community if a fire occurs in bushforever land, especially lot 51, lot 50 and residents on Smokebush Place following the completion of Nardine Close Extension Stage 1. Currently the local community is using our driveway for convenient access to Berkshire Road/Roe Hwy, especially with road works on Milner Road. We have 2 children and access to our driveway is now unsafe due to local traffic (often at unsafe speeds). Our letterbox is located at the road verge on Sultana Road West and now it is unsafe to collect our mail. I have raised this issue in two meetings (May 2019 and February 2020) with the City of Kalamunda.</p>	
	<p>d) In good faith we accepted the acquisition of land for the construction of Nardine Close extension stage 1 which allows industrial road access for our lot (at the time lot 52) and our neighbour lot 51. To allow the industrial access for lot 50 and the construction of Nardine Close extension stage 2, a temporary culdersac was constructed at the termination of Nardine Close extension stage 1 (completed July 2019). Approximately 1/3 of the RAV4 culdersac and road reserve was constructed on our land which has not been acquired by the DCP. This agreement was signed in December 2016 and still has not been resolved. As indicated by the City of Kalamunda, the construction of Nardine Close extension stage 2 may not occur for several years and combined with the planned development of lot 50 as a place of worship, we feel stage 2 is problematic and would like to object to the construction of Nardine Close Extension stage 2. Our objection is based on unreasonable time delays, access already provided for Lot 50 on Sultana Road West and possible restrictions to RAV4 truck access caused by illegal parking around truck culdersac from attendees to place of worship (as experienced at existing temple in Kalamunda).</p>	Noted.
	<p>e) We ask for our land including the temporary culdersac and surrounding road reserve to be immediately acquired by the DCP and include the costs in an additional budget for Nardine Close extension stage 1. This would allow the development of Lot 308 (formerly lot 52) with a clearing understanding of land use available and provide a reasonable industrial truck crossover for entry into lot 51 (which is currently very narrow and not appropriate for RAV4 access). Removal of Nardine Close extension stage 2 from the DCP would allow a clear understanding for sale and development of lots 50, 51 and 308, provide open clear access to all lots and facilitate faster industrial development providing contribution funds for the DCP which is the highest priority of the DCP (page 17 go DCP 2020).</p>	Noted. Refer to the officer comment regarding (b) above.
Submission 8		
	<p>a) As land owners of 170 Sultana Road West (Plot 50), who have submitted a DA to CoK for the development of a Community Centre and Place of</p>	The construction of the emergency access way (EAW) was previously intended to be delivered as part of stage 2 of the Nardine Close extension (Road 2a).

	<p>Worship, we request that the Emergency Access Way (EAW), adjacent to Plot 50 &51, be taken up on top priority because we intend to start development of the property within a reasonable time after our detailed engineering drawings are ready and our funding strategies are put into action.</p> <p>The community members and well-wishers of this development will be enthused and confident to support this project thru financial contribution if they are able to see that the infrastructure as per the Structure Plan is in place before occupying the premises and hence request you to give priority for the development of the EAW.</p>	<p>However, in the event that the Council resolve to remove stage 2 of the Nardine Close extension from the DCP, the EAW will form an individual item and its priority will be considered having regard to the guiding principles for prioritising infrastructure under the DCP.</p>
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File Number:	PG-STU-028
Date:	23 July 2020
Officer:	Peter Varelis, Director Development Services

Memorandum

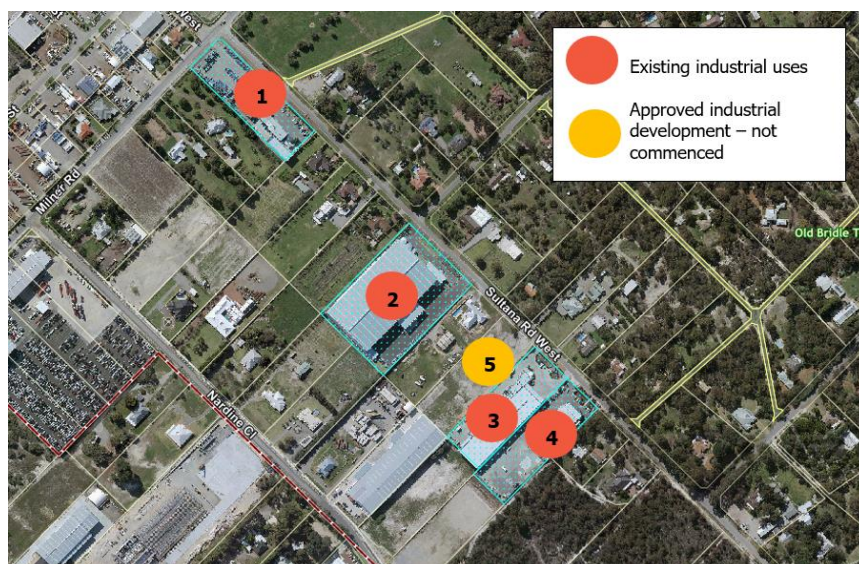
To: All Councillors
 CC: Rhonda Hardy, Chief Executive Officer
 From: Peter Varelis, Director Development Services
 Subject: 28 July 2020 Ordinary Council Meeting – Forrestfield / High Wycombe Stage 1 Industrial Area – Development Contribution Plan Report: Annual Review – Consideration of Submissions and Final Approval – Additional Information

Councillors,

Since the Public Agenda Briefing Forum (PABF) on 14 July 2020, the City has collated additional information and has further considered the details and analysis outlined in, report item 10.1.2 - Forrestfield / High Wycombe Stage 1 Industrial Area (FF/HW Industrial Area) – Development Contribution Plan (DCP) Report: Annual Review of the July PABF (the Report).

1) Milner Road and Sultana Road West Designs

1. The Council report outlines that the City has prepared designs for Milner Road and Sultana Road West to 85% design level, and estimated the cost of construction accordingly. Reference is made regarding the section of Milner Road between Nardine Close and Sultana Road West and the whole of Sultana Road West being designed for 'As of Right' (19m semi-trailer) vehicles with a 9m wide pavement on Sultana Road West. This is in lieu of design to accommodate Restricted Access Vehicle 4 (RAV 4 – 27.5m 'B-Double') category of vehicles.
2. To clarify a key reason behind this recommendation, Sultana Road West will divide the FF/HW Industrial Area from the future Forrestfield North (High Wycombe South) residential area. The introduction of roads designed to accommodate RAV 4 vehicles (B-Doubles) would, in the opinion of the City, not be consistent with the intent of the Forrestfield North Residential Precinct LSP, to manage the interface between the residential and industrial land uses,. By designing the Milner Road and Sultana Road West intersection, and Sultana Road West to accommodate 'As of Right' vehicles, this would ensure that access will be limited to vehicles that are ordinarily allowed on residential roads.
3. The Council report explains that the City undertook a survey to ascertain the current and future access needs for developed and approved industrial operations. The following summarises this process.
4. In April 2020, the City contacted existing industrial operators at Lot 200 (103) Milner Road, and Lots 432, 220 and 219 (88, 116 and 122) Sultana Road West. The City also reviewed the existing Development Approval for Lot 213 (110) Sultana Road West that at the time of the survey had not been constructed. The below map illustrates the sites considered through this process.



5. The sites surveyed include 4 of the 10 lots fronting Sultana Road west, however if measured in land area, over 50% of land fronting on to Sultana Road West was considered.
6. The City was also advised by its consulting engineers in April 2020 that, following a preliminary review of the cost to construct the Milner and Sultana Road West intersection and Sultana Road West to an 'As of Right' standard as opposed to a RAV 4 standard, the savings are estimated to be approximately \$38,000.
7. On the basis of the likely infrastructure cost savings, the responses received, through the engagement above, indicating no existing need for access for vehicles beyond the 'As of Right' standard 19m semi-trailer and future residential development of High Wycombe South, the City's officers decided to proceed with 85% designs for the Milner Road and Sultana Road West intersection and Sultana Road West width of 9m.
8. The City has also contacted Main Roads WA Heavy Vehicle Services, who have advised that landowners with frontage to Milner Road between Nardine Close and Sultana Road West (103 – 121 Milner Road) may still apply for a permit for RAV access, if it can be demonstrated that a RAV vehicle can safely access and egress the site from a south-west direction on Milner Road, and manoeuvre within the site, notwithstanding this section of Milner Road being designed for 'As of Right' vehicles.
9. Since the PABF on 14 July 2020, the City has been advised by a landowner in the area that the infrastructure cost estimates erroneously include estimated costs for the following items:
 - a) Constructing a 1.8m footpath on the south side of Milner Road in addition to a 2.5m shared path on the north side of Milner Road. This item should only include a 2.5m shared path in accordance with the Forrestfield / High Wycombe Stage 1 Industrial Area LSP.
 - b) Removal of redundant road pavement between the future Sultana Road West cul-de-sac and Brand Road. This section of pavement is being removed to facilitate the Forrestfield North Residential Precinct LSP and is therefore not a specific item that should be funded by the DCP.
10. The DCP Report has been amended to remove the cost estimates associated with the 1.8m footpath on Milner Road and the removal of redundant pavement on Sultana Road West accordingly.

2) Berkshire Road

1. The Council report explains that the DCP estimates have been amended to include the completion and necessary upgrades to the existing 2m wide footpath on the northern side of Berkshire Road, until the WA Bicycle Network funding (WABN) will become available.
2. To clarify this, the City has no certainty at this time that an application for WABN grant funding for construction of the footpath will be successful and even if it is, requires a subsequent decision by Council to

provide at least 50% of the construction costs as a condition of the grant. Neither outcome has eventuated, as yet, and thus if WABN funding becomes available (anticipated 2021/22) and Council decide to provide additional funding for it, a subsequent review of the DCP will address the matter. Retaining the costs for the footpath on the northern side of Berkshire within the DCP ensures there is funding certainty for a footpath on Berkshire Road.

3. The report states that there are currently five overhead consumer lines on Berkshire Road that are required to be undergrounded for unrestricted vehicle height access. Since the PABF on 14 July 2020, the City has confirmed that there are now only four consumer lines that are required to be converted to underground supply. This discrepancy is due to the undergrounding of one of the consumer lines as part of a recent development at Lot 547 (291) Berkshire Road, Forrestfield, occurring after the initial consumer line clearance assessment undertaken by the City's consulting engineers.
4. The DCP Report and estimated costs have been amended to reduced number of consumer lines requiring undergrounding from five to four.

3) Amendments to Infrastructure Cost Estimates and the Cost Contribution

1. As a result of the additional information outlined above, the following changes to the cost estimates and cost contribution rate in the DCP report, with the Council report and attachments being amended accordingly:

	Infrastructure Cost Estimate presented to PABF on 14 July 2020	Amendment	Revised Total Infrastructure Cost Estimate
Berkshire Road	\$174,333	-\$15,000* Reduced number of consumer lines requiring undergrounding from five to four.	\$154,070
Milner Road	\$915,403	-\$45,163* For removal of supply and installation of new 1.8m wide concrete footpaths on south side of Milner.	\$856,900
Sultana Road West	Total: \$1,613,454 50% contribution from DCA1: \$806,727	-\$11,827* For removal of redundant pavement between cul-de-sac and Brand Road.	Total: \$1,598,068 50% contribution from DCA1: \$799,034
Impact on Cost Contribution Rate	\$22.43/m²		\$22.30/m²

**Amendment figure does not include percentage allowances and charges for traffic management, BCITF Levy, Council Supervision, Design and Superintendence and contingency. This is however reflected in the Revised Total Infrastructure Cost Estimates.*

Regards,



Peter Varelis

Director Development Services