

Lockyer Valley Regional Council

26 Railway Street, PO Box 82, Gatton Qld 4343
All official correspondence to be addressed to the CEO
Telephone 1300 005 872 | Facsimile (07) 5462 3269
Email mailbox@lvrc.qld.gov.au | www.lockyervalley.qld.gov.au

Application ID: OW2022/0027
Enquiries: Scott Hambleton
Contact: 5462 0618

10 October 2022

Van Der Meer Consulting 51 Alfred Street FORTITUDE VALLEY QLD 4006

Dear Ms Qiao

Decision Notice Planning Act 2016

I refer to your application and advise that on 7 October 2022, Council decided to approve the application subject to conditions.

Details of the decision are as follows:

APPLICATION DETAILS

Application No: OW2022/0027

Street Address: 63 Redbank Creek Road, Adare

Real Property Description: Lot 95 CA311434 & Lot 96 SP225226

Planning Scheme: Gatton Shire Planning Scheme 2007

DECISION DETAILS

Type of Decision: Approval

Type of Approval: Development Permit for Operational Works - Subdivision Works

(roadwork, drainage work, stormwater, earthworks) – Park Lake

Estate Stage 1

Date of Decision: 7 October 2022

CURRENCY PERIOD OF APPROVAL

The currency period for this development approval is two (2) years starting the day that this development approval takes effect. (Refer to Section 85 "Lapsing of approval at end of currency period" of the *Planning Act 2016*.)

INFRASTRUCTURE

Unless otherwise specified, all assessment manager conditions of this development approval relating to the provision of infrastructure are non-trunk infrastructure conditions for Chapter 4 of the *Planning Act 2016*.

ASSESSMENT MANAGER CONDITIONS

GENERAL

- 1. Undertake all approved works in accordance with the approved plans as listed within this decision notice and any works required by conditions of this approval at no cost to Council.
- 2. Prior to commencement of work, a Works on a Road Reserve Permit for any works involving closing of Council roads or working on or adjacent to existing roads or road reserves must be obtained from Council's Infrastructure Planning and Design business unit.

Advice Notes:

- Email applications or inquiries on 'Works on a Road Reserve Permit' to iws@lvrc.qld.gov.au
- Contact Council's IWS branch on 1300 005 872 for more details.
- 3. Submit to Council for approval, test results for subgrade and final pavement designs certified by a RPEQ prior to construction of road pavements. Pavement Design to be in accordance with Austroads Guide to Pavement Technology Part 2: Pavement Structural Design or the Department of Transport and Main Roads design standards after stripping of topsoil and assessment of soaked sub-grade CBR values and using an ESA's or design traffic based on traffic engineering predictions.

Advice Notes:

- A minimum **five (5) business days'** written notice must be provided to Council requesting approval for final pavement designs.
- Provide soil test results from the source quarry taken within two weeks of the pavement design date.
- 4. Provide pavement thickness of no less than 300 mm for including a minimum of 30mm of AC surfacing. The total pavement thickness as determined from the design charts is not to include the thickness of AC surfacing which is deemed to be a wearing surface only unless the AC thickness is greater than 75mm".
- 5. Install any new or reinstated signage in accordance with the IPWEAQ standard drawing no. RS 131. All new signage shall be coated with Class 1 retro-reflective material in accordance with AS1743: Road signs Specifications.

BONDS AND SECURITIES

6. Submit the following to Council prior to the Pre-Start Meeting:

- a. Priced Bill of Quantities prepared and certified by a Registered Professional Engineer Queensland (RPEQ) to substantiate the value of the security.
- b. Security Bond equivalent to no less than 10% (minimum \$5,000) of the value of the works as security for the performance of the various construction obligations of this development approval.
- c. Erosion and Sediment Control Bond equivalent to no less than 5% (minimum \$3000) of the value of the earthworks and subsequent stabilisation works as a security for the performance of restoration works and for achieving grass coverage at off-maintenance.
- d. Works on a Road Reserve Permit for traffic management and any lane/footpath closures during construction.
- 7. Prior to acceptance of works On Maintenance, Council will retain 50% of the previously submitted Performance security bond as a security for the performance of the maintenance obligations and release the remaining amount of security bond.

Advice Note:

The maintenance security and Erosion and Sediment Control Bond will be released only after the project is accepted off-maintenance.

PRE-START MEETING REQUIREMENTS

- 8. Submit a written request for Council's delegated officers to attend a Pre-Start Meeting for the proposed works with the Engineer (RPEQ) and Contractor. The written request must include at a minimum the following details:
 - a. The Engineer (RPEQ), The Principal Contractor, including the name and contact details during and outside of construction hours.
 - b. The supervising engineer's office and after hours contact details.
 - c. Date of commencement of works and expected duration (programme of works).
 - d. Proposed haul route during construction works.
 - e. Pre- construction dilapidation report on existing Council infrastructure for identified local section of the haul route during construction works.
 - f. CCTV footage and an inspection report for underground stormwater drainage works along with a letter from a suitably qualified and experienced RPEQ stating that CCTV inspection report and video had been reviewed and identifying any issues.
 - g. Proposed access locations for trucks and other heavy machinery during construction nhase
 - h. Erosion and sediment control plans.
 - i. A set of "Issued for Construction" drawings, amended if required by the conditions of this approval.
 - j. Evidence of possession of site by contractor.
 - k. Public Liability Insurance to a limit of \$20,000,000 with a notation with the Local Government as an Insured Party that is current/valid for the full duration of works.
 - I. Workers' Compensation Insurance.
 - m. Evidence of Bond Payment(s) as per relevant conditions.

The Pre-Start Meeting date and time will be confirmed by Council's delegated officer.

DEVELOPMENT WORKS

9. All works associated with this approval must occur within the following times, unless otherwise approved in writing by the assessment manager:

Monday to Saturday (inclusive) - 6:30am to 6:30pm Sunday and Public Holidays - No work permitted

- 10. Carry out works to ensure compliance with Work Health and Safety legislative requirements.
- 11. Ensure all work sites are maintained in a clean, orderly state at all times.
- 12. Manage all waste in accordance with the relevant legislation and regulations and dispose of regulated waste at a licensed facility by a licensed regulated waste disposal contractor.
- 13. All services crossings for existing or completed new roads must be carried out only using under boring technique and open cut crossing will not be permitted.
- 14. Ensure the re-location and protection of any Council and public utility services infrastructure and assets that may be impacted on during construction of the development.
- 15. Repair all damages incurred to Council and public utility services infrastructure and assets to relevant authority's standards as a result of the proposed development, immediately should hazards exist for public health and safety or vehicular safety. Otherwise, repair all damage immediately upon completion of works associated with the development.
- 16. Ensure that development works on the subject land do not lead to ponding of stormwater or cause actionable nuisance to adjoining properties.
- 17. Protect nearby property owners from dust pollution arising from construction and maintenance of the works required by this approval in accordance with requirements of the *Environmental Protection Act 1993*.
- 18. In the event that bona fide complaints are received by Council in relation to dust emissions from the site or Council notices that a non-compliance exists, dust mitigation measures must be undertaken as directed by the Council.
- 19. Provide a minimum 100mm capping layer of good quality, non-dispersive soil on all areas disturbed during the earthworks.
- 20. Provide a continuous turfing strip behind all new kerb and channel and any footpaths. The remaining unsealed verge area must be filled, graded and either fully turfed or grass seeded to achieve a minimum of 60% grass coverage, prior to on maintenance.
- 21. Disturbed areas on newly created lots and balance areas (including road verge) must be seeded to achieve a minimum of 60% grass coverage, prior to on maintenance.

- 22. Install signage displaying the business and afterhours telephone number/s of the applicant, supervising engineer and Principal Contractor as well as the operational works application number.
- 23. Ensure that supervision of all construction works is carried out by a suitably qualified and experienced Engineer (RPEQ).
- 24. Allow Council to enter a work site to which this approval relates and undertake testing or analysis of any part of the construction, and Council is not liable for the rectification of or compensation for any damage caused in the testing or analysis process. Should work be found to be not constructed to specification or of poor quality, rectification works must be undertaken by the Principal Contractor.

EROSION AND SEDIMENT CONTROL

- 25. Implement erosion and sediment control generally in accordance with the approved drawings and the Best Practice Erosion and Sediment Control guidelines by the International Erosion Control Association Australasia. Where the drawings and the guidelines are conflicting, the requirements of the guidelines take precedence.
- 26. The supervising engineer must undertake inspections of the erosion and sediment control devices after all significant rain events. Where necessary, the devices will be modified, repaired or improved to prevent any erosion or sediment discharge from the development in future rain events.
- 27. Implement and maintain measures to prevent the tracking of sediment to and from the site onto the adjoining street network for the duration of the construction period. Any sediment discharging from the site to the road network must be cleaned immediately at the expense of the developer.

STOCKPILING

- 28. All temporary stockpiles of erodible material must be:
 - a. Protected from wind, rain, concentrated surface flow, and excessive up-slope stormwater surface flows; and
 - b. Located up-slope of an appropriate sediment control system; and
 - c. Provided with an appropriate protective cover (synthetic or organic) if the materials are likely to be stockpiled for more than four (4) weeks; or
 - d. Provided with an appropriate protective cover (synthetic or organic) if the materials are likely to be stockpiled for more than ten (10) days during months of high erosion risk; or
 - e. Provided with an appropriate protective cover (synthetic or organic) if the materials are likely to be stockpiled for more than five (5) days during months of extreme erosion risk.

IMPORT OR EXPORT OF MATERIALS

- 29. This approval does not extend to any material proposed to be imported to or exported from the site other than:
 - a. from or to site(s) that have a current Development Approval enabling them to export/accept any material; or
 - b. the material is being exported to and accepted at a licensed Council refuse facility.
- 30. Submit to Council, the following for approval in the event it is proposed to import material to or export material from the site, prior to commencement of the work:
 - a. details of the location of any material to be sourced for fill including the volume of fill to be moved from any particular source site;
 - b. details of the final location for any material to be exported from the site from excavations including the volume to be moved to any particular site;
 - c. the proposed haulage route(s) and truck sizes for carting of the material; and
 - d. Council approval will be required for all roads on the haul route below Collector standard.

Note: Further Development Approvals may be required for sites (e.g Sites impacted by flooding and overland flows) proposed to import material from or export material to, prior to commencement of such work.

VEGETATION CLEARING

- 31. Any vegetation clearing as a result of this approval (e.g. along new boundary fence lines) is to comply with the following:
 - A. Ensure that an accredited fauna spotter/wildlife consultant* is present to check all potential habitat prior to vegetation removal or earthworks. They are to:
 - a. inspect vegetation approved for removal (or any dams to be removed or dewatered) and advise contractors when it is appropriate to commence works.
 - clearly mark (flag) vegetation found to contain fauna or fauna habitat (such as tree hollows, arboreal termite mounds, stick nests or possum drays with flagging tape), and visually and verbally communicate this information to the tree feller to ensure flagged trees are not felled until authorised by the fauna spotter;
 - c. Where native vertebrate animals are found, clearing must only continue in coordination with a fauna spotter. All native vertebrate animals located within, on and amongst vegetation or areas of vegetation approved for clearing, are only to be managed under the guidance of the fauna spotter.
 - d. Keep and maintain accurate records of all animal captures, incidents and disposals for the site and a report prepared for Council and other relevant authorities within one month of completion of the project

- *An accredited Fauna Spotter/ Wildlife Consultant is a person or company holding a current Rehabilitation Permit Spotter Catcher issued by the Department of Environment and Science under the *Nature Conservation (Administration) Regulation 2017.*
 - B. Any clearing of koala habitat trees must ensure the clearing is carried out in a way the complies with the sequential clearing conditions in Part 3 section 10 of the Nature Conservation (Koala) Conservation Plan 2017.

Note: Koala Habitat Trees are defined as

- a. a tree of the Corymbia, Melaleuca, Lophostemon or Eucalyptus genera that is edible by koalas; or
- b. a tree of a type typically used by koalas for shelter, including, for example, a tree of the Angophora genus.
- C. Limit the felling of habitat and hollow bearing trees to the following methods:
 - a. segmental removal of the tree, with hollow-bearing limbs being checked by the wildlife spotter and cleared of fauna using a cherry picker;
 - b. segmental removal of the tree, with hollow-bearing limbs plugged and lowered to the ground for inspection by the wildlife spotter;
 - c. use of an excavator with vertical grab to lower the main trunk; or
 - d. a combination of the above methods.
- D. Preserve valuable habitat features such as large fallen logs, log piles, rock piles or outcrops wherever practicable through the translocation and re-establishment in coordination with the wildlife spotter.
- E. Ensure compliance with AS 4970 2009 Protection of trees on development sites, including but not limited to the implementation of a 'Tree Protection Zone' where trees are to be retained onsite and undertake the following:
 - a. install protective fencing to prevent any damage to areas not in the approved vegetation clearing area in general accordance with Section 4.3 of AS 4970 2009;
 - provide signs identifying the 'Tree Protection Zone' on exclusion fencing that are clearly visible from all areas within the development site within 20 metres of the exclusion fencing; and
 - c. ensure all trees to be retained within allotments are protected from harm during works on site. Ensure activities such as traffic, stockpiling and compaction are excluded from areas of retained vegetation particularly within the tree protection zones of retained trees

- F. Ensure vegetation and rubble piles are not left to serve as a refuge for displaced or roaming wildlife through the implementation of the following measures:
 - a. immediately (within 12 hours) remove or destroy such materials; or
 - b. ensure old (>12 hours) piles of felled vegetation are treated as potential wildlife habitat and inspected by a wildlife spotter catcher prior to removal or destruction
- G. Ensure all vegetation cleared as a result of this development approval and requiring disposal is disposed of:
 - a. on the premises for landscaping and sediment and erosion control purposes (for example as mulch); and/or
 - b. at a waste disposal facility operated by Council provided that the waste is delivered to the waste disposal facility in a manner and form which allows it to be mulched at the facility; and/or
 - c. in such other environmentally responsible manner as meets with the written approval of the Council; and
 - d. ensure any vegetation cleared as a result of this development approval is not burnt or incinerated except for the purpose of domestic heating inside a dwelling on the subject site.

MANDATORY COUNCIL INSPECTIONS

- 32. The following inspections must be attended by Council's delegated officer, the supervising engineer (a suitably qualified RPEQ) and the Principal Contractor:
 - a. Prestart meeting;
 - b. Prior to backfilling of any stormwater drainage works;
 - c. At the time of spreading topsoil;
 - d. Structural steel inspection prior to pouring of any structural concrete;
 - e. Prior to back filling road crossings (during construction of new roads, refer to condition on 'under boring' otherwise);
 - f. Following preparation and compaction of road sub-grade;
 - g. Following placement and compaction of each road pavement layer and prior to laying of the next pavement layer or surfacing layer; and
 - h. Finished pavement surface prior to any bitumen primer-seal or prime or asphalt surfacing.

A minimum two (2) business days' written notice must be provided to Council requesting attendance for above inspections.

- i. On Maintenance inspection (refer to on-maintenance requirements);
- j. Off Maintenance inspection (further to a minimum 12 months defects liability period);

A minimum five (5) business days' written notice must be provided to Council requesting attendance for maintenance inspections.

ON MAINTENANCE REQUIREMENTS

- 33. Ensure that following works will be completed prior to On-maintenance inspection:
 - a. Stabilise adequately all unstable or disturbed soil surfaces against erosion (minimum 80% stabilised).
 - b. Cover all dispersible soils exposed during soil disturbing activities with a minimum 100mm layer of non-dispersible soil before being covered with vegetation, mulch, erosion control blankets or infrastructure.
 - c. All areas that has erosive soils characteristics to achieve 80% grass coverage.
 - d. All approved landscaping works have been completed.
 - e. Install Kerb markers to identify the location of crossroad services eg. water, electricity, telecommunication, gas etc.
- 34. Submit the following to Council prior to the on-maintenance inspection:
 - a. Completed Inspection Check Lists (ITP) and all inspection and test data in its entirety;
 - b. Originals of relevant test results;
 - c. Certification from a suitably qualified Registered Professional Engineer Queensland (RPEQ) stating that works have been undertaken in accordance with the approved plans, approval conditions and any agreed variations;
 - d. CCTV footage and an inspection report for underground stormwater drainage works along with a letter from a suitably qualified and experienced RPEQ stating that CCTV inspection report and video had been reviewed and rectification works were successful and satisfactory.
 - e. Geotechnical and structural certificates (where applicable);
 - f. Payment of any outstanding Fees and Permits;
 - g. Any other relevant document that may be required by Council;
 - h. Certification from a suitably qualified Registered Professional Engineer Queensland (RPEQ) that stormwater drainage works as a part of development works for the subdivision has been constructed to enable slab on ground construction for residential dwellings in lots and areas of lot established above Q100 flood line (provide a layout plan indicating building envelopes, if required for clarity).
 - i. "As Constructed" data for stormwater drainage, roadworks and earthworks where applicable:
 - i. In digital format all construction details compatible with IPWEAQ's Asset Design and As Constructed (ADAC) version 4.1 format with all details and values (e.g. survey levels, material types) matching the associated As-Constructed drawing(s). The electronic file will conform to the ADAC requirements including an electronic signature by a suitably qualified RPEQ / Registered Cadastral Surveyor where appropriate. The levels and positions of infrastructure must be referenced to GDA 94 (Zone 56) coordinate system and AHD.

- ii. A full set of approved drawings in PDF format that are clear and legible when printed at A3 scale with red-lined marked-up (strike through the original design data where applicable) showing changes to construction materials, design levels, locational details and other amendments from approved design that may have approved during the construction of approved Operational Works.
- iii. Each drawing marked as 'As Constructed' and signed by a suitably qualified RPEQ/ Registered Cadastral Surveyor.
- iv. A written confirmation from a Registered Cadastral Surveyor verifying the accuracy of the locational details, relative levels, boundaries and alignments as shown on the drawing(s).
- v. Details are to include any redundant and/or removed assets as well as the details of the immediate existing infrastructure where new works connect to an existing stormwater network.
- 35. Submit to Council, a written request for an on-maintenance inspection issued by the developer's certifying Engineer (RPEQ) stating that all approved works have been completed and are ready for Council inspection.
- 36. Rectify any defects identified by Council during the on-maintenance period. Defects must be remedied under the direction of the supervising engineer (RPEQ).
- 37. Upon completion of the remedial works, the supervising engineer must request Council for another inspection of remedied works.

MAINTENANCE PERIOD

38. The works that will become Council's infrastructure will be subject to a minimum twelve (12) month maintenance period, commencing from the On-Maintenance date stipulated by the assessment manager in 'On Maintenance' correspondence.

ON/OFF MAINTENANCE

- 39. Undertake any further inspections, testing or analysis required, due to failure of work to meet specifications or where the testing previously provided is considered insufficient on behalf of the Principal Contractor by a NATA accredited entity, as directed by the Council further to the initial on/off-maintenance inspection.
- 40. Provide a letter from a suitably qualified and experienced RPEQ stating that report and test results had been reviewed and proposed rectification works for Council approval.
- 41. Undertake any rectification works further to a written approval from the Council.
- 42. Council is not liable for the rectification of or compensation for any damage caused in the testing or analysis process. Should work be found to be not constructed to specification or of poor quality and not satisfactory by Council,
- 43. The applicant and supervising engineer are responsible and liable for the rectification of defects, materials and works.

44. The Council reserves the right to call on the applicant or supervising engineer to rectify any works that have been found to not comply with the Certificates received or for the safety or health of the community or protection of infrastructure where Council deems it necessary.

OFF MAINTENANCE

- 45. The Council reserves the right to extend the maintenance period for up to a further twelve (12) months or a period determined by the Council pending the performance of the Council infrastructure, landscaping, erosion and sediment control and earthworks during the initial maintenance period. The above performance monitoring process to continue until any matters are resolved to Council's satisfaction.
- 46. The Council reserves the right to extend the maintenance period to allow establishment of approved landscaping works and grass coverage (of 80% except in areas that has dispersible or erosive soils characteristics) or request to provide an alternative permanent erosion control measure acceptable to Council for affected areas;
 - a. in the event it is proposed to provide grass seeding or hydro mulching at off-maintenance inspection to address any grass coverage issues to allow establishment.
 - b. in the event the region is experiencing an unfavorable climate conditions for the establishment of approved landscaping works or grass coverage at the time of offmaintenance inspection.
- 47. Comply with the following conditions prior to Off-maintenance inspection:
 - a. Fill and grade the remaining unsealed verge area or reinstate any areas subject to erosion and must be either fully turfed or grassed to achieve 80% grass coverage.
 - b. All the other areas disturbed during construction works (including areas where water management works are constructed) must be either fully turfed or grassed to achieve 80% grass coverage.
- 48. Submit to Council a Closed Circuit Television camera (CCTV) inspection undertaken for underground stormwater drainage works no more than 2 weeks prior to the off maintenance inspection along with a letter from a suitably qualified and experienced RPEQ stating that CCTV inspection report and video had been reviewed and identifying any issues.
- 49. The works will be accepted Off Maintenance only where the works have been suitably maintained to engineer or manufacturer's specifications and any rectification works approved by the Council has been completed to Council's satisfaction and Council standards.
- 50. All works must be fully completed to RPEQ Certified design and specifications, and the assessment manager must be satisfied that the works have been properly completed and landscaping and grass cover established.
- 51. The maintenance bond will be entirely forfeited to Council should there be any failure by the applicant to undertake any such works considered by Council as necessary, to rectify any non-compliant works and to protect public safety. In the event that the bond is insufficient to

address the non-compliant works, Council reserves the right to seek restitution. After expiration of the maintenance period and where required maintenance is suitably undertaken to Council's satisfaction, the bond will be returned accordingly, after the project is accepted offmaintenance.

52. Undertake any necessary maintenance or repairs to defects and/or damage to any works undertaken in relation to this approval, even where damage has resulted from a third-party activity prior to Council accepting work off-maintenance.

REFERRAL AGENCIES

Not Applicable.

APPROVED PLANS

The following plans are Approved Plans for the development:

Approved Plans

The following pla	The following plans prepared by Van Der Meer Consulting are Approved without amendments:			
Plan No.	Rev.	Plan Name	Date	
C1000	В	Cover Sheet	02/09/22	
C1001	Α	Standard Notes	22/07/22	
C1002	В	Site Plan	02/09/22	
C1100	В	Erosion and Sediment Control Plan	02/09/22	
C1190	Α	Erosion and Sediment Control Details	22/07/22	
C1191	Α	Erosion and Sediment Control Notes	22/07/22	
C1200	В	Bulk Earthworks Plan	02/09/22	
C1290	В	Bulk Earthworks Details	02/09/22	
C1300	В	Pavement Plan	02/09/22	
C1400	В	Roadworks Plan	02/09/22	
C1430	С	Signs and Pavement Marking Plan	16/09/22	
C1450	В	Road Longitudinal Section Road 1	02/09/22	
C1451	В	Road Cross Sections – Road 1 Sheet 1	02/09/22	
C1452	В	Road Cross Sections – Road 1 Sheet 2	02/09/22	
C1453	В	Road Longitudinal Section Road 2 Sheet 1	02/09/22	
C1454	В	Road Longitudinal Section Road 2 Sheet 2	02/09/22	
C1455	В	Road Cross Sections Road 2 Sheet 1	02/09/22	
C1456	В	Road Cross Sections Road 2 Sheet 2	02/09/22	
C1457	В	Road Cross Sections Redbank Creek Road Sheet 1	02/09/22	
C1458	В	Road Cross Sections Redbank Creek Road Sheet 2	02/09/22	
C1459	В	Road Longitudinal Section Redbank Creek Road Sheet 1	02/09/22	
C1460	В	Road Longitudinal Section Redbank Creek Road Sheet 2	02/09/22	
C1480	В	Intersection Details	02/09/22	
C1490	В	Roadworks Details	02/09/22	
C1500	С	Drainage Catchment Plan	14/09/22	

C1501	С	Drainage Plan	16/09/22
C1550	В	Drainage Logitudinal Sections Sheet 2	02/09/22
C1560	В	Drainage Calculations	02/09/22
C1700	В	Bushfire Trail Plan	02/09/22
C1701	Α	Bushfire Trail Longitudinal Section	22/07/22
C1702	Α	Bushfire Trail Cross Sections	22/07/22
C1703	Α	Bushfire Trail Details	22/07/22

ADVISORY NOTES

The following notes are included for guidance and information purposes only and do not form part of the assessment manager conditions:

- (i) All works associated with this approval may not start until all subsequent approvals have been obtained, and its conditions complied with.
- (ii) Any additions or modifications to the approved use (not covered in this approval) may be subject to further application for development approval.
- (iii) The maintenance bond will be entirely forfeited to Council should there be any failure by the applicant to undertake any such works considered by Council as necessary, to rectify any noncompliant works and to protect public safety. If the bond is insufficient to address the noncompliant works, Council reserves the right to seek restitution.

(iv) Fire ants

Biosecurity Queensland should be notified on 13 25 23 of proposed development(s) occurring in the fire ant biosecurity zone before operational works commence. It should be noted that works involving fire ant carrier materials may be subject to movement controls and failure to obtain necessary approvals from Biosecurity Queensland is an offence.

It is a legal obligation to report any sighting or suspicion of fire ants within 24 hours to Biosecurity Queensland on 13 25 23.

The Fire Ant Restricted Area as well as general information can be viewed on the <u>DAF</u> website.http://www.daf.qld.gov.au/fireants

(v) Biosecurity

Ensure all prohibited and restricted biosecurity matter under the Biosecurity Act 2014 are removed appropriately prior to conducting any works on the site.

Everyone is obligated under the *Biosecurity Act 2014* to take all reasonable and practical steps to minimise the risks associated with invasive plants under their control. More information on restricted and invasive plants as well as your general biosecurity obligation (GBO) can be viewed on the <u>Business Queensland website</u>.

(vi) Cultural heritage

The Aboriginal Cultural Heritage Act 2003 requires anyone who carries out a land use activity to exercise a duty of care. Further information on cultural heritage duty of care is available on the <u>Department of Aboriginal and Torres Strait Islander Partnerships</u> (DATSIP) website:

The DATSIP has established a <u>register and database</u> of recorded cultural heritage matters, which is also available on the Department's website:

Should any aboriginal, archaeological or historic sites, items or places be identified, located or exposed during construction or operation of the development, the *Aboriginal Cultural Heritage Act 2003* requires all activities to cease. Please contact DATSIP for further information.

Advice for Urban Utilities

On 1 July 2014, Urban Utilities became the assessment manager for the water and wastewater aspects of development applications. An application will need to be made directly to Urban Utilities for water supply connections for the proposed development.

PROPERTY NOTES

Not Applicable.

VARIATION APPROVAL

Not Applicable.

FURTHER PERMITS REQUIRED

Operational Works – Development Permit for Landscaping (Condition 35)

SUBMISSIONS

Not Applicable.

RIGHTS OF APPEAL

You are entitled to appeal against this decision. A copy of the relevant appeal provisions from the *Planning Act 2016* is attached.

During the appeal period, you as the applicant may suspend your appeal period and make written representations to council about the conditions contained within the development approval. If council agrees or agrees in part with the representations, a "negotiated decision notice" will be issued. Only one "negotiated decision notice" may be given. Taking this step will defer your appeal period, which will commence again from the start the day after you receive a "negotiated decision notice".

OTHER DETAILS

If you wish to obtain more information about Council's decision, electronic copies are available on line at https://www.lockyervalley.qld.gov.au, or at Council Offices.

Yours faithfully

Josh Leddy

COORDINATOR DEVELOPMENT ASSESSMENT

Encl: Approved Plans Appeal Rights

CC: Urban Utilities

Development@urbanutilities.com.au

Appeal Rights

PLANNING ACT 2016 & THE PLANNING REGULATION 2017

Chapter 6 Dispute resolution

Part 1 Appeal rights

229 Appeals to tribunal or P&E Court

- (1) Schedule 1 of the Planning Act 2016 states -
 - (a) Matters that may be appealed to
 - (i) either a tribunal or the P&E Court; or
 - (ii) only a tribunal; or
 - (iii) only the P&E Court; and
 - (b) The person-
 - (i) who may appeal a matter (the appellant); and
 - (ii) who is a respondent in an appeal of the matter; and
 - (iii) who is a co-respondent in an appeal of the matter; and
 - (iv) who may elect to be a co-respondent in an appeal of the matter.

(Refer to Schedule 1 of the Planning Act 2016)

- (2) An appellant may start an appeal within the appeal period.
- (3) The appeal period is -
 - (a) for an appeal by a building advisory agency 10 business days after a decision notice for the decision is given to the agency; or
 - (b) for an appeal against a deemed refusal at any time after the deemed refusal happens; or
 - (c) for an appeal against a decision of the Minister, under chapter 7, part 4, to register premises or to renew the registration of premises 20 business days after a notice us published under section 269(3)(a) or (4); or
 - (d) for an appeal against an infrastructure charges notice 20 business days after the infrastructure charges notice is given to the person; or
 - (e) for an appeal about a deemed approval of a development application for which a decision notice has not been given 30 business days after the applicant gives the deemed approval notice to the assessment manager; or
 - (f) for any other appeal 20 business days after a notice of the decision for the matter, including an enforcement notice, is given to the person.

Note -

See the P&E Court Act for the court's power to extend the appeal period.

- (4) Each respondent and co-respondent for an appeal may be heard in the appeal.
- (5) If an appeal is only about a referral agency's response, the assessment manager may apply to the tribunal or P&E Court to withdraw from the appeal.
- (6) To remove any doubt. It is declared that an appeal against an infrastructure charges notice must not be about-
 - (a) the adopted charge itself; or
 - (b) for a decision about an offset or refund-
 - (i) the establishment cost of trunk infrastructure identified in a LGIP; or
 - (ii) the cost of infrastructure decided using the method included in the local government's charges resolution.

230 Notice of appeal

- (1) An appellant starts an appeal by lodging, with the registrar of the tribunal or P&E Court, a notice of appeal that-
 - (a) is in the approved form; and
 - (b) succinctly states the grounds of the appeal.
- (2) The notice of appeal must be accompanied by the required fee.
- (3) The appellant or, for an appeal to a tribunal, the registrar must, within the service period, give a copy of the notice of appeal to
 - (a) the respondent for the appeal; and
 - (b) each co-respondent for the appeal; and
 - (c) for an appeal about a development application under schedule 1, table 1, item 1 each principal submitter for the development application; and

- (d) for and appeal about a change application under schedule 1, table 1, item 2 each principal submitter for the change application; and
- (e) each person who may elect to become a co-respondent for the appeal, other than an eligible submitter who is not a principal submitter in an appeal under paragraph (c) or (d); and
- (f) for an appeal to the P&E Court the chief executive; and
- (g) for an appeal to a tribunal under another Act any other person who the registrar considers appropriate.
- (4) The service period is -
 - (a) if a submitter or advice agency started the appeal in the P&E Court 2 business days after the appeal has started; or
 - (b) otherwise 10 business days after the appeal is started.
- (5) A notice of appeal given to a person who may elect to be a co-respondent must state the effect of subsection (6).
- (6) A person elects to be a co-respondent by filing a notice of election, in the approved form, within 10 business days after the notice of appeal is given to the person.

231 Other appeals

- (1) Subject to this chapter, schedule 1 and the P&E Court Act, unless the Supreme Court decides a decision or other matter under this Act is affected by jurisdictional error, the decision or matter is non-appealable.
- (2) The Judicial Review Act 1991, part 5 applies to the decision or matter to the extent it is affected by jurisdictional error.
- (3) A person who, but for subsection (1) could have made an application under the Judicial Review Act 1991 in relation to the decision or matter, may apply under part 4 of that Act for a statement of reasons in relation to the decision or matter.
- (4) In this section –

decision includes-

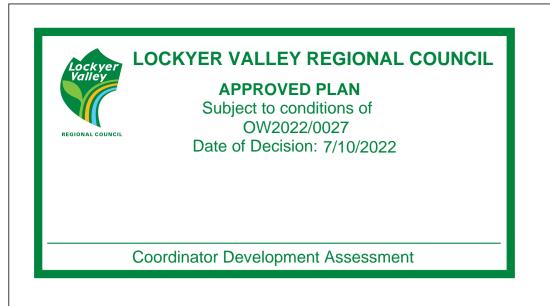
- (a) conduct engaged in for the purpose of making a decision; and
- (b) other conduct that relates to the making of a decision; and
- (c) the making of a decision or failure to make a decision; and
- (d) a purported decision; and
- (e) a deemed refusal.

non-appealable, for a decision or matter, means the decision or matter-

- (a) is final and conclusive; and
- (b) may not be challenged, appealed against, reviewed, quashed, set aside or called into question in any other way under the Judicial Review Act 1991 or otherwise, whether by the Supreme Court, another court, a tribunal or another entity; and
- (c) is not subject to any declaratory, injunctive or other order of the Supreme Court, another court, a tribunal or another entity on any ground.

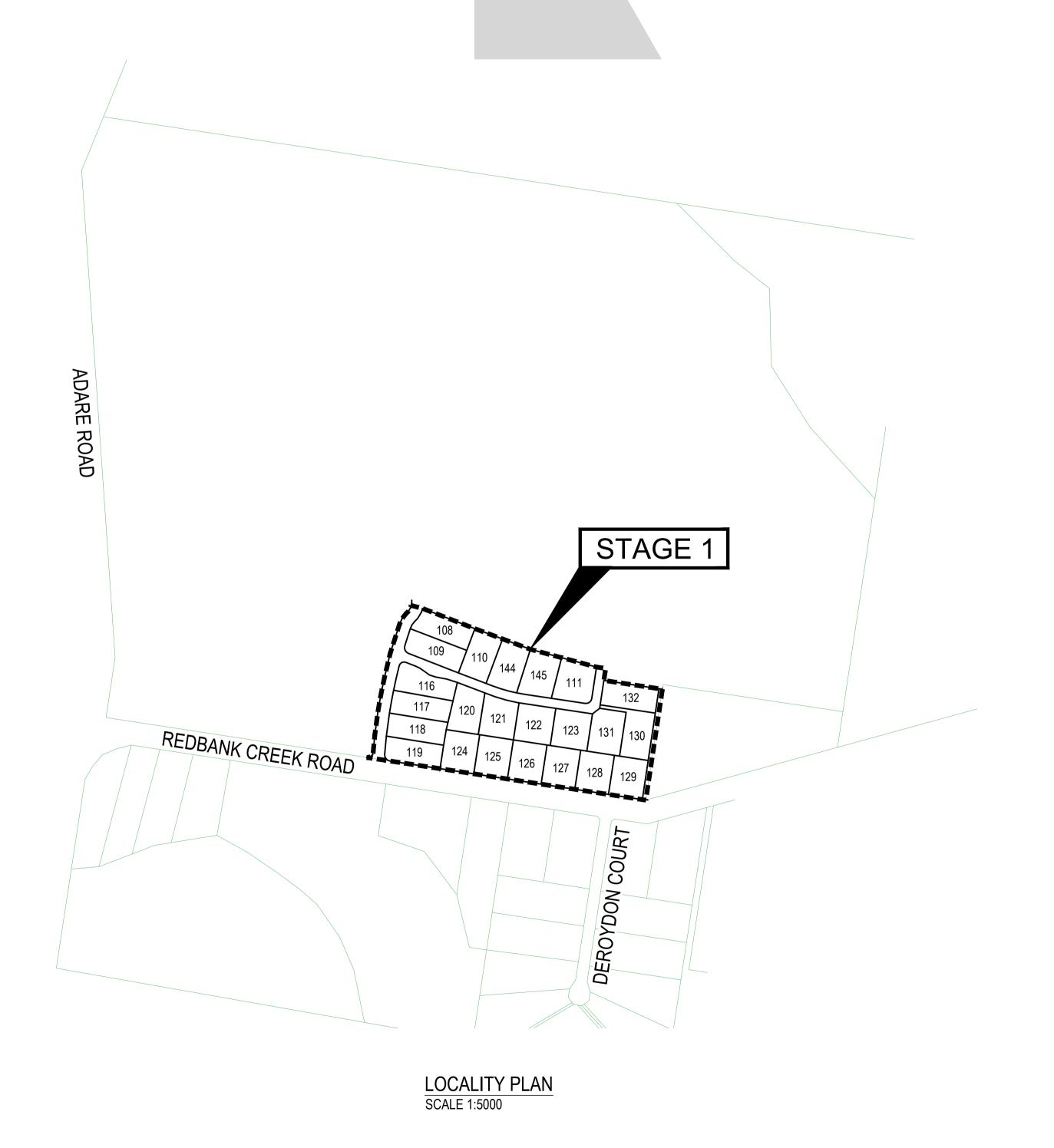
232 Rules of the P&E Court

- (1) A person who is appealing to the P&E Court must comply with the rules of the court that apply to the appeal.
- (2) However, the P&E Court may hear and decide an appeal even if the person has not complied with the rules of the P&E Court.



PROPOSED SUBDIVISION

PARKLAKE, ADARE - STAGE 1 174 ADARE ROAD, ADARE, QLD 4343



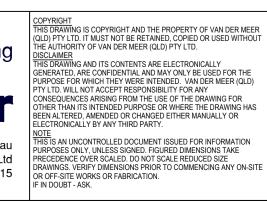
OLICET NU INVOCES	CIVIL ENGINEERING DRAWINGS	DE//IOION
SHEET NUMBER	SHEET TITLE	REVISION
C1000	COVER SHEET	В
C1001	STANDARD NOTES	В
C1002	SITE PLAN	В
C1100	EROSION AND SEDIMENT CONTROL PLAN	В
C1190	EROSION AND SEDIMENT CONTROL DETAILS	В
C1191	EROSION AND SEDIMENT CONTROL NOTES	В
C1200	BULK EARTHWORKS PLAN	В
C1290	BULK EARTHWORKS DETAILS	В
C1300	PAVEMENT PLAN	В
C1400	ROADWORKS PLAN	В
C1430	SIGNS AND PAVEMENT MARKING PLAN	В
C1450	ROAD LONGITUDINAL SECTION - ROAD 1	В
C1451	ROAD CROSS SECTIONS - ROAD 1 - SHEET 1	В
C1452	ROAD CROSS SECTIONS - ROAD 1 - SHEET 2	В
C1453	ROAD LONGITUDINAL SECTION - ROAD 2 - SHEET 1	В
C1454	ROAD LONGITUDINAL SECTION - ROAD 2 - SHEET 2	В
C1455	ROAD CROSS SECTIONS - ROAD 2 - SHEET 1	В
C1456	ROAD CROSS SECTIONS - ROAD 2 - SHEET 2	В
C1457	ROAD CROSS SECTIONS - REDBANK CREEK ROAD - SHEET 1	В
C1458	ROAD CROSS SECTIONS - REDBANK CREEK ROAD - SHEET 2	В
C1459	ROAD LONGITUDINAL SECTION - REDBANK CREEK ROAD - SHEET 1	В
C1460	ROAD LONGITUDINAL SECTION - REDBANK CREEK ROAD - SHEET 2	В
C1480	INTERSECTION DETAILS	В
C1490	ROADWORKS DETAILS	В
C1500	DRAINAGE CATCHMENT PLAN	В
C1501	DRAINAGE PLAN	В
C1550	DRAINAGE LONGITUDINAL SECTIONS - SHEET 1	В
C1560	DRAINAGE CALCULATIONS	В
C1600	WATER RETICULATION COVER SHEET	В
C1601	WATER RETICULATION PLAN	В
C1602	WATER RETICULATION SECTIONS	В
C1700	BUSHFIRE TRAIL PLAN	В
C1701	BUSHFIRE TRAIL LONGITUDINAL SECTION	В
C1702	BUSHFIRE TRAIL CROSS SECTIONS	В
C1703	BUSHFIRE TRAIL DETAILS	В

REVIS	REVISIONS:			
В	COUNCIL IR RESPONSE	MP	02/09/22	
Α	ORIGINAL ISSUE	MP	22/07/22	
No	REVISION DESCRIPTION	DRAWN	DATE	









PARK LAKE ADARE PTY LTD PO BOX 4107 SPRINGFIELD QLD 4300
ARCHITECT

PROPOSED SUBDIVISION

174 ADARE ROAD, ADARE, QLD 4343

STAGE 1

COVER SHEET

DRAWING STATUS	ORIGINA NOT FOR CO	AL ISSUE NSTRUCTION	
PROJECT LEADER CK	DESIGNER MP	SIGNATURE CALVIN KIRK RPEQ:19536	GAR
DRAFTSPERSON MP	AS SHOWN	JUL 2022	SHEET SIZE A1
JOB No. BR22202		PRAWING No.	REVISION B

GENERAL NOTES

- G1. ALL LEVELS SHALL BE OBTAINED FROM ESTABLISHED BMS OR SSM.
- G2. CONTRACTOR MUST VERIFY ALL DIMENSIONS AND EXISTING LEVELS ON SITE PRIOR TO COMMENCEMENT OF WORK.
- G3. ALL WORKS ARE TO BE UNDERTAKEN IN ACCORDANCE WITH COUNCIL'S SPECIFICATIONS AND THE DIRECTIONS OF THE SUPERINTENDENT.
- G4. DIMENSIONS MUST NOT BE SCALED FROM DRAWINGS.
- G5. CONTRACTOR TO ENSURE THAT ALL ROADWORKS ARE SMOOTHLY TRANSITIONED TO EXISTING LEVELS FREE FROM ABRUPT CHANGES
- G6. THE CONTRACTOR SHALL ARRANGE ALL SURVEY SETOUT TO BE CARRIED OUT BY A REGISTERED SURVEYOR. FURTHER, THE LOCATION OF RECOVERY MARKS SHOULD BE VERIFIED AND CONFIRMED BY THE CONTRACTOR AND ANY DISCREPANCIES SHOULD BE CLARIFIED IN WRITING WITH THE SUPERINTENDENT PRIOR TO THE COMMENCEMENT
- G7. AT COMPLETION OF WORKS ALL ADJOINING DISTURBED AREAS ARE TO BE REINSTATED TO THE "AS FOUND" CONDITION.
- G8. THE CONTRACTOR SHALL ENSURE ALL AREAS DRAIN WITH A MINIMUM FALL OF 1% (1:100) GRADE TO OUTLETS UNLESS INDICATED OTHERWISE. NO WORKS SHALL CAUSE PONDING OF STORMWATER ON UPSTREAM PROPERTIES OR CONCENTRATE RUNOFF ONTO DOWNSTREAM PROPERTIES.
- G9. THESE PLANS SHALL BE READ IN CONJUNCTION WITH APPROVED LANDSCAPE, ARCHITECTURAL, ELECTRICAL, RETICULATION, WATER AND SEWER DRAWINGS AND SPECIFICATIONS AND OTHER WRITTEN INSTRUCTIONS AS MAY BE ISSUED.
- G10. THE CONTRACTOR SHALL ENSURE THAT ALL PAVEMENTS GRADE EVENLY BETWEEN NOMINATED RL'S ON PLAN AND NO POND OF WATER OCCURS.
- G11. ALL DIMENSIONS ARE IN METERS UNLESS STATED OTHERWISE. ALL LEVELS ARE EXPRESSED IN METERS.
- G12. DURING CONSTRUCTION THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE STRUCTURE IN A STABLE CONDITION AND ENSURING NO PART SHALL BE OVERSTRESSED UNDER CONSTRUCTION ACTIVITIES.
- G13. WORKMANSHIP AND MATERIALS ARE TO BE IN ACCORDANCE WITH THE RELEVANT CURRENT S.A.A. CODES INCLUDING ALL AMENDMENTS. AND THE LOCAL STATUTORY AUTHORITIES. EXCEPT WHERE VARIED BY THE CONTRACT DOCUMENTS.
- G14 THE APPROVAL OF A SUBSTITUTION SHALL BE SOUGHT FROM THE ENGINEER BUT IS NOT AN AUTHORIZATION FOR AN EXTRA. ANY EXTRAS INVOLVED MUST BE TAKEN UP WITH THE SUPERINTENDENT BEFORE THE WORK COMMENCES.
- G15 THE CONTRACTOR IS TO EMPLOY A QUALIFIED GEOTECHNICAL ENGINEER AS REQUIRED FOR ALL GEOTECHNICAL ASPECTS OF THE BUILDING WORKS. REFER TO FOUNDATION, GROUNDWORKS AND RETENTION/SHORING NOTES. REFER ALSO TO THE GEOTECHNICAL REPORT FOR THIS PROJECT.
- G16 ORIGINAL SURVEY WAS COMPLETED BY BPLANNED & SURVEYED PH.1300 275 266

SUBGRADE PREPARATION

- RW1. REMOVE ALL VEGETATION. TOPSOIL AND DELETERIOUS MATERIAL FROM AREA OF PROPOSED BUILDING PLATFORM AND PAVEMENTS.
- RW2. PROOF ROLL EXPOSED SUB GRADE TO ACHIEVE A MINIMUM COMPACTION OF 98% STANDARD MAXIMUM DRY DENSITY (SMDD), DETERMINED BY THE STANDARD COMPACTION TEST IN ACCORDANCE WITH CURRENT AUSTRALIAN STANDARD 1289.5.1.1.
- RW3. REMOVE ANY SOFT, HEAVING, WET OR UNSTABLE AREAS IDENTIFIED DURING PROOF ROLLING AND REPLACE USING SELECT IMPORTED FILL COMPACTED IN LAYERS NOT EXCEEDING 200mm MEASURED LOOSE TO ACHIEVE A MINIMUM 98% STANDARD MAXIMUM DRY DENSITY.
- RW4. NOTE THAT THE SITE IS UNDERLAIN BY EXISTING SERVICES AND COMPACTION UTILISING VIBRATION MAY NOT BE SUITABLE IN THE VICINITY OF UNDERGROUND SERVICES.
- RW5. ANY FILL REQUIRED TO RAISE LEVELS TO BULK EARTHWORKS TO WITHIN 50mm OF NOMINATED LEVELS IS TO BE APPROVED GRANULAR MATERIAL COMPACTED IN LAYERS NOT EXCEEDING 300mm MEASURED LOOSE TO 98% STANDARD MAXIMUM DRY DENSITY WITHIN 2% OF STANDARD OPTIMUM MOISTURE CONTENT (SOMC).
- RW6. THE CONTRACTOR IS TO PROVIDE CERTIFICATION TO THE EFFECT THAT EARTHWORKS COMPACTION TO 98% STANDARD MAXIMUM DRY DENSITY, (AS 1289 E1.1, E4.1) HAS BEEN ACHIEVED, UNLESS OTHERWISE AGREED IN WRITING BY SITE SUPERINTENDENT.
- RW7. THE CONTRACTOR IS TO PROVIDE TO THE SITE SUPERINTENDENT A SURVEY CONFIRMATION FROM A REGISTERED SURVEYOR, CONFIRMING BULK EARTHWORKS LEVELS AS WITHIN +/-50mm OF LEVELS NOMINATED.
- RW8. SUBGRADE REPLACEMENT MATERIAL IS TO CONSIST OF CLEAN, UNCONTAMINATED, WELL-GRADED MATERIAL WITH A MAXIMUM PARTICLE SIZE OF 75mm, WITH 80% LESS THAN 20mm, AND A SOAKED C.B.R. GREATER THAN 10% AND A PLASTICITY INDEX LESS THAN 12.
- RW9. BACK FILLING FOR SERVICE TRENCHES AND REMOVED SERVICES OR PITS OR FOUNDATIONS IS TO USE APPROVED WELL-GRADED GRANULAR MATERIAL WITH MINIMUM VOIDS, (EITHER SELECT INSITU OR IMPORTED FILL), COMPACTION AS SPECIFIED ABOVE.
- RW10. ALL EARTHWORKS TO BE UNDERTAKEN IN ACCORDANCE WITH AS3798-1996: GUIDELINES ON EARTHWORKS FOR COMMERCIAL AND RESIDENTIAL DEVELOPMENTS.

GENERAL EARTHWORKS

- E1. THE SITE OF THE WORKS SHALL BE PREPARED BY STRIPPING ALL EXISTING TOPSOIL, FILL AND VEGETATION.
- E2. COMPACT SUBGRADE TO 98% OF THE STANDARD MAXIMUM DRY DENSITY WHEN TESTED IN ACCORDANCE WITH AUSTRALIAN STANDARD AS 1289 TESTS E.1.1. OR E.1.2. THE EXPOSED SUBGRADE SHOULD BE PROOF ROLLED TO DETECT ANY SOFT OR WET AREAS WHICH SHOULD BE LOCALLY EXCAVATED AND BACK FILLED WITH SELECTED MATERIAL. THE BACK FILLING MATERIAL SHALL BE IMPORTED GRANULAR FILL OF LOW PLASTICITY, PREFERABLY CRUSHED SANDSTONE, AND TO BE PLACED IN LAYERS NOT EXCEEDING 300mm LOOSE THICKNESS AND COMPACTED TO 98% OF STANDARD MAXIMUM DRY DENSITY WITHIN 2% OF STANDARD OPTIMUM MOISTURE CONTENT. SITE WORKS ARE TO BE BATTERED TO ADJACENT PROPERTY LEVELS.
- E3. NO STORMWATER IS TO POND ON ADJOINING PROPERTIES. THE SITE SHALL BE GRADED AND DRAINED SO THAT STORMWATER WILL BE DIRECTED AWAY FROM THE BUILDING PLATFORM. STORMWATER DRAINAGE SHALL BE PROVIDED AND MAINTAINED THROUGHOUT THE COURSE OF CONSTRUCTION. ALL STORMWATER RUNOFF SHALL BE GRADED AWAY FROM THE DWELLING AND DISPOSED OF VIA SURFACE CATCHDRAINS AND STORMWATER COLLECTION PITS.
- E4. ENSURE ALL RETAINING WALLS ARE CONSTRUCTED WITH ADEQUATE SUBSOIL DRAINAGE.

GROUND WORKS AND EXCAVATION

- GW1. ALL GROUND WORKS AND EXCAVATION SHALL BE IN ACCORDANCE WITH GEOTECHNICAL REPORT: 93323.00.R.01.Rev01.
- GW2. SEPARATE AND REMOVE ALL TOPSOIL, NON SOIL MATERIAL, CONCRETE, VEGETATION, BRICKBATS, TIMBER, ROOT AFFECTED SOIL AND EXISTING FILL. STORE TOPSOIL IF REQUIRED.
- GW3. ALL EXCAVATIONS SHALL BE FINISHED CLEAN AND HORIZONTAL AND SHALL NOT UNDERMINE FOOTINGS. WALLS etc...
- GW4. PROOF ROLL WITH AN 8 TONNE ROLLER, REPLACE ANY SOFT MATERIAL WITH APPROVED FILL AND RE-COMPACT. GEOTECHNICAL ENGINEER TO
- GW5. THE FILL IS TO BE PLACED AND COMPACTED IN LAYERS OF MAXIMUM LOOSE THICKNESS 300mm.
- GW6. TOP LAYER OF PAVED AREAS TO BE COMPACTED TO MINIMUM 98% STANDARD MAXIMUM DRY DENSITY, GEOTECHNICAL ENGINEER TO VERIFY.
- GW7. ALL PERMANENT EMBANKMENTS TO BE COMPACTED IN 200 mm LAYERS AS PER NOTE GW6 AND AT A MAXIMUM SLOPE OF 1 VERTICAL TO 2.5 HORIZONTAL UNLESS NOTED OTHERWISE. SHOULD DRAINAGE BE REQUIRED THEN SUBMIT DETAILS TO THE ENGINEER.
- GW8. ALL GROUND WORKS SHALL BE TESTED BY AN APPROVED GEOTECHNICAL ENGINEER TO A LEVEL 1 STANDARD IN ACCORDANCE WITH AS 3798 - 1996.
- GW9. ALL EXCAVATIONS TO BE INSPECTED AT REGULAR INTERVALS BY A GEOTECHNICAL ENGINEER.
- GW10. REFER TO ARCHITECTURAL DRAWINGS TO CONFIRM SETOUT OF BUILDINGS, CARPARKS ETC.
- ARE SHOWN. GW12. ALL CONTOURS AND LEVELS USED TO PRODUCE EARTHWORK DETAILS

GW11. THE LEVELS SHOWN ARE ONLY RELEVANT TO THE PLAN UPON WHICH THEY

- HAVE BEEN BASED ON SURVEYOR AND ARCHITECTS SURVEY GW13. ALL FINISHED FLOOR LEVELS ARE TO BE CONFIRMED BY ARCHITECT.
- GW14. ALL EXISTING SERVICES ARE TO BE CAPPED OFF PRIOR TO ANY WORKS.
- GW15. A PRE-CONSTRUCTION MEETING SHALL BE HELD BETWEEN THE CONTRACTOR, THE GEOTECHNICAL ENGINEER, AND THE EARTHWORKS CONTRACTOR TO UNDERSTAND POTENTIAL DIFFICULTIES AND TO ORGANISE TESTING PROCEDURES. THE CONTRACTOR SHALL CONFIRM TO THE ENGINEER THAT THE MEETING HAS BEEN HELD.

DRAINAGE NOTES

- D1. PIT LEVELS SHOWN ON STORMWATER DRAINAGE PLANS ARE FOR INFORMATION. EXACT PIT LEVELS TO BE ADJUSTED TO SUIT FALLS IN PAVEMENT/LANDSCAPED AREA.
- D2. PITS GREATER THAN 1.2m DEEP TO BE FITTED WITH STEP IRONS.
- D3. DRAINAGE PIPES SHALL BE BACKFILLED WITH COMPACTED CLEAN SHARP SAND TO 200 ABOVE PIPE OBVERT. ADDITIONAL BACKFILL UNDER ROADS SHALL CONSIST OF CLASS 2 F.C.R. MATERIAL COMPACTED IN 200mm LAYERS TO 98% SMDD. UNDER LANDSCAPED AREAS ADDITIONAL BACKFILL SHALL CONSIST OF GRANULAR MATERIAL COMPACTED IN 200mm LAYERS A 3m LENGTH OF 100 Ø SLOTTED AGRICULTURAL LINE SURROUNDED BY GEOTECH STOCKING SHALL BE PROVIDED ON THE UPSTREAM SIDE OF ALL
- D4. CONCRETE STORMWATER PIPES TO BE CLASS '3' UNDER ROADS AND CLASS '2' IN NON-TRAFFICED AREAS. ALL PIPES GREATER THAN 300Ø ARE TO BE RUBBER RING JOINTS U.N.O.
- D5. CONCRETE PITS GREATER THAN 1.0m DEEP TO BE REINFORCED WITH N12-200 EACH WAY CENTRED, MIN. 300 LAP, CONCRETE - F'c 25MPa
- D6. 150Ø, 225Ø AND 300Ø uPVC PIPES TO BE SEWER GRADE PIPE UNDER TRAFFICABLE PAVEMENT. MIN. 400 COVER UNDER NON-TRAFFICABLE **PAVEMENT**
- D7. PIT COVERS AND GRATED DRAINS IN TRAFFICABLE PAVEMENT TO BE AS 3996 CLASS D "HEAVY DUTY" AND IN NON-TRAFFICABLE AREAS TO BE AS 3996 CLASS C "LIGHT DUTY".

UTILITY SERVICES

- S1. CONDUITS TO BE PROVIDED FOR WATER AND ENERGY AUTHORITIES, TELSTRA AND OTHER SERVICES AS REQUIRED.
- S2. THE LOCATIONS OF UNDERGROUND SERVICES SHOWN ON THESE DRAWING'S HAVE BEEN PLOTTED FROM SURVEY AND AUTHORITY INFORMATION. THE SERVICE INFORMATION HAS BEEN PREPARED ONLY TO SHOW THE APPROXIMATE POSITIONS OF ANY KNOWN SERVICES AND MAY NOT BE AS CONSTRUCTED OR ACCURATE.
- VAN DER MEER CANNOT GUARANTEE THAT THE SERVICES INFORMATION SHOWN ON THESE DRAWINGS, ACCURATELY INDICATES THE PRESENCE OR ABSENCE OF SERVICES OR THEIR LOCATION AND WILL ACCEPT NO LIABILITY FOR INACCURACIES IN THE SERVICES INFORMATION SHOWN ARISING FROM ANY CAUSE WHATSOEVER.
- S4. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ESTABLISH THE LOCATION AND LEVEL OF ALL EXISTING SERVICES PRIOR TO THE COMMENCEMENT OF ANY WORK. ANY DISCREPANCIES SHALL BE REPORTED TO THE SUPERINTENDENT. CLEARANCES SHALL BE OBTAINED FROM THE RELEVANT SERVICE AUTHORITY.
- CONTRACTORS SHALL TAKE DUE CARE WHEN EXCAVATING ON SITE INCLUDING HAND EXCAVATION WHERE NECESSARY.
- CONTRACTORS ARE TO CONTACT THE RELEVANT SERVICE AUTHORITY PRIOR TO COMMENCEMENT OF EXCAVATION OR FUTURE WORKS.
- CONTRACTORS ARE TO UNDERTAKE A SERVICES SEARCH PRIOR TO COMMENCEMENT OF WORKS ON SITE. SEARCH RESULTS ARE TO BE KEPT ON SITE AT ALL TIMES.

TELSTRA - DUTY OF CARE NOTE:

TELSTRA'S PLANS SHOW ONLY THE PRESENCE OF CABLES AND PLANT, THEY ONLY SHOW THEIR POSITION RELATIVE TO ROAD BOUNDARIES, PROPERTY FENCES ETC. AT THE TIME OF INSTALLATION AND TELSTRA DOES NOT WARRANT OR UPHOLD THAT SUCH PLANS ARE ACCURATE THEREAFTER DUE TO CHANGES THAT MAY OCCUR OVER TIME. DO NOT ASSUME DEPTH OR ALIGNMENT OF CABLES OR PLANT AS THESE VARY SIGNIFICANTLY.

THE CONTRACTOR HAS A DUTY OF CARE WHEN EXCAVATING NEAR TELSTRA CABLES AND PLANT. BEFORE USING MACHINE EXCAVATORS TELSTRA PLANT MUST FIRST BE PHYSICALLY EXPOSED BY SOFT DIG POT HOLING TO IDENTIFY IT'S LOCATION. TELSTRA WILL SEEK COMPENSATION FOR DAMAGES CAUSED TO IT'S PROPERTY AND LOSSES CAUSED TO TELSTRA AND IT'S CUSTOMERS.

ELECTRICAL AND GAS NETWORK: A MINIMUM OF 30 DAYS PRIOR TO COMMENCEMENT OF EXCAVATION WORKS THE SUBCONTRACTOR MUST CONTACT DIAL BEFORE YOU DIG.

RETAINING WALL GENERAL

- GR1. BASE MATERIAL SHALL BE COMPACTED TO MINIMUM 98% STANDARD MAXIMUM DRY DENSITY (SMDD) WITHIN 2% OF STANDARD OPTIMUM MOISTURE CONTENT (SMOC) DETERMINED BY THE STANDARD COMPACTION TEST IN ACCORDANCE WITH CURRENT AUSTRALIAN STANDARD 1289.5.1.1. MINIMUM ALLOWABLE BEARING PRESSURE OF 150 kPa. GEOTECHNICAL ENGINEER EMPLOYED BY CONTRACTOR TO INSPECT AND CONFIRM.
- GR2. DRAINAGE MATERIAL WITHIN AND IMMEDIATELY BEHIND THE WALL SHALL BE 12-20mm CLEAN AGGREGATE. DRAINAGE MATERIAL TO EXTEND A MINIMUM 300mm BEHIND WALL. COMPACT DRAINAGE MATERIAL
- ALTERNATIVELY, USE NO FINES CONCRETE, AS FOLLOWS:
- CONCRETE STRENGTH N15. 210kg/m3 PORTLAND CEMENT
- MAXIMUM AGGREGATE SIZE 20 mm.
- W/C RATIO 0.45 TO 0.55.
- DENSITY 1600 TO 2000 kg/m3
- GR3. INFILL SOIL SHALL BE CLASS 1 CONTROLLED FILL TO AS4678, OR AS SPECIFIED ON THE DRAWINGS. UNSUITABLE SOILS, SUCH AS HEAVY CLAYS OR ORGANIC SOILS WITH HIGH PLASTICITY, SHALL NOT BE USED IN THE REINFORCED SOIL MASS.
- GR4. SPREAD BACKFILL IN UNIFORM LIFTS OF 200mm UNCOMPACTED THICKNESS. COMPACT TO MINIMUM 95% OF SMDD. COMPACTION WITHIN 1.0 m BEHIND THE WALL SHALL BE ACCOMPLISHED BY USING A HAND-OPERATED PLATE COMPACTOR AND SHALL BEGIN BY RUNNING THE PLATE DIRECTLY ON THE BLOCK. THEN COMPACTING IN PARALLEL PATHS, PROGRESSIVELY AWAY FROM THE WALL FACE.
- GR5. WHERE ROADWAYS OR BUILDING STRUCTURES ARE LOCATED ABOVE THE REINFORCED ZONE, COMPACT TO 98% SMDD WITHIN 2% OF SOMC DETERMINED BY THE STANDARD COMPACTION TEST IN ACCORDANCE WITH CURRENT AUSTRALIAN STANDARD 1289.5.1.1. COMPACTION TESTING SHALL BE TAKEN AT 1.2m BEHIND THE WALL.

PAVEMENT

- F1. SUBGRADE SHALL BE PREPARED AS OUTLINED IN EARTHWORKS.
- F2. PAVEMENT MATERIAL SHALL CONSIST OF APPROVED OR RIPPED SANDSTONE, NATURAL GRAVEL OR FINE CRUSH ROCK AS PER COUNCIL SPECIFICATION.
- PAVEMENT MATERIALS SHALL BE SPREAD IN LAYERS NOT EXCEEDING 150mm AND NOT LESS THEN 75mm COMPACTED THICKNESS. PAVEMENT MATERIALS SHALL BE SIZED AND OF A STANDARD OUTLINED IN AS1141.
- CRUSHED OR RIPPED SANDSTONE SHALL BE MINUS 75mm NOMINAL SIZE DERIVED FROM SOUND, CLEAN SANDSTONE FREE FROM OVERBURDEN, CLAY SEAMS, SHALE AND OTHER DELETERIOUS MATERIAL
- F5. PAVEMENT MATERIALS SHALL BE COMPACTED BY SUITABLE MEANS TO SATISFY THE FOLLOWING MINIMUM SPECIFICATIONS (AS PER AS1289.52)

DESCRIPTION MODIFIED DENSITY RATIO SUB-BASE 98% MDD BASE COURSE 98% MDD ASPHALTIC CONCRETE 97% MDD

AND SUBJECT TO COUNCIL'S CONSTRUCTION SPECIFICATION.

TESTING FOR EACH LAYER SHALL BE UNDERTAKEN BY A N.A.T.A. REGISTERED LABORATORY IN ACCORDANCE WITH AS1289, AT NOT MORE THAN 50m INTERVALS AND A MINIMUM OF TWO PER LAYER, FURTHER FREQUENCY OF TESTING SHALL BE NO LESS THAN THAT REQUIRED BY AS3978-1996.

AS CONSTRUCTED

PRIVATE WORKS (SITE CIVIL WORKS)

THE CONTRACTOR SHALL PROVIDE THE FOLLOWING AS-CONSTRUCTED DOCUMENTATION TO VAN DER MEER PRIOR TO PRACTICAL COMPLETION OF CIVIL WORKS:

PW.01 A COMPLETE SURVEY OF COMPLETED SURFACE INCLUDING SURFACE LEVELS OF ALL STRUCTURES INCLUDING BUT NOT LIMITED TO:

- STORMWATER MANHOLES AND PITS.
- BIO-RETENTION AREAS, INCLUDING BASE AND TOP OF FILTER TRENCH MATERIAL AND AREA INSTALLED, IF APPLICABLE.
- WATER SERVICE CONNECTION INCLUDING FITTINGS AND METERS.
- SEWERAGE PROPERTY CONNECTIONS INCLUDING MANHOLES.
- SEWER PUMP STATIONS, IF APPLICABLE
- PW.02 COPIES OF NATA TEST CERTIFICATE RESULTS IN RESPECT OF: THE COMPACTION OF FILL INCLUDING COMPACTION OF TRENCH BACKFILL.
- EARTHWORKS CERTIFICATION FROM GEOTECHNICAL RPEQ INCLUDING LEVEL 1 CERTIFICATION WHERE REQUIRED.
- THE SUB-GRADE CBR.
- THE SUB-GRADE COMPACTION.
- THE LOWER SUBBASE (CBR 15) MATERIAL QUALITY.
- THE LOWER SUBBASE (CBR 15) COMPACTION.
- THE SUB-BASE COURSE (CBR 45) MATERIAL QUALITY.
- THE SUB-BASE COURSE (CBR 45) COMPACTION. THE BASE COURSE (CBR 80) MATERIAL QUALITY.
- THE BASE COURSE (CBR 80) COMPACTION.
- THE PRIME OR PRIMER SEAL SPRAY AND APPLICATION RATES. THE AC CORE TESTS
- ANY CONCRETE TESTING REQUIRED.
- CCTV VIDEO FOR UNDERGROUND STORMWATER INFRASTRUCTURE WORK.
- PW.03 DURING CONSTRUCTION, DIGITAL PHOTOGRAPHS MUST: BE TAKEN OF COMPLEX CONSTRUCTIONS OR INSTALLATIONS WHICH WILL BE BELOW GROUND
- LEVEL OR NOT VISIBLE AFTER CONSTRUCTION COMPLETION OR AS REQUESTED ON SITE.
- BE TAKEN PRIOR TO BACKFILLING. INCLUDE A CHAINAGE OR EXACT LOCATION REFERENCE IN THE TITLE OF THE DIGITAL PHOTO
- BE DATE STAMPED.

COUNCIL WORKS

CW.01 TO PROVIDE AS CONSTRUCTED INFORMATION AS PER LOCAL COUNCIL SUBMISSION GUIDELINES REQUIREMENTS.

REINFORCED CONCRETE BLOCKWORK

- M1. CONCRETE BLOCKS SHALL BE BORAL 'CORE FILL BLOCKS', DOUBLE-U TYPE, OR SIMILAR APPROVED.
- M2. MINIMUM DURABILITY REQUIREMENTS:

LOCATION	SALT ATTACK RESISTANCE GRADE OF MASONRY UNIT	MORTAR CLASS	DURABILITY CLASS OF WALL TIES AND BUILT-IN COMPONENTS
INTERIOR MASONRY	GENERAL PURPOSE	M3	R3
EXTERIOR MASONRY ABOVE DAMP PROOF COURSE	GENERAL PURPOSE	M3	R3
BELOW DAMP PROOF COURSE OR IN CONTACT WITH	EXPOSURE	M4	R4

M3. MINIMUM STRENGTH REQUIREMENTS:

ELEMENT	STRENGTH OF MASONRY UNIT	MORTAR CLASS#
CONCRETE BLOCKWORK (REINF)	fuc = 15 MPa	М3

UNLESS A HIGHER CLASSIFICATION IS REQUIRED FOR DURABILITY (REFER NOTE M2). M4. LAY BOTTOM COURSE OF BLOCKS ON FULL MORTAR BED.

- ALL PERPENDS SHALL BE FILLED WITH MORTAR, EXCEPT WEEPHOLES. M5. ALL CORES SHALL BE GROUTED UNLESS NOTED OTHERWISE.
- GROUT FOR CORE FILLING SHALL BE IN ACCORDANCE WITH AS3600, WITH THE FOLLOWING PROPERTIES:
- STRENGTH GRADE S20 MAX. AGGREGATE SIZE 10mm

WALLS AS FOLLOWS

SLUMP 230mm ± 25mm MIN. CEMENT CONTENT 300kg/m³ M7. PROVIDE VERTICAL CONTROL JOINTS IN MASONRY

WALL TYPE	JOINT WIDTH	MAX JOINT SPACIN
CONCRETE BLOCKWORK (REINF)	15mm	12m

- M7. AT CORNERS, CONTROL JOINTS SHALL BE WITHIN HALF THE SPECIFIED JOINTS SPACING FROM THE CORNER. JOINTS SHALL BE SEALED WITH AN APPROVED FLEXIBLE SEALANT.
- PROVIDE JOINTS TO MATCH JOINTS IN SUPPORTING SLABS M8. PROVIDE CLEANOUT OPENINGS AT THE BASE OF ALL REINFORCED CORES AND REMOVE ALL MORTAR PROTRUSIONS BEFORE GROUTING. ADDITIONAL CLEANOUT OPENINGS SHALL BE PROVIDED ABOVE EACH HORIZONTAL POUR BREAK
- M9. MAXIMUM HEIGHT OF POUR FOR GROUTING SHALL NOT EXCEED 3.6m FOR 190 LOCKWORK, AND 0.8m FOR 140 BLOCKWORK. STOP POUR 50mm BELOW TOP OF BLOCK TO PROVIDE KEY FOR SUBSEQUENT POUR.

M10. GROUT SHALL BE THOROUGHLY COMPACTED IN THE CORES BY RODDING OR MECHANICAL

ACCORDANCE WITH AS1379.

- C1. ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH AS 3600 AND OTHER RELEVANT AUSTRALIAN STANDARDS.
- C2. CONCRETE SHALL BE SUPPLIED BY AN APPROVED MANUFACTURER IN
- C3. CONCRETE SHALL HAVE THE FOLLOWING PARAMETERS:

ELEMENT	SLUMP (mm)	AGGREGATE	f'c (MPa)	OTHER REQ
EXTERNAL VEHICLE SLAB	+ 80	20	N32	(1)

DENOTES SLUMP AT PLANT

CONCRETE

- DENOTES MAXIMUM BASE SHRINKAGE STRAIN 600 x 10 -6 AT 56 DAYS (TO AS 1012 PART 13)
- SIZES OF CONCRETE ELEMENTS DO NOT INCLUDE THICKNESS OF APPLIED
- C5. BEAM DEPTHS ARE WRITTEN FIRST AND INCLUDE SLAB THICKNESS, IF ANY.
- HOLES, CHASES OR EMBEDMENT ITEMS, INCLUDING PIPES AND CONDUITS SHALL NOT BE PLACED IN CONCRETE MEMBERS WITHOUT PRIOR APPROVAL OF THE ENGINEER.
- CONDUITS, PIPES AND LIKE SHALL NOT BE PLACED WITHIN THE CONCRETE COVER, NOR DISPLACE THE REINFORCEMENT LAYERS.
- CONSTRUCTION JOINTS (CJ) SHALL BE PROPERLY FORMED AND USED ONLY WHERE SHOWN OR SPECIFICALLY APPROVED BY THE ENGINEER, ALL CONSTRUCTION JOINTS SHALL BE THOROUGHLY SCABBLED.
- THE MAXIMUM HEIGHT OF POUR FOR CONCRETE ELEMENTS SHALL BE 3m UNLESS METHOD OF PLACEMENT HAS BEEN APPROVED BY THE ENGINEER. COLUMNS SHALL NOT BE POURED WITH THE SLAB OVER.
- C10. CONCRETE SHALL BE THOROUGHLY COMPACTED IN THE FORMS BY MEANS OF MECHANICAL VIBRATION.
- C11. WHEN THE SHADE TEMPERATURE EXCEEDS 35°C, THE EXPOSED SURFACE OF CONCRETE SHALL BE SPRAYED WITH A FINE FILM OF APPROVED ALIPHATIC ALCOHOL DURING CONCRETE PLACEMENT AND FINISHING IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. ENSURING ADEQUATE SUPPLY OF ALIPHATIC ALCOHOL ON SITE BEFORE COMMENCING CONCRETE WORK.
- C12. CURING OF CONCRETE SHALL COMMENCE WITHIN 2 HOURS OF FINISHING OPERATIONS AND SHALL BE MAINTAINED FOR A MINIMUM OF 7 DAYS USING AN APPROVED PROPRIETARY CURING COMPOUND IN ACCORDANCE WITH AS 3799 AND COMPATIBLE WITH THE PROPOSED FINISH OR CONTINUOUS PONDING WITH POTABLE WATER. THE CONTRACTOR TO SUBMIT PROPOSED CURING PROCEDURE FOR
- C13. ALL CONCRETE DELIVERED TO SITE SHALL BE SUBJECT TO PROJECT ASSESSMENT IN ACCORDANCE WITH AS 1379.

APPROVAL OF THE ENGINEER.

C14. THE CONTRACTOR SHALL NOMINATE A CONCRETE DELIVERY SUPERVISOR WHO SHALL BE A SUITABLE EXPERIENCED PERSON FOR THE APPROVAL OF THE ENGINEER, TO MONITOR THE DELIVERY AND PLACING OF THE CONCRETE FOR EACH POUR ON THE PROJECT. IN ADDITION, THE MANUFACTURER SHALL SAMPLE AND TEST FOR DRYING SHRINKAGE EACH TYPE OF CONCRETE SUPPLIED. AT LEAST EVERY MONTH DURING THE COURSE OF THE PROJECT OR FOR EVERY 1000 CUBIC METRES PLACED. NATA TEST CERTIFICATES SHALL BE FORWARDED TO THE ENGINEER. THE RESULTS OF THESE TESTS SHALL ALSO BE KEPT ON SITE.

C15. CONCRETE SAMPLES AND TESTS

ARRANGE FOR A NATA REGISTERED TESTING LABORATORY TO TAKE SAMPLES OF AND TEST CONCRETE FOR COMPRESSION, FLEXURAL TENSILE STRENGTH (SLABS ON GROUND ONLY) AND SLUMP.

COMPRESSION TEST SAMPLES SHALL CONSIST OF 3 STANDARD CYLINDERS (4 STANDARD CYLINDERS FOR POST-TENSIONED CONCRETE), TESTED FOR COMPRESSIVE STRENGTH AS FOLLOWS:

TWO (2) CYLINDERS AT 28 DAYS.

ONE (1) CYLINDER AT 3 DAYS FOR POST-TENSIONED CONCRETE ONLY.

- 2 SAMPLES

THE MINIMUM NUMBER OF DAILY SAMPLES SHALL BE AS FOLLOWS:

ONE (1) CYLINDER AT 7 DAYS.

2 TO 5 TRUCKS PER DAY

IN COLUMNS/WALLS: 1 SAMPLE PER TRUCK

ALL OTHER CONCRETE OF ANY ONE TYPE AS FOLLOWS: 1 TRUCK PER DAY - 1 SAMPLE

6 TO 10 TRUCKS PER DAY - 3 SAMPLES 10 TO 20 TRUCKS PER DAY - 4 SAMPLES FOR EACH ADDITIONAL 10 TRUCKS PER DAY, 1 SAMPLE.

1 SAMPLE PER TRUCK AT TIME OF POURING.

C16. REFER TO TYPICAL STRIPPING AND PROPPING DETAIL.



LOCKYER VALLEY REGIONAL COUNCIL

Subject to conditions of OW2022/0027 Date of Decision: 7/10/2022

APPROVED PLAN

Coordinator Development Assessment

REVISIONS: A ORIGINAL ISSU REVISION DESCRIPTION





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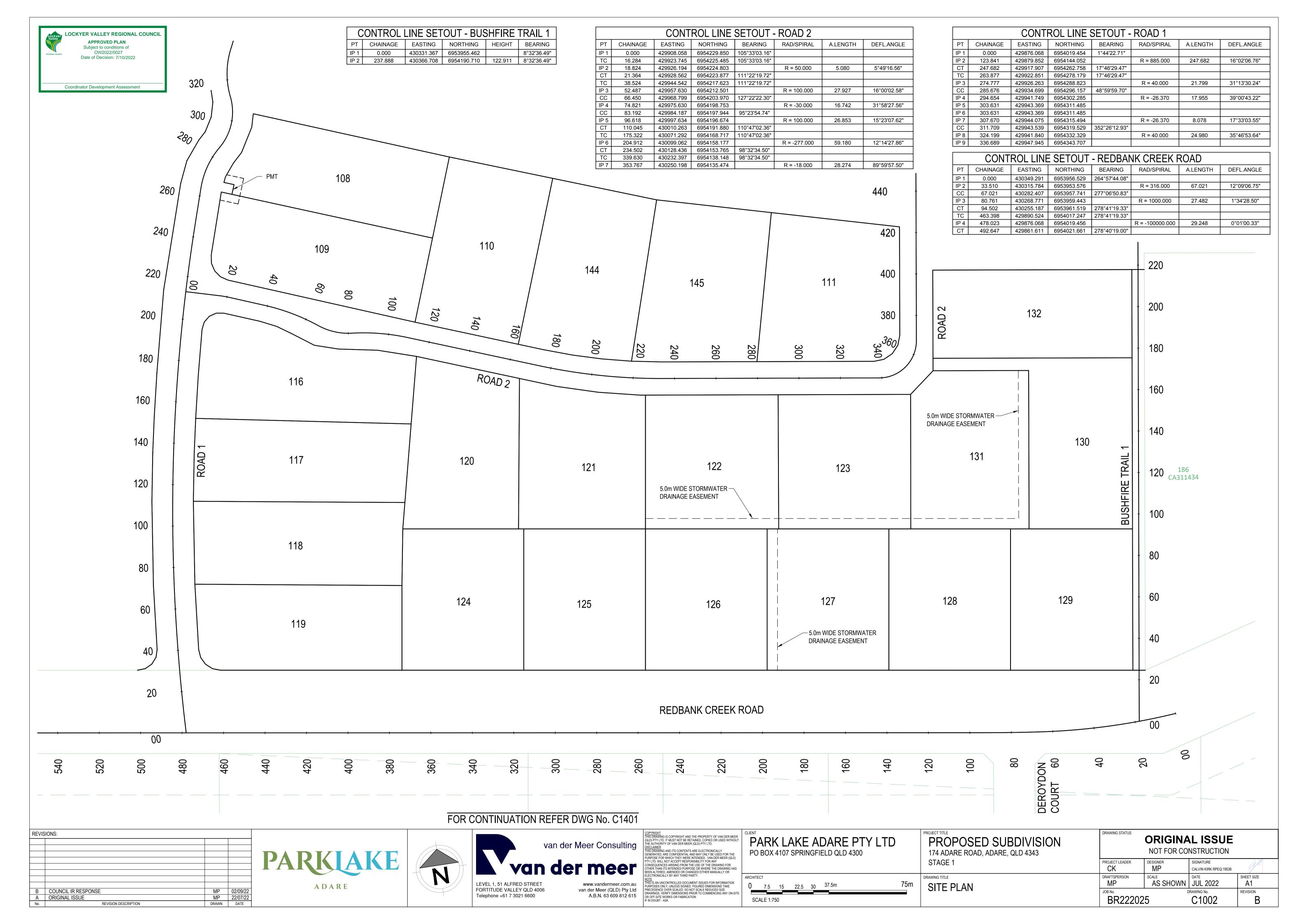
STANDARD NOTES

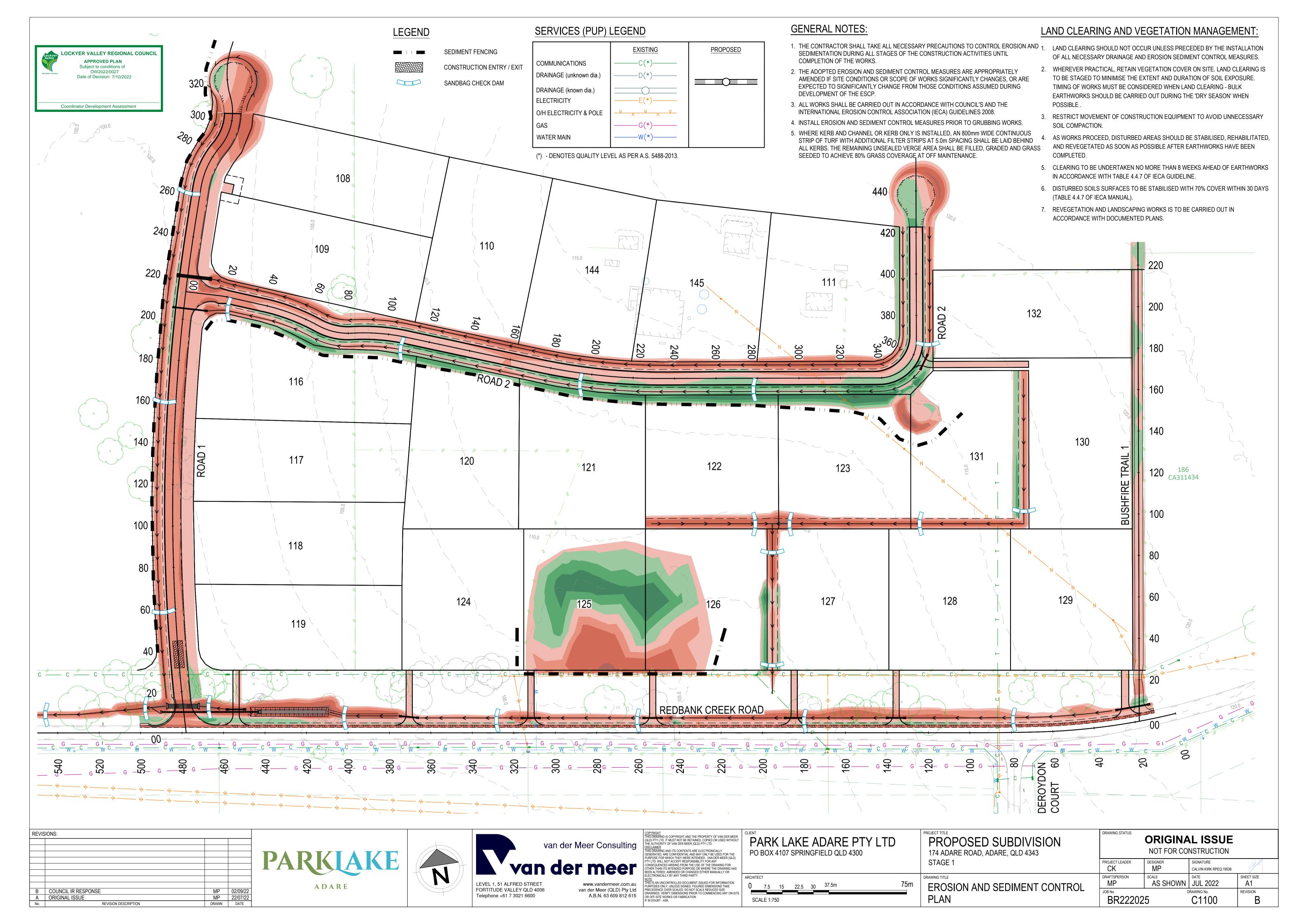
ORIGINAL ISSUE NOT FOR CONSTRUCTION MP CALVIN KIRK RPEQ:19536 DRAFTSPERSON SHEET SIZE MP AS SHOWN | JUL 2022 A1

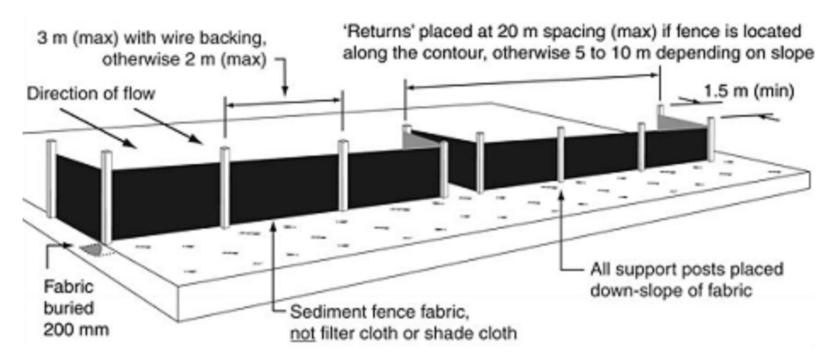
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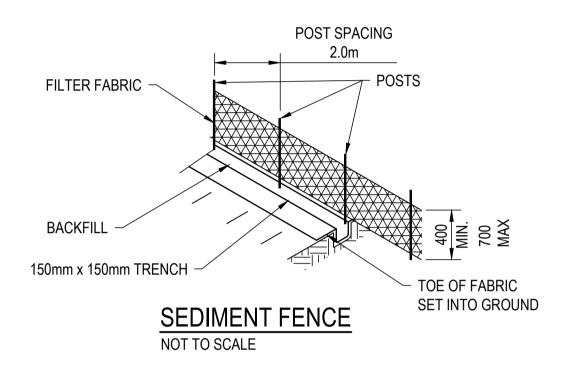
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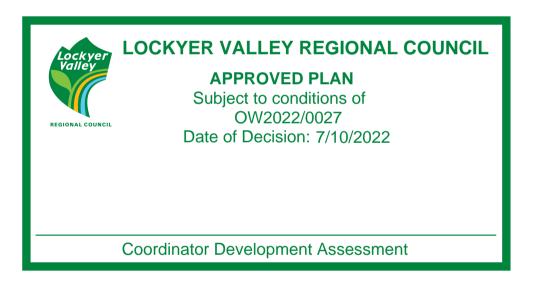


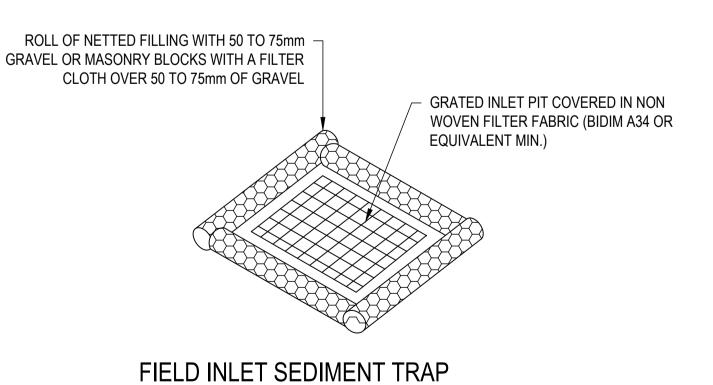


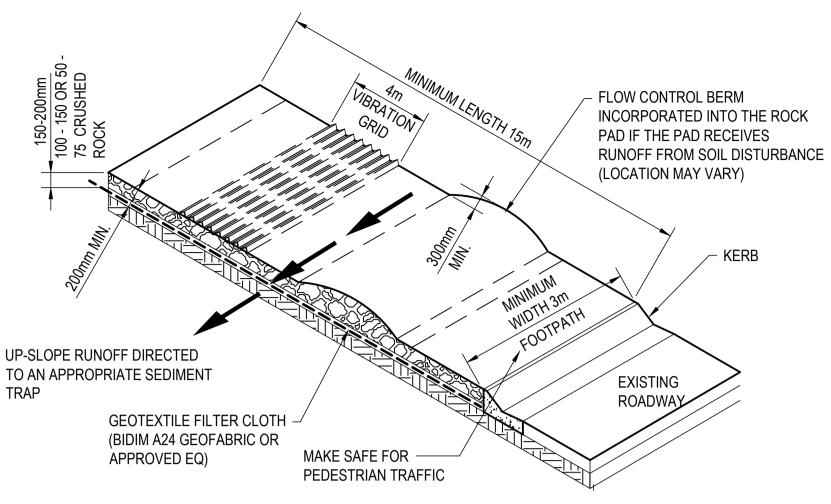


TYPICAL INSTALLATION OF A SEDIMENT FENCE NOT TO SCALE

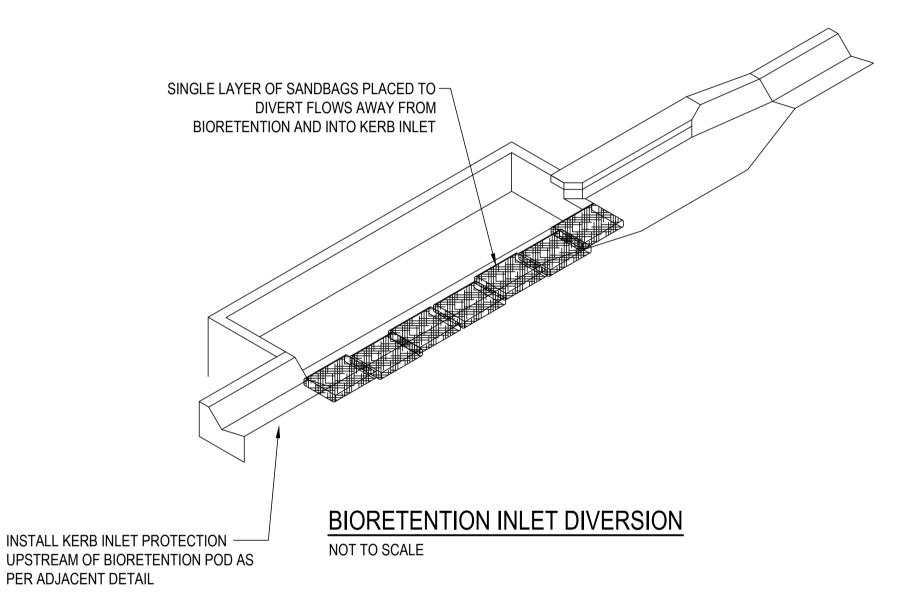


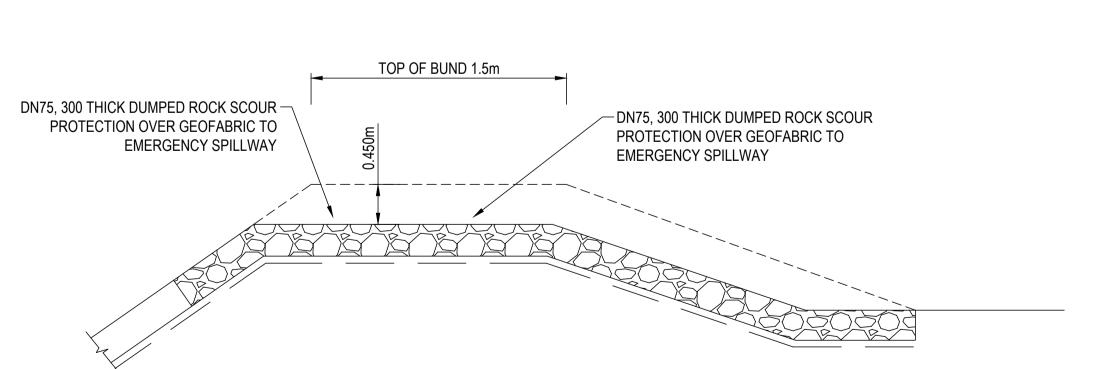




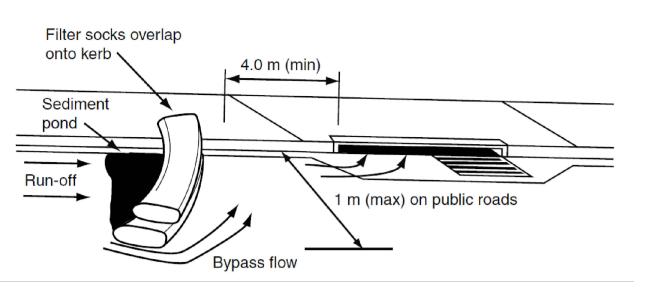


CONSTRUCTION ENTRY/EXIT POINT DETAIL NOT TO SCALE

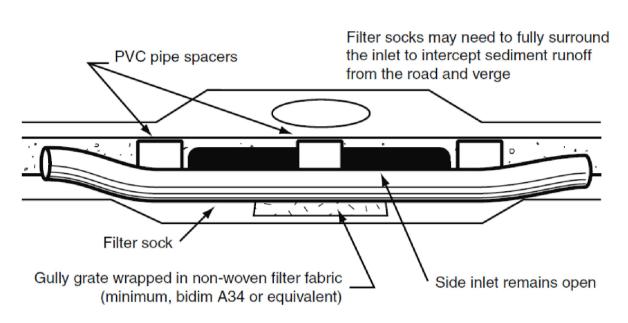




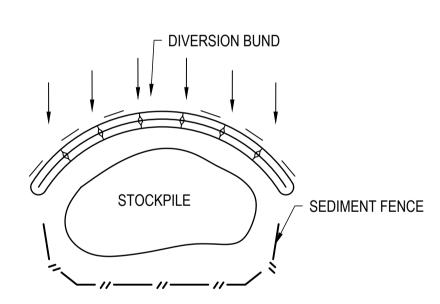
SEDIMENT BASIN EMERGENCY SPILLWAY DETAIL NOT TO SCALE



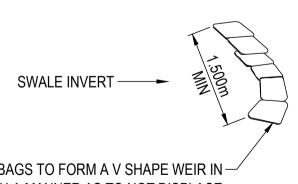
ON-GRADE KERB INLET SEDIMENT TRAP NOT TO SCALE



SAG INLET SEDIMENT TRAP NOT TO SCALE

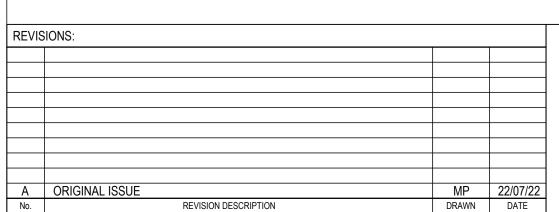


STOCKPILE SEDIMENT CONTROL NOT TO SCALE



SINGLE LAYER OF SANDBAGS TO FORM A V SHAPE WEIR IN-CHANNEL. PLACE IS SUCH A MANNER AS TO NOT DISPLACE STORMWATER RUNOFF OUTSIDE OF SWALE I.E. CENTRE OF WEIR MUST BE LOWER THAN SURROUNDING SURFACE

TYPICAL SAND BAG CHECK DAM NOT TO SCALE



NOT TO SCALE





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DRAWING TITLE
EROSION AND SEDIMENT

CONTROL DETAILS

SION	DRAWING STATUS	ORIGINA NOT FOR CO	AL ISSUE NSTRUCTION	
	PROJECT LEADER CK	DESIGNER MP	SIGNATURE CALVIN KIRK RPEQ:19536	(p/R
-	DRAFTSPERSON MP	AS SHOWN	JUL 2022	SHEET SIZE A1
	JOB No. BR22202	=	C1190	REVISION

SEDIMENT FENCE

MATERIALS

- 1. FABRIC: POLYPROPYLENE, POLYAMIDE, NYLON, POLYESTER OR POLYETHYLENE WOVEN OR NON-WOVEN FABRIC, AT LEAST 700mm IN WIDTH AND A MINIMUM UNIT WEIGHT OF 140GSM.
- 2. SUPPORT POSTS/STAKES AND STEEL STAR PICKETS SUITABLE FOR ATTACHING FABRIC.

INSTALLATION

- 1. WHERE POSSIBLE INSTALL SEDIMENT FENCE AT LEAST 2m FROM THE TOE OF ANY FILLING OPERATIONS THAT MAY RESULT IN SHIFTING SOIL/FILL DAMAGING THE FENCE.
- 2. ENSURE THE EXTREME ENDS OF THE FENCE ARE TURNED UP THE SLOPE AT LEAST 1.5m OR AS NECESSARY TO MINIMISE WATER BYPASSING AROUND THE FENCE.
- 3. ENSURE THE SEDIMENT FENCE IS INSTALLED IN A MANNER THAT AVOIDS THE CONCENTRATION OF FLOW ALONG THE FENCE AND THE UNDESIRABLE DISCHARGE OF WATER AROUND THE ENDS OF THE FENCE.
- 4. IF THE SEDIMENT FENCE IS TO BE INSTALLED ALONG THE EDGE OF THE EXISTING TREES, ENSURE CARE IS TAKEN TO PROTECT THE TREES AND THEIR ROOT SYSTEMS DURING INSTALLATION OF THE FENCE.
- 5. UNLESS DIRECTED BY THE SITE SUPERVISOR OR THE APPROVED PLANS, EXCAVATE A 200mm WIDE BY 200mm DEEP TRENCH ALONG THE PROPOSED FENCE LINE, PLACING THE EXCAVATED MATERIAL ON THE UP-SLOPE SIDE OF THE TRENCH.
- 6. ALONG THE LOWER SIDE OF THE TRENCH, APPROPRIATELY SECURE THE STAKES INTO THE GROUND SPACED NO GREATER THAN 3m IF SUPPORTED BY A TOP SUPPORT WIRE OR WEIR MESH BACKING, OTHERWISE NO GREATER THAN 2m.
- 7. WHEREVER POSSIBLE, CONSTRUCT THE SEDIMENT FENCE FROM A CONTINUOUS ROLL OF FABRIC. TO JOIN FABRIC ATTACH EACH END OF TWO OVERLAPPING STAKES WITH THE FABRIC FOLDING AROUND THE ASSOCIATED STAKE ONE TURN AND WITH TWO STAKES TIED TOGETHER WITH THE WIRE METHOD OR OVERLAP THE FABRIC TO THE NEXT ADJACENT SUPPORT POST.
- 8. SECURELY ATTACH THE FABRIC TO THE SUPPORT POSTS USING 25 X 12.5mm STAPLES, OR TIE WIRE AT MAXIMUM 150mm SPACING.
- 9. SECURELY ATTACH THE FABRIC TO THE SUPPORT WIRE/MESH (IF ANY) AT A MAXIMUM SPACING OF 1m.
- 10. ENSURE THE COMPLETED SEDIMENT FENCE IS AT LEAST 450mm, BUT NOT MORE THAN 700mm HIGH. IF A SPILL THROUGH WEIR IS INSTALLED, ENSURE THE CREST OF THE WEIR IS AT LEAST 300mm ABOVE GROUND LEVEL.
- 11. BACKFILL THE TRENCH AND TAMP THE FILL TO FIRMLY ANCHOR THE BOTTOM OF THE FABRIC AND MESH TO PREVENT WATER FROM FLOWING UNDER THE FENCE.
- 12. IF IT IS NOT POSSIBLE TO ANCHOR THE FABRIC IN AN EXCAVATED TRENCH, THEN USE A CONTINUOUS LAYER OF SAND OR AGGREGATE TO HOLD THE FABRIC FIRMLY ON THE GROUND.

MAINTENANCE

- 1. INSPECT THE SEDIMENT FENCE AT LEAST WEEKLY AND AFTER ANY SIGNIFICANT RAIN. MAKE NECESSARY REPAIRS IMMEDIATELY.
- 2. REPAIR ANY TORN SECTIONS WITH A CONTINUOUS PIECE OF FABRIC FROM POST TO POST.
- 3. WHEN MAKING REPAIRS, ALWAYS RESTORE THE SYSTEM TO ITS ORIGINAL CONFIGURATION UNLESS AN AMENDED LAYOUT IS REQUIRED OR SPECIFIED.
- 4. IF THE FENCE IS SAGGING BETWEEN STAKES, INSTALL ADDITIONAL SUPPORT POSTS.
- 5. REMOVE ACCUMULATED SEDIMENT IF THE SEDIMENT DEPOSIT EXCEEDS A DEPTH OF 1/3 THE HEIGHT OF THE FENCE.
- 6. DISPOSE OF SEDIMENT IN A SUITABLE MANNER THAT WILL NOT CAUSE AN EROSION OR POLLUTION HAZARD.

SEDIMENT BASINS

GENERAL

- 1. SEDIMENT BASIN TO BE LOCATED ABOVE THE 5YR FLOOD LINE. INSTALL SEDIMENT BASINS FOR ALL CATCHMENTS ACROSS THE PROJECT AREA.
- 2. MATERIALS USED IN THE CONSTRUCTION OF SEDIMENT BASINS SHOULD NOT HAVE AN EMERSON NUMBER OF 3 OR ABOVE (I.E. DISPERSIVE SOILS SUCH AS THE SUBSOILS THAT CAN BE ENCOUNTERED AT THE SITE CANNOT BE USED TO CONSTRUCT SEDIMENT BASINS).
- 3. A "FULL OF SEDIMENT" MARKER MUST BE PLACED IN THE SEDIMENT BASIN TO SHOW THE DESIGN DEPTH OF THE SOIL/STORAGE ZONE VOLUME AND TO INDICATE WHEN REMOVAL OF THE SEDIMENT IS TO BE CARRIED OUT.
- 4. CONSTRUCTED SEDIMENT BASINS TO BE FULLY OPERATIONAL THROUGHOUT THE CONSTRUCTION PERIOD AND UNTIL THE BASINS CATCHMENT AREA ACHIEVES 70% GROUND COVER ON ALL SOIL SURFACES.
- 5. FLOCCULATION REQUIREMENTS TO BE IN ACCORDANCE WITH TABLE B17 OF THE IECA GUIDELINES. IN GENERAL 32kg OF GYPSUM TO BE ADDED TO 100m³ OF STORED WATER.

MAINTENANCE

- 1. INSPECT THE SEDIMENT BASIN DURING THE FOLLOWING PERIODS AS STATED WITHIN PAGE B.52 OF THE IECA GUIDELINES:
- 1.1. DURING CONSTRUCTION TO DETERMINE WHETHER MACHINERY, FALLING TREES OR CONSTRUCTION ACTIVITY HAS DAMAGED ANY COMPONENT OF THE SEDIMENT BASIN. IF DAMAGE HAS OCCURRED, REPAIR IT.
- 1.2. AFTER EACH RUNOFF EVENT. INSPECT THE EROSION DAMAGE AT FLOW ENTRY AND EXIT POINTS. IF DAMAGE HAS OCCURRED, MAKE THE NECESSARY REPAIRS.
- 1.3. AT LEAST WEEKLY DURING THE NOMINATED WET SEASON (IF ANY) OTHERWISE AT LEAST FORTNIGHTLY.
- 1.4. PRIOR TO, AND IMMEDIATELY AFTER, PERIODS OF "STOP WORK" OR SITE "SHUTDOWN"
- 2. CLEAN OUT ACCUMULATED SEDIMENT WHEN IT REACHES THE MARKER BOARD/POST, AND RESTORE THE ORIGINAL STORAGE VOLUME. PLACE SEDIMENT IN A DISPOSAL AREA OR, IF APPROPRIATE, MIX WITH DRY SOIL ON THE SITE.
- 3. DO NOT DISPOSE OF SEDIMENT IN A MANNER THAT WILL CREATE AN EROSION OR POLLUTION HAZARD.
- 4. CHECK ALL VISIBLE PIPE CONNECTIONS FOR LEAKS, AND REPAIR AS NECESSARY.
- 5. CHECK FILL MATERIAL IN THE DAM FOR EXCESSIVE SETTLEMENT, SLUMPING OF THE SLOPES OR PIPING BETWEEN THE CONDUIT AND THE EMBANKMENT; MAKE ALL NECESSARY REPAIRS.
- 6. REMOVE ALL TRASH AND OTHER DEBRIS FROM THE BASIN AND RISER.
- 7. SUBMERGED INFLOW PIPES MUST BE INSPECTED AND DE-SILTED (AS REQUIRED) AFTER EACH INFLOW EVENT.

REMOVAL OR CONVERSION OF SEDIMENT BASIN

- 1. WHEN GRADING AND CONSTRUCTION IN THE DRAINAGE AREA ABOVE A TEMPORARY SEDIMENT BASIN IS COMPLETED AND THE DISTURBED AREAS ARE ADEQUATELY STABILISED, THE BASIN MUST BE REMOVED OR OTHERWISE INCORPORATED INTO THE PERMANENT STORMWATER DRAINAGE SYSTEM. IN EITHER CASE, SEDIMENT SHOULD BE CLEARED AND PROPERLY DISPOSED OF AND THE BASIN AREA STABILISED.
- 2. BEFORE STARTING ANY MAINTENANCE WORK ON THE BASIN OR SPILLWAY, INSTALL ALL NECESSARY SHORT-TERM SEDIMENT CONTROL MEASURES DOWNSTREAM OF THE SEDIMENT BASIN.
- 3. ALL WATER AND SEDIMENT MUST BE REMOVED FROM THE BASIN PRIOR TO THE DAM'S REMOVAL. DISPOSE OF SEDIMENT AND WATER IN A MANNER THAT WILL NOT CREATE AN EROSION OR POLLUTION HAZARD.
- 4. BRING THE DISTURBED AREA TO A PROPER GRADE, THEN SMOOTH, COMPACT AND STABILISE OR REVEGETATE AS REQUIRED TO ESTABLISH A STABLE LAND SURFACE.

MATERIAL STOCKPILING:

- 1. THE CONSTRUCTION CONTRACTOR IS TO ADHERE TO THE FOLLOWING SOIL AND STOCKPILE MANAGEMENT PRACTISES. STOCKPILES OF ERODIBLE MATERIAL THAT HAS THE POTENTIAL TO CAUSE ENVIRONMENTAL HARM IF DISPLACED MUST BE:
- 2. APPROPRIATELY PROTECTED FROM WIND, RAIN, CONCENTRATED SURFACE FLOW AND EXCESSIVE UP-SLOPE STORMWATER SURFACE FLOWS.
- 3. LOCATED AT LEAST 2m FROM ANY HAZARDOUS AREA, RETAINED VEGETATION, OR CONCENTRATED DRAINAGE LINE.
- 4. LOCATED UP-SLOPE OF AN APPROPRIATE SEDIMENT CONTROL SYSTEM.
- 5. PROVIDED WITH AN APPROPRIATE PROTECTIVE COVER (SYNTHETIC, MULCH OR VEGETATIVE) IF THE MATERIALS ARE LIKELY TO BE STOCKPILED FOR MORE THAN 28 DAYS.
- 6. PROVIDED WITH AN APPROPRIATE PROTECTIVE COVER (SYNTHETIC, MULCH OR VEGETATIVE) IF THE MATERIALS ARE LIKELY TO BE STOCKPILED FOR MORE THAN 10 DAYS DURING THOSE MONTHS THAT HAVE A HIGH EROSION RISK.
- 7. PROVIDED WITH AN APPROPRIATE PROTECTIVE COVER (SYNTHETIC, MULCH OR VEGETATIVE) IF THE MATERIALS ARE LIKELY TO BE STOCKPILED FOR MORE THAN 5 DAYS DURING THOSE MONTHS THAT HAVE A HIGH EROSION RISK.
- 8. A SUITABLE FLOW DIVERSION SYSTEM MUST BE ESTABLISHED IMMEDIATELY UP-SLOPE OF A STOCKPILE OF ERODIBLE MATERIAL THAT HAS THE POTENTIAL TO CAUSE ENVIRONMENTAL HARM IF DISPLACED, IF THE UP-SLOPE CATCHMENT AREA DRAINING TO THE STOCKPILE EXCEEDS 1500m².

STABILISED ENTRY/EXIT NOTES

MATERIALS

- ROCK: WELL GRADED, HARD, ANGULAR, EROSION RESISTANT ROCK, NOMINAL DIAMETER OF 50mm TO 75mm (SMALL DISTURBANCES) OR 100 TO 150mm (LARGE DISTURBANCES). ALL REASONABLE MEASURES MUST BE TAKEN TO OBTAIN ROCK OF NEAR UNIFORM SIZE.
- FOOTPATH STABILISING AGGREGATE: 25 TO 50mm GRAVEL OR AGGREGATE.
- GEOTEXTILE FABRIC: HEAVY-DUTY, NEEDLE-PUNCHED, NON-WOVEN FILTER CLOTH ('BIDIM' A24 OR EQUIVALENT).

ISTALLATION

- 1. REFER TO APPROVED PLANS FOR LOCATION AND DIMENSIONAL DETAILS. IF THERE ARE QUESTIONS OR PROBLEMS WITH THE LOCATION, DIMENSIONS, OR METHOD OF INSTALLATION, CONTACT THE ENGINEER OR RESPONSIBLE ON-SITE OFFICER FOR ASSISTANCE.
- 2. CLEAR THE LOCATION OF THE VIBRATION GRID, REMOVING STUMPS, ROOTS AND OTHER VEGETATION TO PROVIDE A FIRM FOUNDATION SO THAT THE ROCK IS NOT PRESSED INTO SOFT GROUND. CLEAR SUFFICIENT WIDTH TO ALLOW PASSAGE OF LARGE VEHICLES, BUT CLEAR ONLY THAT NECESSARY FOR THE EXIT. DO NOT CLEAR ADJACENT AREAS UNTIL THE REQUIRED EROSION AND SEDIMENT CONTROL DEVICES ARE IN PLACE
- 3. IF THE EXPOSED SOIL IS SOFT, PLASTIC OR CLAYEY, PLACE A SUB-BASE OF CRUSHED ROCK OR A LAYER OF HEAVY-DUTY FILTER CLOTH TO PROVIDE A FIRM FOUNDATION.
- 4. ENSURE THAT THE INSTALLATION OF THE VIBRATION GRID INCLUDES ADEQUATE SEDIMENT STORAGE VOLUME UNDER THE GRID. WHERE NECESSARY, INSTALL SUITABLE PRECAST SEDIMENT COLLECTION CHAMBERS.
- 5. PLACE A ROCK PAD/RAMP FORMING A MINIMUM 200mm THICK LAYER OF CLEAN, OPEN-VOID ROCK OVER THE ROADWAY BETWEEN THE VIBRATION GRID AND THE SEALED STREET TO PREVENT TYRES FROM PICKING UP MORE SOIL AFTER THEY HAVE BEEN CLEANED.
- 6. IF THE ASSOCIATED CONSTRUCTION SITE IS UP-SLOPE OF THE ROCK PAD, THUS CAUSING STORMWATER RUNOFF TO FLOW TOWARDS THE ROCK PAD, THEN FORM A MINIMUM 300mm HIGH FLOW CONTROL BERM ACROSS THE ROCK PAD TO DIVERT SUCH RUNOFF TO A SUITABLE SEDIMENT TRAP
- 7. THE TOTAL LENGTH OF THE VIBRATION GRIP AND ROCK RAMPS SHOULD BE AT LEAST 15m WHERE PRACTICABLE, AND AS WIDE AS THE FULL WIDTH OF THE ENTRY OR EXIT AND AT LEAST 3m. THE ROCK RAMP SHOULD COMMENCE AT THE EDGE OF THE OFF-SITE SEALED ROAD OR PAVEMENT.
- 8. FLARE THE END OF THE ROCK PAD WHERE IT MEETS THE PAVEMENT SO THAT THE WHEELS OF TURNING VEHICLES DO NOT TRAVEL OVER UNPROTECTED SOIL.

MAINTENANCE

- 1. INSPECT VIBRATION GRID PRIOR TO FORECAST RAIN, DAILY DURING EXTENDED PERIODS OF RAINFALL, AFTER SIGNIFICANT RUNOFF-PRODUCING RAINFALL, OR OTHERWISE AT FORTNIGHTLY INTERVALS.
- 2. IF SAND, SOIL, SEDIMENT OR MUD IS TRACKED OR WASHED ONTO THE ADJACENT SEALED ROADWAY, THEN SUCH MATERIAL MUST BE PHYSICALLY REMOVED, FIRST USING A SQUARE-EDGED SHOVEL, AND THEN A STIFF-BRISTLED BROOM, AND THEN BY A MECHANICAL VACUUM UNIT, IF AVAILABLE.
- 3. IF NECESSARY FOR SAFETY REASONS, THE ROADWAY SHALL ONLY BE WASHED CLEAN AFTER ALL REASONABLE EFFORTS HAVE BEEN TAKEN TO SHOVEL AND SWEEP THE MATERIAL FROM THE ROADWAY.
- 4. WHEN THE VOIDS BETWEEN THE ROCK BECOMES FILLED WITH MATERIAL AND THE EFFECTIVENESS OF THE ROCK RAMPS ARE REDUCED TO A POINT WHERE SEDIMENT IS BEING TRACKED OFF THE SITE, A NEW 100mm LAYER OF ROCK MUST BE ADDED AND/OR THE ROCK PAD MUST BE EXTENDED.
- 5. ENSURE ANY ASSOCIATED DRAINAGE CONTROL MEASURES ARE MAINTAINED IN ACCORDANCE WITH THEIR DESIRED OPERATIONAL CONDITION.
- 6. DISPOSE OF SEDIMENT AND DEBRIS IN A MANNER THAT WILL NOT CREATE AN EROSION OR POLLUTION HAZARD.

CHECK DAM SEDIMENT TRAPS

INSTALLATION

- REFER TO APPROVED PLANS FOR LOCATION AND INSTALLATION DETAILS. IF THERE ARE QUESTIONS OR PROBLEMS WITH THE LOCATION OR METHOD OF INSTALLATION CONTACT THE ENGINEER OR RESPONSIBLE ON-SITE OFFICER FOR ASSISTANCE.
- 2. PRIOR TO PLACEMENT OF THE SEDIMENT TRAP, ENSURE THE DRAINAGE CHANNEL IS DEEP ENOUGH TO PREVENT WATER BEING UNSAFELY DIVERTED OUT OF THE DRAIN ONCE THE CHECK DAMS ARE INSTALLED.
- 3. LOCATE EACH CHECK DAM SEDIMENT TRAP AS DIRECTED WITHIN THE APPROVED PLANS, OR OTHERWISE AT SUCH A SPACING TO ACHIEVE THE REQUIRED SEDIMENT TRAPPING OUTCOMES.
- 4. IF THE CHECK DAMS ARE ALSO BEING USED TO CONTROL EROSION WITHIN THE DRAINAGE CHANNEL, THEN LOCATE EACH SUCCESSIVE CHECK DAM SUCH THAT THE CREST OF THE IMMEDIATE DOWNSTREAM DAM IS LEVEL WITH THE CHANNEL INVERT AT THE IMMEDIATE UPSTREAM CHECK DAM.
- 5. ENSURE SAND BAGS EXTEND UP THE CHANNEL BANKS (WHERE PRACTICAL) TO A LEVEL AT LEAST 100mm ABOVE THE CREST LEVEL OF THE CHECK DAM.

MAINTENANCE

- 1. INSPECT EACH CHECK DAM AND THE DRAINAGE CHANNEL AT LEAST WEEKLY AND AFTER RUNOFF-PRODUCING RAINFALL.
- 2. CORRECT ALL DAMAGE IMMEDIATELY. IF SIGNIFICANT EROSION OCCURS BETWEEN ANY OF THE CHECK DAMS, THEN CHECK THE SPACING OF THE DAMS AND WHERE NECESSARY INSTALL INTERMEDIATE CHECK DAMS OR A SUITABLE CHANNEL LINER.
- 3. CHECK FOR DISPLACEMENT OF THE CHECK DAMS.
- 4. CHECK FOR SOIL SCOUR AROUND THE ENDS OF EACH CHECK DAM. IF SUCH EROSION IS OCCURRING, CONSIDER EXTENDING THE WIDTH OF THE CHECK DAM TO AVOID SUCH PROBLEMS.
- 5. IF SEVERE SOIL EROSION OCCURS EITHER UNDER OR AROUND THE CHECK DAMS, THEN SEEK EXPERT ADVICE ON AN ALTERNATIVE TREATMENT MEASURE.
- 6. DE-SILT SEDIMENT TRAP IF THE SEDIMENT LEVEL EXCEEDS 1/3 THE CREST HEIGHT.
- 7. DISPOSE OF COLLECTED SEDIMENT IN A SUITABLE MANNER THAT WILL NOT CAUSE AN EROSION OR POLLUTION HAZARD.

KERB INLET SEDIMENT TRAPS

FROM ICEA (INTERNATIONAL EROSION SEDIMENT ASSOCIATION) AUSTRALASIA STANDARD DRAWING ESC-03 (DEC 09).

MATERIALS

- 1. SOCKS: MINIMUM 200mm DIAMETER SYNTHETIC OR BIODEGRADABLE TUBES MANUFACTURED FROM NON-WOVEN OR COMPOSITE FABRIC SUITABLE FOR THE 'FILTRATION' OF COARSE SEDIMENTS.
- 2. FILL MATERIAL: STRAW, CANE MULCH, COMPOSITE MATERIAL (AS4454), COARSE SAND, OR CLEAN AGGREGATE.
- 3. STAKES: MINIMUM 25 x 25mm TIMBER.

INSTALLATION

 REFER TO APPROVED PLANS FOR LOCATION AND INSTALLATION DETAILS. IF THERE ARE QUESTIONS OR PROBLEMS WITH THE LOCATION, DIMENSIONS OR METHOD OF INSTALLATION CONTACT THE ENGINEER OR RESPONSIBLE ON-SITE OFFICER FOR ASSISTANCE.

- 2. ENSURE THE SOCKS ARE PLACED INDIVIDUALLY OR COLLECTIVELY (AS A SINGLE SEDIMENT TRAP) SUCH THAT:
 - (i) LEAKAGE AROUND OR UNDER THE SOCKS IS MINIMISED.
- (ii) ADJOINING SOCKS ARE TIGHTLY BUTTED OR OVERLAPPED AT LEAST 450mm.
 (iii) THE SURFACE AREA OF POTENTIAL WATER PONDING UP-SLOPE OF EACH SEDIMENT TRAP IS
- MAXIMISED.
 (iv) TO THE MAXIMUM DEGREE PRACTICAL, ALL SEDIMENT-LADEN WATER WILL PASS THROUGH THE

FORMED POND BEFORE FLOWING OVER THE DOWN-SLOPE END OF THE SEDIMENT TRAP.

- 3. WHEN PLACED ACROSS THE INVERT OF MINOR DRAINS, ENSURE THE SOCKS ARE PLACED SUCH THAT: (i) THE CREST OF THE DOWNSTREAM SOCK IS LEVEL WITH THE CHANNEL INVERT AT THE IMMEDIATE UPSTREAM SOCK (IF ANY);
- (ii) EACH SOCK EXTENDS UP THE CHANNEL BANKS SUCK THAT THE CREST OF THE SOCK AT ITS LOWEST POINT IS LOWER THAN GROUND LEVEL AT EITHER END OF THE SOCK.
- 4. IF STAKES ARE REQUIRED TO ANCHOR THE SOCKS, THEIR SPACING DOES NOT EXCEED 1.2m OR SIX TIMES THE SOCK DIAMETER (WHICHEVER IS THE LESSER). A MAXIMUM STAKE SPACING OF 0.3m APPLIES WHEN USED TO FORM CHECK DAMS.

MAINTENANCE

- 1. INSPECT ALL FILTER SOCKS PRIOR TO FORECAST RAIN, DAILY DURING EXTENDED PERIODS OF RAINFALL, AFTER SIGNIFICANT RUNOFF PRODUCING STORMS OR OTHERWISE AT WEEKLY INTERVALS.
- 2. REPAIR OR REPLACE DAMAGED SOCKS.
- 3. THE BULK OF THE SEDIMENT COLLECTED BEHIND THE FILTER SOCKS SHOULD BE REMOVED BY SHOVEL AFTER EACH STORM EVENT.
- 4. REMOVE COLLECTED SEDIMENT AND DISPOSE OF IN A SUITABLE MANNER THAT WILL NOT CAUSE AN EROSION OR POLLUTION HAZARD.

EMOVAL

- 1. ALL SAND, SOIL, SEDIMENT OR MUD MUST BE PHYSICALLY REMOVED FROM SEALED SURFACES, FIRST USING A SQUARE-EDGED SHOVEL, AND THEN A STIFF-BRISTLED BROOM, AND THEN BY A MECHANICAL VACUUM UNIT, IF AVAILABLE.
- 2. IF NECESSARY FOR SAFETY REASONS, THE SEALED SURFACE SHALL ONLY BE WASHED CLEAN AFTER ALL REASONABLE EFFORTS HAVE BEEN TAKEN TO SHOVEL AND SWEEP THE MATERIAL FROM THE SURFACE.
- 3. DISPOSE OF COLLECTED SEDIMENT IN A SUITABLE MANNER THAT WILL NOT CAUSE AN EROSION OR POLLUTION HAZARD.
- 4. ALL SYNTHETIC (PLASTIC) MESH OR OTHER NON READILY BIODEGRADABLE MATERIAL MUST BE REMOVED FROM THE SITE ONCE THE SLOPE OR DRAIN IS STABILISED, OR THE SOCKS HAVE DETERIORATED TO A POINT WHERE THEY ARE NO LONGER PROVIDING THEIR INTENDED DRAINAGE OR SEDIMENT CONTROL FUNCTION.



Coordinator Development Assessment

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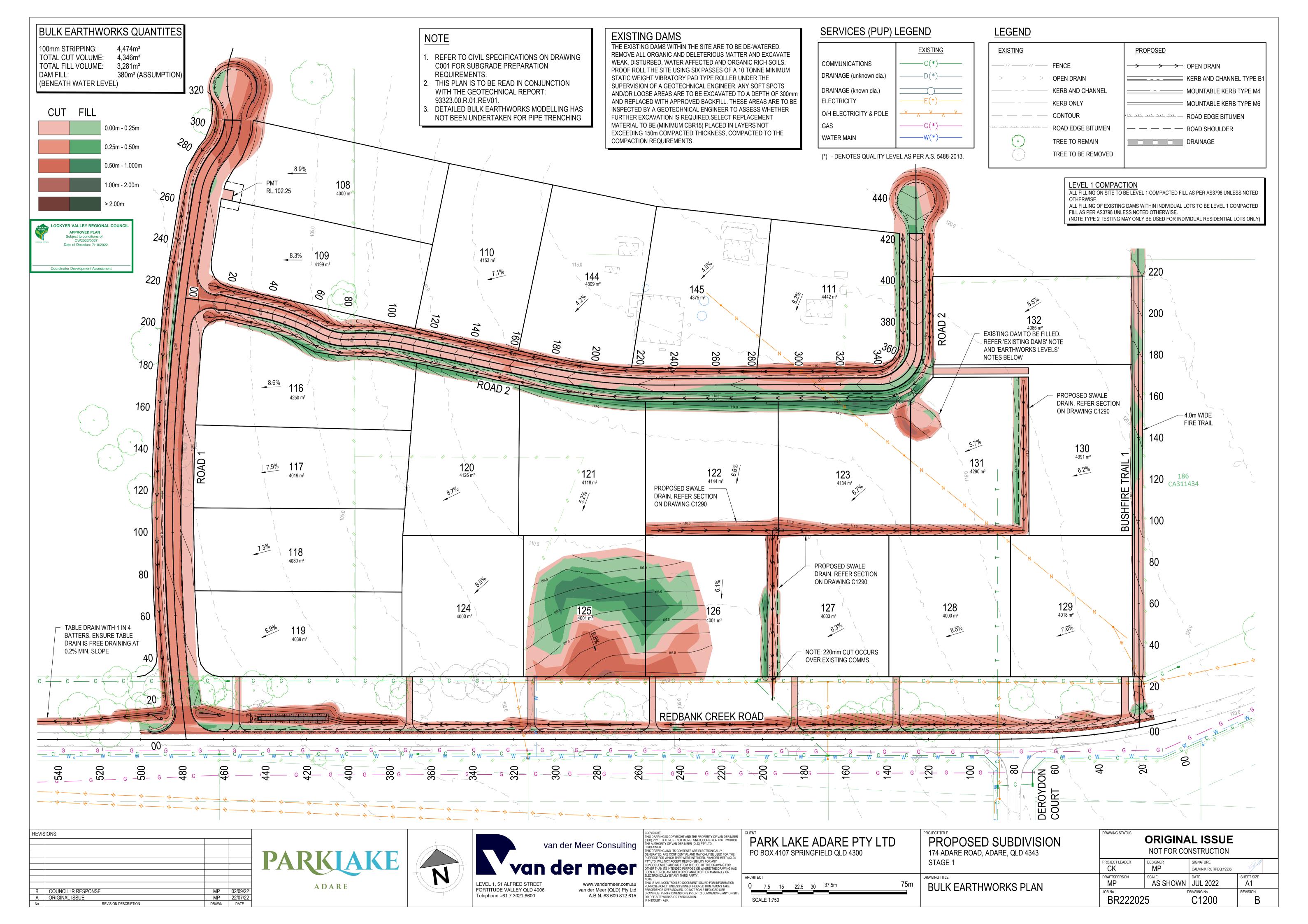
PROPOSED SUBDIVISION
174 ADARE ROAD, ADARE, QLD 4343
STAGE 1

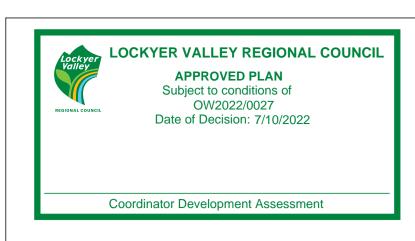
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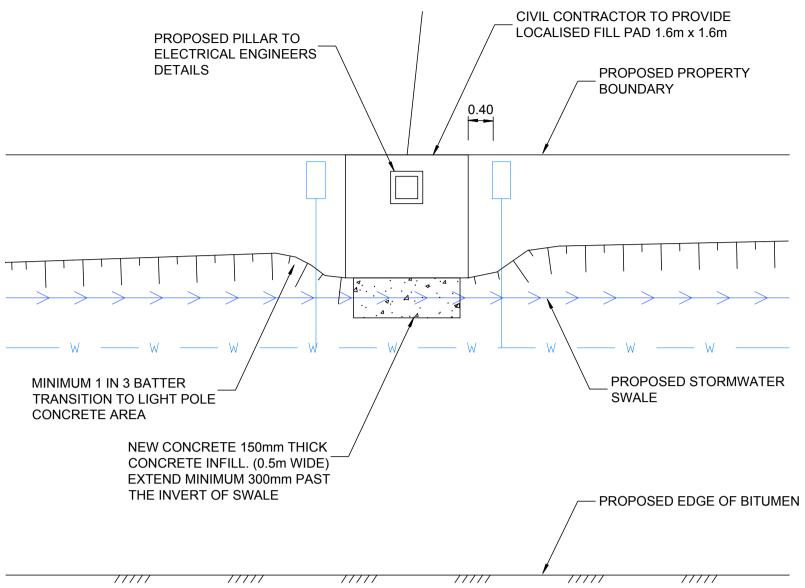
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CK
DESIGNER
MP
SIGNATURE
CALVIN KIRK RPEQ:19536

DATE
AS SHOWN
DRAWING NO

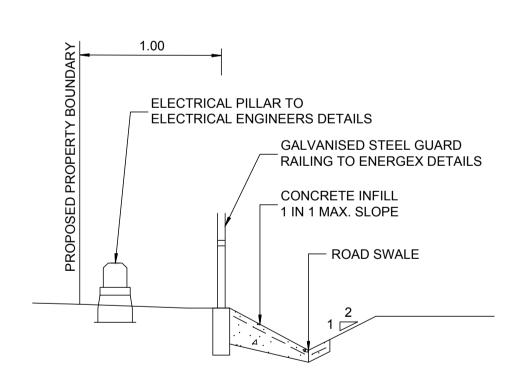
EROSION AND SEDIMENT CONTROL NOTES



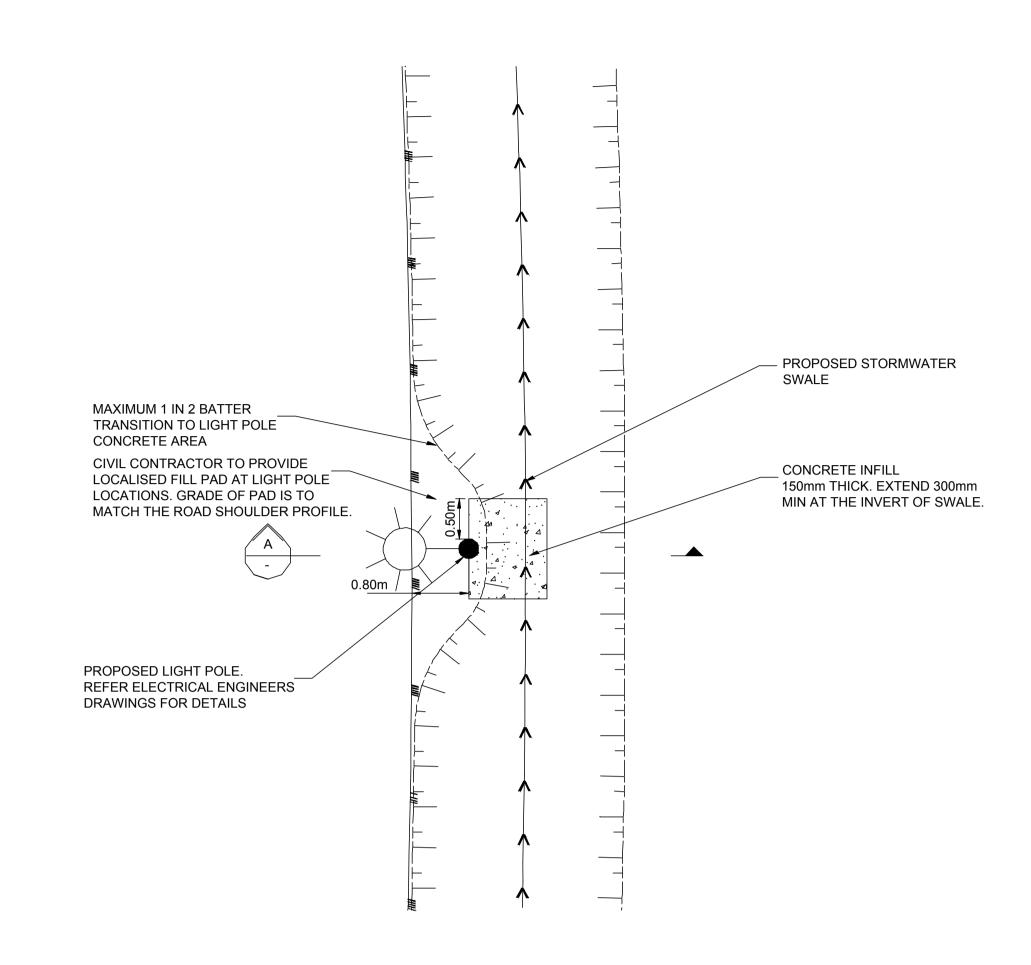




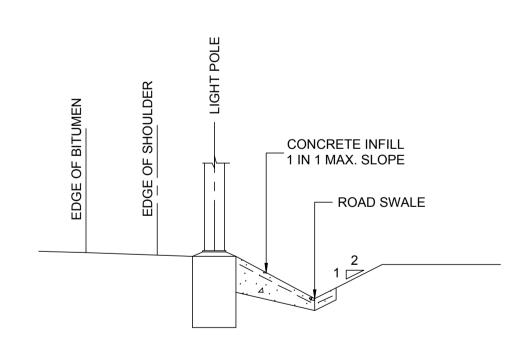
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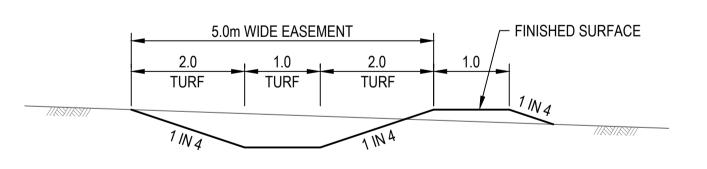
B TYPICAL ELECTRICAL PILLAR SECTION
SCALE 1:50



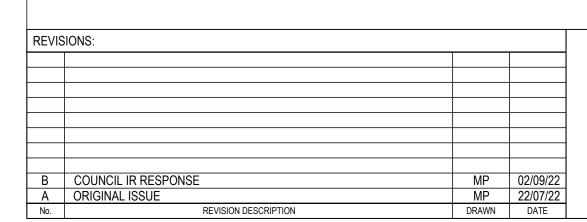
TYPICAL LIGHT POLE PROTECTION DETAIL
SCALE 1:50



TYPICAL LIGHT POLE SECTION A
SCALE 1:50



TYPICAL SWALE DRAIN SECTION
(REFER TO DRG C1500 FOR STORMWATER CALCULATIONS)
N.T.S.



PARKIAKE ADARE





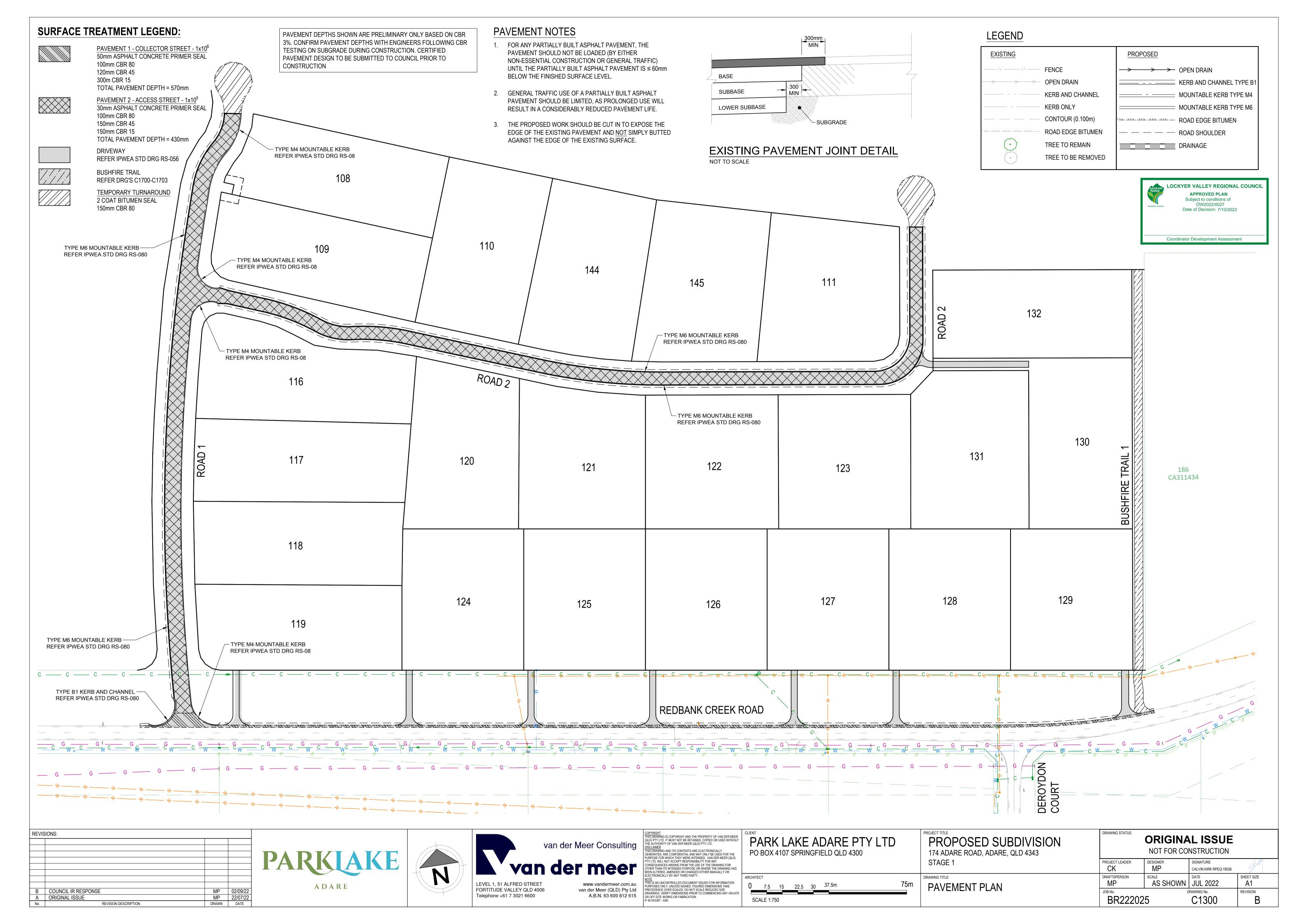
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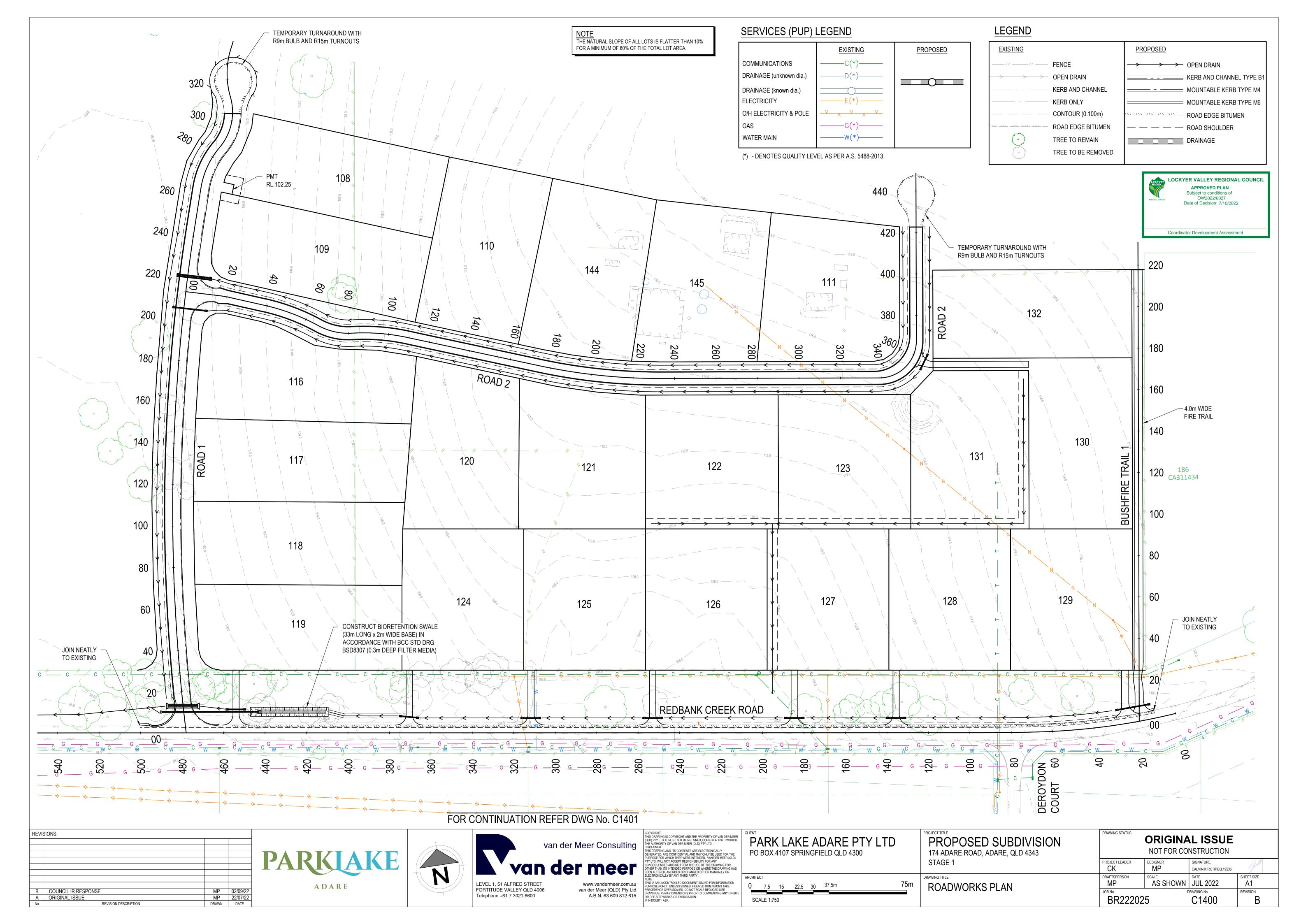
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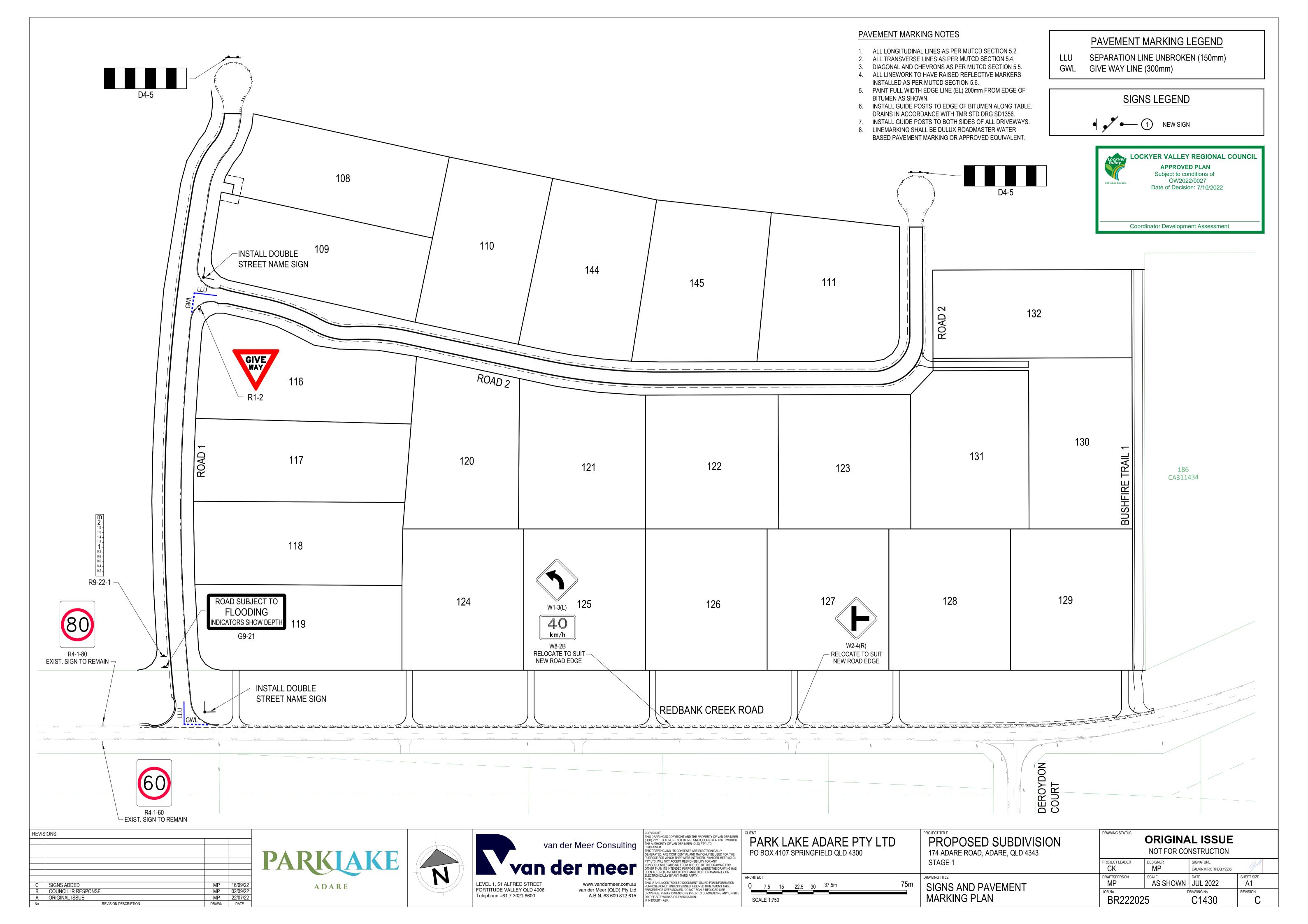
PROJECT TITLE
PROPOSED SUBDIVISION
174 ADARE ROAD, ADARE, QLD 4343
STAGE 1

BULK EARTHWORKS DETAILS

DRAWING STATUS			
PROJECT LEADER CK	DESIGNER MP	SIGNATURE CALVIN KIRK RPEQ:19536	(fg/le
DRAFTSPERSON MP	AS SHOWN	JUL 2022	SHEET SIZE A1
JOB No. BR222025		RAWING No. C1290	REVISION





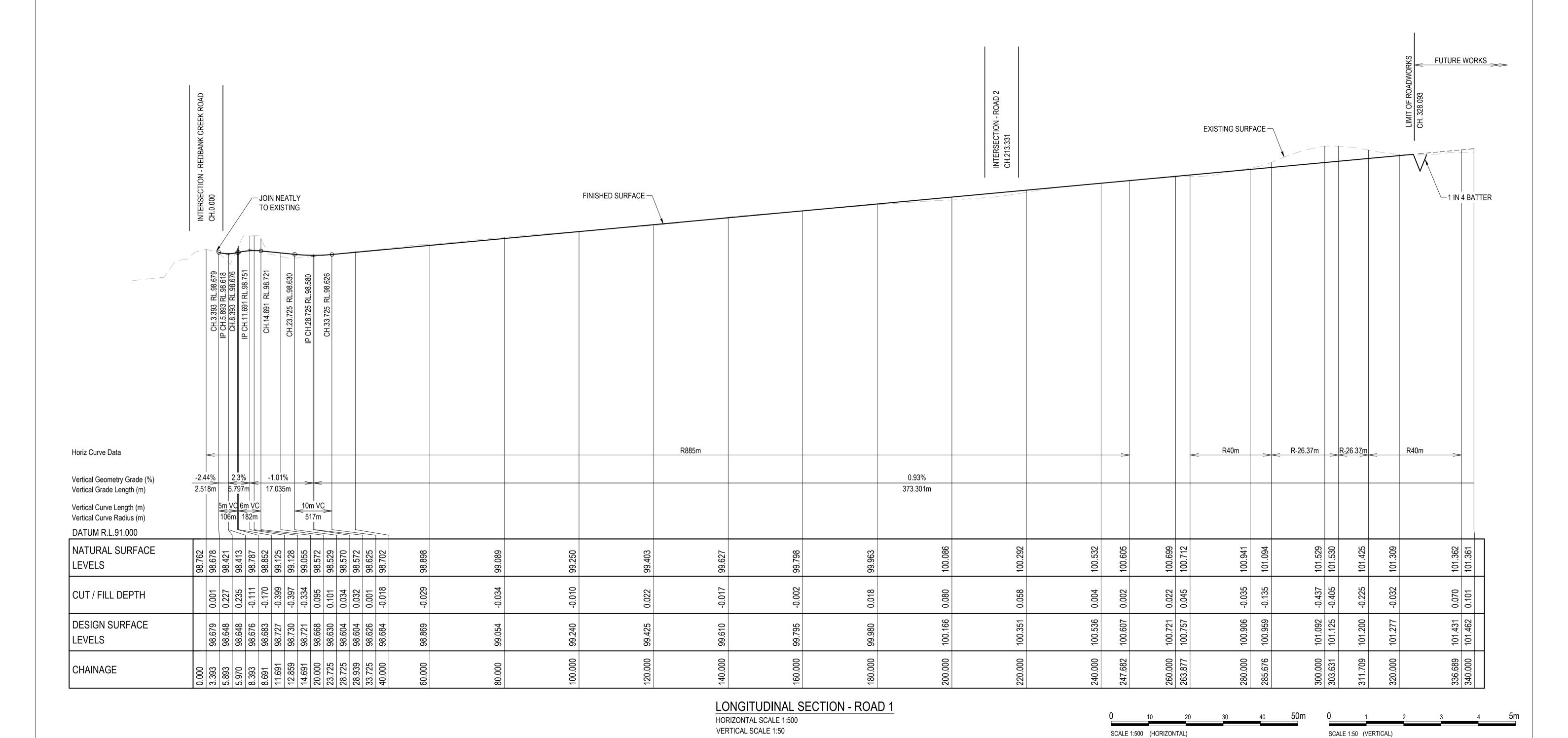




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van der Meer Consulting

van der Meer (QLD) Pty Ltd

FORTITUDE VALLEY QLD 4006

Telephone +61 7 3021 6600

PARKIAKE

ADARE

MP 02/09/22 MP 22/07/22

PARK LAKE ADARE PTY LTD

PO BOX 4107 SPRINGFIELD QLD 4300

DRAWING STATUS

DRAFTSPERSON

BR222025

MP

ORIGINAL ISSUE

NOT FOR CONSTRUCTION

AS SHOWN JUL 2022

CALVIN KIRK RPEQ:19536

C1450

SHEET SIZE

A1

В

MP

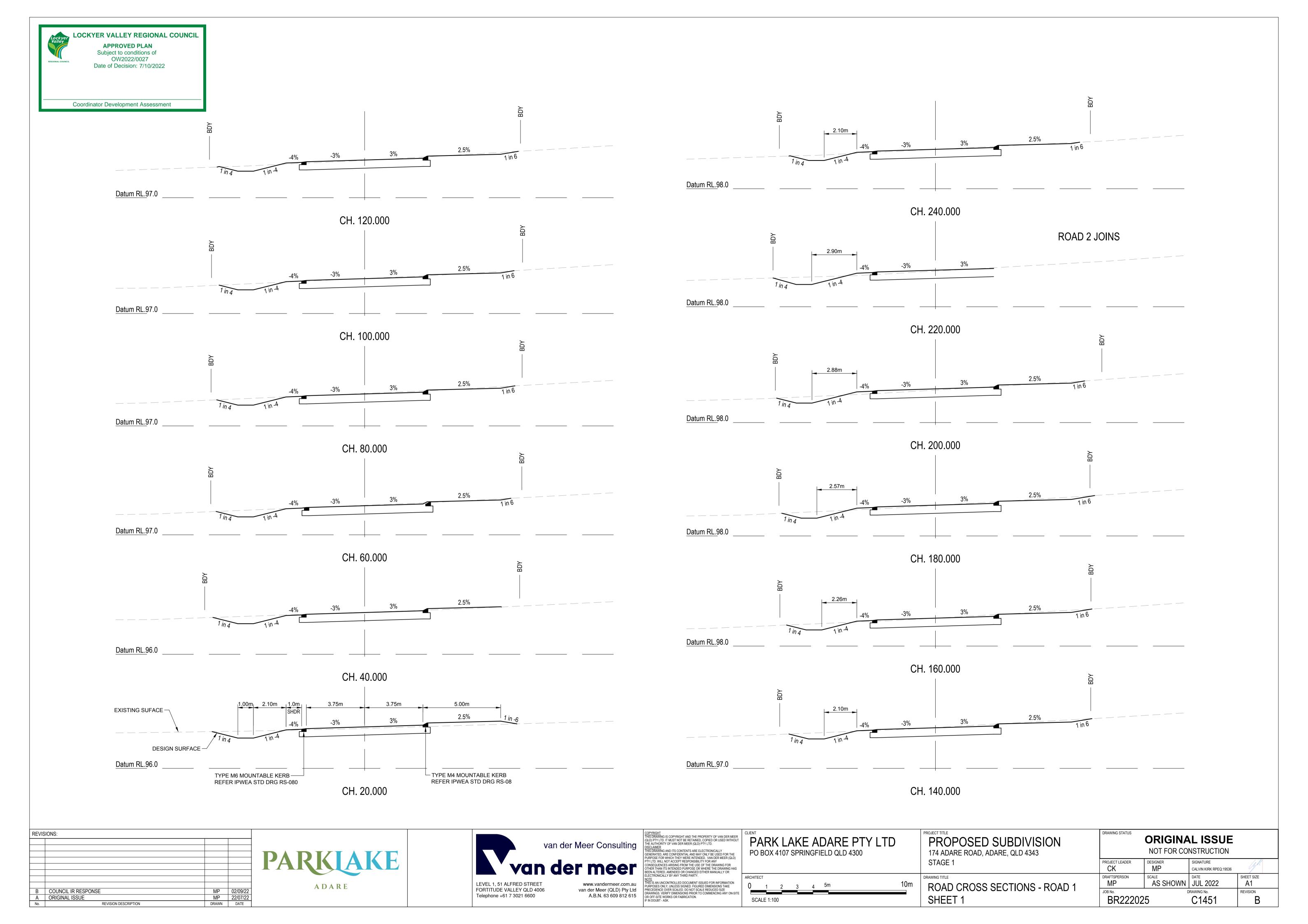
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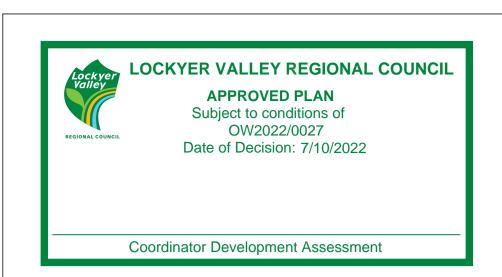
ROAD LONGITUDINAL SECTION

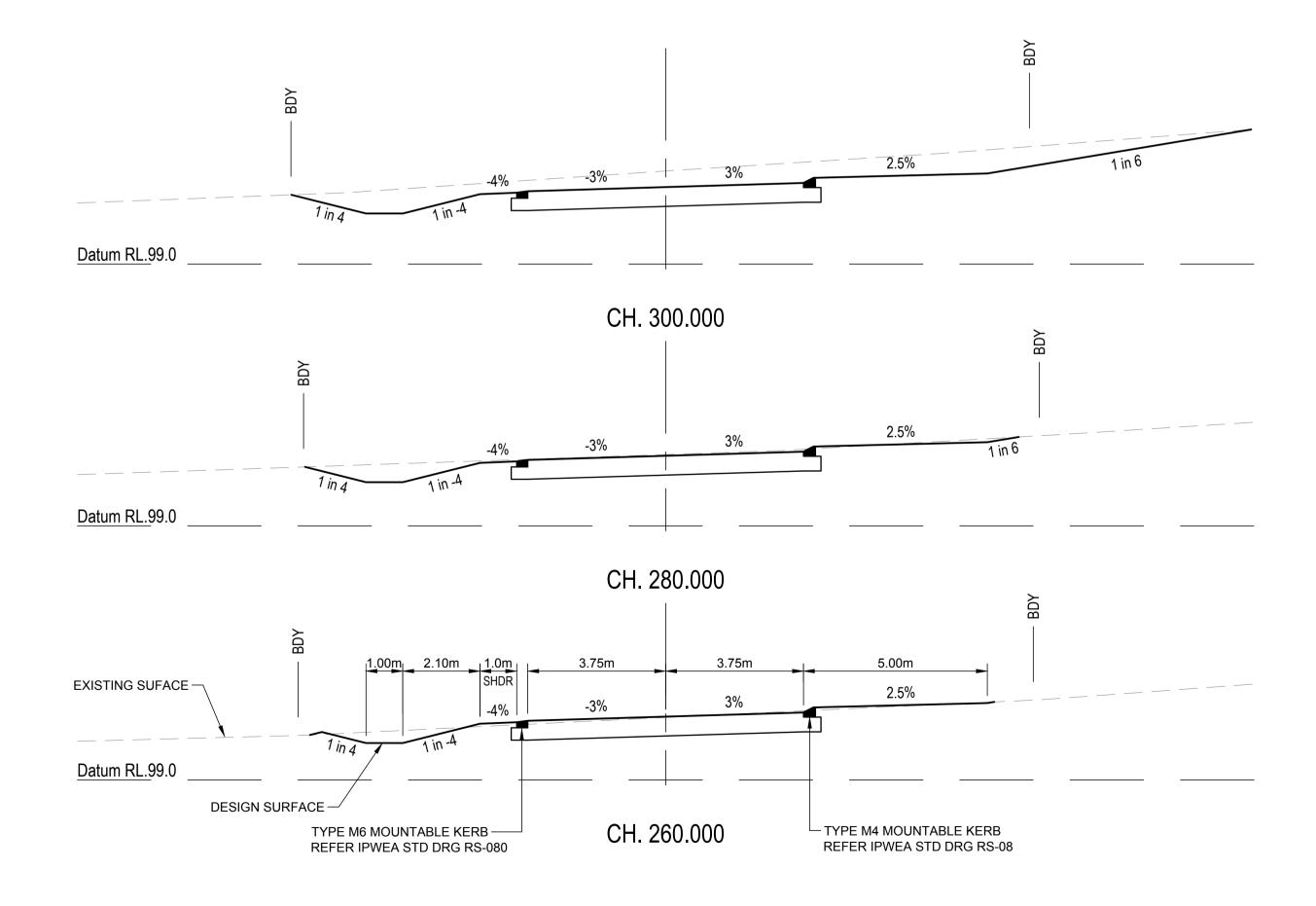
174 ADARE ROAD, ADARE, QLD 4343

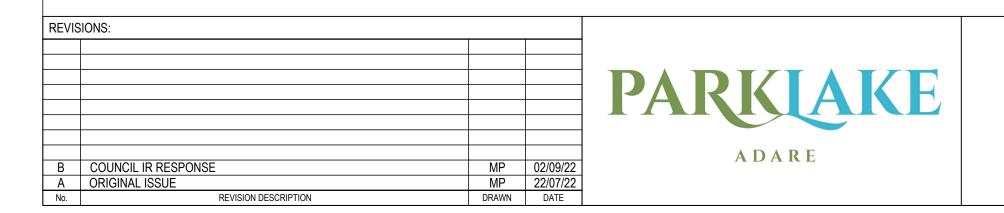
STAGE 1

ROAD 1













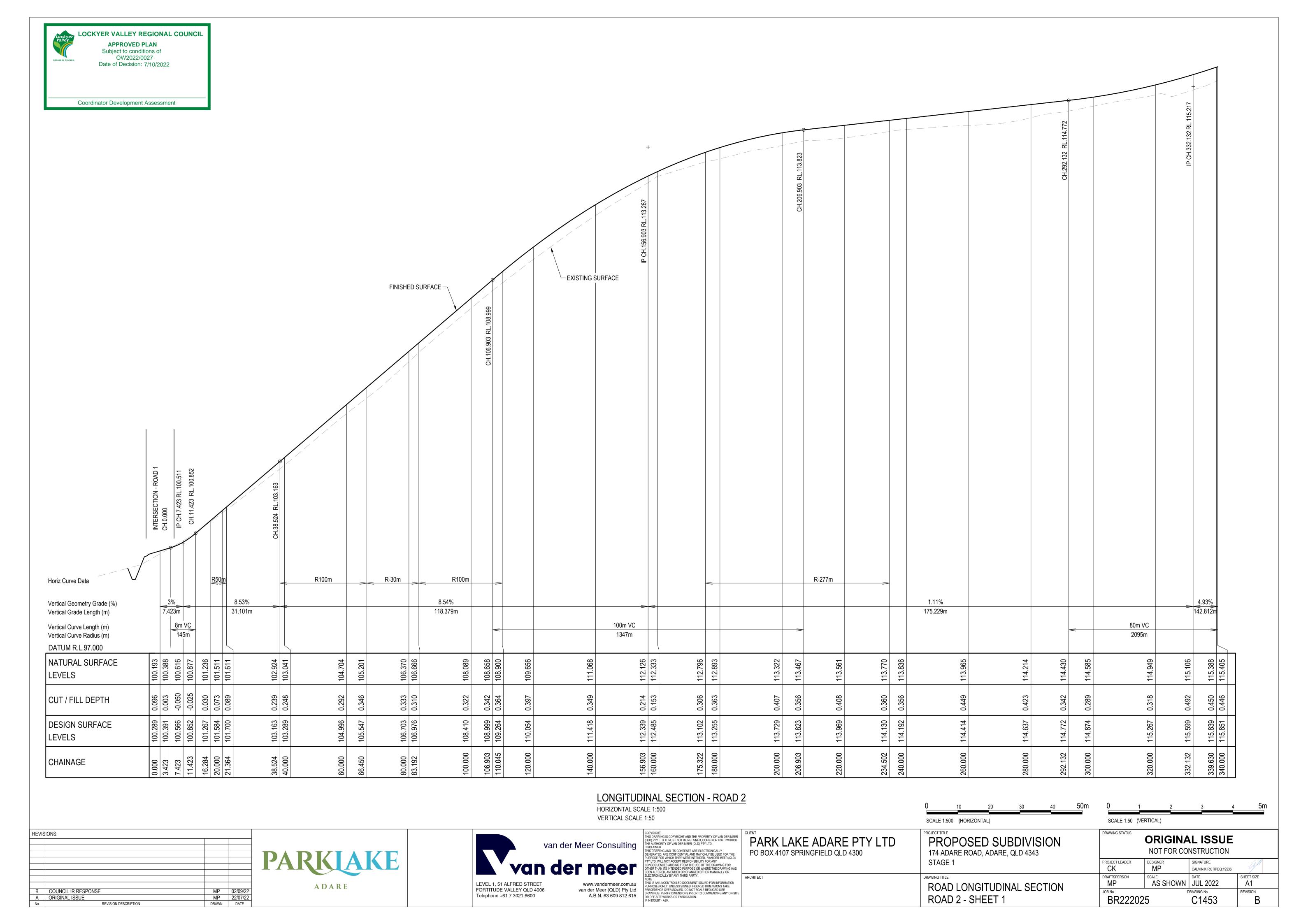
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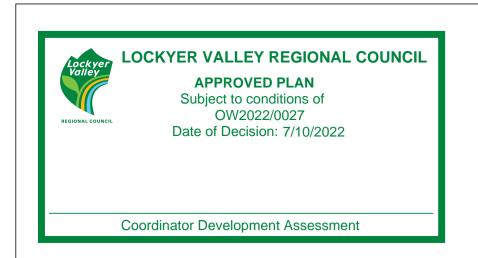
SCALE 1:100

PROPOSED SUBDIVISION 174 ADARE ROAD, ADARE, QLD 4343 STAGE 1
ROAD CROSS SECTIONS - ROAD 1

SHEET 2

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	PROJECT LEADER CK	DESIGNER MP	SIGNATURE CALVIN KIRK RPEQ:19536	(f) R
	DRAFTSPERSON MP	AS SHOWN	JUL 2022	SHEET SIZE A1
	JOB No. BR22202	=	RAWING No. C1452	REVISION B

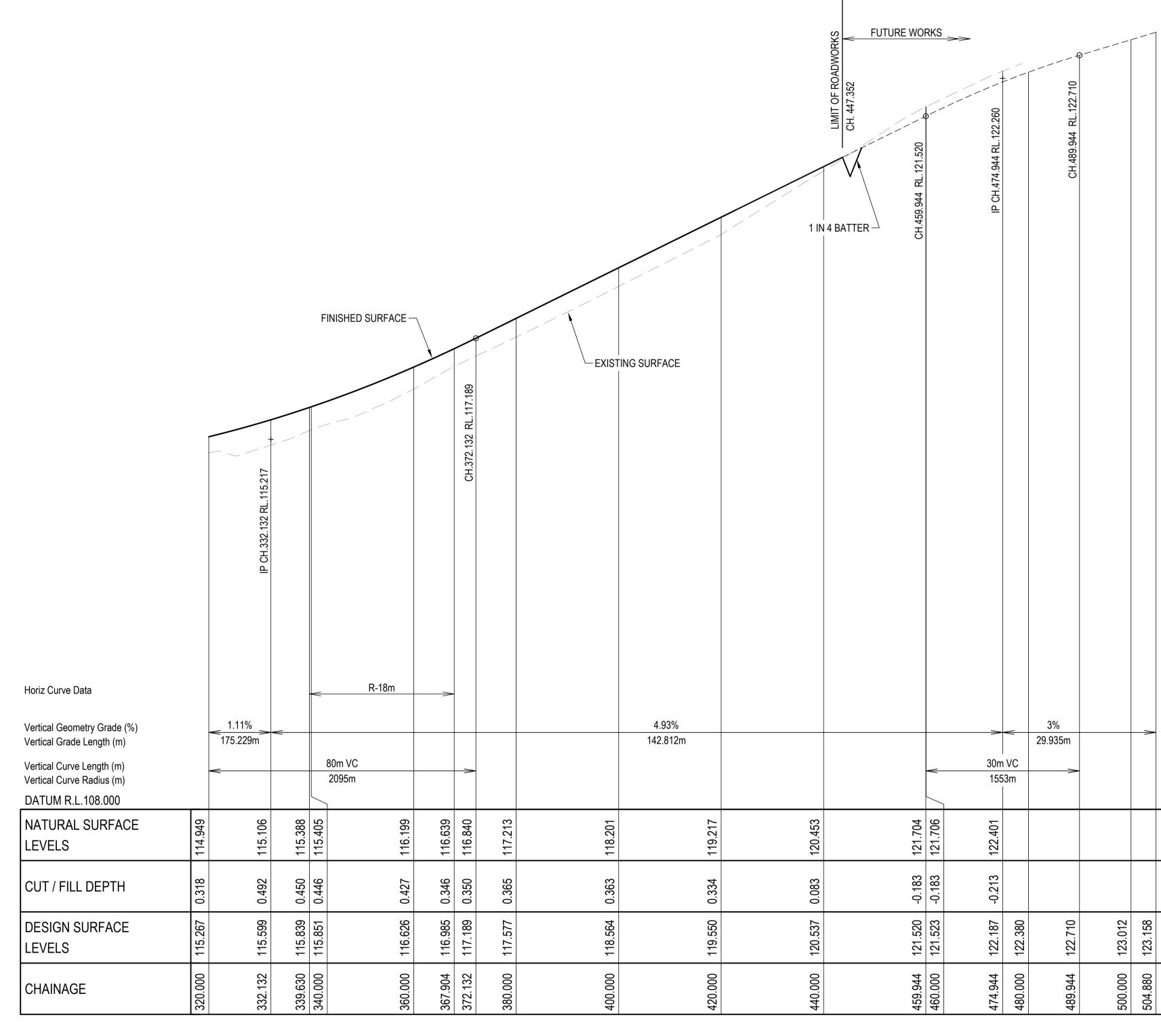




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LONGITUDINAL SECTION - ROAD 2 HORIZONTAL SCALE 1:500

VERTICAL SCALE 1:50

ADARE

MP 02/09/22 MP 22/07/22 DRAWN DATE





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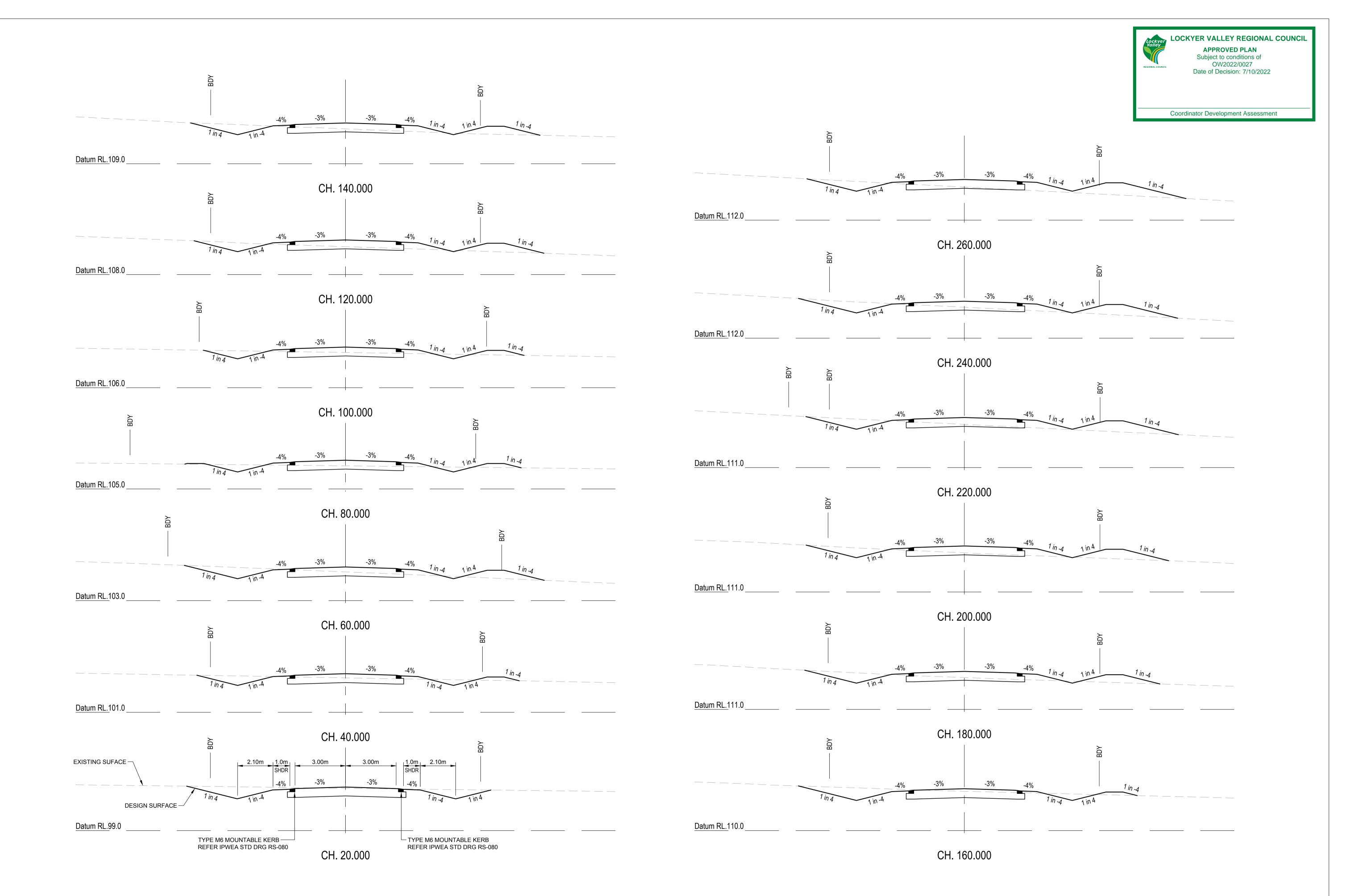
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DRAWING TITLE
ROAD LONGITUDINAL SECTION

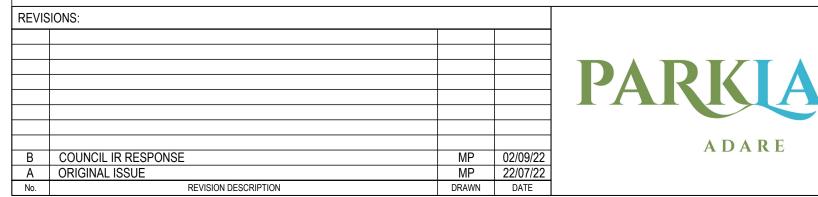
SCALE 1:500 (HORIZONTAL)

ROAD 2 - SHEET 2

50m

SCALE 1:50 (\	VERTICAL)			
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PROJECT LEADER CK	DESIGNER MP		ATURE IN KIRK RPEQ:19536	(z)R
DRAFTSPERSON MP	SCALE AS SH	OWN JU	L 2022	SHEET SIZE A1
JOB No. BR2220	25	DRAWIN	G No. 1454	REVISION







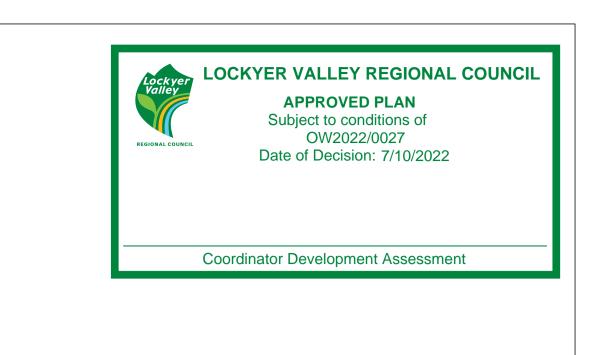


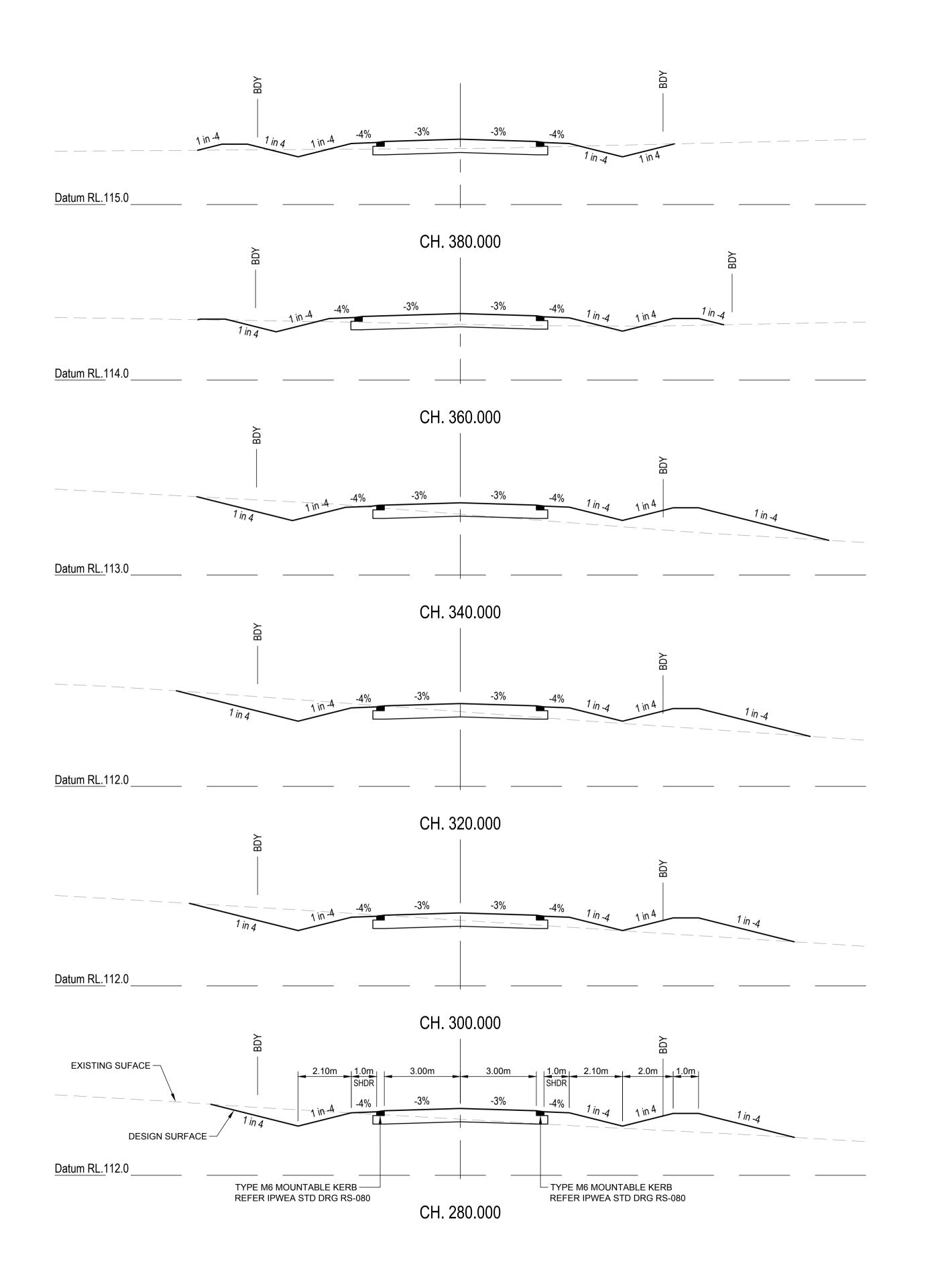
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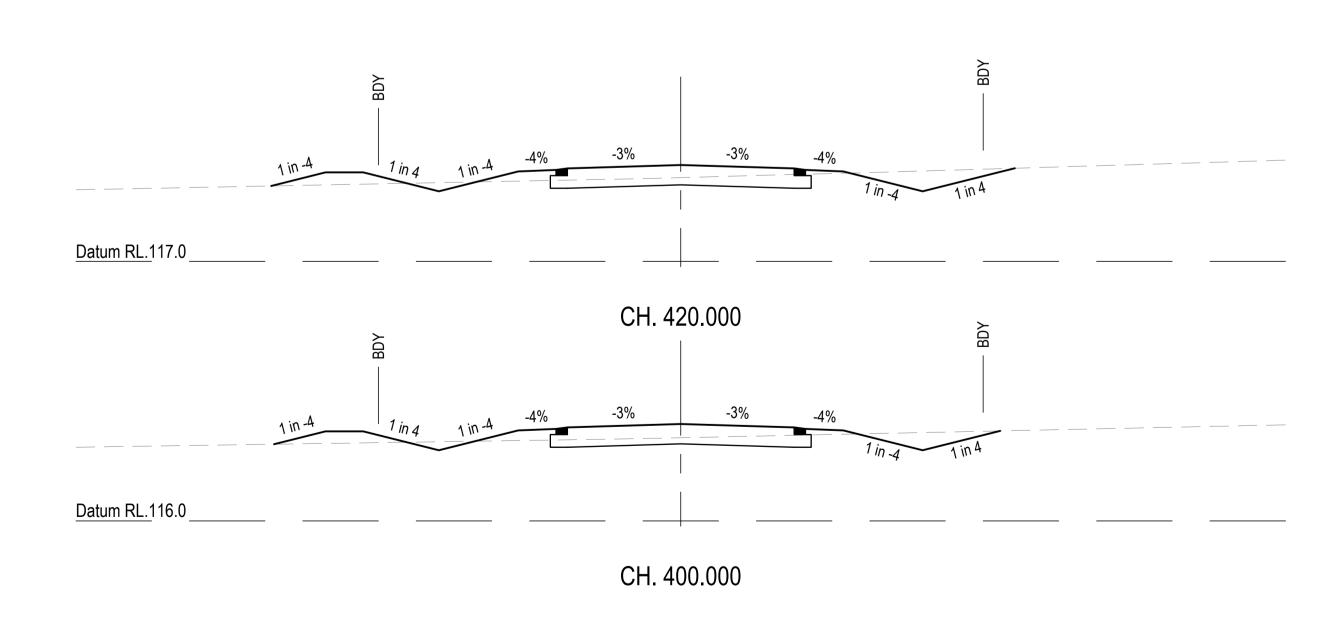
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PROPOSED SUBDIVISION 174 ADARE ROAD, ADARE, QLD 4343 STAGE 1	
ROAD CROSS SECTIONS - ROAD 2 SHEET 1	

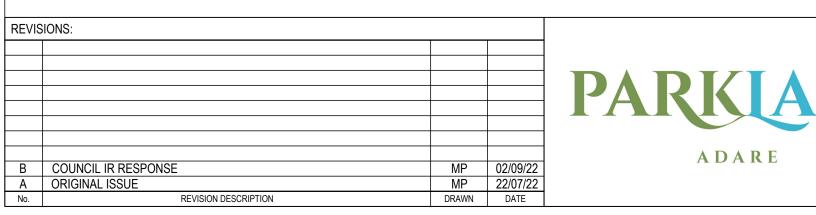
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DRAFTSPERSON MP	AS SHOWN	JUL 2022	SHEET SIZE A1
JOB No. BR22202		C1455	REVISION B



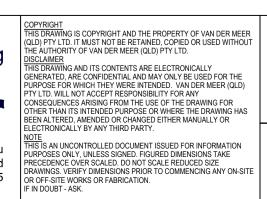




SHEET 2





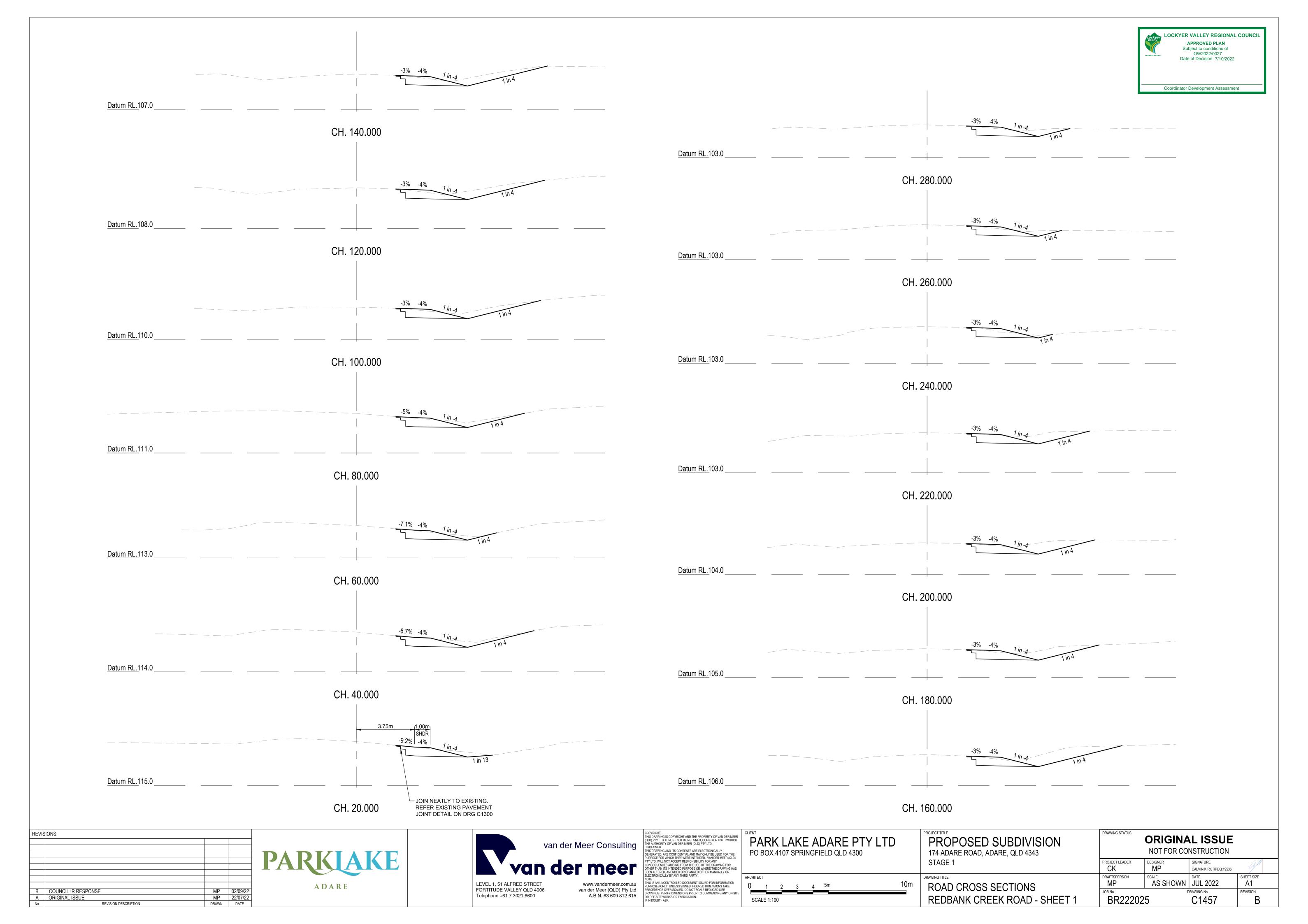


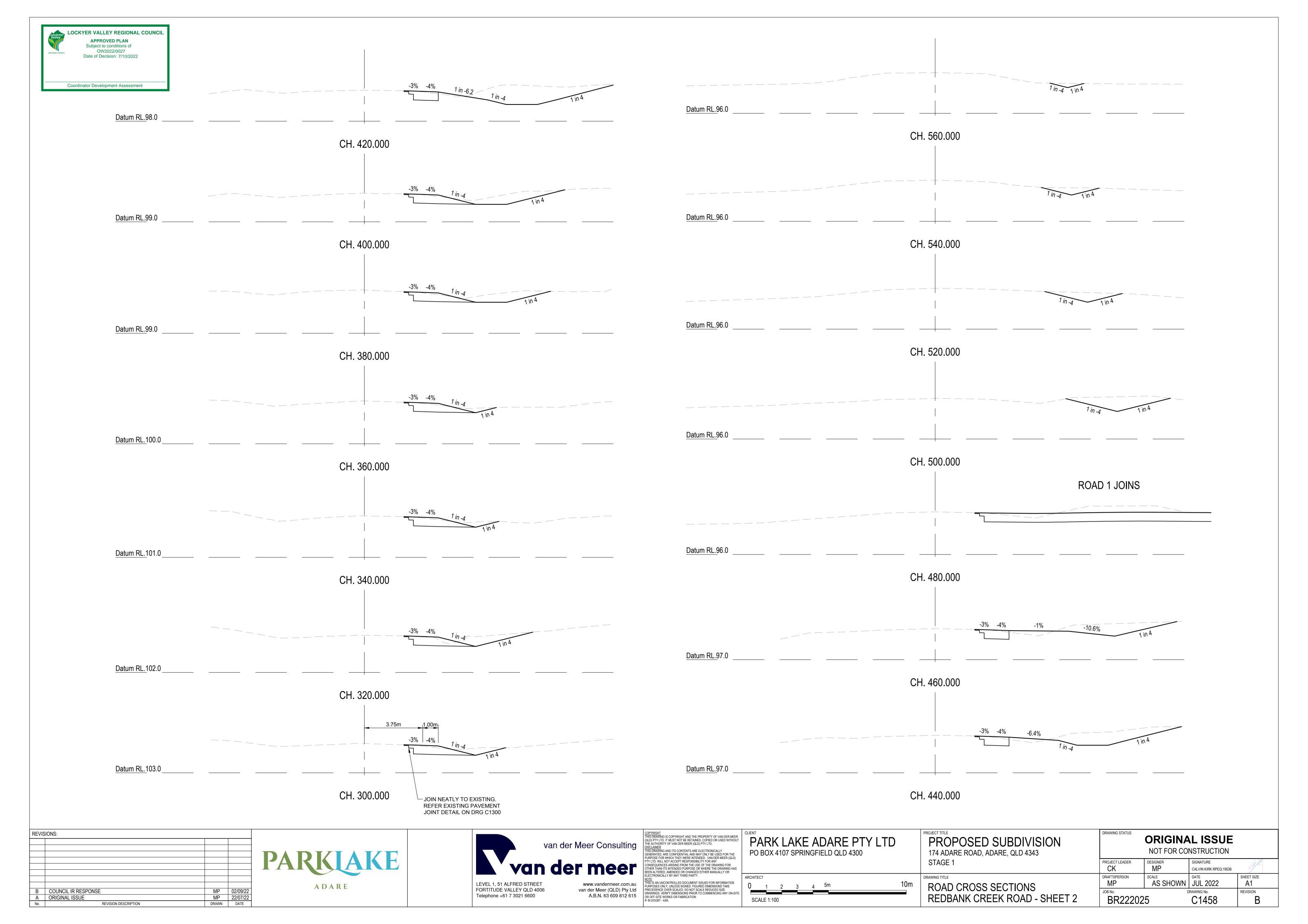
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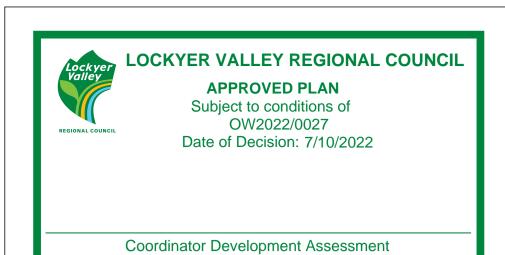
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PROPOSED SUBDIVISION 174 ADARE ROAD, ADARE, QLD 4343 STAGE 1
DRAWING TITLE
ROAD CROSS SECTIONS - ROAD 2

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DRAFTSPERSON MP	AS SHOWN	JUL 2022	SHEET SIZE A1
JOB No. BR22202	_	C1456	REVISION







LONGITUDINAL SECTION - ROEDBANK CREEK ROAD

HORIZONTAL SCALE 1:500

VERTICAL SCALE 1:50

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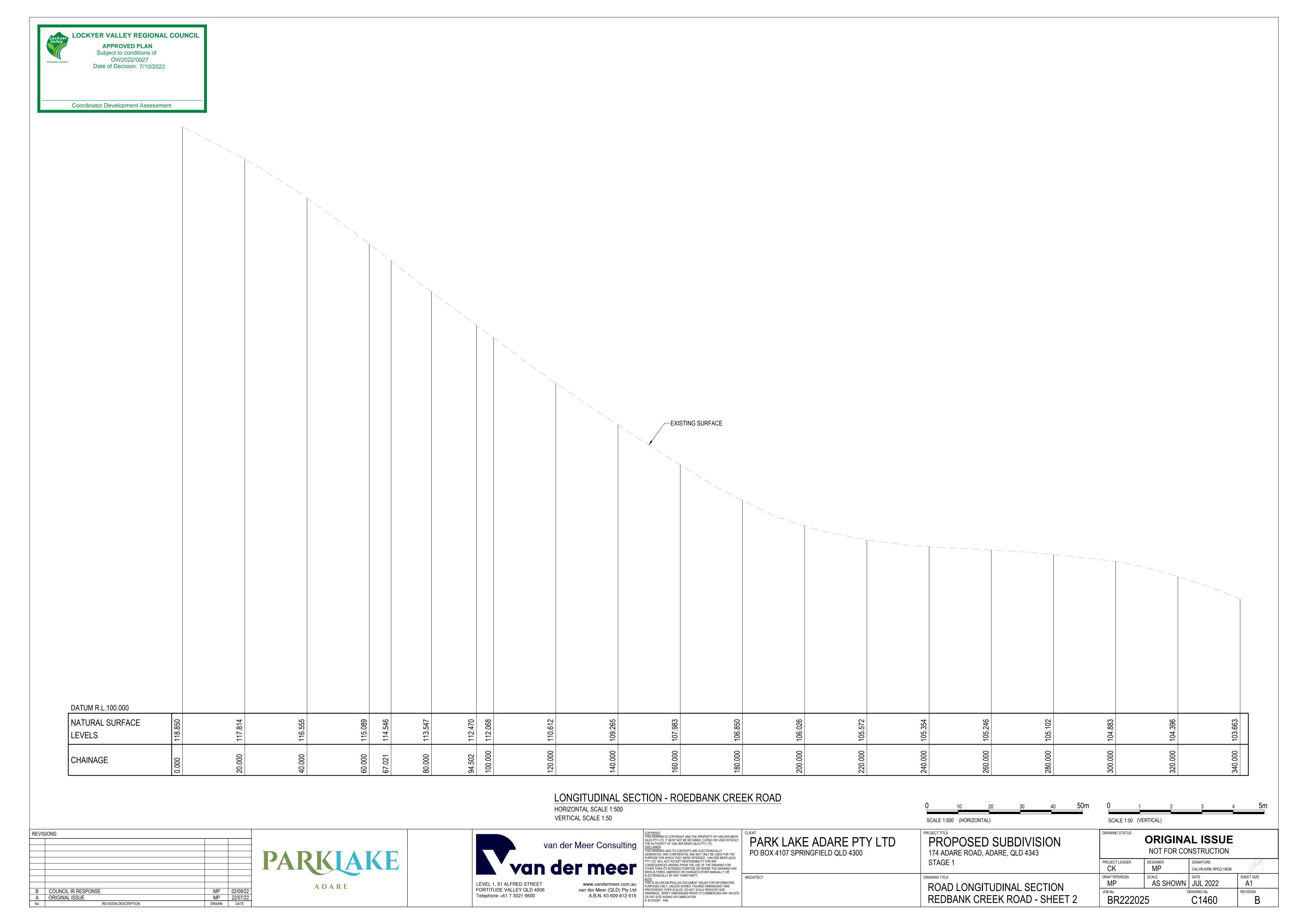
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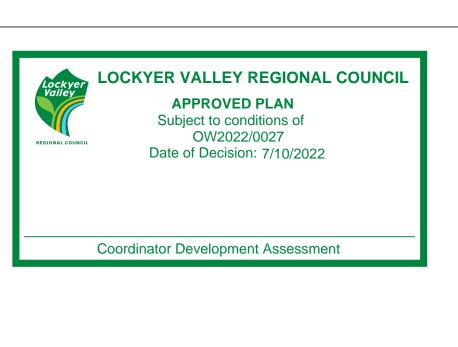
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ROAD LONGITUDINAL SECTION

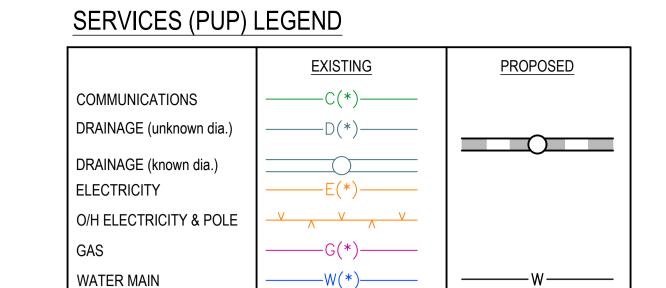
REDBANK CREEK ROAD - SHEET 1

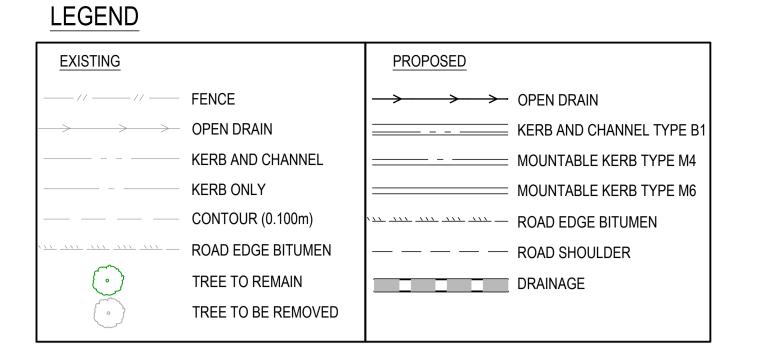
SCALE 1:500 (HORIZONTAL)

SCALE 1:50 (V	ERTICAL)				
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JOB No. BR22202	25	DRAWING No.	9	REVISION B	

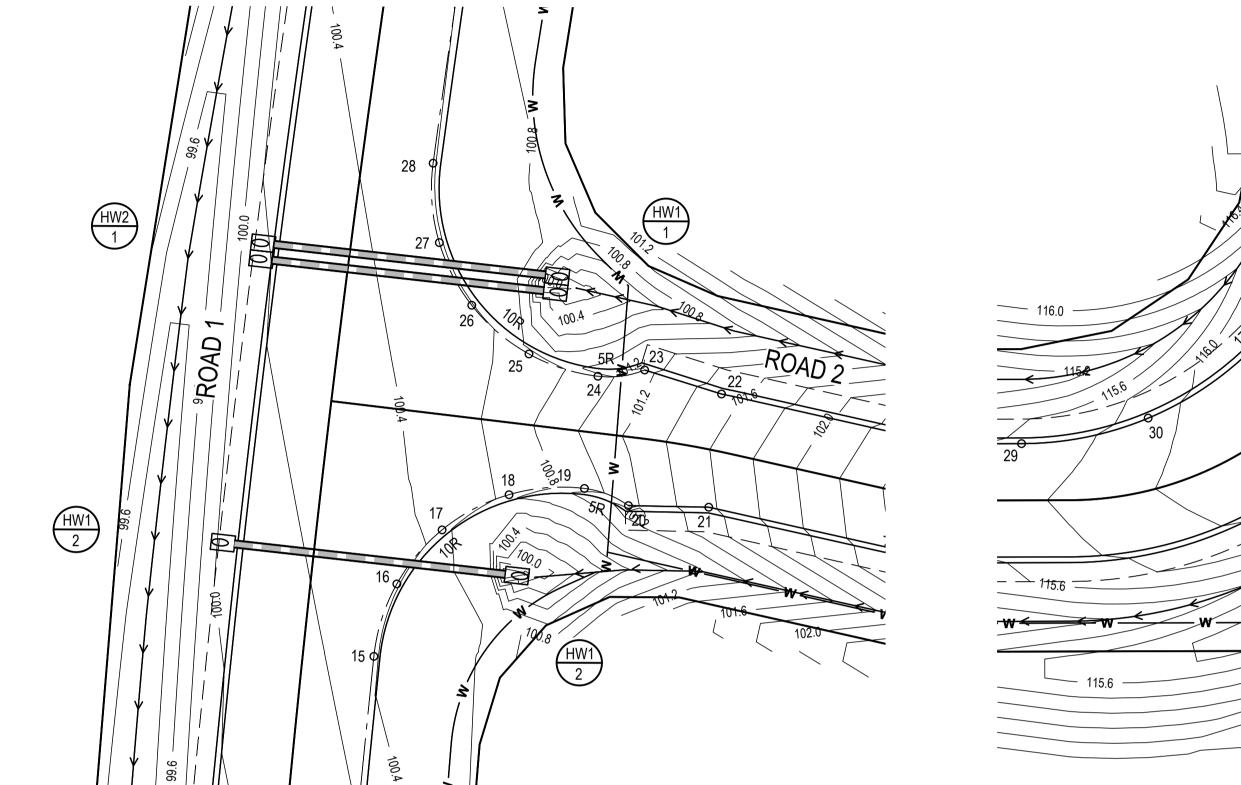


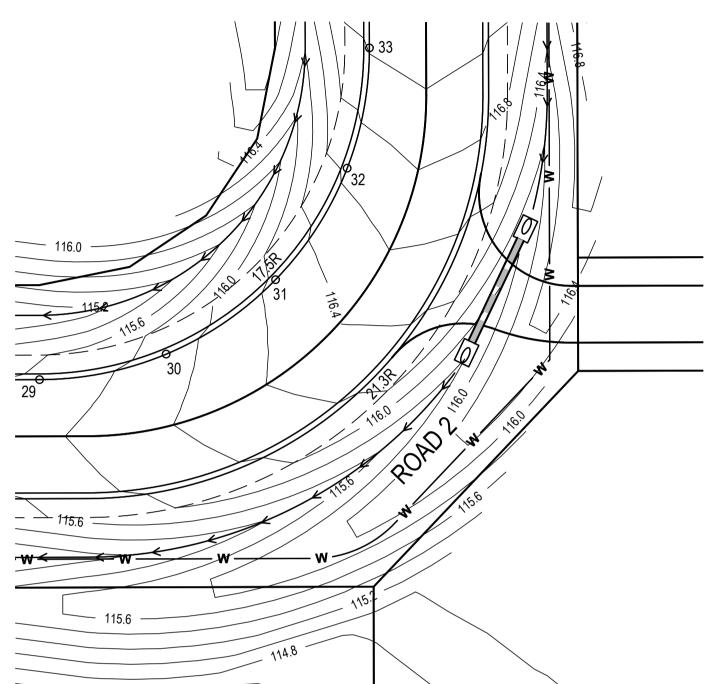


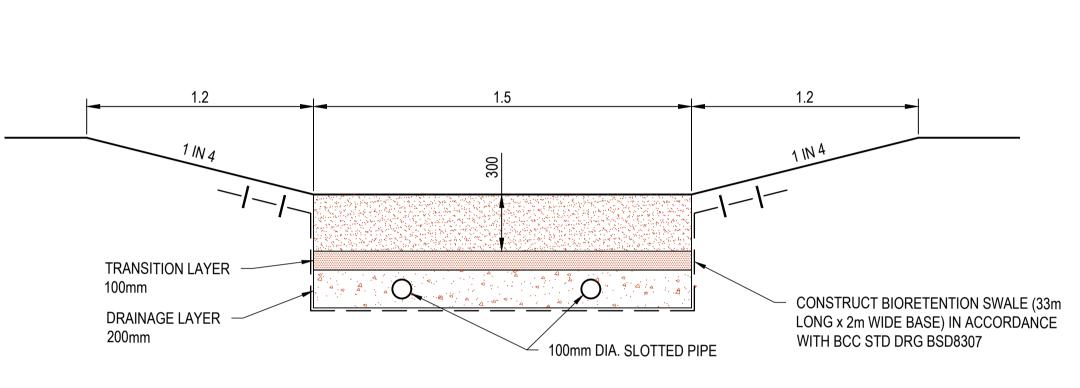




(*) - DENOTES QUALITY LEVEL AS PER A.S. 5488-2013.

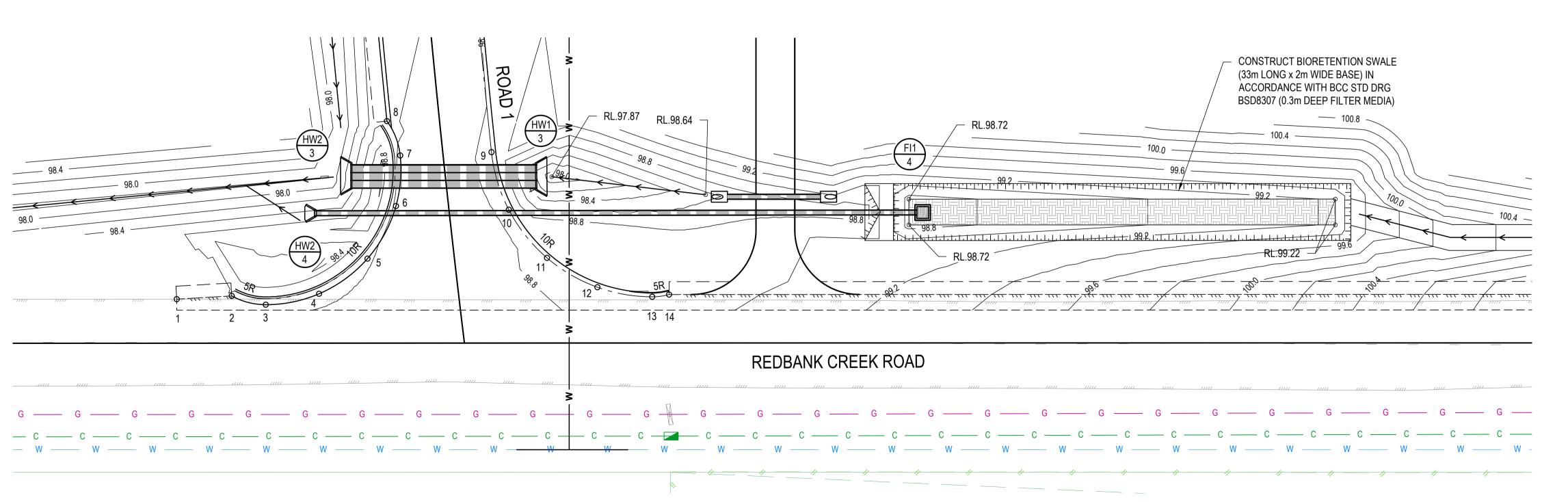






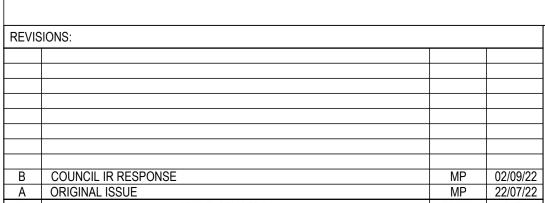
TYPICAL BIORETENTION SWALE SECTION SCALE 1:20

KERB LIP SETOUT / LEVELS
POINT EASTING NORTHING



1	429854.576	6954026.180	98.553
2	429858.818	6954025.784	98.532
3	429861.322	6954024.714	98.546
4	429865.526	6954024.924	98.568
5	429869.639	6954027.044	98.593
6	429872.434	6954030.733	98.617
7	429873.352	6954034.548	98.622
8	429872.737	6954037.332	98.539
9	429880.371	6954033.736	98.836
10	429881.021	6954029.134	98.834
11	429883.380	6954025.003	98.842
12	429886.892	6954022.168	98.854
13	429890.969	6954020.796	98.865
14	429892.288	6954020.771	98.868
15	429908.242	6954216.162	100.279
16	429910.023	6954219.766	100.328
17	429912.822	6954222.230	100.443
18	429916.606	6954223.534	100.639
19	429920.596	6954223.259	100.910
20	429922.759	6954222.009	101.131
21	429926.949	6954221.283	101.559
22	429928.522	6954227.099	101.512
23	429924.695	6954228.970	101.143
24	429922.199	6954229.018	100.926
25	429918.771	6954230.734	100.682
26	429916.170	6954233.738	100.555
27	429914.975	6954237.274	100.506
28	429915.287	6954241.476	100.524
29	430230.371	6954141.486	115.666
30	430237.197	6954141.810	115.916
31	430243.514	6954144.825	116.253
32	430248.150	6954150.083	116.649
33	430250.276	6954156.192	117.015
.1 .2 .3 .4	.5 1	m 1.5	 2m

LEVEL



REVISION DESCRIPTION









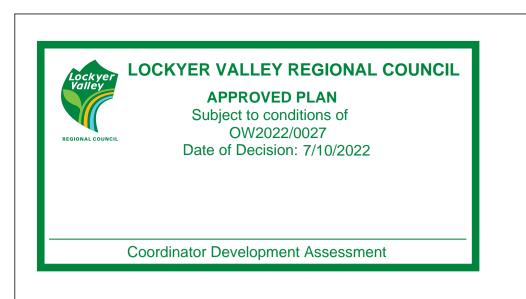
PARK LAKE ADARE PTY LTD
PO BOX 4107 SPRINGFIELD QLD 4300

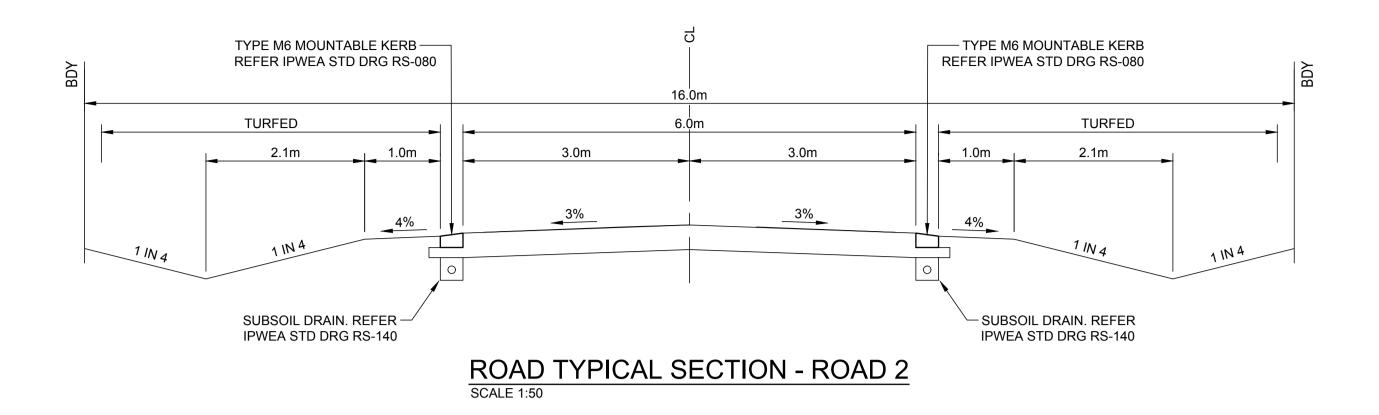
SCALE 1:200

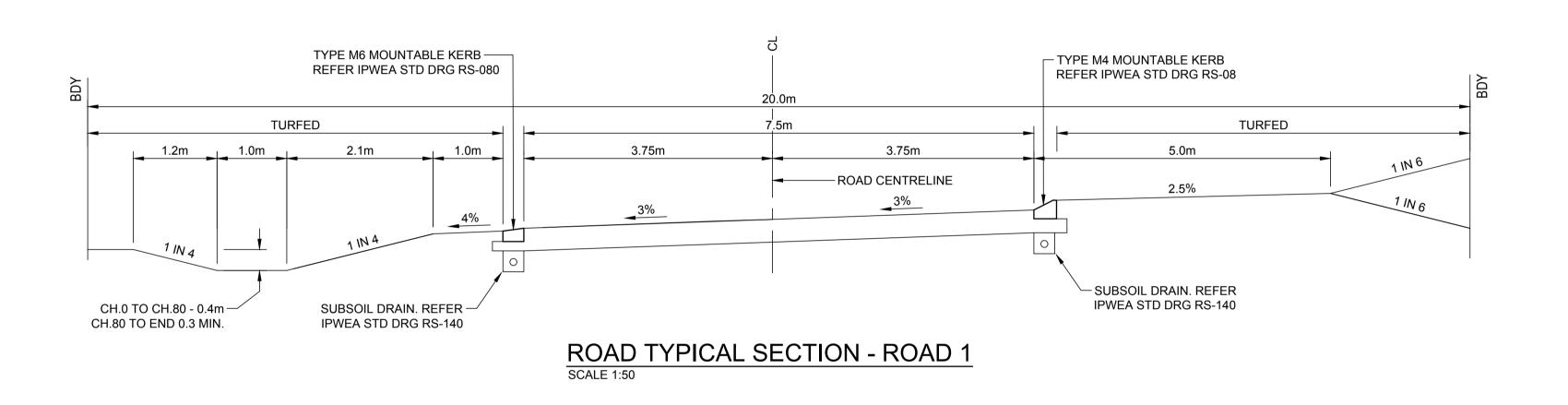
PROJECT TITLE	
PROPOSED SUBDIVISION	
174 ADARE ROAD, ADARE, QLD 4343	
STAGE 1	

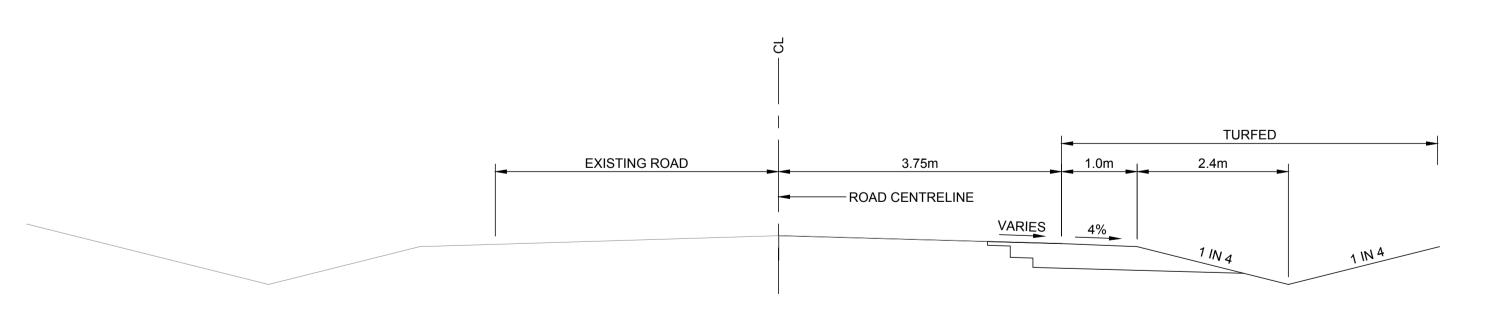
INTERSECTION DETAILS

SCALE 1:20			
DRAWING STATUS	ORIGINA NOT FOR CO	AL ISSUE NSTRUCTION	
PROJECT LEADER CK	DESIGNER MP	SIGNATURE CALVIN KIRK RPEQ:19536	(g/l
DRAFTSPERSON MP	AS SHOWN	JUL 2022	SHEET SIZE A1
JOB No. BR22202	_	C1480	REVISION B

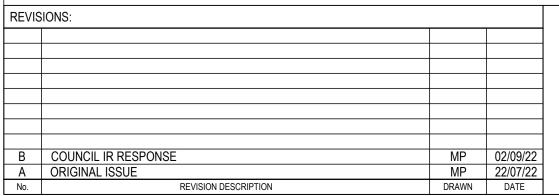






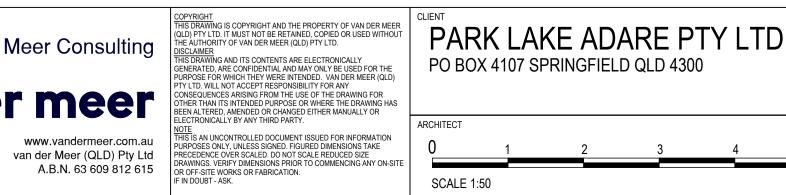


ROAD TYPICAL SECTION - REDBANK CREEK ROAD SCALE 1:50









		KE AD/ Pringfieli		—	D
ARCHITECT					
0	1	2	3	4	5r
SCALE 1:	:50				

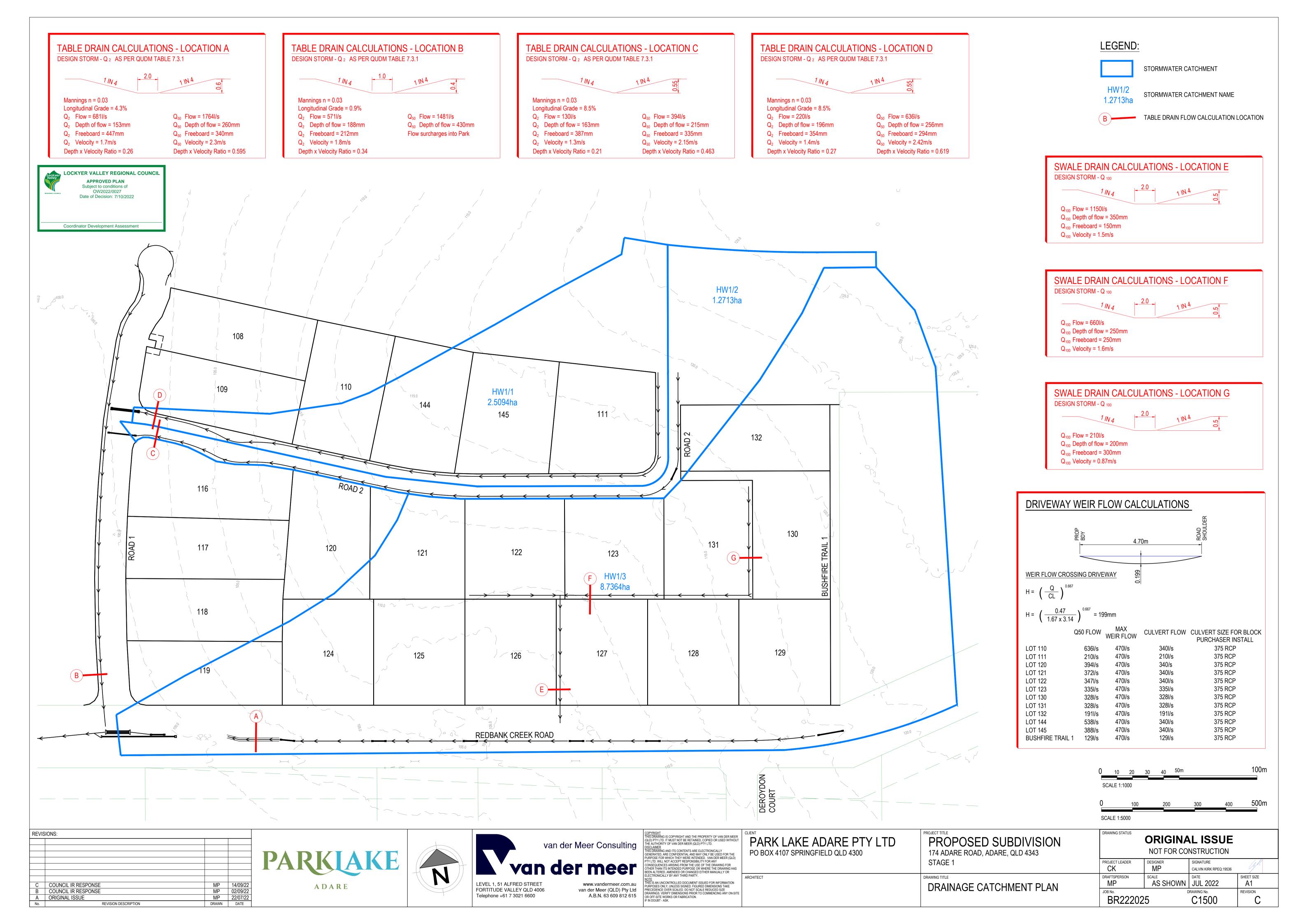
PROPOSED SUBDIVISION 174 ADARE ROAD, ADARE, QLD 4343 STAGE 1
ROADWORKS DETAILS

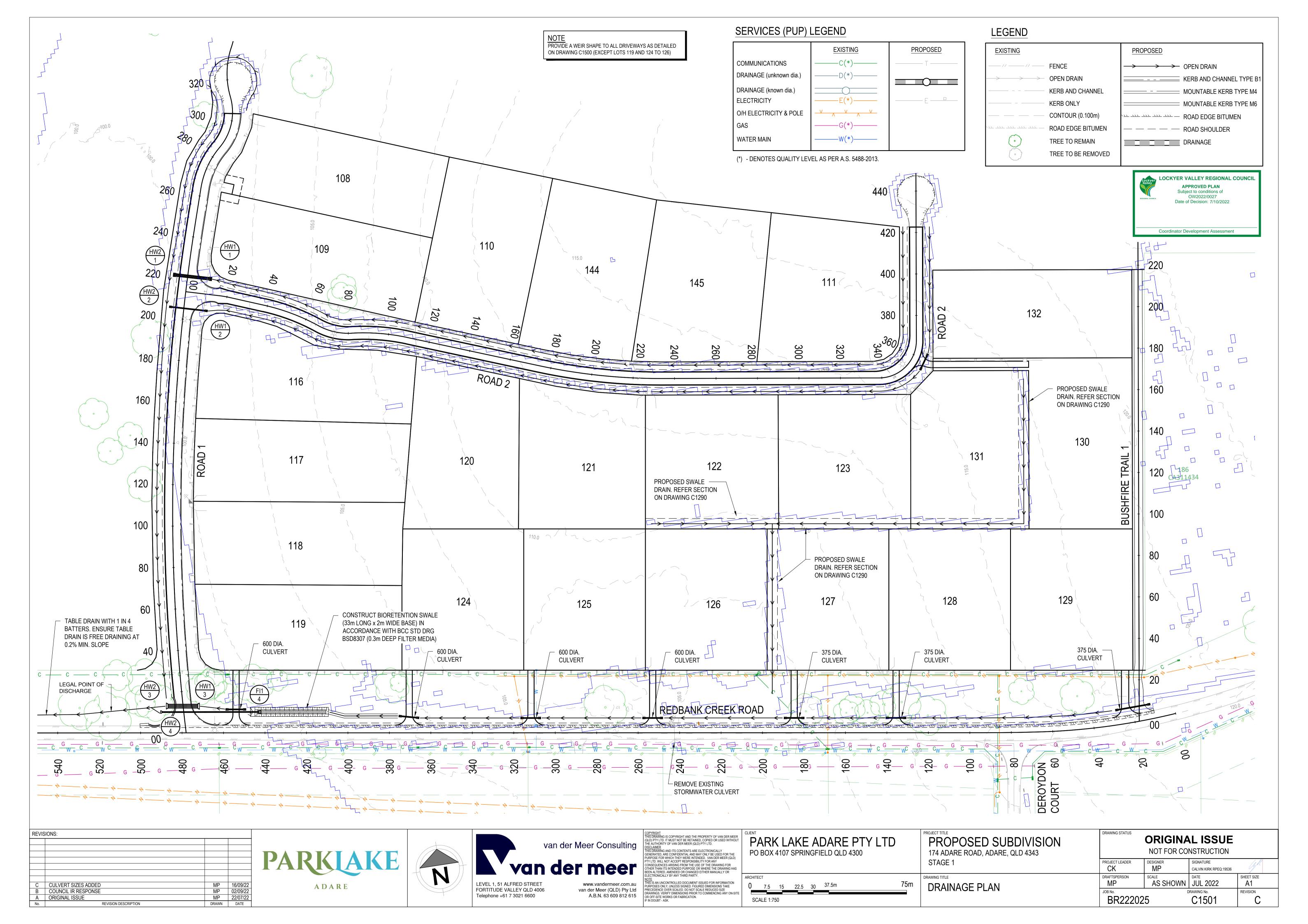
DRAWING STATUS	ORIGINA NOT FOR CO	AL ISSUE NSTRUCTION	
PROJECT LEADER CK	DESIGNER MP	SIGNATURE CALVIN KIRK RPEQ:19536	(f)R
DRAFTSPERSON MP	AS SHOWN	JUL 2022	SHEET SIZE A1

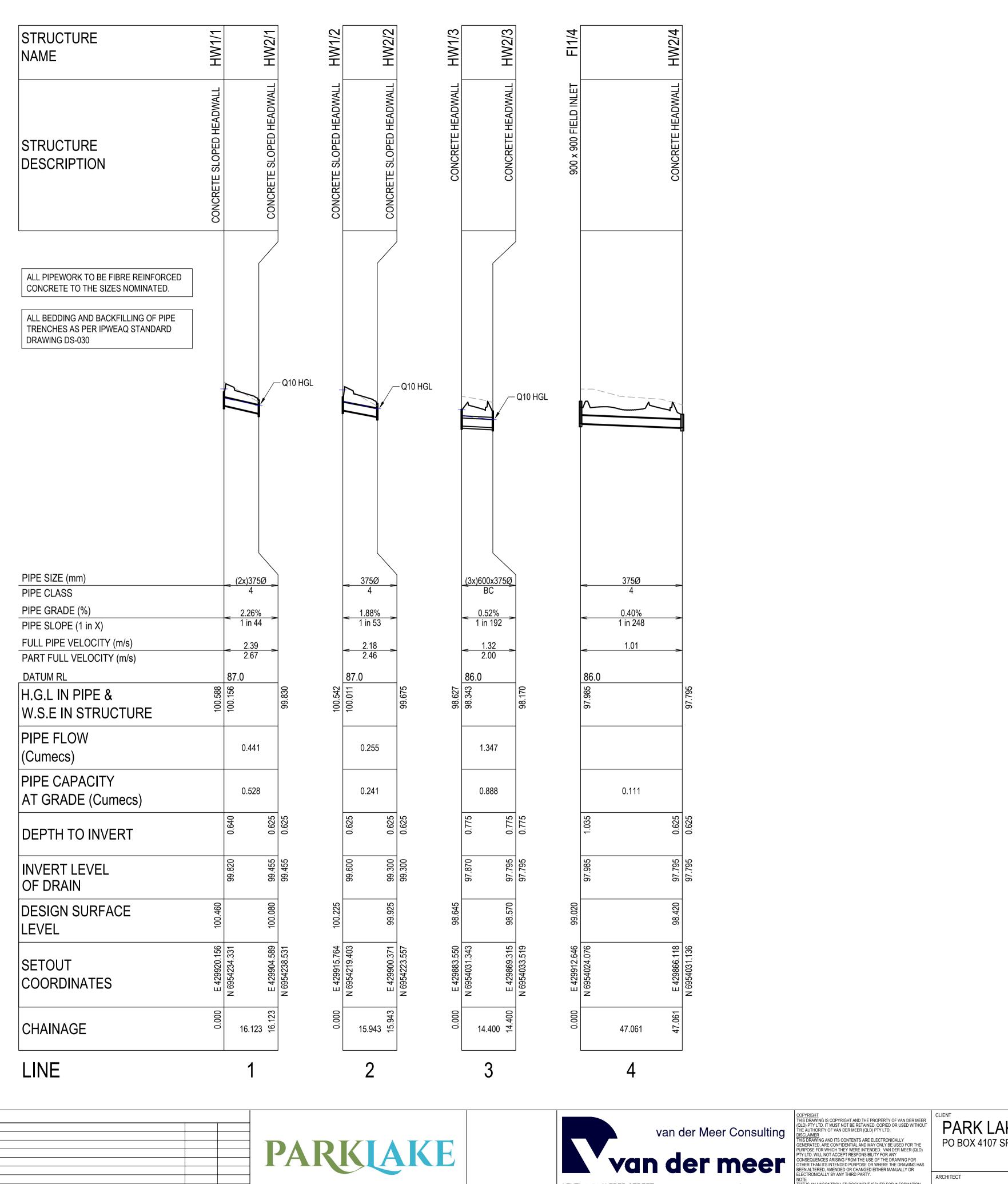
C1490

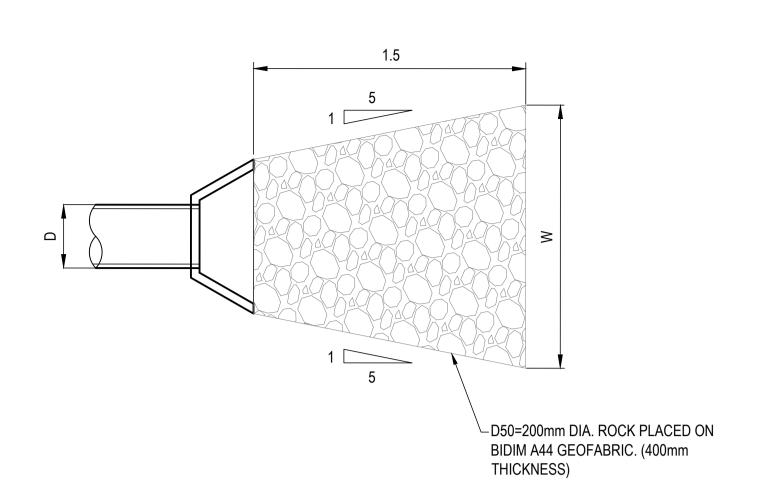
BR222025

REVISION



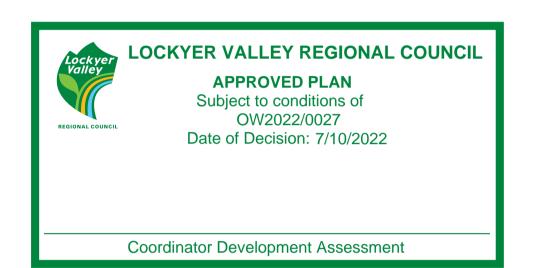


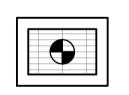




OUTLET PROTECTION DETAIL

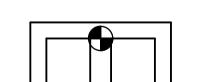
PROVIDE TO ALL OUTLETS N.T.S.





TYPICAL FIELD INLET SETOUT SCALE 1:50

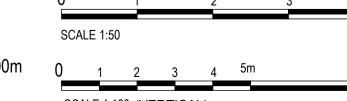




TYPICAL HEADWALL SETOUT

SCALE 1:50

DENOTES SETOUT POINT



100m 0 10 20 30 40 ^{50m} SCALE 1:1000 (HORIZONTAL)

SCALE 1:100 (VERTICAL)

REVIS	SIONS:			
В	COUNCIL IR RESPONSE	MP	02/09/22	
Α	ORIGINAL ISSUE	MP	22/07/22	
No.	REVISION DESCRIPTION	DRAWN	DATE	

ADARE





PARK LAKE ADARE PTY LTD PO BOX 4107 SPRINGFIELD QLD 4300

PROPOSED SUBDIVISION 174 ADARE ROAD, ADARE, QLD 4343 STAGE 1

SHEET 1

DRAINAGE LONGITUDINAL SECTIONS

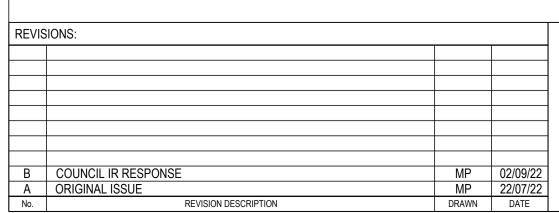
DRAWING STATUS **ORIGINAL ISSUE** NOT FOR CONSTRUCTION

DESIGNER MP CALVIN KIRK RPEQ:19536 DRAFTSPERSON SHEET SIZE AS SHOWN | JUL 2022 MP A1 BR222025 C1550 В

																																											T																		
	LC	OCATION	١		+			JB-CATC	HMENT R				-									INLET DE	SIGN				1 -								[DRAIN DESIG	3N			_		77.0			2.1-		AD LOSSES					PART					DESIGN	LEVELS			
					T	:	1		Α	١	CA	Qc	Qa					_									Qg	Qb		T	: I	C	A Qr	at	Q	L	S		Vf=Q/A	Qcap	Vcap	Vt		Vf ²	² /2g	Ku	hu	Kw	hw	Sf	hf	dn	Vn								
STRUCTURE No.	CATCHMENT	CONTRIBUTING	DRAIN SECTION		SUB-CATCHMENT TIME	OF CONC.	RAINFALL INTENSITY	CO-EFFICIENT OF RUNOFF	SUB-CATCHMENT AREA		EQUIVALENT AREA	SUB-CATCHMENT DISCHARGE	FLOW IN K&C (INC.		HALF KOAD CAPACITY	FLOW WIDTH	FLOW DEPTH	FLOW DxV		ROAD GRADE AT INLET	ROAD XFALL AT INLET		INLET TYPE		BLOCKAGE FACTOR	INLET CURVE	FLOW INTO INLET	BYPASS FLOW	BYPASS STRUCTURE No.	CRITICAL TIME OF	CONC.	TOTAL (C × A)	DE AK ELOW		PIPE FLOW	REACH LENGTH	PIPE GRADE	PIPE SIZE	FULL PIPE VELOCITY	CAPACITY FLOW	CAPACITY VELOCITY	TRAVEL VELOCITY	CHART(S) USED		VELOCITY HEAD U/S HFAD LOSS	COEFFICIENT	U/S HEAD LOSS	W.S.E COEFFICIENT	CHANGE IN W.S.E	PIPE FRICTION SLOPE	PIPE FRICTION HEAD LOSS	NORMAL DEPTH	NORMAL DEPTH VEL.	PIPE U/S I.L	PIPE D/S I.L	PIPE U/S H.G.L	PIPE D/S H.G.L	W.S.E	SURFACE LEVEL	FREEBOARD	STRUCTURE No.
					m	n	mm/h		h	a	ha	L/s	L/s	L	/s	m	m	m^2	2/s 9	%	%						L/s	L/s		m	n mm	/hr ha	L/	S	L/s	m S	% n	mm	m/s	L/s	m/s	m/s		ı	m		m		m	%	m	m	m/s	m	m	m	m	m	m		
HW1/1	L HW1	1/1 H	W1/1 to	HW2/1	21.34	311 10	05.5348	0.6	2.509	9359 1.	505615	441.3743	441.37	43						6	.693282	cc	NCRETE HEADW	ALL	0.8		441.374	3		21.34	311 105.5	5348 1.505	615 441.3	3743 441	3743 16.:	12339 2.26	53792 (2x	k)375 1	998134	527.8241	2.389499	2	Inlet Contr	ol 0.20	03701 2.13	21252 0.4	432101	C	0.432101 2.	022292 0	.350462	0.26234	2.674216	99.82	99.455	100.1561	99.83	100.5882 1	100.695 0.	106837	HW1/1
HW2/1	L HW2	2/1																				cc	NCRETE HEADW	ALL																																		99.83	100.08		HW2/1
HW1/2	2 HW1,	1/2 H	W1/2 to	HW2/2	16.50	136 12	20.1956	0.6	1.271	1346 0.	762808	254.6838	254.68	38						1	8.71001	CC	NCRETE HEADW	ALL	0.8		254.683	8		16.50	0136 120.1	1956 0.762	808 254.0	5838 254	1.6838 15.	9433 1.88	31668 3	375 2.	305945 2	240.6094	2.178513	2	Inlet Contr	ol 0.27	71295 1.9	56142 0.5	530692	C	0.530692 2.	108243 0	.336123	0.332789	2.458108	99.6	99.3	100.0111	99.675	100.5418	100.57 0.	028185	HW1/2
HW2/2	2 HW2	2/2																				cc	NCRETE HEADW	ALL																																		99.675	99.925		HW2/2
HW1/3	B HW1	1/3 H	W1/3 to	HW2/3	26.83	306 92	2.54386	0.6	8.736	5393 5.	241836	1347.499	1347.4	99						2	8.57618	CC	NCRETE HEADW	ALL	0.8		1347.49	9		26.83	3306 92.54	1386 5.241	836 1347	.499 134	7.499 14.4	40005 0.52	20831 3x)6	00x375 1	996297	888.124	1.315741	2	Outlet Cont	rol 0.20	03327	1.4 0.2	284657	C).284657 1.	198967 0	.172652	0.375	1.996297	97.87	97.795	98.34265	98.17	98.62731	100 1.	372691	HW1/3
HW2/3	B HW2	2/3																				CC	NCRETE HEADW	ALL																																		98.17	98.57		HW2/3
	FI1/	/4 F	11/4 to	HW2/4																		90	00 x 900 FIELD INI	LET	0.5					5	18	2			47.0	06056 0.40	3735	375	1	111.4523	1.009106	2	Inlet Contr	ol					0.	403735	0.19			97.985	97.795	97.985	97.795	97.985	99.02	1.035	FI1/4
HW2/4	1 HW2	2/4																				cc	NCRETE HEADW	ALL																																		97.795	98.42		HW2/4

STORMWATER CALCULATIONS TABLE (Q10)









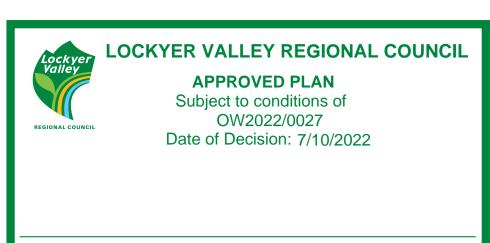


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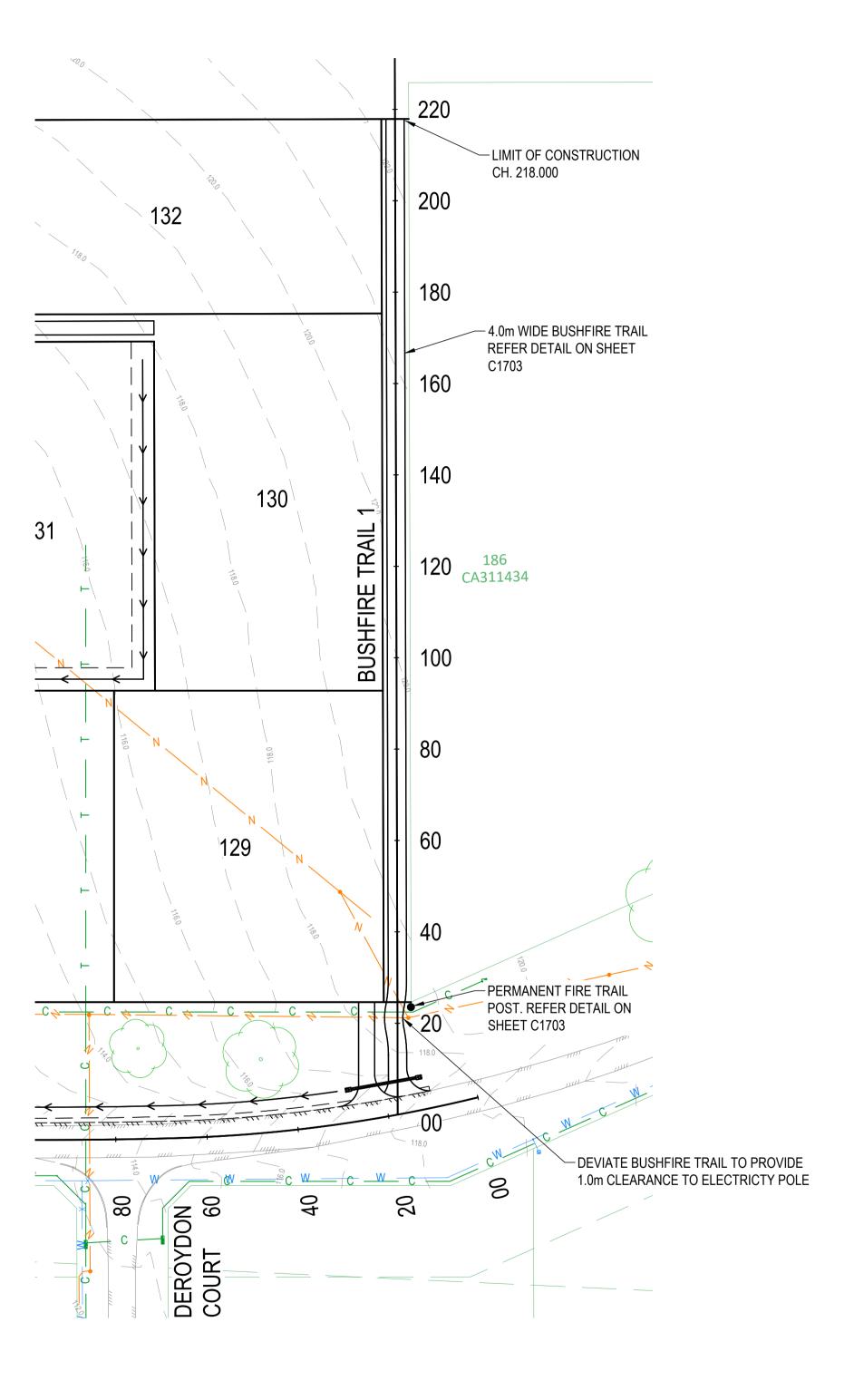
PROJECT TITLE	
PROPOSED SUBDIVISION	
174 ADARE ROAD, ADARE, QLD 4343	
STAGE 1	

STAGE T
DRAINAGE CALCULATIONS
DIVAINAGE CALCOLATIONS

DRAWING STATUS	ORIGINA NOT FOR CO	AL ISSUE NSTRUCTION	
PROJECT LEADER CK	DESIGNER MP	SIGNATURE CALVIN KIRK RPEQ:19536	(f)R
DRAFTSPERSON MP	AS SHOWN	JUL 2022	SHEET SIZE A1
JOB No. BR22202	=	RAWING No. C1560	REVISION

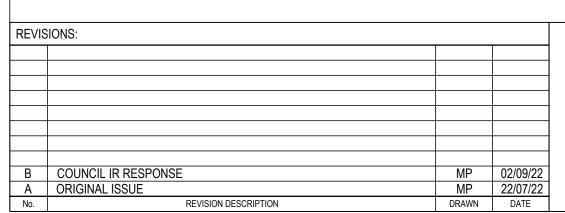


Coordinator Development Assessment





EXISTING	PROPOSED
	->> OPEN DRAIN
OPEN DRAIN	KERB AND CHANNEL TYPE B1
KERB AND CHANNEL	————— MOUNTABLE KERB TYPE M4
KERB ONLY	MOUNTABLE KERB TYPE M6
CONTOUR (0.100m)	ROAD EDGE BITUMEN
ROAD EDGE BITUMEN	— — — — ROAD SHOULDER
TREE TO REMAIN	DRAINAGE
TREE TO BE REMOVED	









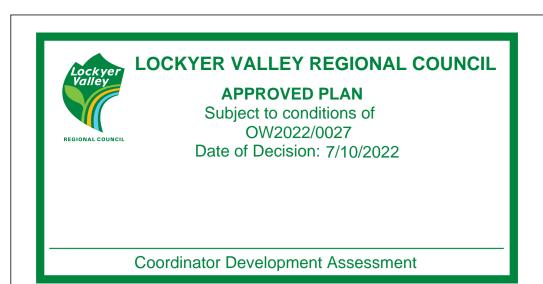


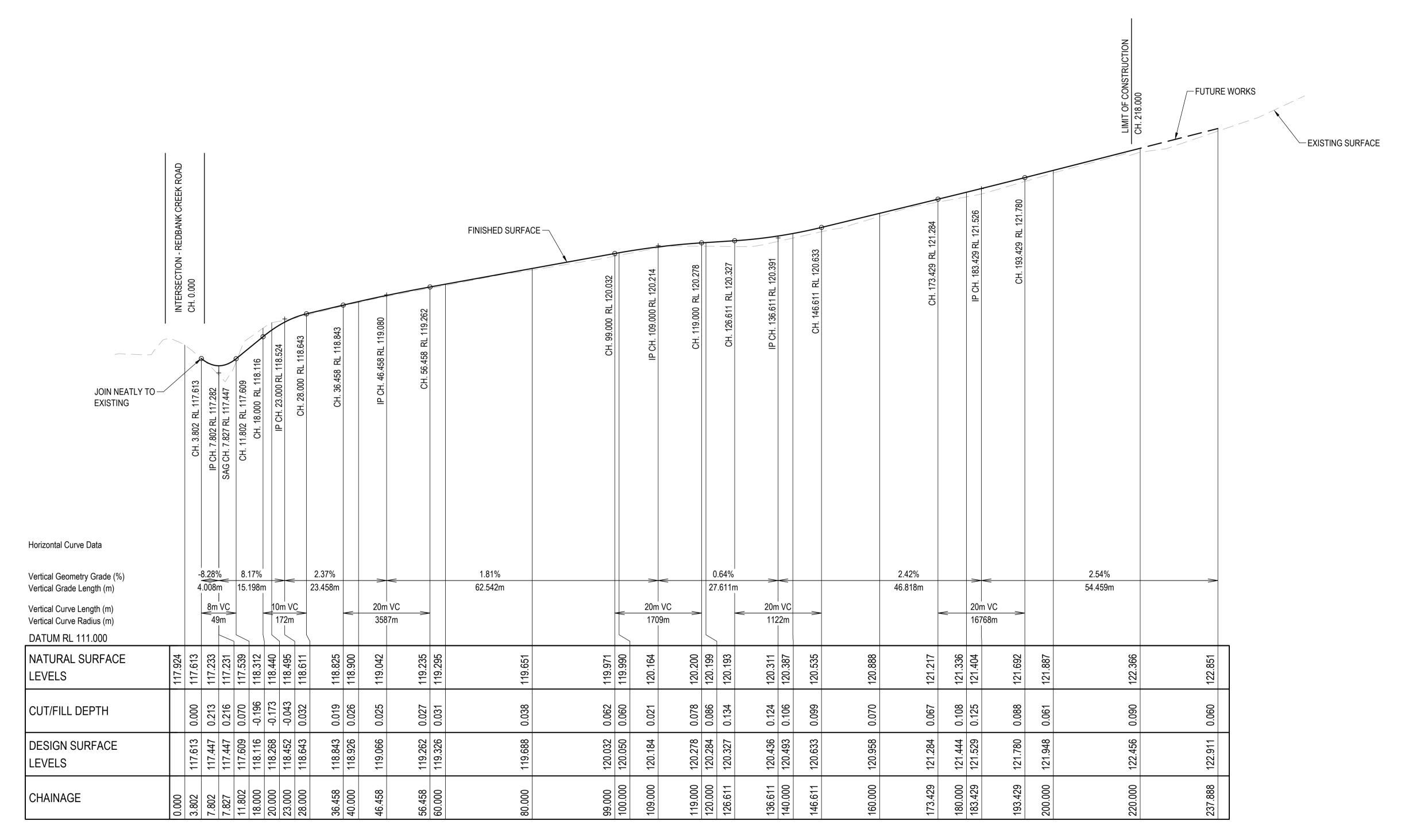
CLIENT
PARK LAKE ADARE PTY LTD
PO BOX 4107 SPRINGFIELD QLD 4300

SCALE 1:500

PROJECT TITLE
PROPOSED SUBDIVISION
174 ADARE ROAD, ADARE, QLD 4343
STAGE 1

SED SUBDIVISION AD, ADARE, QLD 4343	ORIGINAL ISSUE NOT FOR CONSTRUCTION								
	PROJECT LEADER CK	DESIGNER MP	SIGNATURE CALVIN KIRK RPEQ:19536	(pl					
TRAIL PLAN	DRAFTSPERSON MP	AS SHOWN	JUL 2022	SHEET SIZE A1					
TIVAL I LAN	JOB No. BR22202	=	RAWING No.	REVISION					





LONGITUDINAL SECTION - BUSHFIRE TRIAL 1

HORIZONTAL SCALE 1:500 VERTICAL SCALE 1:50

REVISIONS: A ORIGINAL ISSUE REVISION DESCRIPTION





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R IT	PARK LAKE ADARE PTY LTD PO BOX 4107 SPRINGFIELD QLD 4300
	ADDITION

PROJECT TITLE	
PROPOSED SUBDIVISION	
	ł
174 ADARE ROAD, ADARE, QLD 4343	
STAGE 1	
317.02 1	
DRAWING TITLE	

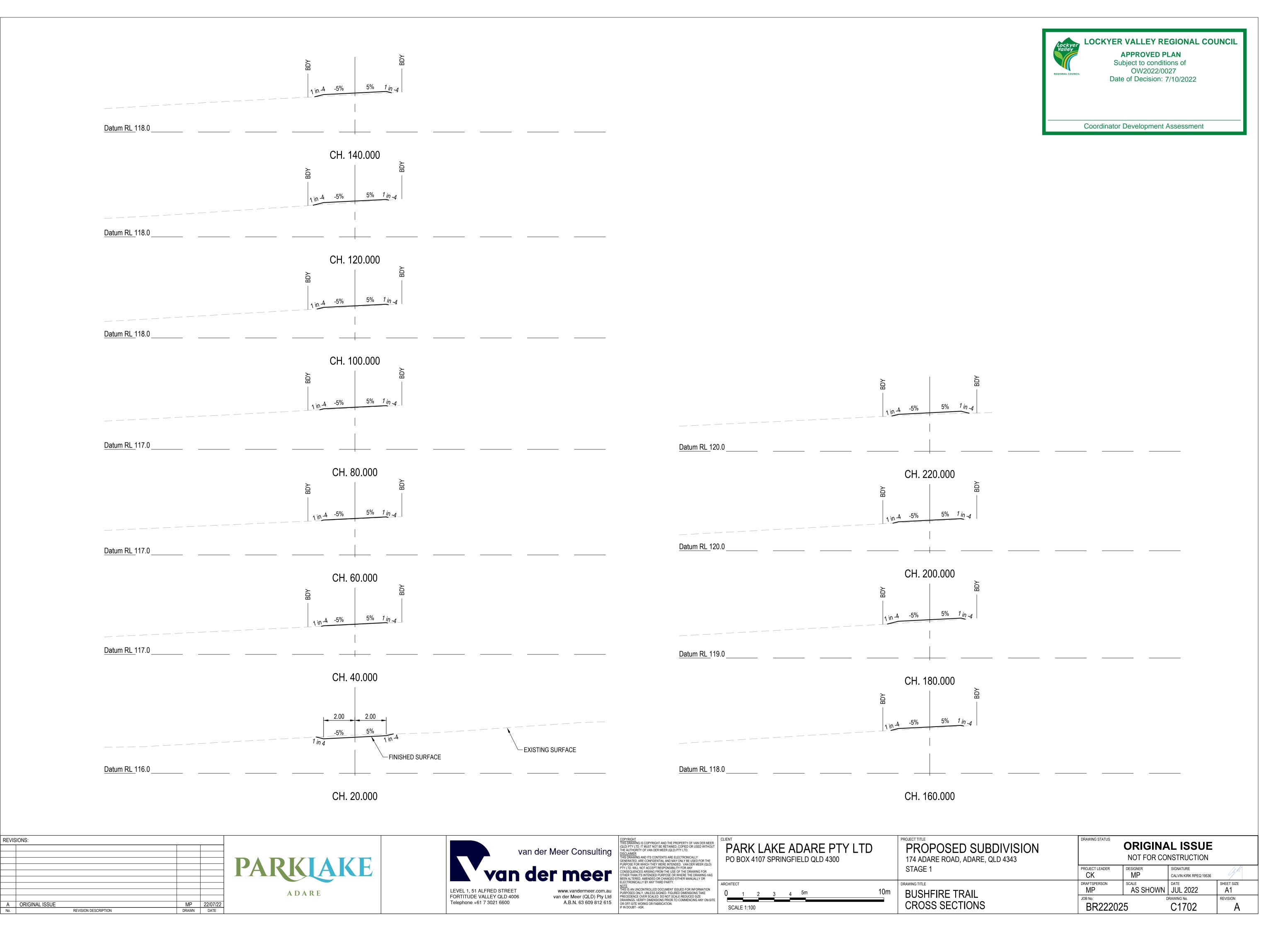
SCALE 1:500 (HORIZONTAL)

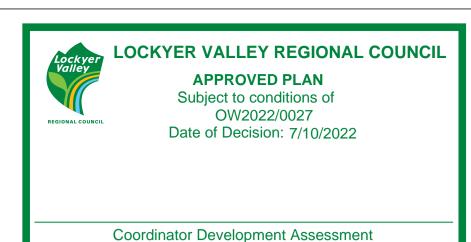
SCALE 1:50	(VERTICAL)			
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DRAFTSPERSON MP	AS SHOWN	JUL 2022	SHEET SIZE A1	

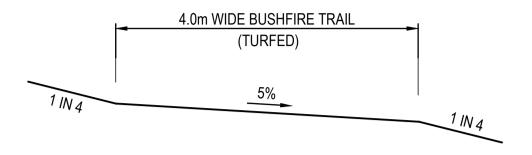
BUSHFIRE TRAIL LONGITUDINAL SECTION

50m

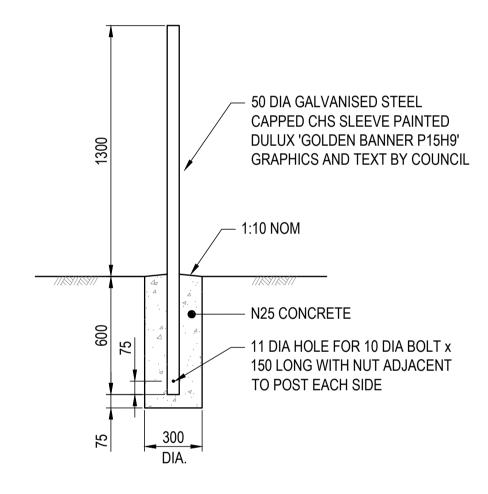
BR222025 C1701







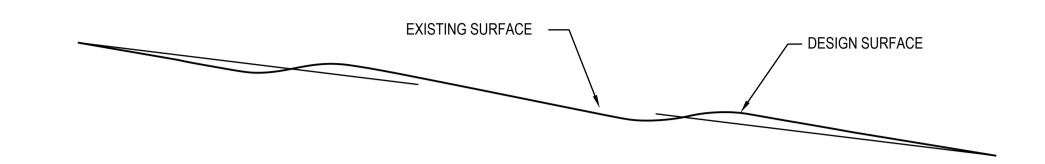
TYPICAL SECTION - BUSHFIRE TRAIL
SCALE 1:50



PERMANENT FIRE TRAIL POST DETAIL

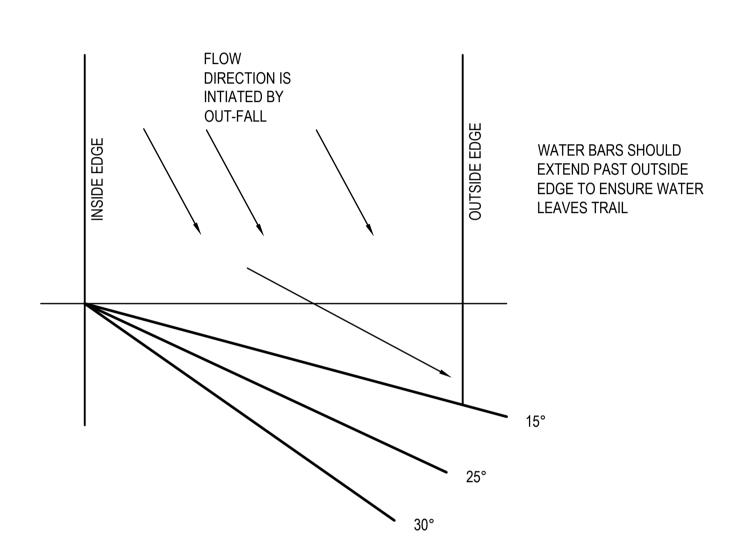
FIRE TRAIL NOTES

- 1. FIRE TRAIL TO BE IN ACCORDANCE WITH THE APPROVED REPORT "BUSHFIRE RISK ASSESSMENT & MANAGEMENT PLAN" PREPARED BY BUSHLAND PROTECTION SYSTEMS DATED 20TH APRIL 2022.
- 2. PROVIDE A FIRE TRAIL NUMBER SIGN AT EVERY ENTRANCE TO A FIRE TRAIL.
- 3. COUNCIL WILL ALLOCATE TRAIL NUMBERS AND INSTALL NUMBERING ON POST.



FORMATION OF WATERBAR

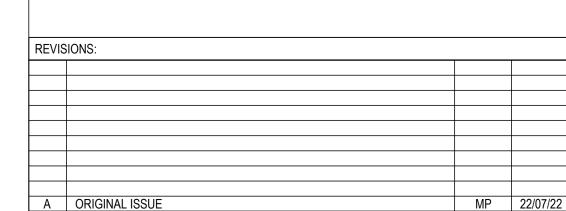
NOT TO SCALE



WATER BAR ORIENTATION ON THE TRAIL

NOT TO SCALE

TABLE A					
ROAD GRADE	WATER BAR ORIENTATION	SOIL CLASS A WATER BAR SPACING	SOIL CLASS B WATER BAR SPACING	SOIL CLASS C WATER BAR SPACING	WATER BAR HEIGHT
UP TO 10%	35°	15 - 20m	10 - 12m (apart)	7 - 10m (apart)	0.3 - 0.4m
11% TO 15%	25°	8 - 10m	7 - 10m	UNDESIRABLE	0.4 - 0.6m
15% TO 20%	15°	5 - 8m	CONCRETE	CONCRETE	CONCRETE & OUT-FALL
21% TO 25%	CONCRETE	CONCRETE	CONCRETE	CONCRETE	CONCRETE & OUT-FALL
26% TO 30%	CONCRETE	CONCRETE	CONCRETE	CONCRETE	CONCRETE & OUT-FALL
ABOVE 30%	RELOCATE TRAIL ALIGNMENT	RELOCATE TRAIL ALIGNMENT	RELOCATE TRAIL ALIGNMENT	RELOCATE TRAIL ALIGNMENT	RELOCATE TRAIL ALIGNMENT









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PROPOSED SUBDIVISION 174 ADARE ROAD, ADARE, QLD 4343 STAGE 1
BUSHFIRE TRAIL DETAILS

SCALE 1:50			
ORIGINAL ISSUE NOT FOR CONSTRUCTION			
PROJECT LEADER CK	DESIGNER MP	SIGNATURE CALVIN KIRK RPEQ:19536	1/g/R
DRAFTSPERSON MP	AS SHOWN	JUL 2022	SHEET SIZE A1
JOB No. BR222025		C1703	REVISION