CITY OF MORETON BAY

Enquiries: Xavier Dubreuil
Direct 07 5433 2739
Our Ref: DA/2024/2330
Your Ref: 22-000082_4
Date: 5 July 2024

Foreverlen Pty Ltd
c/- Egis Consulting Pty Ltd
Level 1, 99 Creek Street
BRISBANE QLD 4000

Dear Applicant,

Re: DEVELOPMENT APPROVAL
Planning Act 2016

Development Application No.:	**DA/2024/2330**
Property Location:	**409-423 Caboolture River Road LILYWOOD**
Property Description:	**Lot 1 and 12 RP 866105**
Development Type:	**Operational Works - Development Permit for Roadworks and Stormwater (Lilywood Landings, Stage 4)**

Please be advised that on 5 July 2024 the above development application was approved by Council's Delegate as the Assessment Manager in accordance with section 63 of the *Planning Act 2016* subject to conditions.

The following type of approval has been issued:

- **Development Permit - Operational Works for Roadworks and Stormwater (Lilywood Landings, Stage 4)**

The development allowed by this approval must be carried out in accordance with the attached Decision package.

Attached is an extract from the *Planning Act 2016* which details your appeal rights and the appeal rights of any submitters, if applicable, regarding this decision.

Should you require any further information about this matter, please contact Xavier Dubreuil as referenced above.

Yours faithfully

X. Dubreuil

Xavier Dubreuil
Senior Engineer
Development Services

Enclosures: Attachment 1 - Decision Notice
Attachment 2 - Assessment Manager Conditions
Attachment 3 - Approved Plans / Documents
Attachment 4 - Appeal Rights
Attachment 5 - Infrastructure Charges

Cc Unitywater
Development.Services@Unitywater.com

ATTACHMENT 1

Decision Notice

Decision Notice

Planning Act 2016, section 63

APPLICATION DETAILS

Application No:	**DA/2024/2330**
Applicant:	**Foreverlen Pty Ltd**
Street Address:	**409-423 Caboolture River Road LILYWOOD**
Real Property Description:	**Lot 1 RP 866105** **Lot 12 RP 866105**
Planning Scheme:	**Moreton Bay Regional Council Planning Scheme**

APPROVAL DETAILS

Date of Decision: **5 July 2024**

The development application was approved by Council's Delegate as the Assessment Manager subject to conditions (refer Attachment 2).

Application Type	Development Permit	Preliminary Approval
Operational Works for **Roadworks and Stormwater (Lilywood Landings, Stage 4)**	☑	☐

OTHER NECESSARY PERMITS

Not applicable.

In addition to this approval, you may also be required to obtain a water approval from the Northern SEQ Distributor Retailer, trading as Unitywater. To engage a Registered Certifier to lodge your connection application, go to Unitywater's website www.unitywater.com/certifier

CURRENCY PERIOD OF APPROVAL

The currency period stated in section 85 of the *Planning Act 2016* applies to this approval as outlined below:

- Operational Works - 2 years from the date of this approval starts to have effect.

DEEMED APPROVAL

Not applicable.

VARIATION APPROVAL

Not applicable.

INFRASTRUCTURE

Unless otherwise specified, all assessment manager conditions of this development approval relating to the provision of infrastructure are non-trunk infrastructure conditions under Chapter 4, section 145 of the *Planning Act 2016*.

ASSESSMENT MANAGER CONDITIONS

The Conditions relevant to this development approval are listed in Attachment 2 of the Decision package.

APPROVED PLANS / DOCUMENTS

The approved plans and/or documents as listed below for this development approval are included in Attachment 3 of the Decision package.

The approved plans/documents for this development approval are listed below.

Approved Plans and Documents			
Plan / Document Name	**Reference Number**	**Prepared By**	**Dated**
Title Sheet & Locality Plan	22-000082_4 Dwg. 1000 Rev. A	Egis Consulting Pty Ltd	30 May 2024
Site Layout Plan	22-000082_4 Dwg. 1100 Rev. A	Egis Consulting Pty Ltd	30 May 2024
Control Line Setout Plan	22-000082_4 Dwg. 1300 Rev. A	Egis Consulting Pty Ltd	30 May 2024
Roadworks Layout Plan	22-000082_4 Dwg. 1310 Rev. A	Egis Consulting Pty Ltd	30 May 2024
Intersection Details	22-000082_4 Dwg. 1320 Rev. A	Egis Consulting Pty Ltd	30 May 2024
Road 7 (Pembroke Drive) Longitudinal Section	22-000082_4 Dwg. 1330 Rev. A	Egis Consulting Pty Ltd	30 May 2024
Road 7 (Pembroke Drive) Cross Sections	22-000082_4 Dwg. 1331 Rev. A	Egis Consulting Pty Ltd	30 May 2024
Road 9 (Ashford Crescent) Longitudinal Section	22-000082_4 Dwg. 1332 Rev. A	Egis Consulting Pty Ltd	30 May 2024
Road 9 (Ashford Crescent) Cross Sections	22-000082_4 Dwg. 1333 Rev. A	Egis Consulting Pty Ltd	30 May 2024
Road 13 (Jersey Street) Longitudinal Section	22-000082_4 Dwg. 1334 Rev. A	Egis Consulting Pty Ltd	30 May 2024
Road 13 (Jersey Street) Cross Sections	22-000082_4 Dwg. 1335 Rev. A	Egis Consulting Pty Ltd	30 May 2024
Road 14 (Ashford Crecent) Longitudinal Section	22-000082_4 Dwg. 1336 Rev. A	Egis Consulting Pty Ltd	30 May 2024
Road 14 (Ashford Crecent) Cross Sections	22-000082_4 Dwg. 1337 Rev. A	Egis Consulting Pty Ltd	30 May 2024

Approved Plans and Documents			
Plan / Document Name	**Reference Number**	**Prepared By**	**Dated**
Stormwater Layout Plan	22-000082_4 Dwg. 1400 Rev. A	Egis Consulting Pty Ltd	30 May 2024
Stormwater Notes and Details	22-000082_4 Dwg. 1401 Rev. A	Egis Consulting Pty Ltd	30 May 2024
Stormwater Catchment Plan	22-000082_4 Dwg. 1410 Rev. A	Egis Consulting Pty Ltd	30 May 2024
Stormwater Longitudinal Sections Sheet 1 of 2	22-000082_4 Dwg. 1420 Rev. A	Egis Consulting Pty Ltd	30 May 2024
Stormwater Longitudinal Sections Sheet 2 of 2	22-000082_4 Dwg. 1421 Rev. A	Egis Consulting Pty Ltd	30 May 2024
Stormwater Calculation Table Minor	22-000082_4 Dwg. 1430 Rev. A	Egis Consulting Pty Ltd	30 May 2024
Stormwater Calculation Tables Major	22-000082_4 Dwg. 1431 Rev. A	Egis Consulting Pty Ltd	30 May 2024
Stormwater Structure Details	22-000082_4 Dwg. 1440 Rev. A	Egis Consulting Pty Ltd	30 May 2024
Bio-basin Plans Layout Plan	22-000082_4 Dwg. 1700 Rev. A	Egis Consulting Pty Ltd	30 May 2024
Bio-Basin Plans Section Plan	22-000082_4 Dwg. 1701 Rev. A	Egis Consulting Pty Ltd	30 May 2024
Bio-Basin Plans Notes and Details	22-000082_4 Dwg. 1702 Rev. A	Egis Consulting Pty Ltd	30 May 2024

ASSESSMENT BENCHMARKS

The Assessment Benchmarks that applied to the development from the following Categorising Instruments include;

Categorising Instrument (*Planning Regulation 2017*)

State Planning Policy

- *State Planning Policy 2017*, Part E.

Regional Plan

- *South East Queensland Regional Plan 2017 (ShapingSEQ).*

Local Categorising Instrument (Moreton Bay Regional Planning Scheme)

- MBRC Planning Scheme - Works Code
- Reconfiguration a lot (applicable precinct only)
- Code Caboolture West Local Plan Code

Local Categorising Instrument (Variation Approval)

Not applicable.

Local Categorising Instrument (Temporary Local Planning Instrument)

Not applicable.

OTHER RELEVANT ASSESSMENT MATTERS

Not applicable.

REASONS FOR THE DECISION

Not Applicable.

REASONS FOR APPROVAL DESPITE NON-COMPLIANCE WITH ASSESSMENT BENCHMARKS

Not applicable.

REFERRAL AGENCY CONDITIONS

There were no Referral Agencies applicable to this development application.

SUBMISSIONS

Not applicable.

APPEAL RIGHTS

Attachment 4 of the Decision package is an extract from the *Planning Act 2016* which details your appeal rights, and the appeal rights of any submitters, if applicable, regarding this decision.

ATTACHMENT 2

Assessment Manager Conditions of Approval

CONDITION		**TIMING**
OPERATIONAL WORKS		
DEVELOPMENT ENGINEERING		
1	**Road Classifications for Pavement Design**	
	Design pavement in accordance with the following road classifications: Road 07 - Modified living Residential - 1.2 x 10^5 ESA Road 09 - Modified living Residential - 1.2 x 10^5 ESA Road 13 - Modified living Residential - 1.2 x 10^5 ESA Road 14 - Modified living Residential - 1.2 x 10^5 ESA	Prior to subgrade inspections.
2	**Non-Conforming Designs**	
	Only non-conforming designs listed in this approval have been accepted. All other discrepancies with Council standards shall be redesigned and / or reconstructed as necessary to conform with Council standards at no cost to Council.	At all times during construction and prior to works being accepted Off Maintenance.
3	**Errors and Omissions**	
	Where errors or omissions occur in the design or works do not conform to or meet Council standards then these works shall be rectified to comply with Council standards at no cost to Council. Where drawings contain insufficient detail or do not contain details of works that are either necessary or associated with the development then these works shall be designed and constructed to Council standards. Only the approved plans shall be used for construction. Note: Council reserves the right to amend the approved drawings or request further information should this become necessary.	At all times during construction and prior to works being accepted Off Maintenance.
4	**Works – Applicant's Expense**	
	All works, services, facilities and/or public utility alterations required by or as a consequence of this approval or stated condition/s, whether carried out by the Council or otherwise, shall be at the developer's expense unless otherwise specified or agreed in writing. Replace existing Council infrastructure (including but not limited to street trees and footpaths) to Council's standards.	At all times during construction and prior to works being accepted Off Maintenance.
5	**Works – Connection to existing works**	
	Where existing works, including roads and drainage works, will not link up with and join smoothly to proposed works and are not more than twenty (20) metres from the nearest point of the proposed works the developer shall carry out such	Prior to works being accepted On Maintenance.

CONDITION		TIMING
	works as are necessary to ensure that the incomplete works, including roads and drainage, are constructed to link up with and join smoothly to the works proposed in accordance with Council's standards. These works are to be undertaken at the developer's expense unless otherwise specified or agreed in writing.	
6	**Notification of Finalisation of Works**	
	Notify Council in writing that the development works on site have been finalised.	At the time of completion of construction.
7	**As Constructed Drawings**	
A	Provide, for review and approval, Council with a preliminary set of the surveyor and engineering As Constructed drawings for the approved works and a digital ADAC file. Note: The current design standard and relevant planning scheme policy is MBRC Planning Scheme Policy Operational Works inspection, maintenance and bonding procedures.	Prior to requesting an On Maintenance inspection.
B	Submit 'As Constructed' drawings and digital ADAC file in accordance with Council's Planning Scheme, relevant Planning Scheme Policies and design standards current at the time of development.	Prior to works being accepted On Maintenance.
8	**Works in Existing Roads**	
A	Works carried out in or affecting existing Roads must be undertaken so that these roads are maintained in a safe and useable condition.	At all times.
B	Provide to Council's delegated officer and receive acknowledgement of a Traffic Management Plan, with site specific Guidance Scheme, prepared and signed by an appropriately qualified person and in accordance with the Manual of Uniform Traffic Control Devices (MUTCD) for any works that will affect traffic movements or traffic safety in existing roads. Note: 1. A 'Part Road Closure Application' for Development Works form is to accompany the Traffic Management Plan submission. 2. This submission is required to be made in addition to any Traffic Management Plan which has been submitted and/or approved as part of a Construction Management Plan for the site during the development application process for Material Change of Use or Reconfiguring a Lot or subsequent non-IDAS applications.	At least five (5) days prior to undertaking the works in or affecting existing roads.

CONDITION		TIMING
9	**Information Sign – Works in Existing Roads**	
	A construction advisory road sign must be erected and regularly updated and maintained displaying the developer and contractors details and the expected completion date for works on existing roads. The sign shall be located so as be clearly legible to the public from of minimum 15m distance from the existing road on which the works are to be carried out on.	For the duration of the works from commencement to acceptance of On Maintenance.
10	**Notification to Affected Premises**	
A	Provide Council with a copy of an information kit for 'Notification to Affected Premises' which includes the following: 1. A layout plan of the proposed development showing adjoining lot boundaries, new and existing roads, park and open space, drainage reserves and community purposes lots as applicable; 2. Details of any external works with any changes to existing works highlighted for easy identification; 3. Scheduled start and completion dates; 4. Contact names and phone numbers for the Developer, Supervising Engineer, Consulting Engineer, the Contractor, Wildlife Spotter and who to contact in an emergency; and 5. The site working hours authorised for the site works.	Prior to distribution of information kit to residents.
B	Provide all occupiers of premises adjoining the site, directly opposite the frontage of the site, adjacent to and directly opposite external works and residents/occupiers likely to be directly affected by the works with a copy of the 'Notification to Affected Premises' information kit. Provide Council's delegated officer with a list of premises which the information kit has been delivered to.	Not less than 14 days prior to commencing any construction works.
11	**Information Sign – Development Works**	
	An information sign containing the following details and after hours contact details must be provided at each entrance to the development site: 1. Developer 2. Supervising Consultant/ Engineers / Project Manager 3. Principal Contractor The sign must be at least 0.9m (W) by 0.6m (H). The sign must be erected and maintained for the duration of the development works.	For the duration of the development works from commencement to acceptance On Maintenance by Council.
12	**Prestart Meeting**	
	Arrange a prestart meeting with Council officers from Development Services section on 3205 0555 or (Email - council@moretonbay.qld.gov.au - Attention - Development Services - Engineering Waraba Construction Team - Referencing DA/2024/2330.	Not less than 7 days prior to commencing any construction works.

CONDITION		TIMING
	The following people will be required to attend the prestart meeting: 1. Developer's Supervising Engineer 2. Contractor's Engineer / Project Manager 3. Contractor's Site Supervisor 4. Fauna Manager (where required).	
13	**Mandatory Inspections with Council Officers**	
	Submit required documentation for each mandatory inspection in accordance with MBRC Planning Scheme Policy - Operational Works inspection, maintenance and bonding procedures.	Prior to requesting inspection.
	Undertake the following inspections with Council's delegated officer (where applicable to approved works) in accordance with MBRC Planning Scheme Policy - Operational Works inspection, maintenance and bonding procedures:	As prescribed below.
A	Stormwater drainage.	Prior to backfilling stormwater trenches.
B	Subgrade / box inspection.	Prior to placement of structural pavements.
C	Preseal inspection.	Prior to priming and sealing of structural pavements.
D	For concrete slabs and concrete pavements - foundations / subgrade and pre-pour inspections.	Prior to concrete pouring.
E	On maintenance inspection for Council's acceptance of all works.	Prior to works being accepted On Maintenance.
F	Off maintenance inspection of all works. Note: Reinspections attract a fee in accordance with Council's Fee Schedule. The fee must be paid prior to the reinspection.	After maintenance period has elapsed.
G	Provide Council's delegated officer with a copy of an Engineers' Certificate Soil tester's reports demonstrating that required compaction standards, finished levels and textures of finish have been obtained in accordance with Council's Planning Scheme Policy - Operational Works inspection, maintenance and bonding procedures.	Prior to proceeding to construction of next layer or surfacing.
14	**Testing Frequency – General**	
A	All testing of the works shall be carried to comply with the minimum testing frequencies given in MBRC Planning Scheme Policy - Operational Works inspection, maintenance and bonding procedures. Note: Council's delegated officer may vary the frequency of testing to suit site conditions but must provide written advice to the supervising engineer prior to commencement of the relevant works.	At all times during construction.

CONDITION		TIMING
B	Provide a plan identifying locations where testing has occurred.	Prior to works being accepted On Maintenance.
15	**Construction Hours Restrictions**	
	Ensure hours of construction are limited to 0630 to 1830 Monday to Saturday and not at all on Sundays and public holidays. Note: Council's engineer may approve (in writing) work outside the above hours where it can be demonstrated to the satisfaction of Council that the work will not cause unreasonable interference with the amenity of adjoining premise and any person.	At all times.
16	**Construction Nuisance and Annoyance**	
	Ensure construction works do not cause unreasonable interference with the amenity of adjoining premise and any person by reason of noise, vibration, electrical interference, smell, fumes, vapour, steam, soot, ash, dust, silt, wastewater, waste products, grit, oil or otherwise.	At all times.
17	**Construction Site Management**	
	Ensure the construction site is kept in a clean and tidy state.	At all times.
18	**Temporary Sedimentation, Erosion and Runoff Control**	
A	Implement an Erosion and Sediment Control Plan which is prepared by an experienced Certified Professional in Erosion and Sediment Control (CPESC) in accordance with International Erosion Control Association Australasia (IECA) Best Practice and Sediment Control document and MBRC Planning Scheme current at the time of development.	Prior to commencement of works and to be maintained current at all times during construction and until the development is accepted off-maintenance.
B	The temporary erosion and sediment control measures shall be maintained and be functional until the end of the Maintenance Period for the works or earlier if Council's delegated officer considers they are no longer required. Note: Council's delegated officer may order additional measures to control silt on site at no cost to Council.	At all times during construction.
19	**Haul Routes**	
	Submit and have approved by Council's delegated officer all haul routes for the transport of imported or spoil material and gravel pavement material along Council roads below sub-arterial standard. Note: Refer to MBRC Planning Scheme Values and Constraints Mapping - Road Hierarchy for details on sub-arterial and arterial roads.	Prior to a prestart meeting being held.

CONDITION		TIMING
20	**Spillage onto Existing Roads**	
	Clean those parts of the access route to the site that are affected by any material dropped, deposited or spilled on the roads as a result of construction processes associated with the site. Note: 1. All materials must be swept up and removed from the roads and not directed into Council's stormwater drainage system. 2. All care must be taken to prevent sediments being deposited on roads.	At all times during construction.
21	**Dust Control – Nuisance and Annoyance**	
	Implement suitable dust control measures. If airborne particles are observed leaving the site, any work is to cease immediately and satisfactory dust suppression is to be implemented. Note: Dust suppression measures must be in place at all times including weekends and public holidays.	At all times prior to works being accepted Off Maintenance.
22	**Earthworks Batters**	
	Where approved drawings do not include specifications for scour and erosion protection apply the following treatments to batter slopes: 1. Slopes of 1:6 or flatter – topsoil and seed 2. Slopes between 1:6 and 1:4 – topsoil and turf 3. Slopes of 1:4 or greater – provide treatment recommendation from a qualified geotechnical engineer (R.P.E.Q.) for Council approval prior to undertaking batter works 4. Or as directed by Council. Note: Batters within Open and Civic Spaces are to be treated in accordance with MBRC Planning Scheme Policy Integrated Design - Open and Civil Space Design.	At all times during construction.
23	**Road Crossings in Existing Roads**	
	All services crossings under Existing Council Roads are to be tunnel bored unless approved otherwise by Council's delegated officer. Where approval is given for open trenching, the following is to apply: 1. Minor Roads - backfill shall be compacted in layers to 95% standard maximum dry density and topped with 300mm of pavement material and a 50mm AC wearing course. 2. Sub-arterial or Arterial roads - refer to I.P.W.E.A. Standard Drawing RS-170. 3. Verge - Backfill shall be compacted to 90% standard maximum dry density and topped with 75mm of sandy	At all times during construction.

CONDITION		TIMING
	loam. Restoration of any vegetation shall be undertaken to a standard as near as practicable to the pre-construction standard.	
24	**Site works – Stormwater Runoff Quality**	
	Carry out earthworks in accordance with the State Planning Policy - Water Quality and IECA Best Practice Erosion and Sediment Control document. Note: 1. Soil disturbances of greater than 1.0 hectares will require a site specific Erosion & Sediment Control Plan. 2. Earthworks are to be undertaken to ensure that soil disturbances are staged into manageable areas of not greater than 3.5 hectares.	At all time during construction and until the site is suitably stabilised.
25	**Unsuitable Fill Materials**	
	Ensure that all fill material used on the development site is free of unsuitable materials, identified in AS3798 and the following: 1. actual acid sulfate soils and potential acid sulfate soils; 2. organic or putrescible matter; 3. material imported from land which is, or has been, listed on the “Environmental Management Register” under the *Environmental Protection Act 1994*; and 4. building demolition material.	At all times.
26	**Compaction Requirements**	
	All fill material which is intended to be load bearing, or the finished surface level of which is required to remain approximately constant, is selected, placed and compacted to the standard prescribed in Australian Standard AS3798 Guidelines on Earthworks for Commercial and Residential developments.	At all times during construction.
27	**Advisory Sign – Future Road Extension**	
	At the end of each road that is intended to extend with future development an advisory sign shall be supplied and erected to inform residents and the public of the future road extension. The sign shall be worded as follows: “This road may be extended with future development of the adjoining land. For further information refer to Council’s Planning Scheme.” This sign must be easily read at a distance of 5 metres. The sign shall not be attached to the road end hazard sign above the sign board.	Prior to works being accepted On Maintenance.

CONDITION		TIMING
28	**Pavement Design**	
A	All road pavements must be designed, constructed and tested in accordance with MBRC Planning Scheme Policy - Integrated Design - Street, Roads and Utilities and standard drawings current at the time of construction. Note: 1. Council requires a primer seal placed under all asphalt surfaces. 2. Increased asphalt surface thicknesses for road thresholds are to be identified in the pavement design.	At all times during construction.
B	Submit, for review and approval by Council's delegated officer, a pavement design for all roads. Pavement designs are to include Soil tester's reports.	Prior to subgrade inspection.
29	**Pavement Jointing Detail**	
	Undertake pavement jointing in accordance with I.P.W.E.A.Q. Standard Drawings RS-170.	Prior to works being accepted On Maintenance.
30	**Concrete Footpaths**	
	Construct concrete footpaths and kerb ramps in accordance with I.P.W.E.A. Standard Drawings RS-065 and RS-090.	Prior to works being accepted On Maintenance.
31	**Street Signs**	
	Street signs must be provided in accordance with Council's Standard Drawings and I.P.W.E.A. Standard Drawings. Note: 1. House numbers required for these signs shall be obtained from Council's house numbering officer by contacting Council's Customer Service. 2. The MBRC Logo is not to be put on the sign.	Prior to works being accepted On Maintenance.
32	**Hazard Management**	
A	Undertake the hazard identification and treatment process for any additional, existing or introduced hazards identified onsite by the Consultant or by Council's delegated officer during the construction process. Undertake a review of the identified hazards and provide a copy of the completed Hazard Mitigation Worksheet found in AUSTROADS Guide to Road Design Part 6: Roadside Design, Safety and Barriers Appendix B along with any supporting information.	Prior to works being accepted On Maintenance.
B	Provide, for review and approval by Council's delegated officer, adequate design documentation for the recommended hazard management treatment in accordance with AS3845:1999 and AUSTROADS Guide to Road Design Part 6: Roadside Design, Safety and Barriers.	Prior to construction of any hazard management treatment.

CONDITION		TIMING
C	Construct approved hazard management treatments in accordance with Council's Planning Scheme, Planning Scheme Policies, standard drawings and any other relevant standards current at the time of development.	Prior to works being accepted On Maintenance.
33	**Stormwater Runoff Control – Batters and Retaining Walls**	
	Provide cut-off drains at the top of the batter with turf or rock lined batter drains for all batters and/or retaining walls generally higher than 600mm in height and with a catchment greater than 1000m2. Note: Where these are not detailed on the approved drawings then these works shall be in accordance with Council's current standards.	Prior to works being accepted On Maintenance.
34	**Stormwater Runoff Control – Open Drains**	
	Provide lining with appropriate scour protection to all open drains and bunds in accordance with Council's Planning Scheme, Planning Scheme Policies and standard drawings current at the time of development. Note: Dumped rock is generally not considered as an appropriate solution.	Prior to works being accepted On Maintenance.
35	**Stormwater Pipe Outlets and Culvert Inlets and Outlets**	
	Stabilise all culvert inlets and outlets or stormwater drainage outlets in accordance with industry best practice and the following requirements: 1. Rock gabion baskets/rock mattresses 2. Grouted rock/stone pitching with a properly designed and prepared base and constructed to the following requirements: i. Mortar to be 1 part cement to 3 parts sand (by volume). ii. Open face stone pitching is to be used where the concrete is recessed 50mm behind the stone facing. iii. Select spalls to avoid sharp edges. 3. Other solutions as approved by Council's delegated officer. Note: Dumped rock is generally not considered as an appropriate solution.	At all times.
36	**Stormwater Overland Flow – Site Earthworks**	
	Earthworks must be undertaken on the site so as not to cause nuisance and annoyance to any person or premises. The development must: 1. Allow stormwater overland flow which entered the land prior to the commencement of the earthworks to continue to enter the land; and 2. Ensure stormwater overland flow from the development site is not discharged or diverted onto	At all times during construction.

CONDITION		TIMING
	land (other than a road) adjacent to the site in a manner which: i. concentrates the rate of flow at any point along the property boundary; or ii. increases the peak flow rates of stormwater discharged at any point along the property boundary; beyond that which existed prior to commencement of these earthworks.	
37	**CCTV – Stormwater Pipes**	
A	Undertake and provide, to the satisfaction of the Council, a high definition Closed Circuit Television (CCTV) recording of all stormwater pipes, including inter allotment roof water drainage. Recording to be undertaken within one month immediately preceding making a request for On Maintenance inspection and post road pavement construction works. CCTV to clearly display all joints (full surrounds) and any form of damage or defects, including date and time of the recording. The recording is to include a report signed by a suitably qualified Registered Professional Engineer Queensland (RPEQ) stating that the recording has been reviewed and all works are satisfactory. Where defects have been identified, consultant is to provide method of rectification to Council for approval, prior to carrying out any rectification works.	Prior to a request for On Maintenance Inspection
B	Undertake and provide, to the satisfaction of the Council, a high definition Closed Circuit Television (CCTV) recording of all stormwater pipes, including inter allotment roof water drainage. Recording to be undertaken within one month immediately preceding making a request for Off Maintenance inspection. CCTV to clearly display all joints (full surrounds) and any form of damage or defects, including date and time of the recording. The recording is to include a report signed by a suitably qualified Registered Professional Engineer Queensland (RPEQ) stating that the recording has been reviewed and all works are satisfactory. Where defects have been identified, consultant is to provide method of rectification to Council for approval, prior to carrying out any rectification works.	Prior to a request for Off Maintenance inspection.
38	**Provision of Kerb Adapters**	
	Provide a minimum of two (2) metal kerb adaptors per lot for lots that drain to the road. Where a lot has side crossfall of up to 1.5%, one (1) kerb adaptor shall be located at each side of the lot. Where a lot has side crossfall of greater than 1.5%, both kerb adaptors shall be located at the low side of the lot.	Prior to works being accepted On Maintenance.

CONDITION		TIMING
	For lots with a concrete footpath at the frontage, the kerb adaptors shall be connected to the front boundary of the lot with Class SN8 uPVC stormwater pipe.	
39	**Certification – Public Stormwater Management Infrastructure**	
	Provide documentation to Council from a Registered Professional Engineer (RPEQ) specialising in stormwater design certifying that the stormwater management treatment train as approved in the stormwater management plan and design drawings has been constructed in accordance with engineering best practise and is functioning as designed. The certification shall include the completed sign-off forms for bioretention systems prepared by Water by Design in Partnership with Healthy Waterways shall be completed. The sign-off forms are accessible from www.waterbydesign.com.au.	Prior to works being accepted On Maintenance.
40	**Public Bioretention Inspections**	
	Provide Council with notice of the subsoil drains being laid and the filter media being installed. Note: Council's delegated officer may attend the inspection.	Not less than 48 hours prior to subsoil drains being laid and the filter media being installed.
41	**Maintenance Process for Public Bioretention Basin**	
A	The entire bioretention basin shall act as a sediment basin. Note: Council will consider alternative solutions to achieve the desired outcome.	During the build-out phase (80%) or up to a maximum of two (2) years.
B	Submit, for review and approval by Council's delegated officer, a deferred works schedule to cover the cost of basin conversion plus twenty-five percent (25%) and in accordance with the requirements of Council's Planning Scheme Policy - Operational Works inspection, maintenance and bonding procedures. The following works are to be included as a minimum in the deferred works bond schedule: • removal of sacrificial turf and geofabric; and • In-situ hydraulic conductivity testing of filter material in accordance with the "Guidelines for Soil Filter Media in Bioretention Systems: (produced by the Faculty for Advanced Water Biofiltration) requirements. • Planting out of the basin in accordance with the approved landscaping drawings.	Prior to the bioretention basin area being accepted On Maintenance as a sediment basin.
C	Construct deferred works and any other works necessary to convert to the basin from sediment basin to a functioning bioretention basin in accordance with Council's Planning Scheme Policy - Operational Works inspection, maintenance and bonding procedures. In-situ hydraulic conductivity testing of filter material is to be	Once the contributing catchment achieves eighty percent (80%) build-out or a maximum of 2 years.

CONDITION		TIMING
	provided to Council's delegated officer to demonstrate that area can be planted out. Where in-situ hydraulic conductivity testing shows that the filter material is not acceptable then replacement of the filter material is required in addition to planting out of basin area. Note: Deferred Works for bioretention basin conversion are subject to a separate on maintenance process to the other civil works for the development. The On Maintenance process is to be in accordance with Council's Planning Scheme Policy - Operational Works inspection, maintenance and bonding procedures including on and off maintenance inspections and maintenance period.	
42	**Fertilisers for Grassing and Landscape Works**	
	Odorous chemicals, fertilisers, soil conditioners or mulches shall not be used on land development projects. Only a non-odorous, commercially bagged and labelled fertiliser shall be used when seeding grass areas or laying turf. Without limiting the above, Council's delegated officer may approve the use of suitably composed and aged organic material, such as soil conditioners, at the following locations: 1. in isolated locations where existing and proposed houses are considerable distances from the work site; and 2. where, in the officer's opinion, their use would not adversely affect the occupiers of any nearby properties with strong odours or loose material blown from the work site. Council's delegated officer will provide the approval in writing with conditions where odorous fertilisers are approved.	At all times during construction.
43	**Stabilisation of Disturbed Areas**	
	Ensure that a grass strike rate of at least 80% cover has been attained on all disturbed areas or other approved means of stabilisation of grassed areas have been provided. Note: For residential and rural residential subdivisions, the road reserve between kerb and property line shall be turfed as a condition of completion.	Prior to works being accepted On Maintenance.

ADVICES	
1	**Development Permit**
	This approval shall comply with all the conditions of related approval as stipulated in Council's Decision Notice – Development Permit dated 24 August 2023 referenced as DA/2021/4669. The Applicant needs to be aware that the Currency Period of that Decision Notice may determine the validity period of this Decision Notice.
2	**Extent of Checking by Council**
	This approval shall not be taken to mean that the drawings have been checked in detail and Council accepts no responsibility whatsoever for the survey information, the design, or for the accuracy of any information or detail contained in the approved drawings and specifications.
3	**Aboriginal Cultural Heritage Act**
	The *Aboriginal Cultural Heritage Act 2003* commenced in Queensland on April 16, 2004. Under the Act, indigenous parties are key in assessing cultural heritage significance. The *Aboriginal Cultural Heritage Act 2003* establishes a Duty of Care for indigenous cultural heritage. This applies on all land and water, including freehold land. The Cultural Heritage Duty of Care lies with the person or entity conducting the activity. Penalty provisions apply for failing to fulfil the Cultural Heritage Duty of Care. Those proposing an activity that involves additional surface disturbance beyond that which has already occurred on the proposed site need to be mindful of the Duty of Care requirement. Details of how to fulfil the Duty of Care are outlined in the Duty of Care Guidelines gazetted with the Act. Council strongly advises that you contact the relevant state agency to obtain a copy of the Duty of Care Guidelines and further information on the responsibilities of developer under the terms of the *Aboriginal Cultural Heritage Act 2003*.
4	**Environmental Protection Act**
	It remains the duty of care of the site owner not to cause Environmental Harm as defined under the *Environmental Protection Act 1994*.
5	**Fill in Proposed Parks**
	Filling is not permitted in proposed parks without prior written approval of Council's Delegated Officer.
6	**Road and Stormwater infrastructure**
	In respect to Road and Stormwater infrastructure, the works shall be designed and constructed in accordance with the relevant Planning scheme codes and policies; The current relevant planning scheme codes and policies are: 1. Works code; 2. Reconfiguring a lot codes; 3. PSP- Integrated Design 4. PSP- Operational Works Inspection, Maintenance and Bonding Procedures.

ADVICES	
	All of which may be downloaded free of charge from Council's website at www.moretonbay.qld.gov.au. The PSP- Operational Works Inspection, Maintenance and Bonding Procedures also contains details of other requirements such as: 1. arrangements for works going On or Off Maintenance; 2. inspection and testing; 3. checklists and certification proforma; 4. bonding procedures. Should further information be required regarding the road and stormwater component of the Operational Works Application, please contact Council's Officer, Xavier Dubreuil on phone (07) 5433 2739.
7	**Acceptance Based on Applicant's Certification**
	Council's acceptance of the above submission is based solely on the applicant's certification that the proposal conforms totally to Council's Planning Scheme, Planning Scheme Policies and standard drawings.
8	**Biosecurity Act 2014 - Fire Ant Control**
	Significant portions of the Moreton Bay are within Fire Ant Biosecurity Zone 2 and must remain vigilant for the presence of fire ants. Under the Biosecurity Act 2014, individuals and businesses are responsible for ensuring that they follow the movement controls for specific organic materials to help prevent the spread of fire ants within South East Queensland's fire ant biosecurity zones. Movement of a fire ant carrier from within the fire ant biosecurity zone may need a biosecurity instrument permit. More information is available on https://www.fireants.org.au/treat/business--and-industry/movement-controls

ATTACHMENT 3

Approved Plans / Documents

LILYWOOD LANDINGS

STAGE 4 - OPERATIONAL WORKS FOR FOREVERLEN PTY LTD

LOCALITY PLAN
N.T.S

DRAWING INDEX	
DWG NO.	DESCRIPTION
	GENERAL
1000	TITLE SHEET & LOCALITY PLAN
	KEY PLAN
1100	SITE LAYOUT PLAN
	CONTROL LINE SETOUT
1300	CONTROL LINE SETOUT PLAN
	ROADWORKS LAYOUT PLAN
1310	ROADWORKS LAYOUT PLAN
	INTERSECTION DETAILS
1320	INTERSECTION DETAILS
	LONGITUDINAL AND CROSS SECTIONS
1330	ROAD 7 (PEMBROKE DRIVE) LONGITUDINAL SECTION
1331	ROAD 7 (PEMBROKE DRIVE) CROSS SECTIONS
1332	ROAD 9 (ASHFORD CRESCENT) LONGITUDINAL SECTION
1333	ROAD 9 (ASHFORD CRESCENT) CROSS SECTIONS
1334	ROAD 13 (JERSEY STREET) LONGITUDINAL SECTION
1335	ROAD 13 (JERSEY STREET) CROSS SECTIONS
1336	ROAD 14 (ASHFORD CRESCENT) LONGITUDINAL SECTION
1337	ROAD 14 (ASHFORD CRESCENT) CROSS SECTIONS
	STORMWATER LAYOUT PLANS
1400	STORMWATER LAYOUT PLAN
1401	STORMWATER NOTES AND DETAILS
	STORMWATER CATCHMENT PLAN
1410	STORMWATER CATCHMENT PLAN
	STORMWATER LONGITUDINAL SECTIONS
1420	STORMWATER LONGITUDINAL SECTIONS SHEET 1 OF 2
1421	STORMWATER LONGITUDINAL SECTIONS SHEET 2 OF 2
	STORMWATER CALCULATION TABLES
1430	STORMWATER CALCULATION TABLES MINOR
1431	STORMWATER CALCULATION TABLES MAJOR
1440	STORMWATER STRUCTURES DETAILS
	SEWER RETICULATION PLANS
1500	SEWER RETICULATION COVER SHEET
1501	SEWER RETICULATION LAYOUT PLAN
	SEWER LONGITUDINAL SECTIONS
1510	SEWER RETICULATION LONGITUDINAL SECTIONS SHEET 1 OF 2
1511	SEWER RETICULATION LONGITUDINAL SECTIONS SHEET 2 OF 2
	WATER RETICULATION PLANS
1600	WATER RETICULATION COVER SHEET
1601	WATER RETICULATION LAYOUT PLAN
1602	WATER RETICULATION DETAILS
	BIO-BASIN PLANS
1700	BIO-BASIN PLANS LAYOUT PLAN
1701	BIO-BASIN PLANS SECTION PLAN
1702	BIO-BASIN PLANS NOTES AND DETAILS

CONSTRUCTION HOLD POINT
PRIOR TO CONSTRUCTION THE CONTRACTOR SHALL VERIFY LEVELS OF ALL EXISTING CROSSINGS AND CONNECTION POINTS.

CONSTRUCTION NOTE
THESE DRAWINGS ARE TO BE READ IN CONJUCTION WITH:
- CRR INTERSECTION & IDC SET - 22-000082_CRR
- BULK EARTHWORKS SET - 22-000082_EWKS
- STAGE 1A / 1B SET - 22-000082_1A-1B
- STAGE 2 SET - 22-000082_2
- STAGE 3 SET - 22-000082_3
- STAGE 23 SET - 22-000082_23
- GEOTECHNICAL REPORT
- BAF TRUNK WATER INFRASTRUCTURE SET - 22-000082_TWI
- BAF DOBSON LANE TRUNK GRAVITY SEWER SET - 22-000027
- BAF DN900 NORTHERN TRUNK GRAVITY SEWER SET - 22-000027_NTGS
- BAF NORTH-SOUTH TRUNK GRAVITY SEWER SET - 22-000027_NSTS
- SIGNALS PLANS (BY CV SERVICES)
- LANDSCAPE PLANS (BY AECOM)
- ELECTRICAL / COMMS PLANS (BY CV SERVICES)

MORETON BAY REGIONAL COUNCIL
LOT 12 ON RP 866105
AREA OF SITE: 2.040ha
DA 2021/4669

LENNIUM GROUP

Lilywood LANDINGS

IMAGINE. CREATE. ACHIEVE. a sustainable future

PROJECT No.:	STAGE:	MILESTONE:	REVISION DATE:	DRAWING No.:	REVISION:
22-000082_4	4	OPW	30/05/2024	1000	A

Approved Subject to Conditions of Decision Notice DA/2024/2330

05/07/2024

LEGEND

🟧 - - -	STAGE BOUNDARY
▨ - - -	EXISTING/FUTURE STAGE BOUNDARY
——	PROPOSED LOT BOUNDARY
——	EXISTING LOT BOUNDARY
- - - -	FUTURE LOT BOUNDARY

INITIAL ISSUE		DES	DRN	CHK	APP	DATE	AMENDMENT DETAILS
		AA	RT	AA	RA	15.09.23	
AMENDMENTS	A	AA	RT	AA	MH	30.05.24	ISSUED FOR APPROVAL

DISCLAIMER: ALL DIMENSIONS TO BE CHECKED ON SITE BY CONTRACTOR PRIOR TO CONSTRUCTION. USE WRITTEN DIMENSIONS ONLY, DO NOT SCALE.

STATUS
FOR APPROVAL

APPROVED
BY: MAX HOOPER NO: 16633
SIGN: [illegible] DATE: 30.05.24

SCALE
1:500 10 5 0 10 20m A1
1:1000 A3

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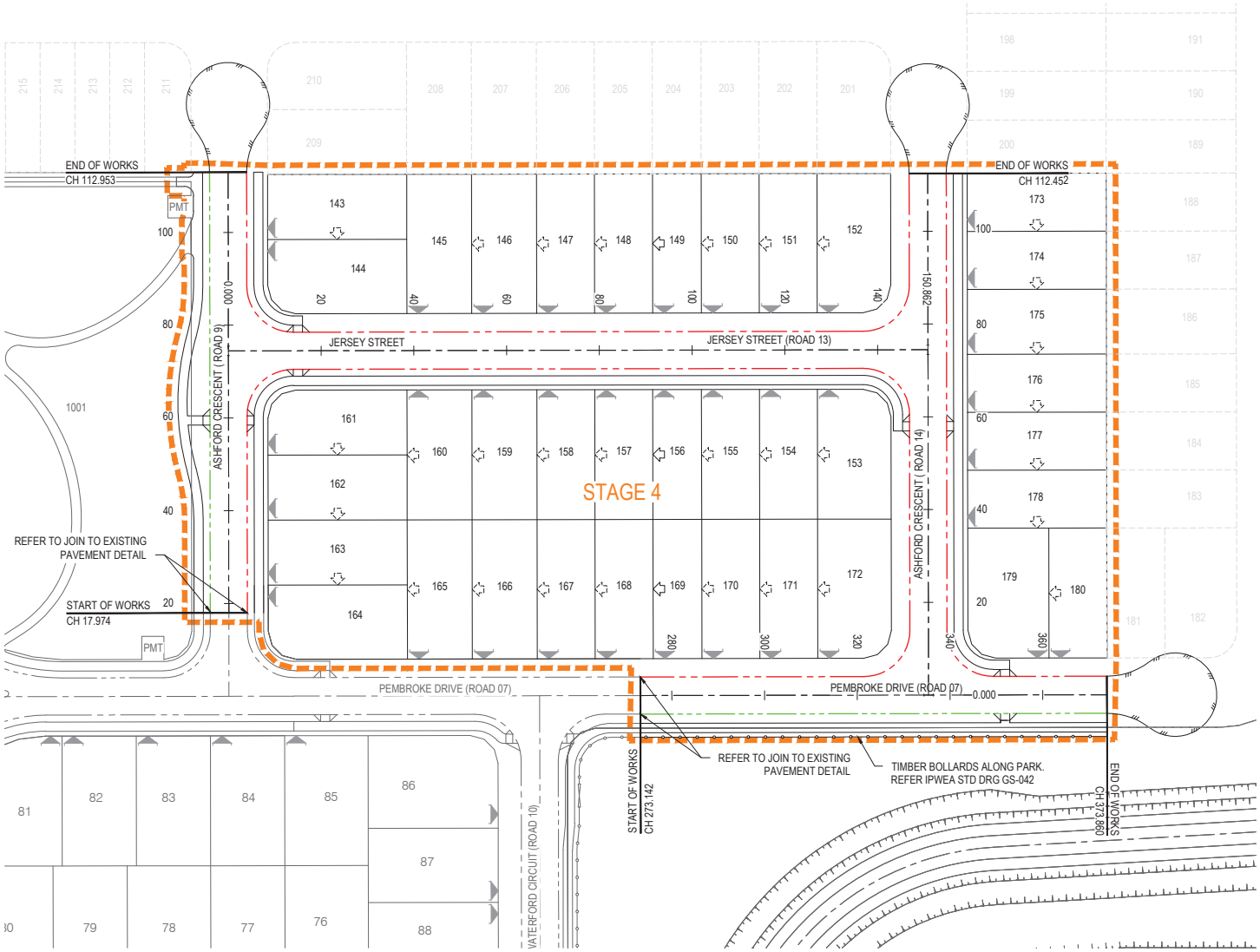
CLIENT
LENNIUM GROUP

PROJECT
Lilywood LANDINGS
STAGE 4

DRAWING TITLE
SITE LAYOUT PLAN

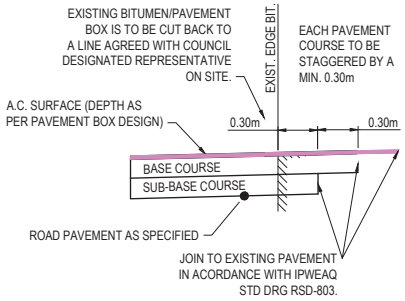
PROJECT No.	DRAWING No.	REVISION
22-000082_4	1100	A

Approved Subject to Conditions of Decision Notice DA/2024/2330
05/07/2024



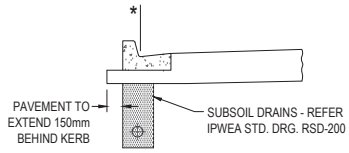
LEGEND

- STAGE BOUNDARY
- CONTROL LINE
- MOUNTABLE KERB & CHANNEL TYPE 'M3'
- BARRIER KERB & CHANNEL TYPE 'B1'
- INDICATIVE DRIVEWAY LOCATIONS
- BUILD TO BOUNDARY - OPTIONAL
- BUILD TO BOUNDARY - MANDATORY



JOIN TO EXISTING PAVEMENT DETAIL

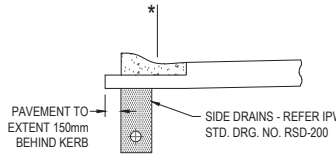
N.T.S.



BARRIER KERB AND CHANNEL TYPE B1 (300mm) IPWEA

SCALE 1 : 25

* NOMINAL KERB LINE



MOUNTABLE KERB AND CHANNEL TYPE M3 IPWEAQ

SCALE 1 : 25

* NOMINAL KERB LINE

ROAD 7 - CONTROL LINE SETOUT

PT	CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH	DEFL.ANGLE
IP 1	0.000	90646.723	502311.511	98°49'24.45"			
TC	394.861	91036.911	502250.943	98°49'24.45"			
IP 2	406.641	91051.733	502248.642		R = -15.000	23.562	89°59'55.96"
CT	418.422	91054.034	502263.464	8°49'28.49"			
TC	612.371	91083.788	502455.117	8°49'28.49"			
IP 3	624.152	91086.089	502469.940		R = -15.000	23.562	90°00'00.05"
CT	635.933	91071.267	502472.241	278°49'28.44"			
IP 4	918.310	90792.232	502515.560	278°49'28.44"			

ROAD 9 - CONTROL LINE SETOUT

PT	CHAINAGE	EASTING	NORTHING	BEARING
IP 1	0.000	90829.038	502283.210	8°49'28.48"
IP 2	148.455	90851.813	502429.908	8°49'28.48"

ROAD 13 - CONTROL LINE SETOUT

PT	CHAINAGE	EASTING	NORTHING	BEARING
IP 1	0.000	90840.460	502356.784	98°49'28.42"
IP 2	150.862	90989.537	502333.640	98°49'28.42"

ROAD 14 - CONTROL LINE SETOUT

PT	CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH	DEFL.ANGLE
IP 1	0.000	90978.115	502260.070	8°49'28.92"			
TC	133.452	90998.588	502391.942	8°49'28.92"			
IP 2	145.233	91000.889	502406.764		R = -15.000	23.562	90°00'00.44"
CT	157.014	90986.067	502409.065	278°49'28.47"			
IP 3	350.876	90794.499	502438.806	278°49'28.47"			

INITIAL ISSUE	DES	DRN	CHK	APP	DATE	AMENDMENT DETAILS
A	AA	RT	AA	MH	30.05.24	ISSUED FOR APPROVAL

STATUS: FOR APPROVAL

APPROVED BY: MAX HOOPER NO: 16633 SIGN: DATE: 30.05.24

SCALE: 1:500 1:1000 10 5 0 10 20m A1 A3

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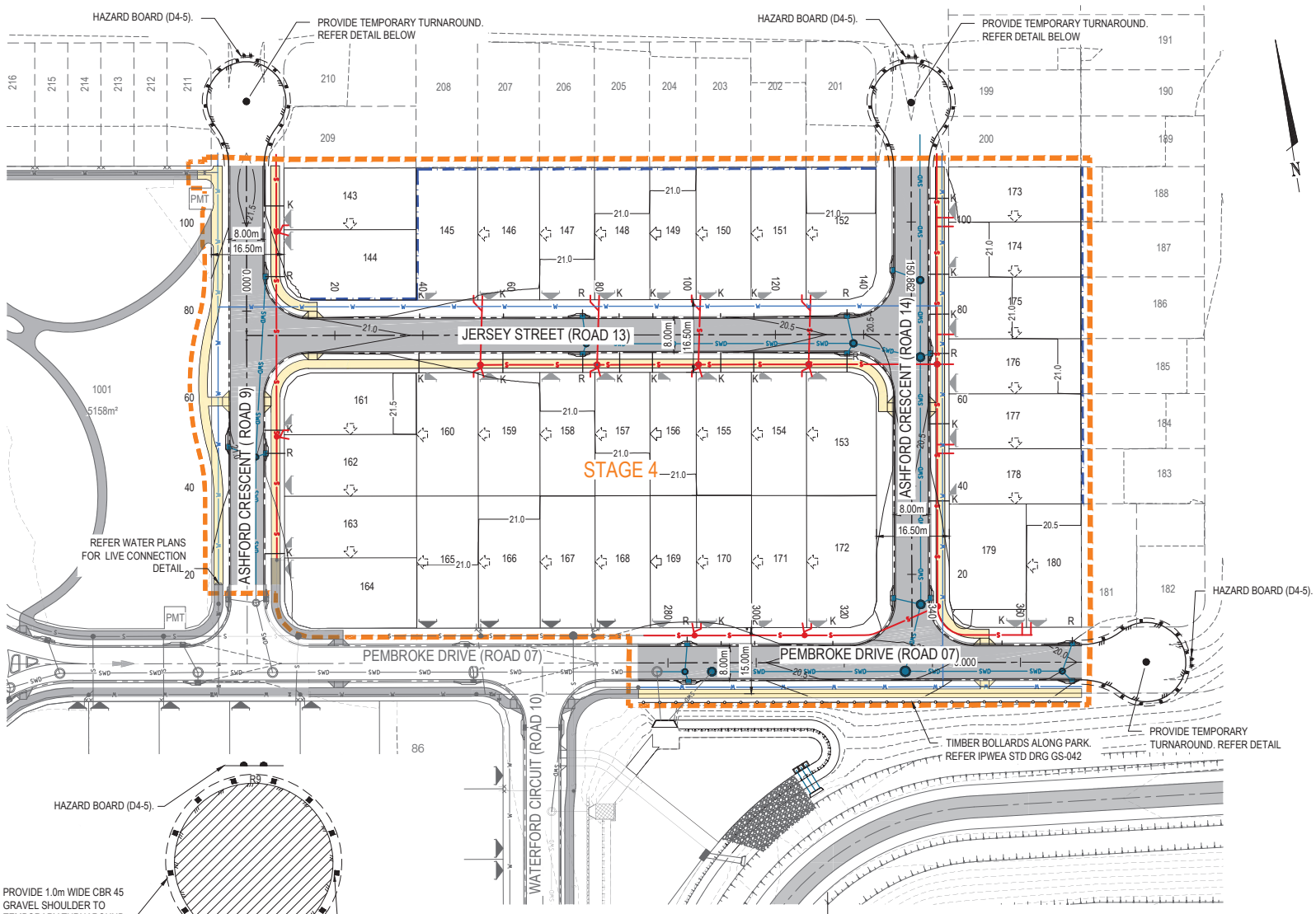
CLIENT: LENNIUM GROUP

PROJECT: Lilywood LANDINGS STAGE 4

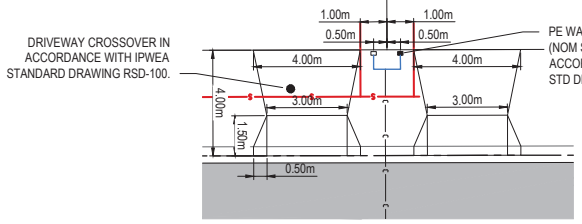
DRAWING TITLE: CONTROL LINE SETOUT PLAN

PROJECT No.	DRAWING No.	REVISION
22-000983	4-1300	A



ROAD 7, 9 & 14 - TYPICAL TEMPORARY TURNAROUND AREA DETAIL

SCALE 1:250(A1)
SCALE 1:500(A3)



TYPICAL DRIVEWAY AND LOT SERVICE CONNECTION LAYOUT

SCALE 1:50 (A1)

SERVICE CLEARANCE NOTE:
MINIMUM VERTICAL CLEARANCE BETWEEN SEWER H.C. AND WATER METER OF 700mm.

LEGEND

- STAGE BOUNDARY
- STORMWATER DRAINAGE
- EXISTING STORMWATER DRAINAGE MAINTENANCE HOLE
- GULLY PIT
- OUTLET STRUCTURE
- EXISTING STORMWATER STRUCTURE
- CONCRETE FOOTPATH (2m WIDE)
- ASPHALT SURFACING
- MOUNTABLE KERB & CHANNEL TYPE 'M3'
- BARRIER KERB & CHANNEL TYPE 'B1'
- EDGE OF BITUMEN
- EXISTING SURFACE CONTOUR (0.50m INTERVALS)
- DESIGN SURFACE CONTOUR (0.50m INTERVALS)
- PROPOSED WATER MAIN
- EXISTING WATER MAIN
- PROPOSED SEWERAGE RETICULATION
- EXISTING SEWERAGE RETICULATION
- PROPOSED KERB ADAPTER + LINE
- PROPOSED ROOF WATER LINE
- PROPOSED SLEEPER RETAINING WALL
- INDICATIVE DRIVEWAY LOCATION
- BUILD TO BOUNDARY - OPTIONAL
- BUILD TO BOUNDARY - MANDATORY

ROADWORKS NOTES

1. ALL WORKS SHALL BE CARRIED OUT IN ACCORDANCE WITH CURRENT MORETON BAY REGIONAL COUNCIL STANDARD DRAWINGS AND METHODS.
2. NOTWITHSTANDING THE LIMITS OF CUTTING AND FILLING SHOWN ON THE CROSS SECTIONS, THE ACTUAL LIMITS SHALL BE DETERMINED ON-SITE BY THE SUPERINTENDENT DURING CONSTRUCTION AND SIMILARLY THE FINISHED SURFACE CONTOURS MAY BE ADJUSTED BY WRITTEN DIRECTION OF THE SUPERINTENDENT DURING CONSTRUCTION.
3. KERB RAMPS AS PER CMB STANDARD DRAWING PC-2101. FOOTPATH CONSTRUCTION AS PER IPWEA STANDARD DRAWING PCD-101. RESIDENTIAL DRIVEWAY CROSSOVERS AS PER IPWEA STANDARD DRAWINGS RSD-100 & RSD-101.
4. LEVELS FOR KERB AND CHANNELING CONSTRUCTION ARE AT EQUAL INTERVALS AT LIP OF CHANNEL UNLESS SHOWN OTHERWISE.
5. SIDE DRAINS TO BE CONSTRUCTED UNDER ALL KERBS AND ALL KERB AND CHANNEL AND IN LOCATIONS DIRECTED BY THE SUPERINTENDENT IN ACCORDANCE WITH MORETON BAY REGIONAL COUNCIL STANDARDS.
6. LEVELS AND GRADIENTS AT JUNCTIONS WITH EXISTING WORKS MAY BE VARIED AS REQUIRED TO ACHIEVE A SATISFACTORY CONNECTION AND THE CONTRACTOR SHALL INCLUDE THE COST OF THIS WORK IN THE TENDER PRICE. WHERE NEW WORK JOINS EXISTING, THE WORK SHALL TRANSITION NEATLY WITH THE PAVEMENT SO THAT DEVIATION FROM THE LINE OF A 3.0m STRAIGHT EDGE SHALL BE NO GREATER THAN 10mm.
7. SUBGRADE TEST RESULTS TO BE FORWARDED TO SUPERINTENDENT. FOR DETERMINATION OF BOX DEPTHS PRIOR TO EXCAVATION, TESTS SHALL INCLUDE SOAKED CBR AND/OR OTHER TESTS AS REQUESTED BY THE SUPERINTENDENT.
8. CONTRACTOR TO LIAISE WITH ALL RELEVANT SERVICE AUTHORITIES TO ASCERTAIN SERVICES PRESENT ON-SITE. ANY ALTERATION WORKS TO SERVICES WILL BE CARRIED OUT BY THAT SERVICE AUTHORITY ONLY.
9. FOOTPATHS AND BATTERS TO HAVE MINIMUM OF 75mm TOPSOIL (AND GRASSING IF ORDERED).
10. THE CONTRACTOR SHALL NOTIFY THE SUPERINTENDENT PRIOR TO COMMENCEMENT OF DEMOLISHING ANY EXISTING STRUCTURES WITHIN THE SITE AREAS.
11. WORKS SHALL BE PROGRAMMED SO AS NOT TO DISTURB NEARBY HOUSEHOLDERS EITHER BY DUST, NOISE, FLOODING OR DISCONNECTION OF SERVICES.
12. ALL CONSTRUCTION ACTIVITIES SHALL COMPLY WITH WORKPLACE HEALTH AND SAFETY REQUIREMENTS.

INITIAL ISSUE	DES	DRN	CHK	APP	DATE	AMENDMENT DETAILS
	AA	RT	AA	RA	15.09.23	
A	AA	RT	AA	MH	30.05.24	ISSUED FOR APPROVAL

STATUS: FOR APPROVAL

APPROVED BY: MAX HOOPER NO: 16633 SIGN: DATE: 30.05.24

SCALE: 1:500 10 5 0 10 20m A1; 1:1000 A3

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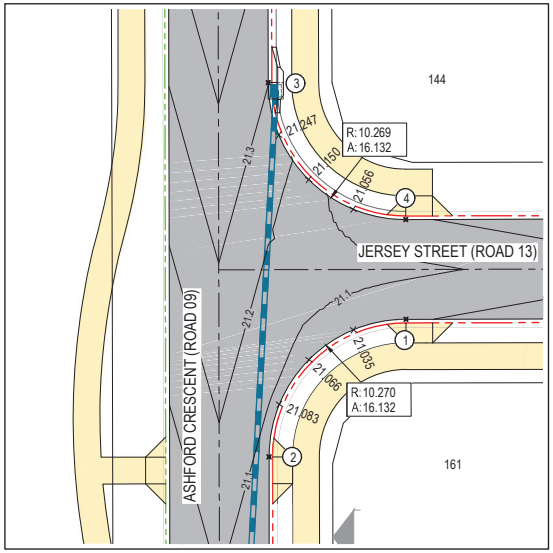
CLIENT: LENNIUM GROUP

PROJECT: Lilywood LANDINGS STAGE 4

DRAWING TITLE: ROADWORKS LAYOUT PLAN

PROJECT No.	DRAWING No.	REVISION
22-000983	4-1310	A



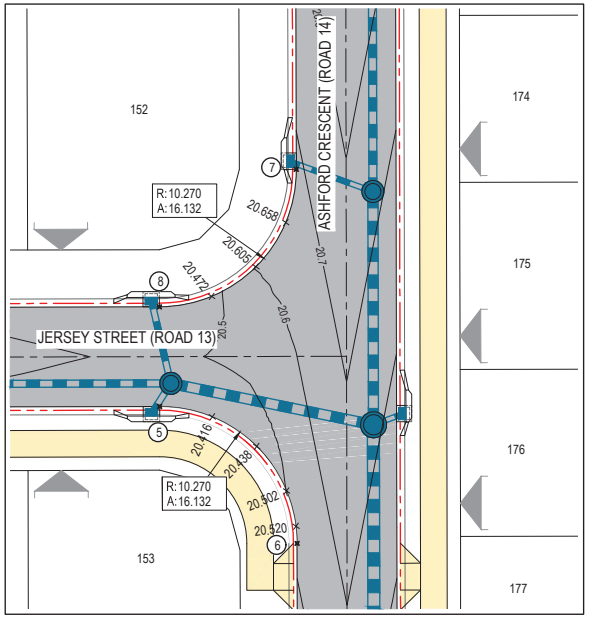
ROAD 9 AND ROAD 13 INTERSECTION
SCALE 1:200

ROAD 13 & 14 INTERSECTION

POINT ID	EASTING	NORTHING	LEVEL
5	90975.130	502332.102	20.410
6	90983.703	502320.378	20.516
7	90987.998	502348.047	20.683
8	90976.274	502339.474	20.410

ROAD 09 & 13 INTERSECTION

POINT ID	EASTING	NORTHING	LEVEL
1	90853.722	502350.950	21.011
2	90841.998	502342.377	21.066
3	90846.295	502370.046	21.302
4	90854.867	502358.322	21.011

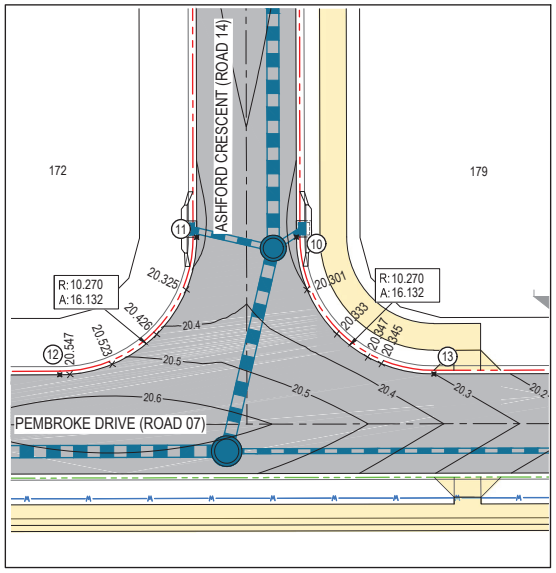


ROAD 13 AND ROAD 14 INTERSECTION
SCALE 1:200

LEGEND

- CONTROL LINE
- 66.0 DESIGN SURFACE CONTOUR (0.1m INTERVALS)
- MOUNTABLE KERB & CHANNEL TYPE 'M3'
- BARRIER KERB & CHANNEL TYPE 'B1'
- RL.59.651 KERB INTERMEDIATE LEVEL
- 10 KERB SETOUT POINT
- CONCRETE FOOTPATH
- ASPHALT SURFACING
- STORMWATER DRAINAGE
- MAINTENANCE HOLE
- GULLY PIT
- OUTLET STRUCTURE
- INDICATIVE DRIVEWAY LOCATIONS

NOTE
KERB SETOUT IS TO LIP OF KERB AND CHANNEL.
LEVEL ARE SHOWN TO LIP OF KERB AND CHANNEL.
KERB LEVELS SHOWN AT EQUAL INTERVALS, U.N.O.



ROAD 07 AND ROAD 14 INTERSECTION
SCALE 1:200

ROAD 07 & 14 INTERSECTION

POINT ID	EASTING	NORTHING	LEVEL
10	90983.948	502273.332	20.287
11	90976.577	502274.476	20.287
12	90964.853	502265.903	20.545
13	90992.521	502261.608	20.301

INITIAL ISSUE	DES	DRN	CHK	APP	DATE	AMENDMENT DETAILS
	AA	RT	AA	RA	15.09.23	
A	AA	RT	AA	MH	30.05.24	ISSUED FOR APPROVAL

STATUS: FOR APPROVAL
APPROVED BY: MAX HOOPER NO: 16633 SIGN: DATE: 30.05.24
SCALE: 1:200 1:400 2 0 2 4 6 8 10m A1 A3

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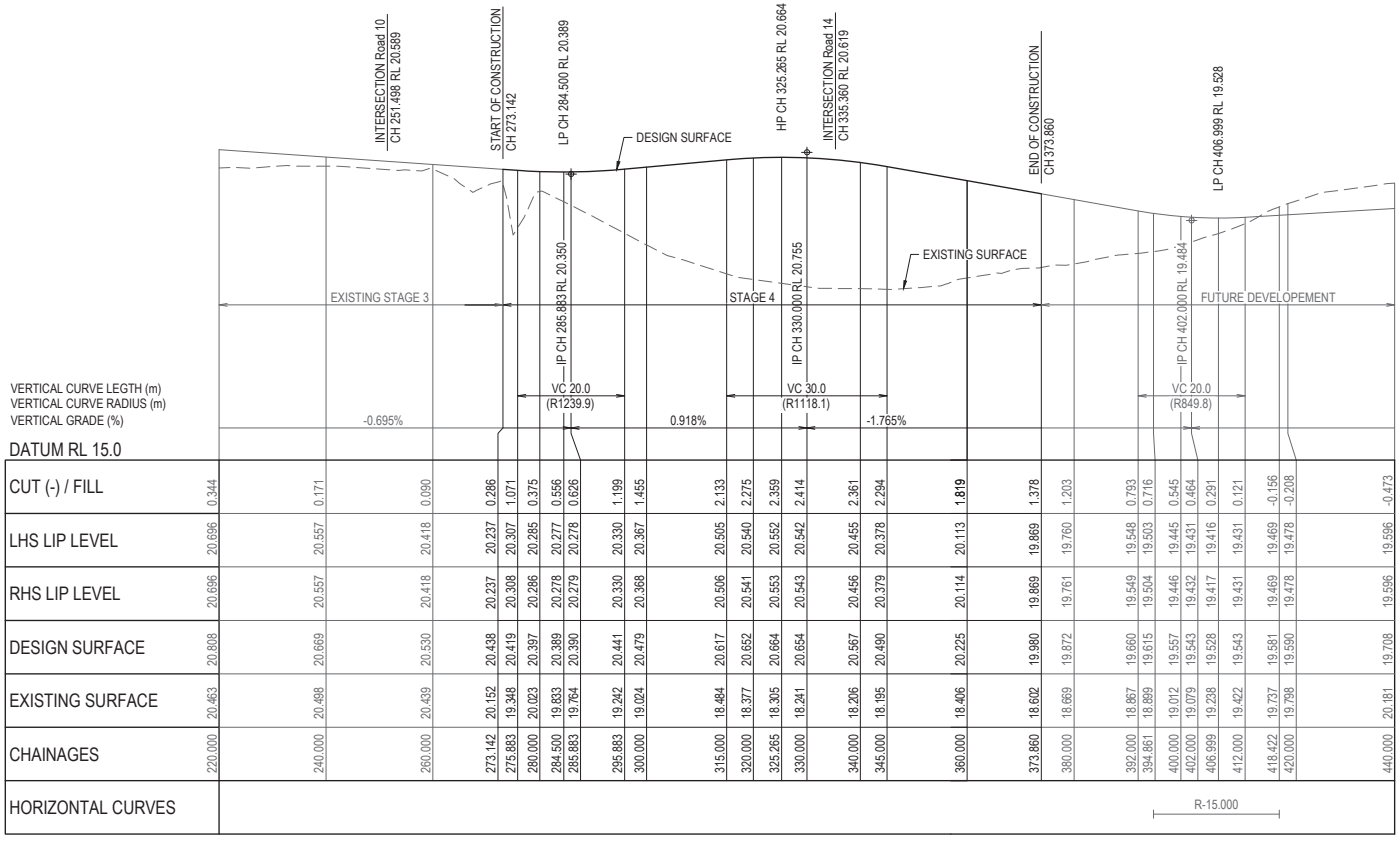
CLIENT: LENNIUM GROUP
PROJECT: Lilywood LANDINGS STAGE 4
DRAWING TITLE: INTERSECTION DETAILS
PROJECT No. 22-000983.4 DRAWING No. 1320 REVISION A

PRELIMINARY ROAD 7 PAVEMENT DESIGN

ROAD	SUBGRADE CBR	TRAFFIC ESA'S	ROAD CLASS	AC SURFACING (mm)	BASE (mm)	SUB-BASE (mm)	LOWER SUB-BASE (mm)	TOTAL BOX (mm)
ROAD 7	3*	1.2 X 10^5	LIVING RESIDENTIAL	25mm BCC TYPE 2	100	100	300	525

* ASSUMED SUBGRADE CBR

NOTE:
1. PRELIMINARY PAVEMENT DESIGNS HAVE BEEN BASED ON AN ASSUMED SUBGRADE CBR. ACTUAL PAVEMENT DESIGNS WILL BE BASED ON TEST RESULTS TAKEN AFTER STRIPPING HAS BEEN COMPLETED.
2. WHEN THE TOTAL PAVEMENT DEPTH (AS DETERMINED BY SUBGRADE TESTS) EXCEEDS THE NORMAL DEPTH, THE PAVEMENT GRAVEL SHALL EXTEND UNDER THE KERB AND CHANNEL TO 150mm BEHIND (TYP).



LONGITUDINAL SECTION - ROAD 7

HORIZ SCALE: 500
VERTICAL SCALE: 50

INITIAL ISSUE	DES	DRN	CHK	APP	DATE	AMENDMENT DETAILS
A	AA	RT	AA	MH	30.05.24	ISSUED FOR APPROVAL

STATUS: FOR APPROVAL
APPROVED
BY: MAX HOOPER NO: 16633
SIGN: DATE: 30.05.24

SCALE
1:500 1:1000 10 5 0 10 20m A1 A3 HORIZONTAL
1:50 1:100 1 0.5 0 1 2m A1 A3 VERTICAL

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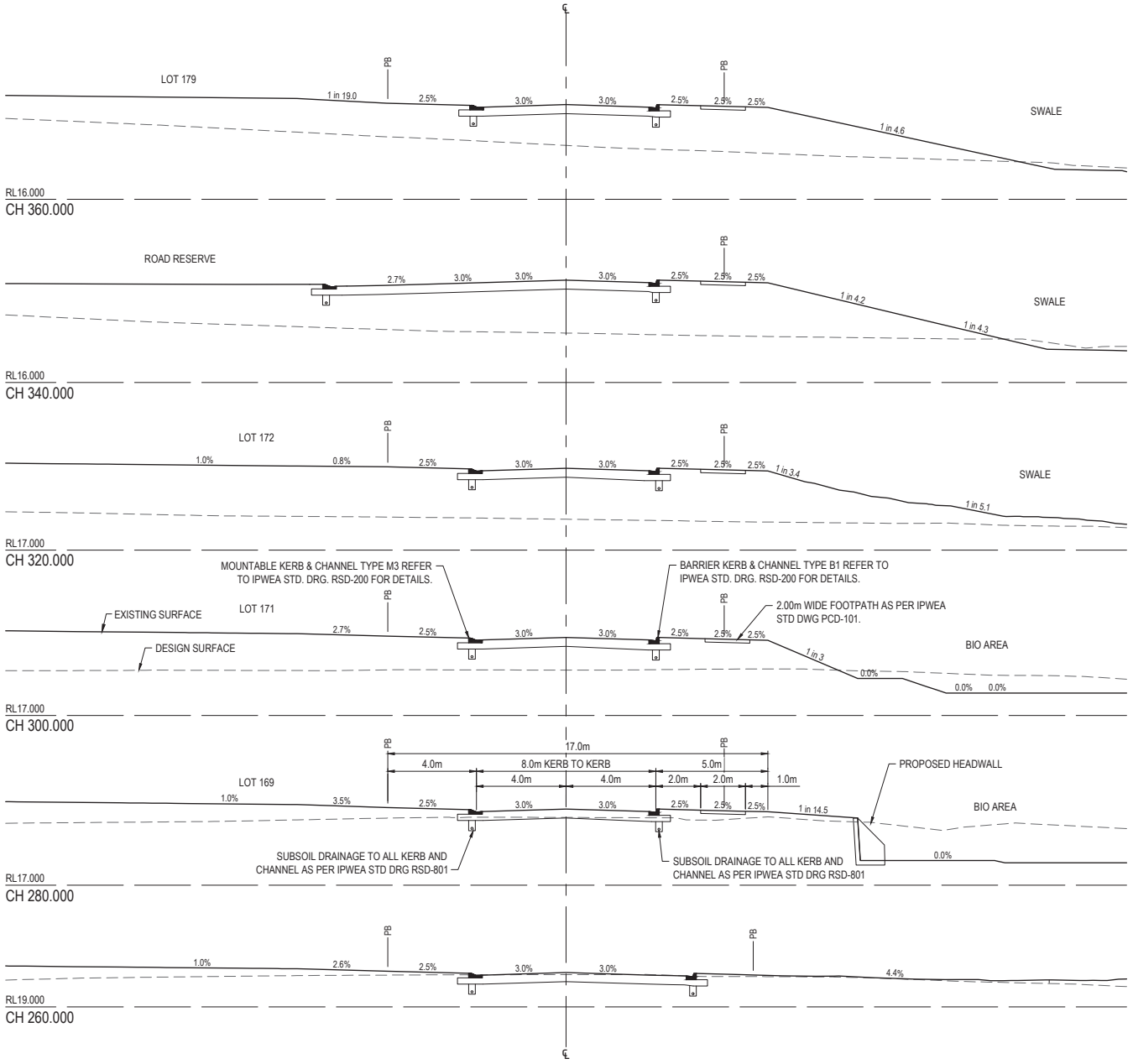
CLIENT: LENNIUM GROUP

PROJECT: Lilywood LANDINGS STAGE 4

DRAWING TITLE: ROAD 7 (PEMBROKE DRIVE) LONGITUDINAL SECTION

PROJECT No.	DRAWING No.	REVISION
22-000983	4-1330	A



INITIAL ISSUE	DES	DRN	CHK	APP	DATE	AMENDMENT DETAILS
	AA	RT	AA	RA	15.09.23	
A	AA	RT	AA	MH	30.05.24	ISSUED FOR APPROVAL

STATUS: FOR APPROVAL

APPROVED
BY: MAX HOOPER NO: 16633
SIGN: DATE: 30.05.24

SCALE: 1:100 1 0 1 2 3 4 5m A1; 1:200 A3

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CLIENT: LENNIUM GROUP

PROJECT: Lilywood LANDINGS
STAGE 4

DRAWING TITLE: ROAD 7 (PEMBROKE DRIVE) CROSS SECTIONS

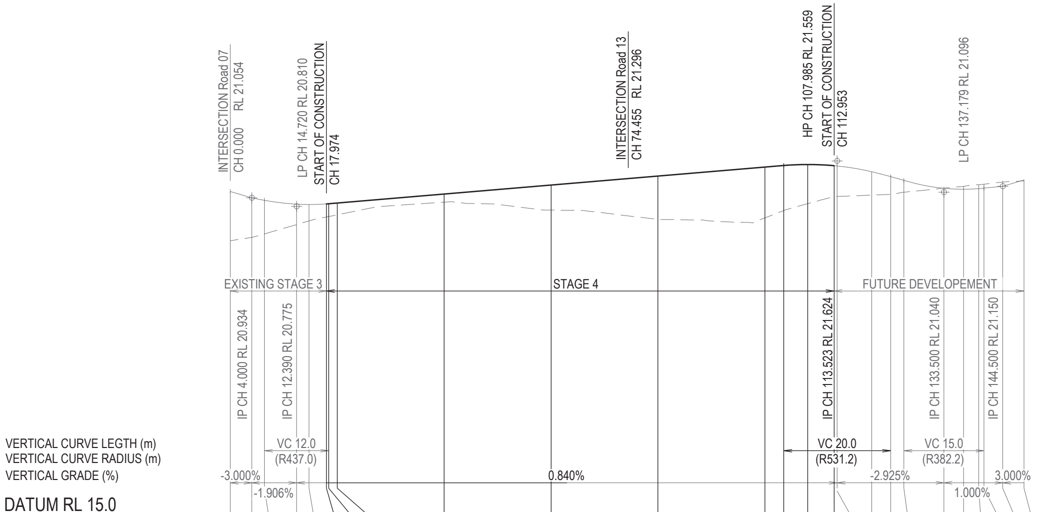
PROJECT No.	DRAWING No.	REVISION
22-000983	4-1331	A

PRELIMINARY ROAD 9 PAVEMENT DESIGN

ROAD	SUBGRADE CBR	TRAFFIC ESA'S	ROAD CLASS	AC SURFACING (mm)	BASE (mm)	SUB-BASE (mm)	LOWER SUB-BASE (mm)	TOTAL BOX (mm)
ROAD 9	3*	1.2 X 10^5	LIVING RESIDENTIAL	25mm BCC TYPE 2	100	100	300	525

* ASSUMED SUBGRADE CBR

NOTE:
1. PRELIMINARY PAVEMENT DESIGNS HAVE BEEN BASED ON AN ASSUMED SUBGRADE CBR. ACTUAL PAVEMENT DESIGNS WILL BE BASED ON TEST RESULTS TAKEN AFTER STRIPPING HAS BEEN COMPLETED.
2. WHEN THE TOTAL PAVEMENT DEPTH (AS DETERMINED BY SUBGRADE TESTS) EXCEEDS THE NORMAL DEPTH, THE PAVEMENT GRAVEL SHALL EXTEND UNDER THE KERB AND CHANNEL TO 150mm BEHIND (TYP).



CUT (-) / FILL	0.922	0.741	0.628	0.381	0.308	0.246	0.241	0.222	0.155	0.469	0.812	0.951	0.843
LHS LIP LEVEL	⊛				20.736	20.711	20.751	20.765	20.896	21.064	21.232	21.400	21.429
RHS LIP LEVEL					20.735	20.711	20.750	20.764	20.895	21.063	21.231	21.399	21.428
DESIGN SURFACE	21.055	20.934	20.889	20.816	20.810	20.822	20.825	20.839	21.007	21.175	21.343	21.511	21.540
EXISTING SURFACE	20.132	20.194	20.261	20.434	20.502	20.576	20.584	20.617	20.852	20.706	20.531	20.559	20.697
CHAINAGES	0.000	4.000	6.390	12.390	14.720	17.974	18.390	20.000	40.000	60.000	80.000	100.000	103.523
HORIZONTAL CURVES													

CUT (-) / FILL	0.735	0.584	0.570	0.438	0.333	0.219	-0.001	-0.054	-0.074	-0.076	-0.081	0.016
LHS LIP LEVEL	21.448	21.424	21.419	21.312	21.221	21.148	21.003	20.985	20.995	⊛		
RHS LIP LEVEL	21.447	21.424	21.418	21.311	21.220	21.147	21.002	20.984	20.994			
DESIGN SURFACE	21.559	21.535	21.530	21.423	21.332	21.259	21.113	21.096	21.106	21.115	21.150	21.268
EXISTING SURFACE	20.824	20.951	20.960	20.985	20.999	21.040	21.114	21.149	21.180	21.191	21.230	21.252
CHAINAGES	107.985	112.953	113.523	120.000	123.523	126.000	133.500	137.179	140.000	141.000	144.500	148.455
HORIZONTAL CURVES												

LONGITUDINAL SECTION - ROAD 9

HORIZ SCALE: 500
VERTICAL SCALE: 50

⊛ REFER INTERSECTION DETAILS FOR LEVELS

	DES	DRN	CHK	APP	DATE	AMENDMENT DETAILS
INITIAL ISSUE	AA	RT	AA	RA	15.09.23	
A	AA	RT	AA	MH	30.05.24	ISSUED FOR APPROVAL

STATUS: FOR APPROVAL

APPROVED BY: MAX HOOPER NO: 16633
SIGN: DATE: 30.05.24

SCALE: 1:500 / 1:1000 HORIZONTAL 10 5 0 10 20m A1 A3; 1:50 / 1:100 VERTICAL 1 0.5 0 1 2m A1 A3

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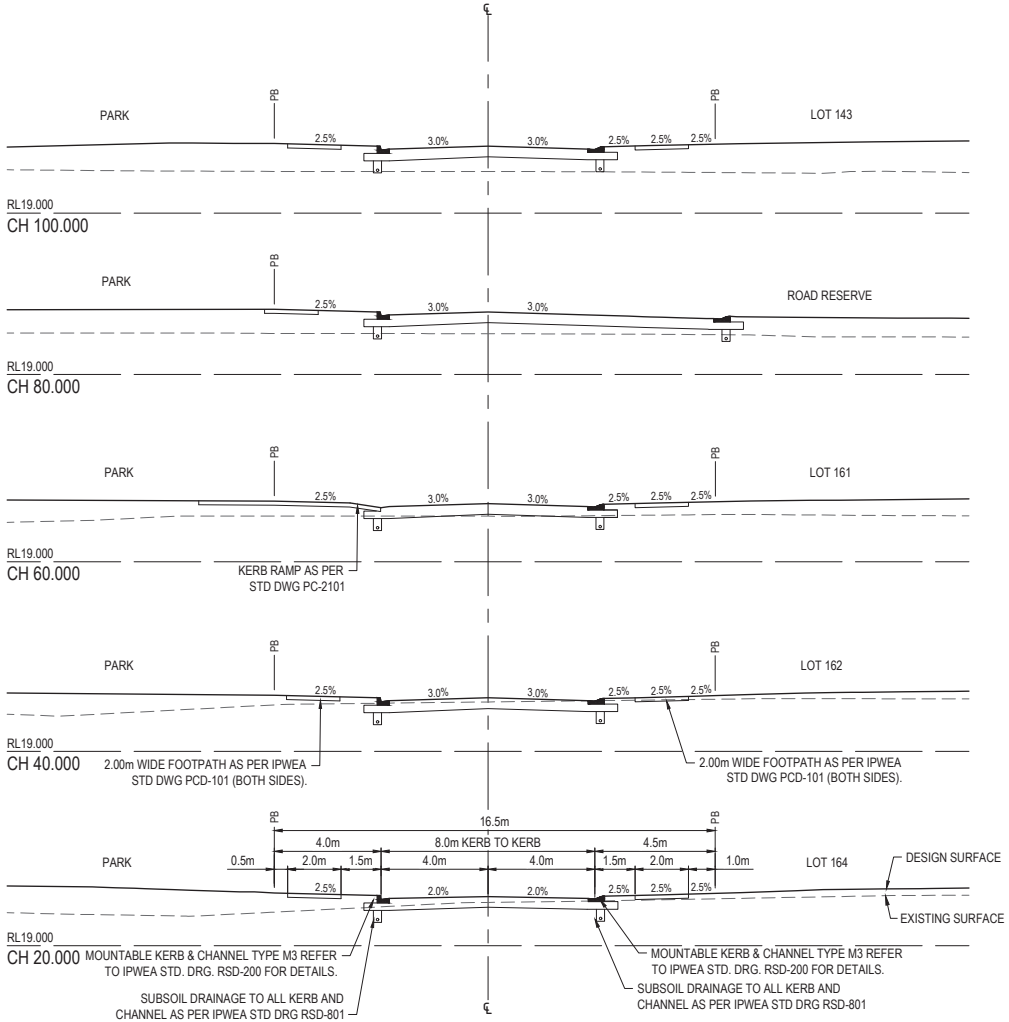
CLIENT: LENNIUM GROUP

PROJECT: Lilywood LANDINGS STAGE 4

DRAWING TITLE: ROAD 9 (ASHFORD CRESCENT) LONGITUDINAL SECTION

PROJECT No. 22-000082 | DRAWING No. 4-1332 | REVISION A



INITIAL ISSUE	DES	DRN	CHK	APP	DATE	AMENDMENT DETAILS
	AA	RT	AA	RA	15.09.23	
A	AA	RT	AA	MH	30.05.24	ISSUED FOR APPROVAL

STATUS: FOR APPROVAL

APPROVED
BY: MAX HOOPER NO: 16633
SIGN: DATE: 30.05.24

SCALE: 1:100 / 1:200 — 1 0 1 2 3 4 5m — A1 / A3

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CLIENT: LENNIUM GROUP

PROJECT: Lilywood LANDINGS
STAGE 4

DRAWING TITLE: ROAD 9 (ASHFORD CRESCENT) CROSS SECTIONS

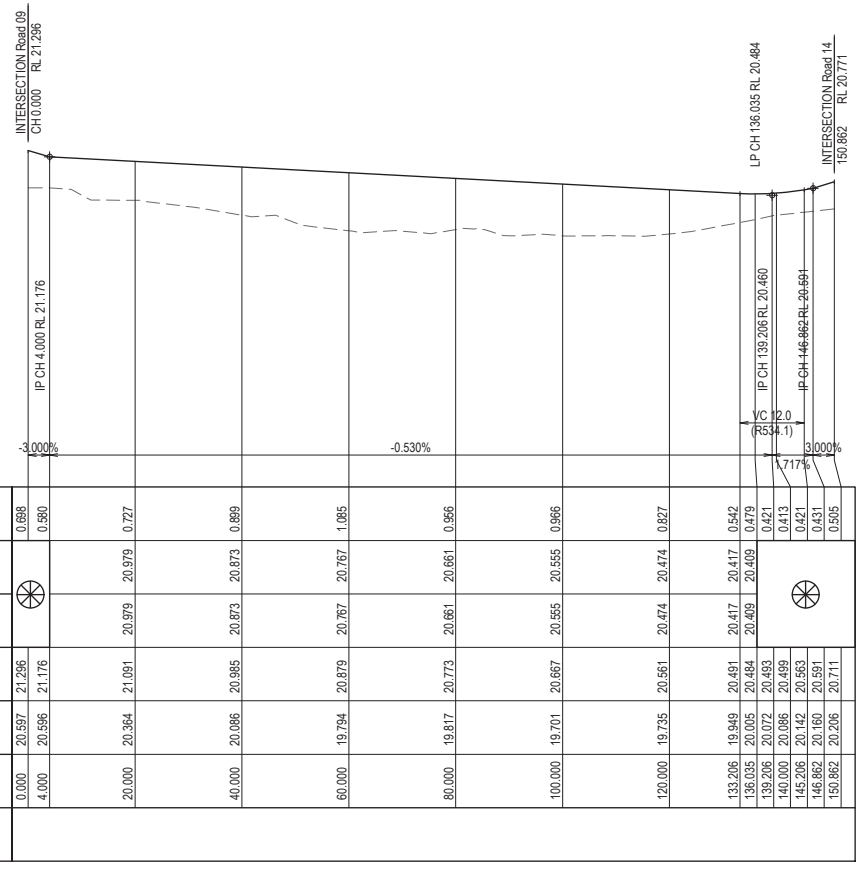
PROJECT No.	DRAWING No.	REVISION
22-000983	4-1333	A

PRELIMINARY ROAD 13 PAVEMENT DESIGN

ROAD	SUBGRADE CBR	TRAFFIC ESA'S	ROAD CLASS	AC SURFACING (mm)	BASE (mm)	SUB-BASE (mm)	LOWER SUB-BASE (mm)	TOTAL BOX (mm)
ROAD 13	3*	1.2 X 10^5	LIVING RESIDENTIAL	25mm BCC TYPE 2	100	100	300	525

* ASSUMED SUBGRADE CBR

NOTE:
1. PRELIMINARY PAVEMENT DESIGNS HAVE BEEN BASED ON AN ASSUMED SUBGRADE CBR. ACTUAL PAVEMENT DESIGNS WILL BE BASED ON TEST RESULTS TAKEN AFTER STRIPPING HAS BEEN COMPLETED.
2. WHEN THE TOTAL PAVEMENT DEPTH (AS DETERMINED BY SUBGRADE TESTS) EXCEEDS THE NORMAL DEPTH, THE PAVEMENT GRAVEL SHALL EXTEND UNDER THE KERB AND CHANNEL TO 150mm BEHIND (TYP).



CHAINAGES	0.000	4.000	20.000	40.000	60.000	80.000	100.000	120.000	133.206	136.035	139.206	140.000	145.206	146.862	150.862
CUT (-) / FILL	0.688	0.580	0.727	0.889	1.085	0.956	0.966	0.827	0.542	0.479	0.421	0.413	0.421	0.431	0.505
LHS LIP LEVEL			20.979	20.873	20.767	20.661	20.555	20.474	20.417	20.409					
RHS LIP LEVEL			20.979	20.873	20.767	20.661	20.555	20.474	20.417	20.409					
DESIGN SURFACE	21.296	21.176	21.091	20.985	20.879	20.773	20.667	20.561	20.491	20.484	20.493	20.499	20.563	20.591	20.711
EXISTING SURFACE	20.597	20.596	20.364	20.086	19.794	19.817	19.701	19.735	19.949	20.005	20.072	20.086	20.142	20.160	20.206

LONGITUDINAL SECTION - ROAD 13

HORIZ SCALE: 500
VERTICAL SCALE: 50

INITIAL ISSUE	DES	DRN	CHK	APP	DATE	AMENDMENT DETAILS
	AA	RT	AA	RA	15.09.23	
A	AA	RT	AA	MH	30.05.24	ISSUED FOR APPROVAL

STATUS: FOR APPROVAL
APPROVED BY: MAX HOOPER NO: 16633
SIGN: DATE: 30.05.24

SCALE
1:500 10 5 0 10 20m A1
1:1000 HORIZONTAL A3
1:50 1 0.5 0 1 2m A1
1:100 VERTICAL A3

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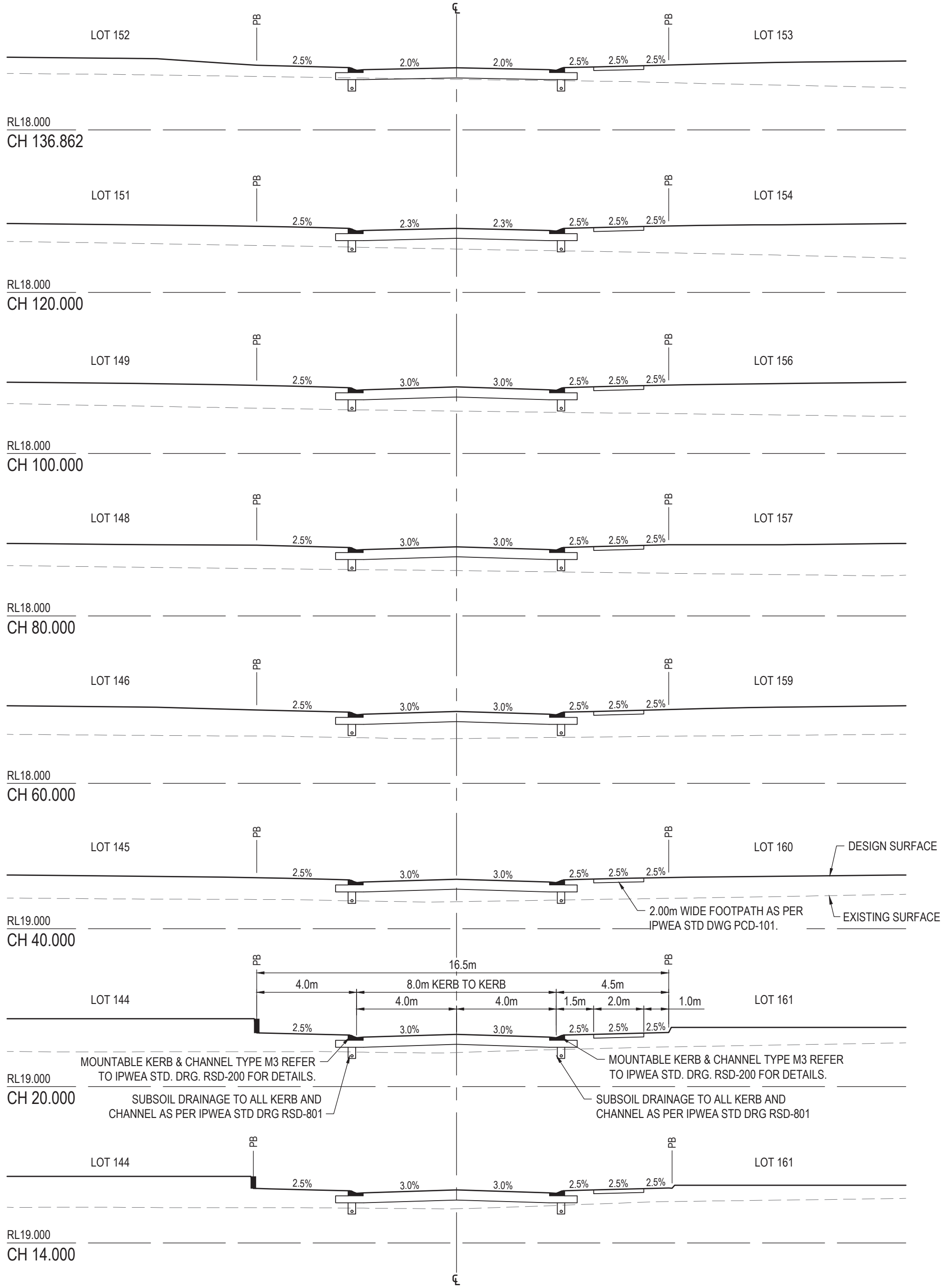
CLIENT: LENNIUM GROUP

PROJECT: Lilywood LANDINGS STAGE 4

DRAWING TITLE: ROAD 13 (JERSEY STREET) LONGITUDINAL SECTION

PROJECT No.	DRAWING No.	REVISION
22-000983	1334	A



INITIAL ISSUE / AMENDMENTS	DES	DRN	CHK	APP	DATE	AMENDMENT DETAILS
	AA	RT	AA	RA	15.09.23	
A	AA	RT	AA	MH	30.05.24	ISSUED FOR APPROVAL

STATUS: FOR APPROVAL

APPROVED
BY: MAX HOOPER NO: 16633
SIGN: [signature] DATE: 30.05.24

SCALE: 1:100 A1, 1:200 A3 (0 1 2 3 4 5m)

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CLIENT: LENNIUM GROUP

PROJECT: Lilywood LANDINGS STAGE 4

DRAWING TITLE: ROAD 13 (JERSEY STREET) CROSS SECTIONS

PROJECT No.	DRAWING No.	REVISION
22-000082-4	1335	A

DISCLAIMER: ALL DIMENSIONS TO BE CHECKED ON SITE BY CONTRACTOR PRIOR TO CONSTRUCTION. USE WRITTEN DIMENSIONS ONLY, DO NOT SCALE.

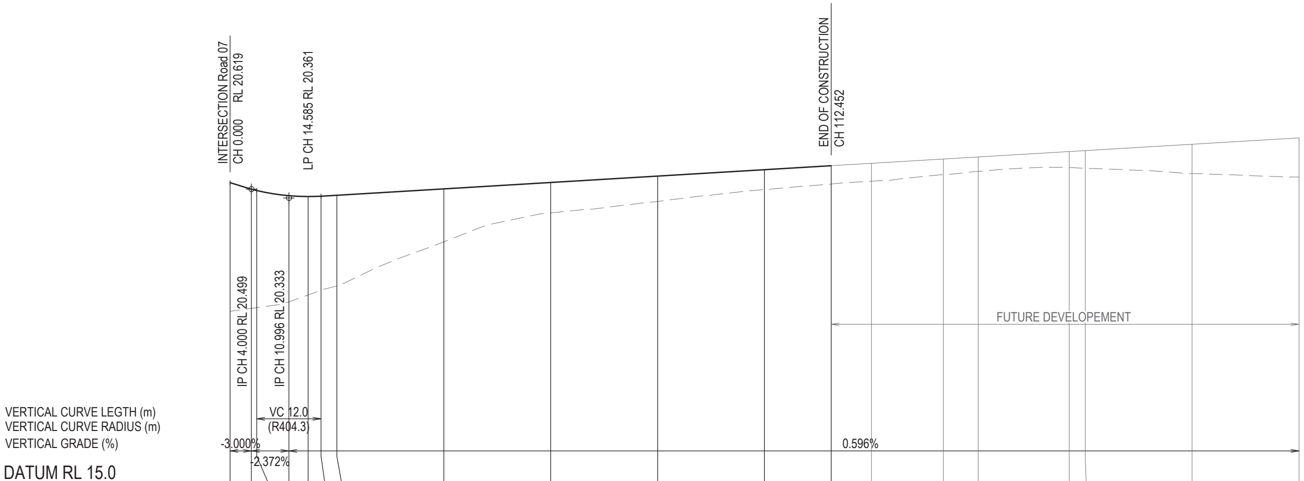
PRELIMINARY ROAD 14 PAVEMENT DESIGN

ROAD	SUBGRADE CBR	TRAFFIC ESA'S	ROAD CLASS	AC SURFACING (mm)	BASE (mm)	SUB-BASE (mm)	LOWER SUB-BASE (mm)	TOTAL BOX (mm)
ROAD 14	3*	1.2×10^5	LIVING RESIDENTIAL	25mm BCC TYPE 2	100	100	300	525

* ASSUMED SUBGRADE CBR

NOTE:

1. PRELIMINARY PAVEMENT DESIGNS HAVE BEEN BASED ON AN ASSUMED SUBGRADE CBR. ACTUAL PAVEMENT DESIGNS WILL BE BASED ON TEST RESULTS TAKEN AFTER STRIPPING HAS BEEN COMPLETED.
2. WHEN THE TOTAL PAVEMENT DEPTH (AS DETERMINED BY SUBGRADE TESTS) EXCEEDS THE NORMAL DEPTH, THE PAVEMENT GRAVEL SHALL EXTEND UNDER THE KERB AND CHANNEL TO 150mm BEHIND (TYP).



CUT (-) / FILL	2.408	2.231	2.194	1.986	1.843	1.764	1.697	0.991	0.569	0.474	0.371	0.343	0.335	0.291	0.271	0.300	0.330	0.550	0.732
LHS LIP LEVEL					20.286	20.289	20.301	20.394	20.513	20.632	20.752	20.827	20.871						
RHS LIP LEVEL					20.286	20.289	20.301	20.394	20.513	20.632	20.752	20.827	20.871						
DESIGN SURFACE	20.619	20.499	20.475	20.377	20.361	20.368	20.386	20.506	20.625	20.744	20.863	20.938	20.983	21.063	21.102	21.204	21.221	21.341	21.460
EXISTING SURFACE	18.210	18.267	18.281	18.391	18.518	18.604	18.689	19.514	20.056	20.270	20.492	20.595	20.648	20.772	20.831	20.903	20.892	20.791	20.728
CHAINAGES	0.000	4.000	4.996	10.996	14.585	16.996	20.000	40.000	60.000	80.000	100.000	112.452	120.000	133.452	140.000	157.014	160.000	180.000	200.000
HORIZONTAL CURVES														R-15.000					

LONGITUDINAL SECTION - ROAD 14

HORIZ SCALE: 500
VERTICAL SCALE: 50

INITIAL ISSUE	DES	DRN	CHK	APP	DATE	AMENDMENT DETAILS
	AA	RT	AA	RA	15.09.23	
A	AA	RT	AA	MH	30.05.24	ISSUED FOR APPROVAL

STATUS: FOR APPROVAL

APPROVED
BY: MAX HOOPER NO: 16633
SIGN: DATE: 30.05.24

SCALE: 1:500 / 1:1000 HORIZONTAL (10 5 0 10 20m, A1 / A3); 1:50 / 1:100 VERTICAL (1 0.5 0 1 2m, A1 / A3)

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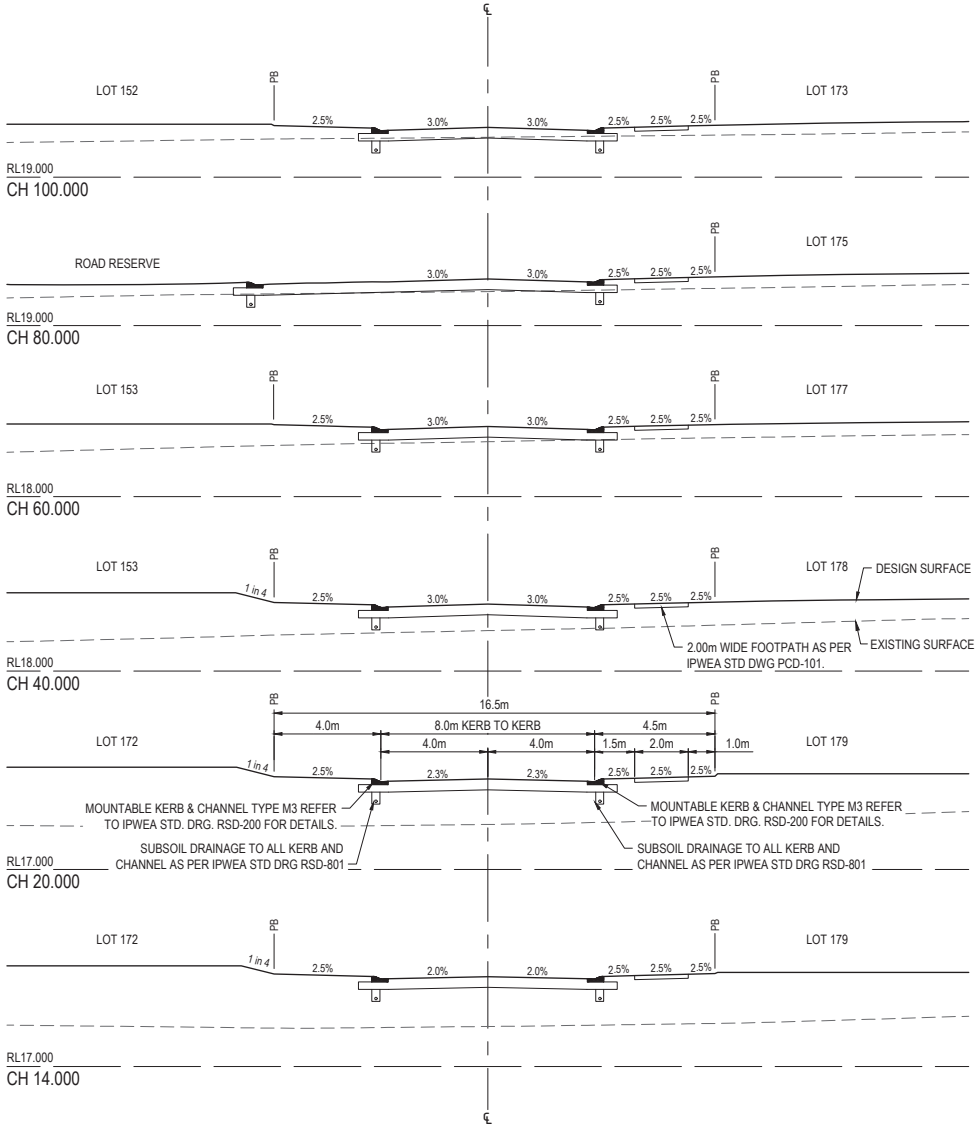
CLIENT: LENNIUM GROUP

PROJECT: Lilywood LANDINGS STAGE 4

DRAWING TITLE: ROAD 14 (ASHFORD CRESCENT) LONGITUDINAL SECTION

PROJECT No.	DRAWING No.	REVISION
22-000082.4	1336	A



INITIAL ISSUE	DES	DRN	CHK	APP	DATE	AMENDMENT DETAILS
	AA	RT	AA	RA	15.09.23	
A	AA	RT	AA	MH	30.05.24	ISSUED FOR APPROVAL

STATUS: FOR APPROVED

BY: MAX HOOPER NO: 16633

SIGN: DATE: 30.05.24

SCALE: 1:100 1 0 1 2 3 4 5m A1; 1:200 A3

egis

www.egis-group.com

CLIENT: LENNIUM GROUP

PROJECT: Lilywood LANDINGS STAGE 4

DRAWING TITLE: ROAD 14 (ASHFORD CRESCENT) CROSS SECTIONS

PROJECT No.	DRAWING No.	REVISION
22-000983	4-1337	A

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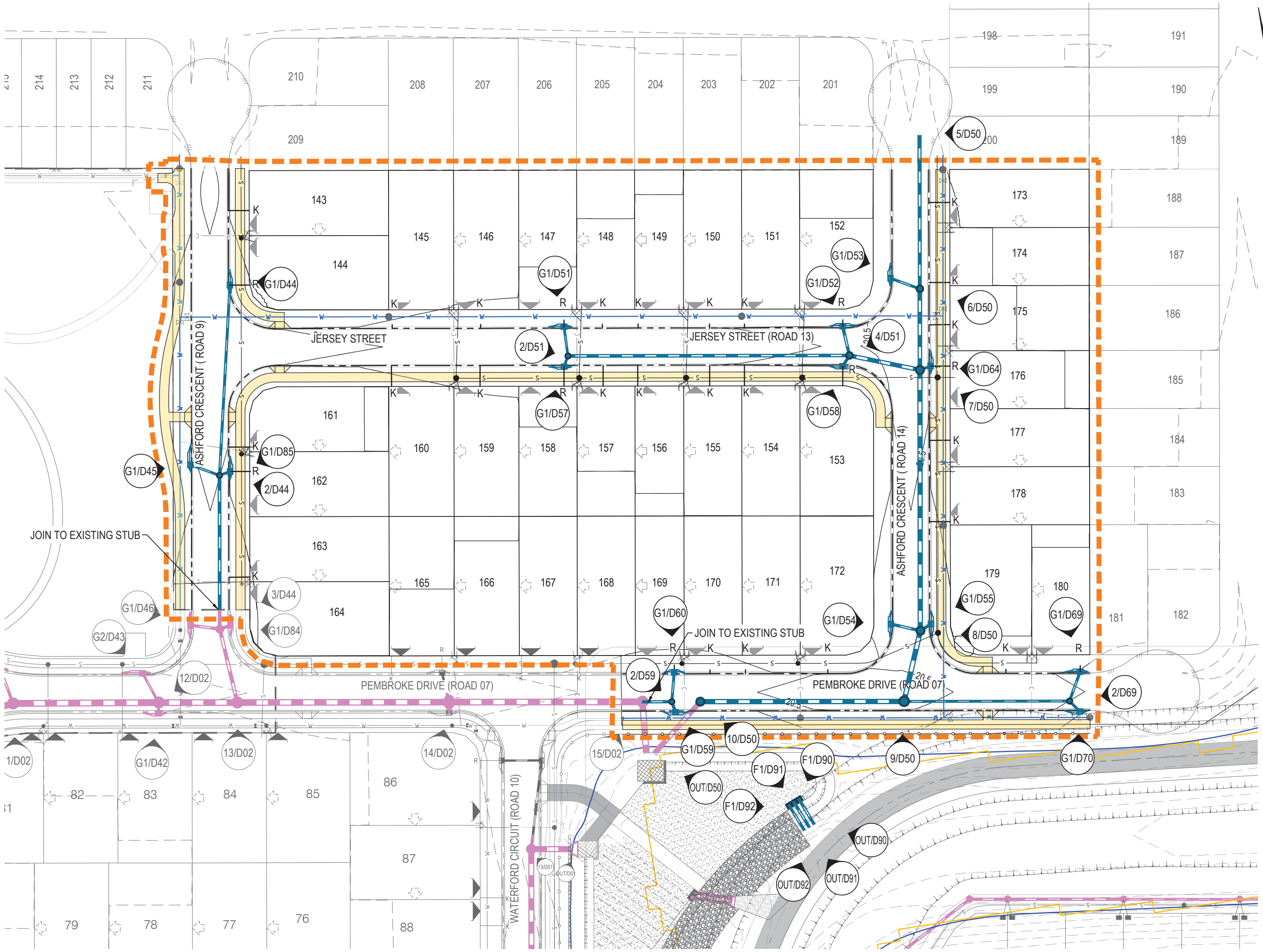

LEGEND

STAGE BOUNDARY
STORMWATER DRAINAGE
MAINTENANCE HOLE
GULLY PIT
OUTLET STRUCTURE
ROCK SCOUR PROTECTION
EXISTING SURFACE CONTOUR (0.5m INTERVALS)
DESIGN SURFACE CONTOUR (0.50m INTERVALS)
EXISTING STORMWATER DRAINAGE
EXISTING MAINTENANCE HOLE
EXISTING GULLY PIT
EXISTING WATER RECTICULATION
EXISTING SEWER RETICULATION
PROPOSED WATER MAIN
PROPOSED WATER FITTING
PROPOSED WATER CONDUIT
PROPOSED SEWERAGE RETICULATION
PROPOSED SLEEPER RETAINING WALL
PROPOSED BOULDER RETAINING WALL
EXISTING RETAINING WALL + ACOUSTIC FENCE
K PROPOSED KERB ADAPTER + LINE
R PROPOSED ROOF WATER LINE
PROPOSED BATTERS
PROPOSED LOW FLOW CHANNEL AREA
CONCRETE FOOTPATH
INDICATIVE DRIVEWAY LOCATION
5% AEP (20YR ARI) FLOOD LEVEL
1% AEP (100YR ARI) FLOOD LEVEL
PROPOSED TRUNK SEWER
BUILD TO BOUNDARY

NOTE:
1. REFER TO DRG 22-000082_4_1401 FOR STORMWATER STANDARD NOTES AND DETAILS.
2. REFER TO DRG 22-000082_4_1410 FOR STORMWATER CATCHMENT PLAN.
3. REFER TO DRGs 22-000082_4_1420-1421 FOR STORMWATER LONGITUDINAL SECTIONS.
4. REFER TO DRGs 22-000082_4_1430-1431 FOR STORMWATER CALCULATION TABLES.

CAUTION !! UNDERGROUND TELECOMMS CABLES	CAUTION !! UNDERGROUND GAS MAIN	CAUTION !! OVERHEAD ELECTRICAL CABLES	CAUTION !! UNDERGROUND ELECTRICAL CABLES
UNDERGROUND TELECOMMUNICATION CABLES EXIST IN THIS VICINITY. CONTACT SUPPLIER FOR CABLE LOCATIONS. EXTREME CARE MUST BE TAKEN WHILST EXCAVATING.	UNDERGROUND GAS MAIN EXIST IN THIS VICINITY. CONTACT SUPPLIER FOR MAIN LOCATIONS. EXTREME CARE MUST BE TAKEN WHILST EXCAVATING	OVERHEAD ELECTRICITY CABLES EXIST IN THIS VICINITY. CONTACT ENERGEX WHERE CABLE CLEARANCE IS COMPROMISED BY MACHINERY.	UNDERGROUND ELECTRICITY CABLES EXIST IN THIS VICINITY. CONTACT ENERGEX FOR CABLE LOCATIONS. EXTREME CARE MUST BE TAKEN WHILST EXCAVATING

INITIAL ISSUE	DES	DRN	CHK	APP	DATE	AMENDMENT DETAILS
	AA	RT	AA	RA	15.09.23	
A	AA	RT	AA	MH	30.05.24	ISSUED FOR APPROVAL

STATUS: FOR APPROVAL

APPROVED BY: MAX HOOPER NO: 16633

SIGN: DATE: 30.05.24

SCALE: 1:500 A1, 1:1000 A3 (10 5 0 10 20m)

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CLIENT: LENNIUM GROUP

PROJECT: Lilywood LANDINGS STAGE 4

DRAWING TITLE: STORMWATER LAYOUT PLAN

PROJECT No. 22-000082_4 DRAWING No. 1400 REVISION A

Document Set ID: 70182489
Version: 1, Version Date: 02/07/2024

Approved Subject to Conditions of Decision Notice DA/2024/2330
05/07/2024

STORMWATER DRAINAGE NOTES

1. ALL WORKS SHALL BE CARRIED OUT IN ACCORDANCE WITH CURRENT M.B.R.C STANDARD DRAWINGS AND METHODS.
2. ALL STORMWATER PIPES UNDER ROADWAYS AND FOOTPATHS SHALL BE RCP CLASS 3 U.N.O.
3. ALL STORMWATER PIPES UP TO AND INCLUDING 600Ø SHALL BE R.R.J. STORMWATER PIPES GREATER THAN 600Ø SHALL BE INTERNAL FLUSH JOINTED WITH PROPRIETARY EXTERNAL BAND.
4. STEPIRONS ARE TO BE PROVIDED IN STORMWATER MANHOLES AND GULLIES GREATER THAN 1.20m DEEP, IN ACCORDANCE WITH M.B.R.C STD. DRG. SD.10.
5. ALL DIMENSIONS ARE IN METRES UNLESS SHOWN OTHERWISE.
6. CONTRACTOR TO LIAISE WITH ALL RELEVANT SERVICE AUTHORITIES TO ASCERTAIN SERVICES PRESENT ON-SITE. ANY ALTERATION WORKS TO SERVICES WILL BE CARRIED OUT BY THAT SERVICE AUTHORITY ONLY.
7. THE CONTRACTOR SHALL NOTIFY THE SUPERINTENDENT PRIOR TO COMMENCEMENT OF DEMOLISHING ANY EXISTING STRUCTURES WITHIN THE SITE AREAS.
8. THE STORMWATER PIPE CLASSES HAVE BE DESIGNED FOR SERVICE LOADS ONLY, AND THE CONTRACTOR SHALL ASSESS ANTICIPATED CONSTRUCTION LOADS AND UPGRADE THE PIPE CLASSES IF NECESSARY, IN ACCORDANCE WITH AS3725-2007.
9. RETAINING WALL SUBSOIL DRAINS TO CONNECT TO KERB AND CHANNEL SUBSOIL OR STORMWATER DRAINAGE STRUCTURES.
10. WORKS SHALL BE PROGRAMMED SO AS NOT TO DISTURB NEARBY HOUSEHOLDERS EITHER BY DUST, NOISE, FLOODING OR DISCONNECTION OF SERVICES.
11. ALL CONSTRUCTION ACTIVITIES SHALL COMPLY WITH WORKPLACE HEALTH AND SAFETY REQUIREMENTS.
12. ANTI PONDING GULLIES ARE TO BE SIDE ENTRY TYPE. CHAMBER AND GRATE ONLY TYPE NOT TO BE USED.
13. GULLY PITS IN EXCESS OF 1.5 METRES DEEP ARE TO BE CONSTRUCTED AS A GULLY PIT/ACCESS CHAMBER STRUCTURE.
14. CRACKS IN STORMWATER PIPES WILL NOT BE ACCEPTED.
15. LEVELS AND GRADIENTS AT JUNCTIONS WITH EXISTING WORKS MAY BE VARIED AS REQUIRED TO ACHIEVE A SATISFACTORY CONNECTION AND THE CONTRACTOR SHALL INCLUDE THE COST OF THIS WORK IN THE TENDER PRICE. WHERE NEW WORK JOINS EXISTING, THE WORK SHALL TRANSITION NEATLY WITH THE PAVEMENT SO THAT DEVIATION FROM THE LINE OF A 3.0m STRAIGHT EDGE SHALL BE NO GREATER THAN 10mm.
16. CONDUITS SHALL BE IN ACCORDANCE WITH I.P.W.E.A STD. DRG. RSD-602.
17. ALL EXCAVATION AND FILLING SHALL BE COMPACTED TO THE REQUIREMENTS OF AS3798-2007 IN ACCORDANCE WITH THE LOCAL AUTHORITY REQUIREMENTS.
18. ALL LEVELS ARE IN METRES ABOVE AUSTRALIAN HEIGHTS DATUM (mAHD) UNLESS OTHERWISE SHOWN

KERB ADAPTORS NOTES

ALL LOTS NOT DRAINING TO A PROPERTY PIT TO HAVE 2 KERB ADAPTORS . KERB ADAPTORS SHOWN ARE INDICATIVE ONLY AND ARE TO BE INSTALLED IN ACCORDANCE WITH IPWEA STD DRG RSD-201.

NOTE:
NOTWITHSTANDING THAT EXISTING SERVICES MAY OR MAY NOT BE SHOWN ON THE JOB DRAWINGS, NO RESPONSIBILITY IS TAKEN BY THE SUPERINTENDENT OR THE PRINCIPAL FOR THIS INFORMATION WHICH HAS BEEN SUPPLIED BY OTHERS. THE DETAILS ARE PROVIDED FOR INFORMATION ONLY. THE CONTRACTOR SHALL ASCERTAIN THE POSITION OF ANY UNDERGROUND SERVICES IN THIS AREA AND SHALL BE RESPONSIBLE FOR MAKING GOOD ANY DAMAGE THERETO.

SCOUR PROTECTION NOTES:

1. IF ROCK SIZE IS SPECIFIED ON THE PLAN AS D_{50} THIS CORRESPONDS TO A ROCK SIZE WITH A MEDIAN ROCK DIAMETER OF D_{50}. A VARIANCE OF ±30% IS ACCEPTABLE. Eg. IF D_{50} = 600 IS SPECIFIED THEN THE EQUIVALENT ROCK DIAMETER RANGES FROM 420mm TO 780mm.
2. NEITHER BREADTH NOR THICKNESS OF A SINGLE ROCK SHALL BE LESS THAN ONE HALF ITS LENGTH (ie THE ROCK SHALL BE CHUNKY RATHER THAN FLAT).
3. ROCK TYPE - BASALT OR OTHER APPROVED MATERIAL. TO BE CONFIRMED WITH SUPERINTENDENT BEFORE COMMENCING ROCK WORK.
4. ROCKS GREATER THAN D_{50}=450 TO BE PLACED AND INTERLOCKED INTO POSITION AND BUILT UP TO FINAL LEVELS SHOWN, ENSURING COVERAGE OF GEOFABRIC. GAPS BETWEEN THE BOULDERS ARE TO BE FILLED BY DROPPING STONES INTO GAPS AND LOCKING INTO POSITION WITH A CROWBAR.
5. ROCKS LESS THAN & EQUAL TO D_{50}=450 TO BE DUMPED & MOVED INTO POSITION. BUILD UP TO FINAL LEVELS & ENSURING COVERAGE OF GEOFABRIC.

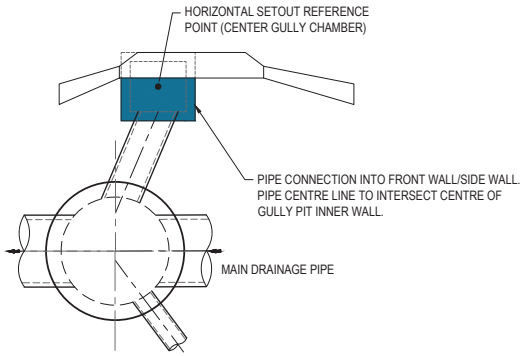
REFERENCE POINT LOCATION FOR DRAINAGE STRUCTURES

STRUCTURE TYPE	HORIZONTAL CONTROL (REFERENCE POINT LOCATION)		VERTICAL CONTROL (REFERENCE LEVEL)
MANHOLE		℄ OF MAIN SHAFT	FINISHED SURFACE LEVEL
GULLY PIT		GEOMETRIC CENTRE OF PIT STRUCTURE	KERB LIP LEVEL
HEADWALL		INTERSECTION OF HEADWALL FACE AND PIPE ℄	INVERT OF HEADWALL

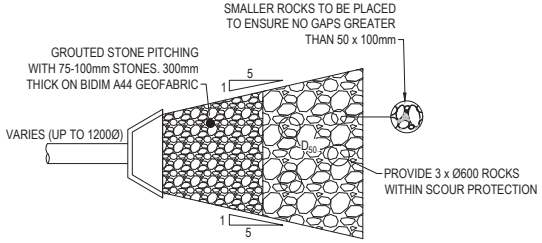
ROCK SCOUR PROTECTION

OUTLET	OUTLET PIPE SIZE	VELOCITY	D_{50}	'L'
OUT/G2	Ø 450	m/s	300 mm	4.3m
OUT/19 & OUT/20	Ø 2/ 450	m/s	300 mm	4.3m

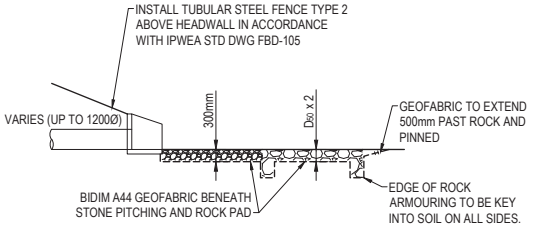
NOTE:
CONTRACTOR TO ENSURE PIPE CONNECTORS TO GULLY PITS ARE NOT CONSTRUCTED INTO THE CORNER OF TWO WALLS.



TYPICAL GULLY PIT PIPE CONNECTION DETAIL
NTS



TYPICAL SCOUR PROTECTION DETAIL PLAN
NTS



TYPICAL SCOUR PROTECTION SECTION
NTS

INITIAL ISSUE	DES	DRN	CHK	APP	DATE	AMENDMENT DETAILS
	AA	RT	AA	RA	15.09.23	
A	AA	RT	AA	MH	30.05.24	ISSUED FOR APPROVAL

STATUS: FOR APPROVAL
APPROVED BY: MAX HOOPER NO: 16633 SIGN: DATE: 30.05.24
SCALE: AS SHOWN
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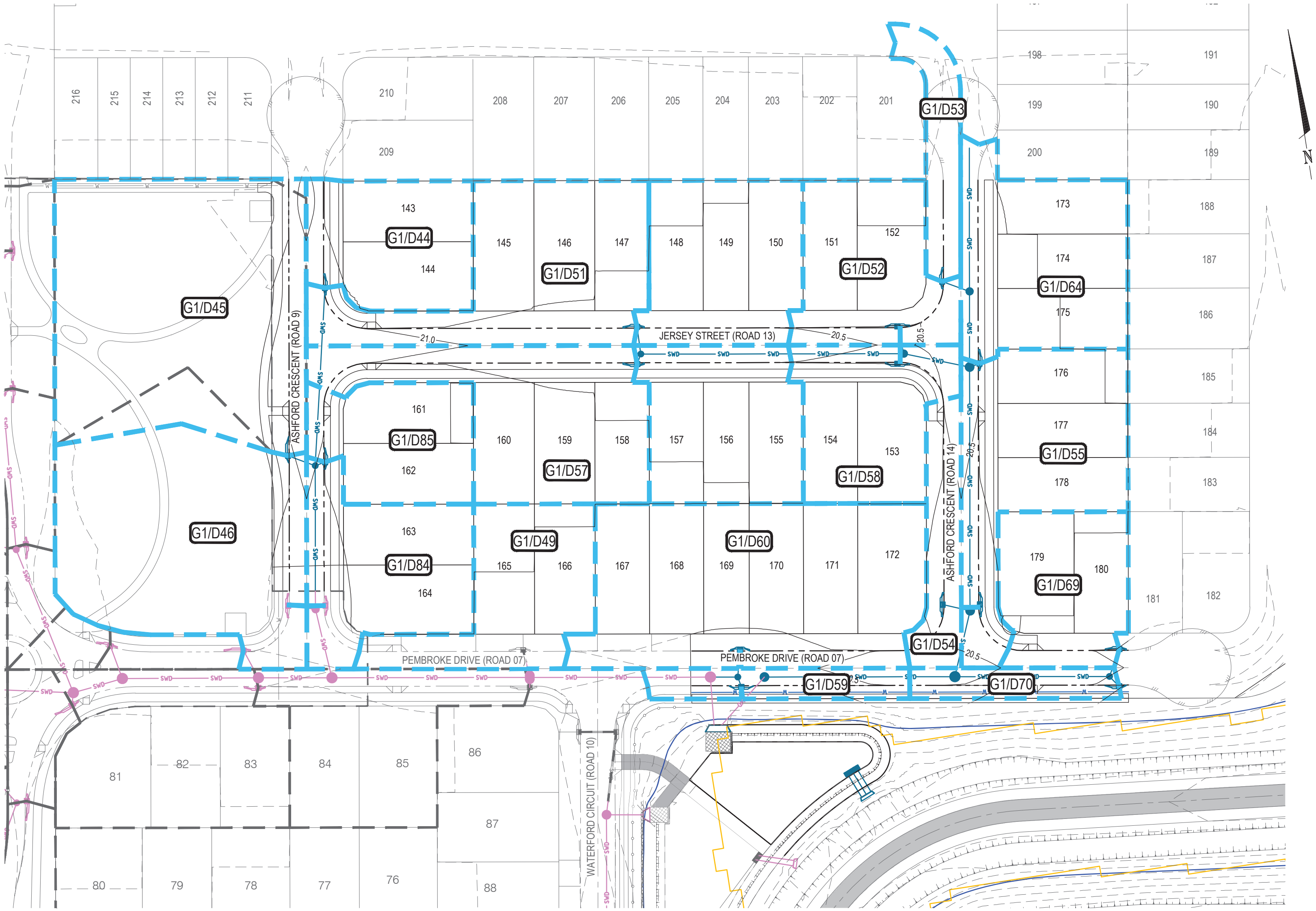
CLIENT: LENNIUM GROUP
PROJECT: Lilywood LANDINGS STAGE 4
DRAWING TITLE: STORMWATER NOTES AND DETAILS
PROJECT No. 22-000983 DRAWING No. 1401 REVISION A



LEGEND

- STAGE BOUNDARY
- STORMWATER DRAINAGE
- ● MAINTENANCE HOLE
- GULLY PIT
- OUTLET STRUCTURE
- G1/A01 STORMWATER CATCHMENT NAME
- F1/A03 EXISTING STORMWATER CATCHMENT NAME
- STORMWATER CATCHMENT BOUNDARY
- EXISTING STORMWATER CATCHMENT BOUNDARY
- 64.0 DESIGN SURFACE CONTOUR (0.5m INTERVALS)
- 66.0 EXISTING SURFACE CONTOUR (0.5m INTERVALS)
- EXISTING STORMWATER DRAINAGE
- ○ EXISTING MAINTENANCE HOLE
- EXISTING GULLY PIT

CATCHMENT NAME	CATCHMENT AREA (Ha)
G1/D44	0.1100
G1/D45	0.3465
G1/D46	0.2686
G1/D49	0.0718
G1/D51	0.1880
G1/D52	0.2575
G1/D53	0.0490
G1/D55	0.1751
G1/D57	0.1799
G1/D58	0.2459
G1/D59	0.0427
G1/D60	0.3409
G1/D64	0.1601
G1/D69	0.1033
G1/D70	0.0338
G1/D84	0.1337
G1/D85	0.0969

NOTE:

1. REFER TO DRG 22-000082_4_1401 FOR STORMWATER STANDARD NOTES AND DETAILS.
2. REFER TO DRG 22-000082_4_1410 FOR STORMWATER CATCHMENT PLAN.
3. REFER TO DRGs 22-000082_4_1420-1421 FOR STORMWATER LONGITUDINAL SECTIONS.
4. REFER TO DRGs 22-000082_4_1430-1431 FOR STORMWATER CALCULATION TABLES.

CAUTION !! UNDERGROUND TELECOMMS CABLES	CAUTION !! UNDERGROUND GAS MAIN
UNDERGROUND TELECOMMUNICATION CABLES EXIST IN THIS VICINITY. CONTACT SUPPLIER FOR CABLE LOCATIONS. EXTREME CARE MUST BE TAKEN WHILST EXCAVATING.	UNDERGROUND GAS MAIN EXIST IN THIS VICINITY. CONTACT SUPPLIER FOR MAIN LOCATIONS. EXTREME CARE MUST BE TAKEN WHILST EXCAVATING
CAUTION !! OVERHEAD ELECTRICAL CABLES	**CAUTION !! UNDERGROUND ELECTRICAL CABLES**
OVERHEAD ELECTRICITY CABLES EXIST IN THIS VICINITY. CONTACT ENERGEX WHERE CABLE CLEARANCE IS COMPROMISED BY MACHINERY.	UNDERGROUND ELECTRICITY CABLES EXIST IN THIS VICINITY. CONTACT ENERGEX FOR CABLE LOCATIONS. EXTREME CARE MUST BE TAKEN WHILST EXCAVATING

	DES	DRN	CHK	APP	DATE	AMENDMENT DETAILS
INITIAL ISSUE	AA	RT	AA	RA	15.09.23	
A	AA	RT	AA	MH	30.05.24	ISSUED FOR APPROVAL

AMENDMENTS

STATUS: FOR APPROVAL

APPROVED
BY: MAX HOOPER NO: 16633
SIGN: [illegible] DATE: 30.05.24

SCALE
1:500 10 5 0 10 20m A1
1:1000 A3

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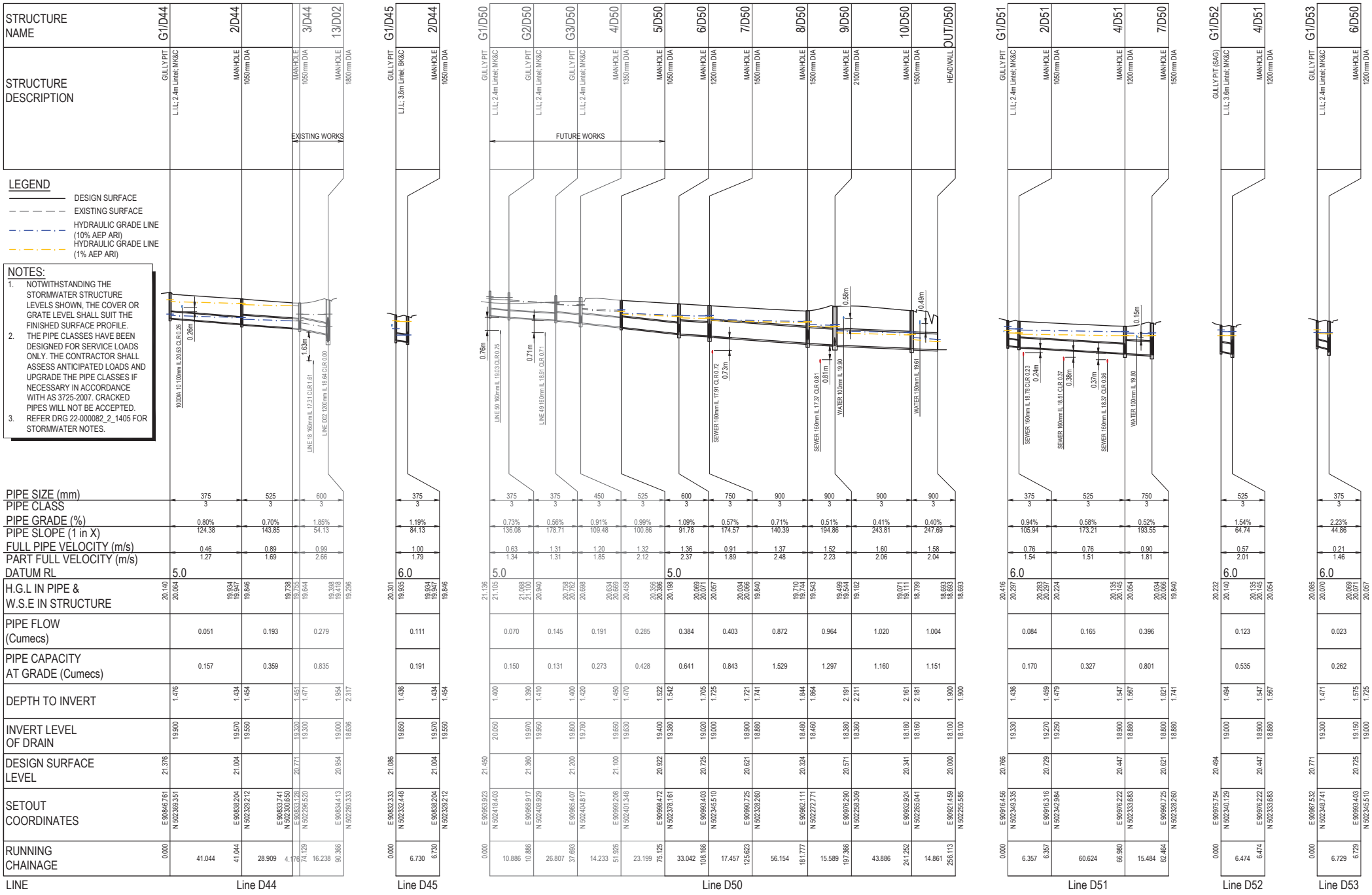
CLIENT: LENNIUM GROUP

PROJECT: Lilywood LANDINGS STAGE 4

DRAWING TITLE: STORMWATER CATCHMENT PLAN

PROJECT No.	DRAWING No.	REVISION
22-000082_4_1410		A



INITIAL ISSUE	DES	DRN	CHK	APP	DATE	AMENDMENT DETAILS
	AA	RT	AA	RA	15.09.23	
A	AA	RT	AA	MH	30.05.24	ISSUED FOR APPROVAL

STATUS: FOR APPROVAL

APPROVED BY: MAX HOOPER NO: 16633 SIGN: DATE: 30.05.24

SCALE: 1:1000 10 0 10 20 30 40 50m A1; 1:2000 A3 HORIZONTAL; 1:100 2 1 0 2 4m A1; 1:200 A3 VERTICAL

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CLIENT: LENNIUM GROUP

PROJECT: Lilywood LANDINGS STAGE 4

DRAWING TITLE: STORMWATER LONGITUDINAL SECTIONS SHEET 1 OF 2

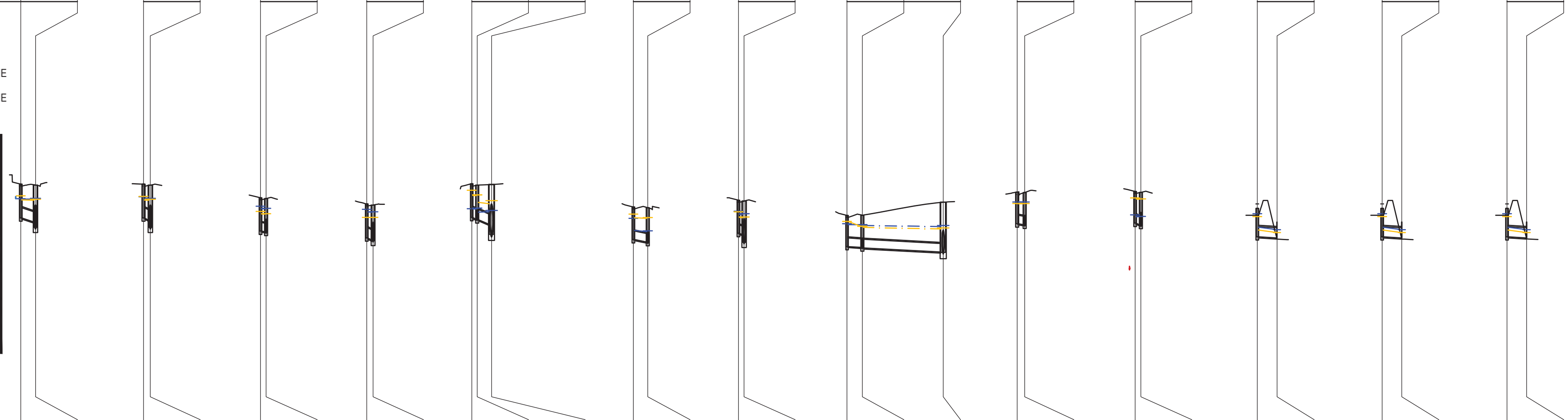
PROJECT No.	DRAWING No.	REVISION
22-000082_4	1420	A

LEGEND

——	DESIGN SURFACE
— — —	EXISTING SURFACE
— · — · (blue)	HYDRAULIC GRADE LINE (10% AEP ARI)
— · — · (yellow)	HYDRAULIC GRADE LINE (1% AEP ARI)

NOTES:

1. NOTWITHSTANDING THE STORMWATER STRUCTURE LEVELS SHOWN, THE COVER OR GRATE LEVEL SHALL SUIT THE FINISHED SURFACE PROFILE.
2. THE PIPE CLASSES HAVE BEEN DESIGNED FOR SERVICE LOADS ONLY. THE CONTRACTOR SHALL ASSESS ANTICIPATED LOADS AND UPGRADE THE PIPE CLASSES IF NECESSARY IN ACCORDANCE WITH AS 3725-2007. CRACKED PIPES WILL NOT BE ACCEPTED.
3. REFER DRG 22-000082_2_1405 FOR STORMWATER NOTES.



LINE	STRUCTURE NAME	STRUCTURE DESCRIPTION	PIPE SIZE (mm)	PIPE CLASS	PIPE GRADE (%)	PIPE SLOPE (1 in X)	FULL PIPE VELOCITY (m/s)	PART FULL VELOCITY (m/s)	DATUM RL	H.G.L IN PIPE & W.S.E IN STRUCTURE	PIPE FLOW (Cumecs)	PIPE CAPACITY AT GRADE (Cumecs)	DEPTH TO INVERT	INVERT LEVEL OF DRAIN	DESIGN SURFACE LEVEL	SETOUT COORDINATES	RUNNING CHAINAGE
Line D54	G1/D54 8/D50	GULLY PIT (SAG) L.I.L; 3.6m Lintel; MK&C MANHOLE 1500mm DIA	450	3	2.77%	36.09	0.16	1.58	5.0	19.720 19.711 19.710 19.744 19.543	0.025	0.475	1.491 1.624 1.864	18.880 18.700 18.460	20.371 20.324	E 90976.110 N 502275.171 E 90982.111 N 502272.771	0.000 6.496 6.496
Line D55	G1/D55 8/D50	GULLY PIT (SAG) L.I.L; 3.6m Lintel; MK&C MANHOLE 1500mm DIA	450	3	3.29%	30.38	0.53	2.40	5.0	19.810 19.713 19.710 19.744 19.543	0.085	0.517	1.491 1.544 1.864	18.880 18.780 18.460	20.371 20.324	E 90984.603 N 502273.853 E 90982.111 N 502272.771	0.000 3.038 3.038
Line D57	G1/D57 2/D51	GULLY PIT L.I.L; 2.4m Lintel; MK&C MANHOLE 1050mm DIA	375	3	1.21%	82.56	0.74	1.67	6.0	20.397 20.288 20.283 20.297 20.224	0.081	0.193	1.466 1.459 1.479	19.300 19.270 19.250	20.766 20.729	E 90915.137 N 502340.842 E 90916.316 N 502342.984	0.000 2.477 2.477
Line D58	G1/D58 4/D51	GULLY PIT (SAG) L.I.L; 3.6m Lintel; MK&C MANHOLE 1200mm DIA	450	3	3.58%	27.96	0.74	2.71	6.0	20.257 20.139 20.135 20.145 20.054	0.117	0.539	1.494 1.547 1.567	19.000 18.900 18.880	20.494 20.447	E 90974.435 N 502331.636 E 90976.222 N 502333.683	0.000 2.796 2.796
Line D59	G1/D59 2/D59 15/D02	GULLY PIT (SAG) L.I.L; 3.6m Lintel; BK&C MANHOLE 1050mm DIA MANHOLE 2100mm DIA	450 450	3 3	3.30% 3.17%	30.28 31.57	0.12 1.12	1.57 2.91	5.0	19.286 19.278 19.278 19.309 19.136 19.148 19.211 18.885	0.020 0.178	0.518 0.508	1.485 1.509 1.529 1.749 2.189	18.900 18.820 18.800 18.600 18.160	20.385 20.329 20.349	E 90927.332 N 502263.634 E 90926.868 N 502265.981 E 90920.630 N 502266.949	0.000 2.423 2.423 6.313 8.736
Line D60	G1/D60 2/D59	GULLY PIT (SAG) L.I.L; 2.4m Lintel; MK&C MANHOLE 1050mm DIA	375	3	1.73%	57.65	1.44	2.25	6.0	19.858 19.330 19.278 19.309 19.136	0.159	0.231	1.432 1.509 1.529	18.930 18.820 18.800	20.362 20.329	E 90928.371 N 502272.140 E 90926.868 N 502265.981	0.000 6.341 6.341
Line D64	G1/D64 7/D50	GULLY PIT L.I.L; 2.4m Lintel; MK&C MANHOLE 1500mm DIA	375	3	2.42%	41.30	0.75	2.17	6.0	20.174 20.040 20.034 20.066 19.840	0.083	0.273	1.459 1.481 1.741	19.200 19.140 18.880	20.659 20.621	E 90993.124 N 502328.734 E 90990.725 N 502328.260	0.000 2.478 2.478
Line D69	G1/D69 2/D69 9/D50	GULLY PIT L.I.L; 2.4m Lintel; MK&C MANHOLE 1050mm DIA MANHOLE 2100mm DIA	375 375	3 3	0.59% 0.51%	168.72 197.95	0.44 0.58	1.12 1.13	6.0	19.627 19.583 19.578 19.582 19.546 19.499 19.544 19.182	0.048 0.064	0.135 0.125	1.371 1.418 1.438 2.191 2.211	18.620 18.580 18.560 18.380 18.360	19.991 19.998 20.571	E 91014.740 N 502258.733 E 91011.499 N 502252.844 E 90976.290 N 502258.309	0.000 6.749 6.749 35.630 42.379
Line D70	G1/D70 2/D69	GULLY PIT L.I.L; 2.4m Lintel; BK&C MANHOLE 1050mm DIA	375	3	1.20%	83.25	0.14	1.05	5.0	19.583 19.578 19.578 19.582 19.546	0.016	0.192	1.395 1.418 1.438	18.620 18.580 18.560	20.015 19.998	E 91013.361 N 502250.280 E 91011.499 N 502252.844	0.000 3.330 3.330
Line D85	G1/D85 2/D44	GULLY PIT L.I.L; 2.4m Lintel; MK&C MANHOLE 1050mm DIA	375	3	3.10%	32.27	0.41	1.99	6.0	20.014 19.932 19.934 19.947 19.846	0.045	0.309	1.396 1.434 1.454	19.650 19.570 19.550	21.046 21.004	E 90840.638 N 502329.914 E 90838.204 N 502329.212	0.000 2.581 2.581
Line D90	F1/D90 OUT/D90	FIELD INLET 900x900 RAISED GRATE HEADWALL	450	3	0.58%	173.05	1.68	1.68	4.0	18.066 17.472 17.363 17.363 17.363	0.267	0.217	1.250 0.700 0.700	17.050 17.000 17.000	18.300 17.700	E 90950.702 N 502240.918 E 90954.009 N 502232.922	0.000 8.653 8.653
Line D91	F1/D91 OUT/D91	FIELD INLET 900x900 RAISED GRATE HEADWALL	450	3	0.58%	173.05	1.68	1.68	4.0	18.066 17.472 17.363 17.363 17.363	0.267	0.217	1.250 0.700 0.700	17.050 17.000 17.000	18.300 17.700	E 90949.547 N 502240.440 E 90952.854 N 502232.444	0.000 8.653 8.653
Line D92	F1/D92 OUT/D92	FIELD INLET 900x900 RAISED GRATE HEADWALL	450	3	0.58%	173.05	1.68	1.68	4.0	18.066 17.472 17.363 17.363 17.363	0.267	0.217	1.250 0.700 0.700	17.050 17.000 17.000	18.300 17.700	E 90948.392 N 502239.963 E 90951.698 N 502231.967	0.000 8.653 8.653

INITIAL ISSUE	DES	DRN	CHK	APP	DATE	AMENDMENT DETAILS
	AA	RT	AA	RA	15.09.23	
A	AA	RT	AA	MH	30.05.24	ISSUED FOR APPROVAL

STATUS: FOR APPROVAL

APPROVED BY: MAX HOOPER NO: 16633
SIGN: [illegible] DATE: 30.05.24

SCALE: 1:1000 A1 / 1:2000 A3 HORIZONTAL 10 0 10 20 30 40 50m; 1:100 A1 / 1:200 A3 VERTICAL 2 1 0 2 4m

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CLIENT: LENNIUM GROUP

PROJECT: Lilywood LANDINGS STAGE 4

DRAWING TITLE: STORMWATER LONGITUDINAL SECTIONS SHEET 2 OF 2

PROJECT No. 22-000082 | DRAWING No. 4_1421 | REVISION A

	LOCATION	CATCHMENT PROPERTIES			FULL AREA RUNOFF					PART AREA RUNOFF					INLET DESIGN										DRAIN DESIGN								HEADLOSSES											PART FULL		DESIGN LEVELS							
		fi	Ci	Cp	tc	I	A	CA	Q	tc	I	A	CA	Q	Qa							Qg	Qb		tc	I	CA	Qp	L	S		Vf	S/Do	Qg/Qo	Du/Do		Vf2/2g	Ku	hu	Kw	hw	Sf	hf	dn	Vn								
DESIGN ARI	STRUCTURE No.	FRACTION IMPERVIOUS	COEFFICIENT OF RUNOFF IMPERVIOUS AREA	COEFFICIENT OF RUNOFF PERVIOUS AREA	TIME OF CONCENTRATION	RAINFALL INTENSITY	SUB-CATCHMENT AREA	EQUIVALENT IMPERVIOUS AREA	SUB-CATCHMENT DISCHARGE	TIME OF CONCENTRATION	RAINFALL INTENSITY	PARTIAL CATCHMENT AREA	EQUIVALENT IMPERVIOUS AREA	SUB-CATCHMENT DISCHARGE	FLOW IN K&C(INC. BYPASS)	FLOW WIDTH	FLOW DEPTH	FLOW DxV	ROAD GRADE AT INLET	ROAD XFALL AT INLET	INLET TYPE	FLOW INTO INLET	BYPASS FLOW	BYPASS STRUCTURE No.	CRITICAL TIME OF CONC.	RAINFALL INTENSITY	TOTAL (C x A)	PIPE FLOW	REACH LENGTH	PIPE GRADE	PIPE SIZE	FULL PIPE VELOCITY	SUBMERGENCE RATIO	GRATE FLOW RATIO	DIAMETER RATIO	CHART(S) USED	VELOCITY HEAD	U/S HEAD 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	GRATE LEVEL	FREEBOARD	STRUCTURE No.
Yrs					min	mm/h	ha	ha	L/s	min	mm/h	ha	ha	L/s	L/s	m	m		%	%		L/s	L/s		min	mm/hr	ha	L/s	m	%	mm	m/s					m	m			m	%	m	m	m/s	m	m	m	m	m	m	m	
10%	G1/D44	85	0.9	0.64	10	168	0.11	0.094	44	5	207	0.102	0.089	51	51	2.305	0.074	0.05	1.43	2.94	GULLY MK-S	51	0	G1/D51	5	207	0.089	51	41.044	0.8	375	0.46	1.2	1		G1	0.011	7	0.077		0.077	0.32	0.18	0.147	1.27	19.9	19.57	20.064	19.934	20.14	21.296	1.155	G1/D44
10%	2/D44	0																			MH1050				5.48	203	0.354	193	33.085	0.7	525	0.89	1.19	0	1	T6/T9	0.041	2.18	0.089	2.49	0.101	0.33	0.173	0.274	1.69	19.55	19.32	19.846	19.738	19.947	21.004	1.057	2/D44
10%	3/D44	0																			MH1050				10.07	168	0.733	279	16.238	1.85	600	0.99	1.19	0	1	T3/T6	0.05	1.88	0.094	2.23	0.111	1.52	0.287	0.239	2.66	19.3	19	19.644	19.398	19.755	20.771	1.016	3/D44
10%	G1/D45	35	0.9	0.64	10	168	0.347	0.252	118	5	207	0.234	0.18	104	118	3.113	0.123	0.1	0.84	3	GULLY BK-M	111	7	G1/D46	10	168	0.252	111	6.73	1.19	375	1	1.98	1		G2	0.051	7.12	0.366		0.366	0	0.026	0.205	1.79	19.65	19.57	19.935	19.934	20.301	20.972	0.672	G1/D45
10%	G1/D50	85	0.9	0.64	10	168	0.15	0.128	60	5	207	0.139	0.121	70	70				0.59	3	GULLY MK-S	70	0	G1/D73	5	207	0.121	70	10.886	0.73	375	0.63	2.9			Outlet Control	0.02	1.5	0.03		0.03	0.16	0.017	0.179	1.34	20.05	19.97	21.105	21.088	21.136	21.45	0.314	G1/D50
10%	G2/D50	85	0.9	0.64	10	168	0.169	0.145	67	5	207	0.156	0.137	79	79				0.95	3	GULLY MK-S	75	3	G3/D50	5.13	206	0.258	145	26.807	0.56	375	1.31	3.07	0.52	1	G1/T6/T9	0.087	1.69	0.148	1.82	0.159	0.68	0.182	0.375	1.31	19.95	19.8	20.94	20.758	21.1	21.36	0.26	G2/D50
10%	G3/D50	85	0.9	0.64	10	168	0.1	0.086	40	5	207	0.092	0.081	47	50				0.59	3	GULLY MK-S	50	0	G1/D53	5.51	203	0.339	191	14.233	0.91	450	1.2	2.18	0.26	0.83	T1/T3	0.074	0.82	0.061	0.87	0.065	0.45	0.064	0.278	1.85	19.78	19.65	20.698	20.634	20.762	21.2	0.438	G3/D50
10%	4/D50	0																			MH1350				5.65	202	0.591	285	23.199	0.99	525	1.32	1.98	0	1	T6/T9	0.089	1.98	0.175	2.38	0.211	0.44	0.102	0.313	2.12	19.63	19.4	20.458	20.356	20.669	21.1	0.431	4/D50
10%	5/D50	0																			MH1050				5.84	200	0.711	384	33.042	1.09	600	1.36	1.68	0	1	T3	0.094	1.67	0.158	1.99	0.188	0.39	0.129	0.335	2.37	19.38	19.02	20.198	20.069	20.386	20.922	0.536	5/D50
10%	6/D50	0																			MH1200				6.09	199	0.751	403	17.457	0.57	750	0.91	1.43	0	0.94	T1/T3	0.042	0.28	0.012	0.33	0.014	0.13	0.023	0.365	1.89	19	18.9	20.057	20.034	20.071	20.725	0.653	6/D50
10%	7/D50	0																			MH1500				6.11	198	1.588	872	56.154	0.71	900	1.37	1.32	0	1	T3/T6	0.096	2.02	0.194	2.35	0.226	0.23	0.13	0.487	2.48	18.88	18.48	19.84	19.71	20.066	20.621	0.555	7/D50
10%	8/D50	0																			MH1500				6.38	196	1.769	964	15.589	0.51	900	1.52	1.43	0	1	T1/T3	0.117	1.42	0.167	1.71	0.201	0.28	0.044	0.578	2.23	18.46	18.38	19.543	19.499	19.744	20.324	0.58	8/D50
10%	9/D50	0																			MH2100				6.51	195	1.881	1020	43.886	0.41	900	1.6	1.4	0	1	T9/T10	0.131	2.42	0.317	2.76	0.362	0.25	0.122	0.655	2.06	18.36	18.18	19.182	19.071	19.544	20.571	1.027	9/D50
10%	10/D50	0																			MH1500				6.91	192	1.881	1004	14.861	0.4	900	1.58	1.35	0	1	T6/T9	0.127	2.14	0.272	2.46	0.312	0.71	0.066	0.651	2.04	18.16	18.1	18.799	18.693	19.111	20.341	1.23	10/D50
10%	OUT/D50																				HW outlet																													18.693	20		OUT/D50
10%	G1/D51	85	0.9	0.64	10	168	0.188	0.161	75	5	207	0.174	0.152	87	87	3.197	0.1	0.06	0.53	3	GULLY MK-S	84	4	G1/D52	5	207	0.152	84	6.357	0.94	375	0.76	2.9	1		G2	0.029	4.03	0.119		0.119	0.23	0.015	0.186	1.54	19.33	19.27	20.297	20.283	20.416	20.681	0.265	G1/D51
10%	2/D51	0																			MH1050				5.07	206	0.298	165	60.624	0.58	525	0.76	2	0	1	T9/T10	0.03	2.01	0.059	2.5	0.074	0.15	0.089	0.264	1.51	19.25	18.9	20.224	20.135	20.297	20.729	0.431	2/D51
10%	4/D51	0																			MH1200				5.74	201	0.709	396	15.484	0.52	750	0.9	1.69	0	1	T3/T6	0.041	1.97	0.081	2.22	0.091	0.13	0.02	0.373	1.81	18.88	18.8	20.054	20.034	20.145	20.447	0.302	4/D51
10%	G1/D52	85	0.9	0.64	10	168	0.257	0.221	103	5	207	0.238	0.208	120	123		0.06		0.24	1.41	SAG MK-M	123	0	G1/D58	5	207	0.208	123	6.474	1.54	525	0.57	2.35	1		G2	0.017	5.54	0.092		0.092	0.08	0.005	0.172	2.01	19	18.9	20.14	20.135	20.232	20.409	0.177	G1/D52
10%	G1/D53	85	0.9	0.64	10	168	0.049	0.042	20	5	207	0.045	0.04	23	23	1.861	0.063	0.03	0.6	1.6	GULLY MK-S	23	0	G1/D52	5	207	0.04	23	6.729	2.23	375	0.21	2.09	1		G2	0.002	6.61	0.014		0.014	0.02	0.001	0.075	1.46	19.3	19.15	20.07	20.069	20.085	20.686	0.602	G1/D53
10%	G1/D54	85	0.9	0.64	10	168	0.054	0.046	22	5	207	0.05	0.044	25	25		0.004		0.2	1.52	SAG MK-M	25	0	G1/D55	5	207	0.044	25	6.496	2.77	450	0.16	1.87	1		G2	0.001	7.72	0.01		0.01	0.01	0.001	0.07	1.58	18.88	18.7	19.711	19.71	19.72	20.286	0.565	G1/D54
10%	G1/D55	85	0.9	0.64	10	168	0.175	0.15	70	5	207	0.162	0.142	81	85		0.035		0.2	1.52	SAG MK-M	85	0	G1/D69	5	207	0.142	85	3.038	3.29	450	0.53	2.07	1		G2	0.014	6.72	0.097		0.097	0.09	0.003	0.123	2.4	18.88	18.78	19.713	19.71	19.81	20.286	0.476	G1/D55
10%	G1/D56	85	0.9	0.64	10	168	0.147	0.126	59	5	207	0.136	0.119	68	115	3.658	0.108	0.07	0.6	3	GULLY MK-S	103	11	G1/D64	5	207	0.119	103	2.477	2.02	375	0.93	2.7	1		G2	0.045	4.46	0.198		0.198	0.35	0.009	0.168	2.15	19.55	19.5	20.365	20.356	20.563	20.875	0.312	G1/D56
10%	G1/D57	85	0.9	0.64	10	168	0.18	0.154	72	5	207	0.166	0.146	84	84	3.144	0.098	0.06	0.53	3	GULLY MK-S	81	3	G1/D58	5	207	0.146	81	2.477	1.21	375	0.74	2.93	1		G2	0.028	3.96	0.109		0.109	0.21	0.005	0.17	1.67	19.3	19.27	20.288	20.283	20.397	20.681	0.284	G1/D57
10%	G1/D58	85	0.9	0.64	10	168	0.246	0.211	98	5	207	0.227	0.199	114	117		0.056		0.24	1.41	SAG MK-M	117	0	G1/D54	5	207	0.199	117	2.796	3.58	450	0.74	2.79	1		G2	0.028	4.26	0.117		0.117	0.17	0.005	0.142	2.71	19	18.9	20.139	20.135	20.257	20.409	0.153	G1/D58
10%	G1/D59	85	0.9	0.64	10	168	0.043	0.037	17	5	207	0.04	0.035	20	20		0.007		0.13	3	SAG BK-M	20	0	LOST	5	207	0.035	20	2.423	3.3	450	0.12	1.02	1		G2	0.001	9.7	0.008		0.008	-0.02	0	0.06	1.57	18.9	18.82	19.286	19.286	19.293	20.278	0.985	G1/D59
10%	2/D59	0																			MH1050				5.05	207	0.31	184	6.313	3.17	450	1.16	1.41	0	1	T9/T10	0.068	2.22	0.152	2.7	0.185	-0.22	0.026	0.187	2.94	18.8	18.6	19.134	19.148	19.319	20.329	1.01	2/D59
10%	G1/D60	85	0.9	0.64	10	168	0.341	0.292	136	5	207	0.315	0.276	159	165		0.104		0.13	3	SAG MK-S	165	0	G1/D59	5	207	0.276	165	6.341	1.73	375	1.49	2.55	1		G2	0.113	4.79	0.543		0.543	0.88	0.056	0.234	2.27	18.93	18.82	19.342	19.286	19.885	20.277	0.392	G1/D60
10%	G1/D64	85	0.9	0.64	10	168	0.16	0.137	64	5	207	0.148	0.13	74	86	3.104	0.097	0.06	0.6	3	GULLY MK-S	83	3	G1/D55	5	207	0.13	83	2.478	2.42	375	0.75	2.6	1		G2	0.029	4.69	0.134		0.134	0.22	0.006	0.142	2.17	19.2	19.14	20.04	20.034	20.174	20.574	0.399	G1/D64
10%	G1/D69	85	0.9	0.64	10	168	0.103	0.089	41	5	207	0.096	0.084	48	48	2.015	0.067	0.06	1.77	3	GULLY MK-S	48	0	LOST	5	207	0.084	48	6.749	0.59	375	0.44	2.68	1		G2	0.01	4.5	0.043		0.043	0.08	0.005	0.155	1.12	18.62	18.58	19.583	19.578	19.627	19.906	0.279	G1/D69
10%	2/D69	0																			MH1050				5.09	206	0.111	64	35.63	0.51	375	0.58	2.72	0	1	T6/T9	0.017	1.89	0.032	2.11	0.036	0.13	0.047	0.19	1.13	18.56	18.38	19.546	19.499	19.582	19.998	0.416	2/D69
10%	G1/D70	85	0.9	0.64	10	168	0.034	0.029	14	5	207	0.031	0.027	16	16	1.135	0.065	0.04	1.77	3	GULLY BK-S	16	0	LOST	5	207	0.027	16	3.33	1.2	375	0.14	2.57	1		G2	0.001	4.75	0.005		0.005	0.01	0	0.073	1.05	18.62	18.58	19.578	19.578	19.583	19.908	0.325	G1/D70
10%	G1/D85	85	0.9	0.64	10	168	0.097	0.083	39	5	207	0.09	0.078	45	45	2.27	0.074	0.05	0.84	3	GULLY MK-S	45	0	G1/D84	5	207	0.078	45	2.581	3.1	375	0.41	1.22	1		G2	0.008	9.7	0.082		0.082	-0.11	0.002	0.097	1.99	19.65	19.57	19.932	19.934	20.014	20.961	0.947	G1/D85
10%	F1/D90	0					0	0	0			0	0	0	267		0.2				RSIP-9x9	267	0	LOST	1	286	0	267	8.653	0.58	450	1.68	2.32	1		G1	0.144	4.13	0.594		0.594	1.26	0.068	0.45	1.68	17.05	17	17.472	17.363	18.066	18.5	0.434	F1/D90
10%	OUT/D90																				HW outlet																													17.363	17.7		OUT/D90
10%	F1/D91	0					0	0	0			0	0	0	267		0.2				RSIP-9x9	267	0	F1/D90	1	286	0	267	8.653	0.58	450	1.68	2.32	1		G1	0.144	4.13	0.594		0.594	1.26	0.068	0.45	1.68	17.05	17	17.472	17.363	18.066	18.5	0.434	F1/D91
10%	OUT/D91																				HW outlet																													17.363	17.7		OUT/D91
10%	F1/D92	0					0	0	0			0	0	0	267		0.2				RSIP-9x9	267	0	F1/D91	1	286	0	267	8.653	0.58	450	1.68	2.32	1		G1	0.144	4.13	0.594		0.594	1.26	0.068	0.45	1.68	17.05	17	17.472	17.363	18.066	18.5	0.434	F1/D92
10%	OUT/D92																				HW outlet																													17.363	17.7		OUT/D92

STORMWATER DRAINAGE CALCULATIONS - MINOR 10% AEP

INITIAL ISSUE	DES	DRN	CHK	APP	DATE	AMENDMENT DETAILS
	AA	RT	AA	RA	15.09.23	
A	AA	RT	AA	MH	30.05.24	ISSUED FOR APPROVAL

STATUS: FOR APPROVAL

APPROVED BY: MAX HOOPER NO: 16633

SIGN: DATE: 30.05.24

SCALE

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CLIENT: LENNIUM GROUP

PROJECT: Lilywood LANDINGS STAGE 4

DRAWING TITLE: STORMWATER CALCULATION TABLES MINOR

PROJECT No. 22-000082 | DRAWING No. 4_1430 | REVISION A

	LOCATION	CATCHMENT PROPERTIES			FULL AREA RUNOFF					PART AREA RUNOFF					INLET DESIGN									DRAIN DESIGN								HEADLOSSES										PART FULL		DESIGN LEVELS								
DESIGN ARI	STRUCTURE No.	FRACTION IMPERVIOUS	COEFFICIENT OF RUNOFF IMPERVIOUS AREA	COEFFICIENT OF RUNOFF PERVIOUS AREA	TIME OF CONCENTRATION	RAINFALL INTENSITY	SUB-CATCHMENT AREA	EQUIVALENT IMPERVIOUS AREA	SUB-CATCHMENT DISCHARGE	TIME OF CONCENTRATION	RAINFALL INTENSITY	PARTIAL CATCHMENT AREA	EQUIVALENT IMPERVIOUS AREA	SUB-CATCHMENT DISCHARGE	FLOW IN K&G(INC. BYPASS)	FLOW WIDTH	FLOW DEPTH	FLOW DxV	ROAD GRADE AT INLET	ROAD XFALL AT INLET	INLET TYPE	FLOW INTO INLET	BYPASS FLOW	BYPASS STRUCTURE No.	CRITICAL TIME OF CONC.	RAINFALL INTENSITY	TOTAL (C x A)	PIPE FLOW	REACH LENGTH	PIPE GRADE	PIPE SIZE	FULL PIPE VELOCITY	SUBMERGENCE RATIO	GRATE FLOW RATIO	DIAMETER RATIO	CHART(S) USED	VELOCITY HEAD	US HEAD LOSS COEFFICIENT	US 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	GRATE LEVEL	FREEBOARD	STRUCTURE No.
Yrs					min	mm/h	ha	ha	L/s	min	mm/h	ha	ha	L/s	L/s	m	m		%	%		L/s	L/s		min	mm/hr	ha	L/s	m	%	mm	m/s					m/s	m	m		m	%	m	m	m/s	m	m	m	m	m	m	m	
1%	G1/D44	85	1	0.77	10	294	0.11	0.106	87	5	370	0.102	0.1	102	102	3.009	0.093	0.08	1.43	2.94	GULLY MK-S	91	12	G1/D51	5	370	0.1	91	41.044	0.8	375	0.82	2.09	1		G1	0.034	4.61	0.159		0.159	0.27	0.11	0.204	1.47	19.9	19.57	20.525	20.415	20.684	21.296	0.611	G1/D44
1%	2/D44	0																			MH1050				5.48	362	0.403	164	33.085	0.7	525	0.76	1.66	0	1	T3/T6	0.029	1.89	0.055	2.17	0.063	0.14	0.048	0.249	1.62	19.55	19.32	20.36	20.312	20.423	21.004	0.581	2/D44
1%	3/D44	0																			MH1050				5.81	357	0.696	148	16.238	1.85	600	0.52	1.69	0	1	T1/T3	0.014	1.27	0.018	1.49	0.021	0.06	0.009	0.171	2.23	19.3	19	20.294	20.285	20.315	20.771	0.455	3/D44
1%	G1/D45	35	1	0.77	10	294	0.347	0.294	240	5	370	0.234	0.208	213	240	4.303	0.154	0.14	0.84	3	GULLY BK-M	72	168	G1/D46	10	294	0.294	72	6.73	1.19	375	0.65	2.38	1		G2	0.022	5.39	0.117		0.117	0.17	0.011	0.16	1.61	19.65	19.57	20.427	20.415	20.544	20.972	0.428	G1/D45
1%	G1/D50	85	1	0.77	10	294	0.15	0.145	118	5	370	0.139	0.136	140	140				0.59	3	GULLY MK-S	98	42	G1/D73	5	370	0.136	98	10.886	0.73	375	0.89	2.98			Outlet Control	0.04	1.5	0.06		0.06	0.31	0.034	0.22	1.45	20.05	19.97	21.109	21.075	21.169	21.45	0.281	G1/D50
1%	G2/D50	85	1	0.77	10	294	0.169	0.163	133	5	370	0.156	0.153	157	157				0.95	3	GULLY MK-S	5	152	G3/D50	5.13	368	0.289	102	26.807	0.56	375	0.92	3.01	0.05	1	T6/T9	0.043	1.67	0.072	1.77	0.076	0.34	0.09	0.248	1.31	19.95	19.8	21.003	20.913	21.08	21.36	0.28	G2/D50
1%	G3/D50	85	1	0.77	10	294	0.1	0.096	79	5	370	0.092	0.091	93	245				0.59	3	GULLY MK-S	100	145	G1/D53	5.51	362	0.381	195	14.233	0.91	450	1.23	2.52	0.5	0.83	T1/T3	0.077	1.37	0.105	1.41	0.108	0.47	0.067	0.282	1.86	19.78	19.65	20.808	20.741	20.916	21.2	0.284	G3/D50
1%	4/D50	0																			MH1350				5.65	360	0.663	320	23.199	0.99	525	1.48	2.18	0	1	T6/T9	0.112	1.91	0.214	2.2	0.246	0.55	0.129	0.339	2.17	19.63	19.4	20.527	20.399	20.773	21.1	0.327	4/D50
1%	5/D50	0																			MH1050				5.84	357	0.797	392	33.042	1.09	600	1.39	1.74	0	1	T1/T3	0.098	1.41	0.139	1.66	0.163	0.41	0.135	0.339	2.38	19.38	19.02	20.26	20.125	20.423	20.922	0.499	5/D50
1%	6/D50	0																			MH1200				6.09	353	0.843	495	17.457	0.57	750	1.12	1.52	0	0.94	T1/T3	0.064	1.16	0.074	1.37	0.088	0.2	0.035	0.413	1.98	19	18.9	20.051	20.016	20.139	20.725	0.586	6/D50
1%	7/D50	0																			MH1500				6.11	353	1.782	763	56.154	0.71	900	1.2	1.29	0	1	T3/T6	0.073	1.81	0.133	2.17	0.159	0.18	0.1	0.45	2.4	18.88	18.48	19.884	19.784	20.043	20.621	0.578	7/D50
1%	8/D50	0																			MH1500				6.38	349	1.985	980	15.589	0.51	900	1.54	1.52	0	1	T3/T6	0.121	1.8	0.218	2.16	0.261	0.29	0.046	0.585	2.24	18.46	18.38	19.565	19.52	19.827	20.324	0.497	8/D50
1%	9/D50	0																			MH2100				6.4	348	2.101	1040	43.886	0.41	900	1.63	1.42	0	1	T9/T10	0.136	2.43	0.331	2.76	0.376	0.27	0.127	0.666	2.06	18.36	18.18	19.189	19.072	19.565	20.571	1.006	9/D50
1%	10/D50	0																			MH1500				6.8	342	2.101	1004	14.861	0.4	900	1.58	1.35	0	1	T6/T9	0.127	2.14	0.272	2.46	0.312	0.71	0.066	0.651	2.04	18.16	18.1	18.799	18.693	19.112	20.341	1.229	10/D50
1%	OUT/D50																				HW outlet																											18.693	20		OUT/D50
1%	G1/D51	85	1	0.77	10	294	0.188	0.181	148	5	370	0.174	0.171	175	187	5.387	0.132	0.09	0.53	3	GULLY MK-S	84	103	G1/D52	5	370	0.171	84	6.357	0.94	375	0.76	2.65	1		G2	0.029	4.57	0.133		0.133	0.23	0.014	0.185	1.53	19.33	19.27	20.19	20.176	20.324	20.681	0.358	G1/D51
1%	2/D51	0																			MH1050				5.07	369	0.334	160	60.624	0.58	525	0.74	1.79	0	1	T9/T10	0.028	2.17	0.061	2.61	0.073	0.14	0.084	0.26	1.5	19.25	18.9	20.115	20.031	20.188	20.729	0.541	2/D51
1%	4/D51	0																			MH1200				5.74	358	0.795	168	15.484	0.52	750	0.38	1.54	0	1	T1/T3	0.007	1.51	0.011	1.82	0.013	0.02	0.004	0.233	1.43	18.88	18.8	20.02	20.016	20.033	20.447	0.413	4/D51
1%	G1/D52	85	1	0.77	10	294	0.257	0.248	203	5	370	0.238	0.234	240	422		0.095		0.24	1.41	SAG MK-M	14	408	G1/D58	5	370	0.234	14	6.474	1.54	525	0.07	1.97	1		G2	0	7.18	0.002		0.002	0	0	0.059	1.06	19	18.9	20.031	20.031	20.033	20.409	0.377	G1/D52
1%	G1/D53	85	1	0.77	10	294	0.049	0.047	39	5	370	0.045	0.044	46	191	5.272	0.13	0.09	0.6	1.6	GULLY MK-S	112	79	G1/D52	5	370	0.044	112	6.729	2.23	375	1.02	2.86	1		G2	0.053	4.12	0.218		0.218	0.41	0.028	0.172	2.28	19.3	19.15	20.153	20.125	20.371	20.686	0.316	G1/D53
1%	G1/D54	85	1	0.77	10	294	0.054	0.052	43	5	370	0.05	0.049	50	764		0.075		0.2	1.52	SAG MK-M	131	633	G1/D55	5	370	0.049	131	6.496	2.77	450	0.82	2.44	1		G2	0.035	5.16	0.179		0.179	0.21	0.014	0.162	2.55	18.88	18.7	19.798	19.784	19.977	20.286	0.309	G1/D54
1%	G1/D55	85	1	0.77	10	294	0.175	0.169	138	5	370	0.162	0.159	163	1078		0.06		0.2	1.52	SAG MK-M	124	954	G1/D69	5	370	0.159	124	3.038	3.29	450	0.78	2.39	1		G2	0.031	5.36	0.166		0.166	0.19	0.006	0.15	2.67	18.88	18.78	19.79	19.784	19.956	20.286	0.33	G1/D55
1%	G1/D56	85	1	0.77	10	294	0.147	0.141	116	5	370	0.136	0.133	137	334	6.261	0.153	0.13	0.6	3	GULLY MK-S	81	253	G1/D64	5	370	0.133	81	2.477	2.02	375	0.73	2.62	1		G2	0.027	4.64	0.127		0.127	0.21	0.005	0.147	2.01	19.55	19.5	20.404	20.399	20.531	20.875	0.344	G1/D56
1%	G1/D57	85	1	0.77	10	294	0.18	0.174	142	5	370	0.166	0.163	168	168	5.046	0.127	0.08	0.53	3	GULLY MK-S	78	90	G1/D58	5	370	0.163	78	2.477	1.21	375	0.7	2.65	1		G2	0.025	4.56	0.115		0.115	0.2	0.005	0.165	1.65	19.3	19.27	20.181	20.176	20.295	20.681	0.386	G1/D57
1%	G1/D58	85	1	0.77	10	294	0.246	0.237	194	5	370	0.227	0.223	229	727		0.11		0.24	1.41	SAG MK-M	13	714	G1/D54	5	370	0.223	13	2.796	3.58	450	0.08	2.3	1		G2	0	5.76	0.002		0.002	0	0	0.048	1.42	19	18.9	20.031	20.031	20.033	20.409	0.376	G1/D58
1%	G1/D59	85	1	0.77	10	294	0.043	0.041	34	5	370	0.04	0.039	40	738		0.11		0.13	3	SAG BK-M	168	570	LOST	5	370	0.039	168	2.423	3.3	450	1.06	2.94	1		G2	0.057	3.93	0.224		0.224	0.35	0.008	0.176	2.91	18.9	18.82	19.999	19.991	20.223	20.278	0.055	G1/D59
1%	2/D59	0																			MH1050				5.05	369	0.348	274	6.313	3.17	450	1.73	2.72	0	1	T9/T10	0.152	1.88	0.286	2.11	0.321	0.93	0.058	0.236	3.25	18.8	18.6	19.705	19.646	20.025	20.329	0.304	2/D59
1%	G1/D60	85	1	0.77	10	294	0.341	0.329	269	5	370	0.315	0.309	318	805		0.11		0.13	3	SAG MK-S	107	698	G1/D59	5	370	0.309	107	6.341	1.73	375	0.97	3.33	1		G2	0.048	3.44	0.165		0.165	0.37	0.024	0.179	2.05	18.93	18.82	20.014	19.991	20.179	20.277	0.098	G1/D60
1%	G1/D64	85	1	0.77	10	294	0.16	0.154	126	5	370	0.148	0.145	149	402	6.621	0.162	0.14	0.6	3	GULLY MK-S	120	282	G1/D55	5	370	0.145	120	2.478	2.42	375	1.09	2.87	1		G2	0.06	4.1	0.247		0.247	0.47	0.012	0.174	2.39	19.2	19.14	20.028	20.016	20.275	20.574	0.299	G1/D64
1%	G1/D69	85	1	0.77	10	294	0.103	0.1	81	5	370	0.096	0.094	96	0				1.77	3	GULLY MK-S	-638	638	LOST	5	370	0.094	316	6.749	0.59	375	2.86					0.417	0	0		0	3.24	0.219	0.375	2.86	18.62	18.58	19.851	19.632	19.851	19.906	0.055	G1/D69
1%	2/D69	0																			MH1050				5.09	368	0.124	76	35.63	0.51	375	0.69	2.88	0	1	T9	0.024	1.9	0.046	2.17	0.052	0.19	0.067	0.211	1.18	18.56	18.38	19.587	19.52	19.639	19.998	0.359	2/D69
1%	G1/D70	85	1	0.77	10	294	0.034	0.033	27	5	370	0.031	0.031	31	381	4.15	0.157	0.22	1.77	3	GULLY BK-S	14	367	LOST	5	370	0.031	14	3.33	1.2	375	0.13	2.71	1		G2	0.001	4.44	0.004		0.004	0.01	0	0.069	1.02	18.62	18.58	19.633	19.632	19.636	19.908	0.271	G1/D70
1%	G1/D85	85	1	0.77	10	294	0.097	0.093	76	5	370	0.09	0.088	90	90	2.963	0.093	0.07	0.84	3	GULLY MK-S	28	62	G1/D84	5	370	0.088	28	2.581	3.1	375	0.25	2.1	1		G2	0.003	6.58	0.021		0.021	0.03	0.001	0.076	1.74	19.65	19.57	20.416	20.415	20.437	20.961	0.524	G1/D85
1%	F1/D90	0					0	0	0			0	0	0	267		0.2		8.653	0.58	RSIP-9x9	267	0	F1/D90	1	506	0	267	8.653	0.58	450	1.68	2.32	1		G1	0.144	4.13	0.594		0.594	1.26	0.068	0.45	1.68	17.05	17	17.472	17.363	18.066	18.5	0.434	F1/D90
1%	OUT/D90																				HW outlet																											17.363	17.7		OUT/D90
1%	F1/D91	0					0	0	0			0	0	0	267		0.2		8.653	0.58	RSIP-9x9	267	0	F1/D90	1	506	0	267	8.653	0.58	450	1.68	2.32	1		G1	0.144	4.13	0.594		0.594	1.26	0.068	0.45	1.68	17.05	17	17.472	17.363	18.066	18.5	0.434	F1/D91
1%	OUT/D91																				HW outlet																											17.363	17.7		OUT/D91
1%	F1/D92	0					0	0	0			0	0	0	267		0.2		8.653	0.58	RSIP-9x9	267	0	F1/D91	1	506	0	267	8.653	0.58	450	1.68	2.32	1		G1	0.144	4.13	0.594		0.594	1.26	0.068	0.45	1.68	17.05	17	17.472	17.363	18.066	18.5	0.434	F1/D92
1%	OUT/D92																				HW outlet																											17.363	17.7		OUT/D92

STORMWATER DRAINAGE CALCULATIONS - MAJOR 1% AEP

(INCLUDING 20% ABOVE STANDARD 1% AEP INTENTIES FOR CLIMATE CHANGE)

INITIAL ISSUE	DES	DRN	CHK	APP	DATE	AMENDMENT DETAILS
	AA	RT	AA	RA	15.09.23	
A	AA	RT	AA	MH	30.05.24	ISSUED FOR APPROVAL

STATUS: FOR APPROVED

APPROVED BY: MAX HOOPER NO: 16633 SIGN: DATE: 30.05.24

SCALE

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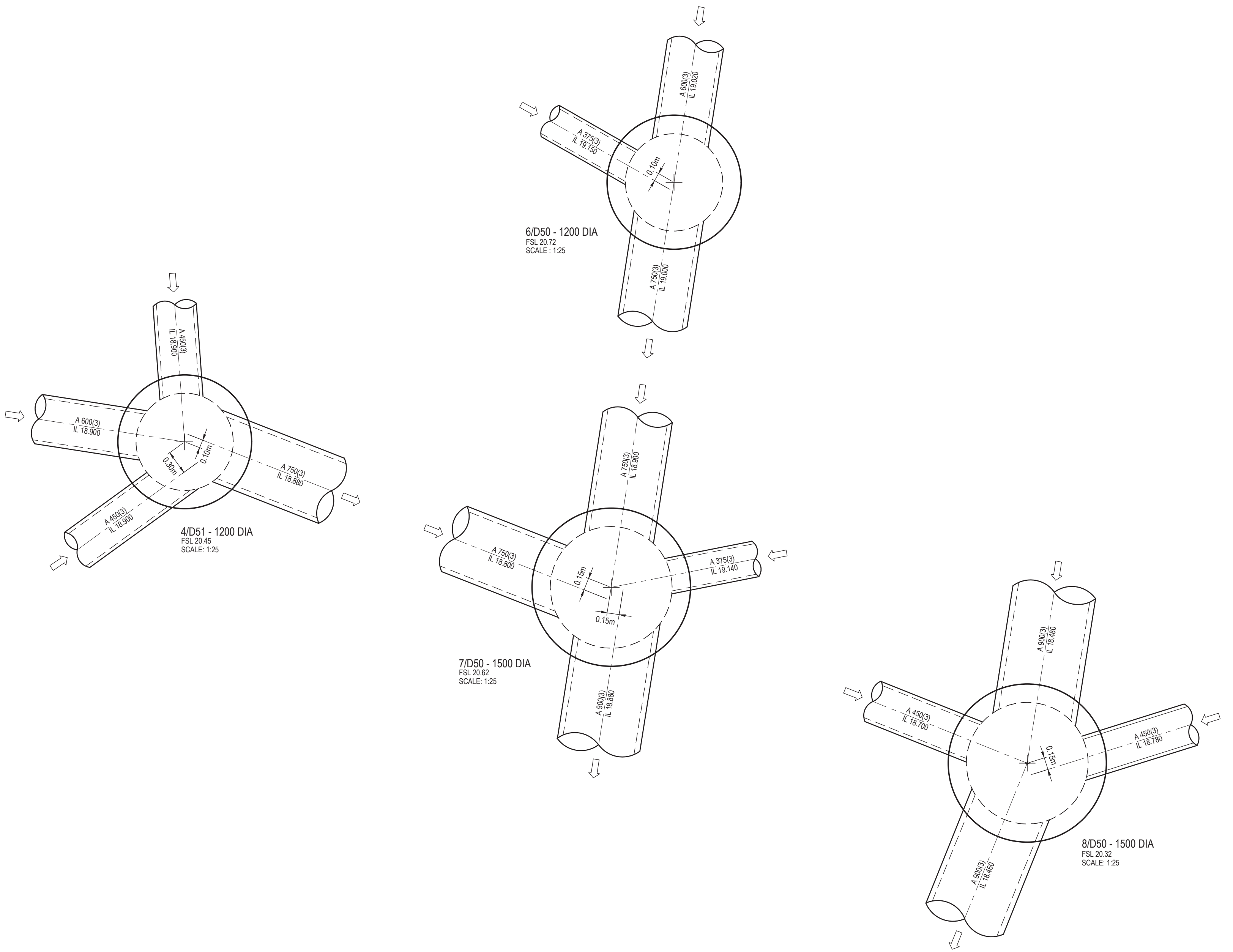
CLIENT: LENNIUM GROUP

PROJECT: Lilywood LANDINGS STAGE 4

DRAWING TITLE: STORMWATER CALCULATION TABLES MAJOR

PROJECT No.	DRAWING No.	REVISION
22-000983.4	1431	A



INITIAL ISSUE	DES	DRN	CHK	APP	DATE	AMENDMENT DETAILS
	AA	RT	AA	RA	15.09.23	
A	AA	RT	AA	MH	30.05.24	ISSUED FOR APPROVAL

STATUS: FOR APPROVAL

APPROVED
BY: MAX HOOPER NO: 16633
SIGN: DATE: 30.05.24

SCALE: 1:20 A1, 1:40 A3 — 0.2 0 0.2 0.4 0.6 0.8 1m

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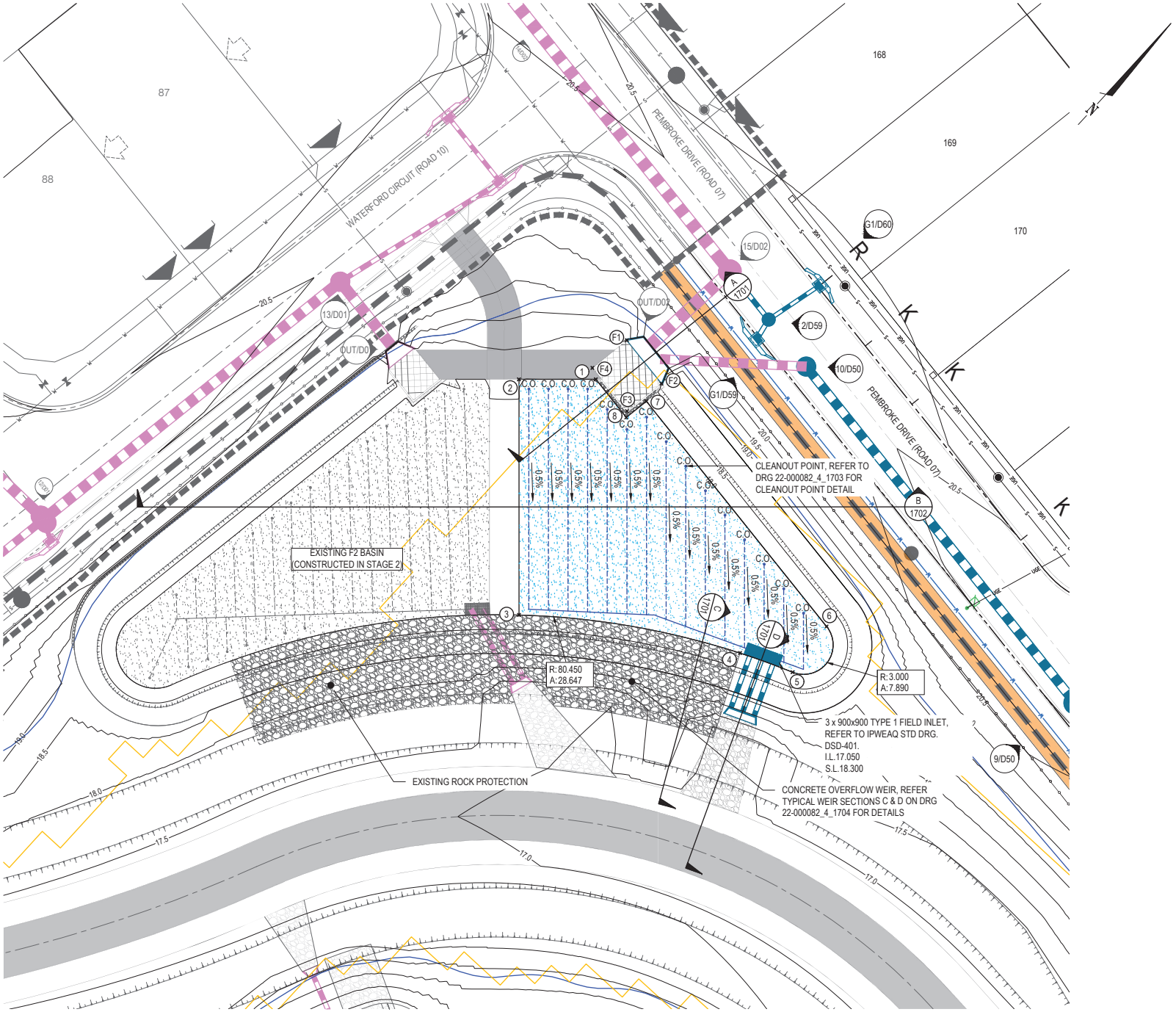
CLIENT: LENNIUM GROUP

PROJECT: Lilywood LANDINGS STAGE 4

DRAWING TITLE: STORMWATER STRUCTURES DETAILS

PROJECT No.	DRAWING No.	REVISION
22-000082	4 1440	A

DISCLAIMER: ALL DIMENSIONS TO BE CHECKED ON SITE BY CONTRACTOR PRIOR TO CONSTRUCTION. USE WRITTEN DIMENSIONS ONLY, DO NOT SCALE.



LEGEND

- WORKS BOUNDARY
- STORMWATER DRAINAGE
- MAINTENANCE HOLE
- GULLY PIT
- OUTLET STRUCTURE
- FIELD INLET
- CONCRETE FOOTPATH
- PROPOSED KERB
- 66.0 DESIGN SURFACE CONTOUR (0.50m INTERVALS)
- FUTURE STORMWATER DRAINAGE
- FUTURE STORMWATER STRUCTURE
- PROPOSED SLEEPER RETAINING WALL
- PROPOSED BOULDER RETAINING WALL
- CONCRETE DRIVEWAY
- BIO-BASIN FOREBAY AREA
- BIO-RETENTION BASIN FILTER MEDIA
- SCOUR PROTECTION
- 100Ø SLOTTED AGI DRAIN, 0.5% MIN GRADE TO OUTLET PIT AS SHOWN.
- 150Ø UN-SLOTTED AGI DRAIN, 0.5% MIN GRADE TO OUTLET PIT AS SHOWN.
- C.O. CLEANOUT POINT
- 01 SETOUT POINT
- PROPOSED BATTERS
- PROPOSED WATER MAIN
- PROPOSED SEWERAGE RETICULATION
- EXISTING TRUNK SEWER

BIO-RETENTION BASIN F1 DETAILS

PARAMETER	BASIN
FILTER SURFACE AREA (m^2)	663
FILTER SURFACE LEVEL (m)	18.00
TEMPORARY PONDING DEPTH (mm)	300
STORAGE VOLUME (m^3)	307.5
TOP OF EMBANKMENT (m)	18.65
EMERGENCY WEIR LEVEL (m)	18.50

NOTE:
REFER 22-000082-4-1703 FOR BIO-FILTRATION BASIN SUBSOIL DETAILS AND NOTES.

CAUTION !! UNDERGROUND TELECOMMS CABLES
UNDERGROUND TELECOMMUNICATION CABLES EXIST IN THIS VICINITY. CONTACT SUPPLIER FOR CABLE LOCATIONS. EXTREME CARE MUST BE TAKEN WHILST EXCAVATING.

CAUTION !! UNDERGROUND GAS MAIN
UNDERGROUND GAS MAIN EXIST IN THIS VICINITY. CONTACT SUPPLIER FOR MAIN LOCATIONS. EXTREME CARE MUST BE TAKEN WHILST EXCAVATING

CAUTION !! OVERHEAD ELECTRICAL CABLES
OVERHEAD ELECTRICITY CABLES EXIST IN THIS VICINITY. CONTACT ENERGEX WHERE CABLE CLEARANCE IS COMPROMISED BY MACHINERY.

CAUTION !! UNDERGROUND ELECTRICAL CABLES
UNDERGROUND ELECTRICITY CABLES EXIST IN THIS VICINITY. CONTACT ENERGEX FOR CABLE LOCATIONS. EXTREME CARE MUST BE TAKEN WHILST EXCAVATING

INITIAL ISSUE	DES	DRN	CHK	APP	DATE	AMENDMENT DETAILS
	AA	RT	AA	RA	15.09.23	
A	AA	RT	AA	MH	30.05.24	ISSUED FOR APPROVAL

STATUS: FOR APPROVAL
APPROVED BY: MAX HOOPER NO: 16633 SIGN: DATE: 30.05.24

SCALE: 1:200 / 1:400 — 2 0 2 4 6 8 10m — A1 / A3

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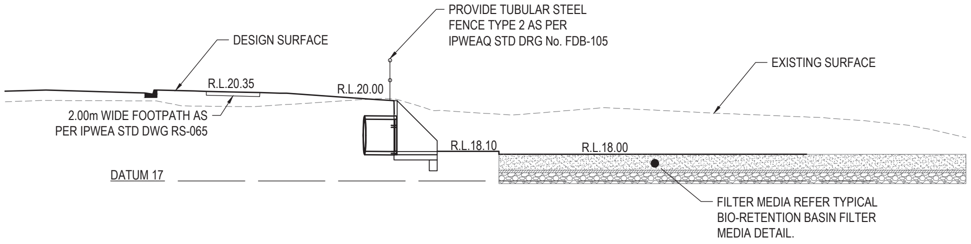
CLIENT: LENNIUM GROUP

PROJECT: Lilywood LANDINGS — STAGE 4

DRAWING TITLE: BIO-BASIN PLANS LAYOUT PLAN

PROJECT No.	DRAWING No.	REVISION
22-000082	4-1700	A



SECTION A/1700
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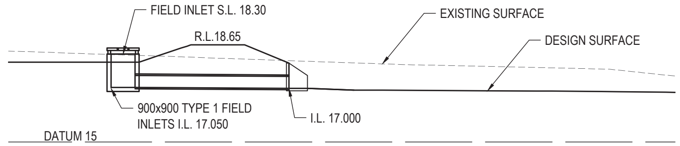
SCALE (A3): 1:200



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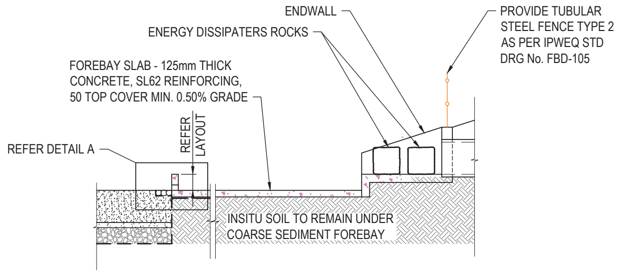
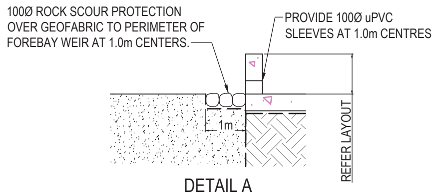
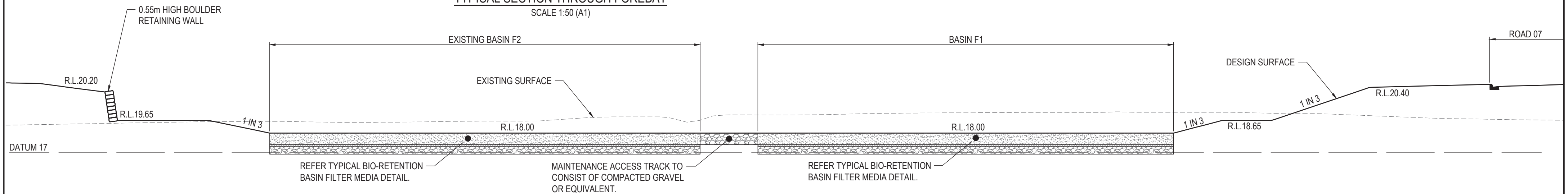


NOTE: LAY GEOFABRIC OVER INSITU SOIL.
(EXTEND MINIMUM 300mm UNDER FOREBAY) PIN GEOFABRIC
TO INSITU SOIL AND FORM CONCRETE ONTO GEOFABRIC.

TYPICAL SECTION THROUGH FOREBAY
SCALE 1:50 (A1)



DETAIL A
SCALE 1:20 (A1)



SECTION B/1700
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SCALE (A3): 1:200

		DES	DRN	CHK	APP	DATE	AMENDMENT DETAILS
INITIAL ISSUE		AA	RT	AA	RA	15.09.23	
AMENDMENTS	A	AA	RT	AA	MH	30.05.24	ISSUED FOR APPROVAL

STATUS: FOR APPROVAL

APPROVED
BY: MAX HOOPER NO: 16633
SIGN: [illegible] DATE: 30.05.24

SCALE
1:20 / 1:40 — 0.2 0 0.2 0.4 0.6 0.8 1m — A1 / A3
1:100 / 1:200 — 1 0 1 2 3 4 5m — A1 / A3

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CLIENT: LENNIUM GROUP

PROJECT: Lilywood LANDINGS
STAGE 4

DRAWING TITLE: BIO-BASIN PLANS SECTION PLAN

PROJECT No.	DRAWING No.	REVISION
22-000082	4_1701	A

BIO RETENTION PARTICLE SIZE DISTRIBUTION AND PROPERTIES GUIDE:

(SOURCE:BIOFILTRATION MEDIA GUIDELINES (VERSION 3.01), PREPARED BY THE FACILITY FOR ADVANCING WATER BIOFILTRATION (FAWB), JUNE 2009.)

MATERIAL COMPOSITION RANGE GUIDE:

CLAY AND SILT	<3%	(<0.05mm)
VERY FINE SAND	5-30%	(0.05-0.15mm)
FINE SAND	10-30%	(0.15-0.25mm)
MEDIUM TO COARSE SAND	40-60%	(0.25-1.0mm)
COARSE SAND	7-10%	(1.0-2.0mm)
FINE GRAVEL	<3.0%	(2.0-3.4mm)

IT IS ESSENTIAL THAT THE TOTAL CLAY AND SILT MIX IS LESS THAN 3% (w/w) TO REDUCE THE LIKELIHOOD OF STRUCTURAL COLLAPSE OF SUCH SOILS.

SOIL SPECIFICATIONS:

- TOTAL NITROGEN CONTENT - <1000mg/kg
- ORTHOPHOSPHATE CONTENT - <80mg/kg SOILS WITH TOTAL PHOSPHORUS CONCENTRATIONS >100mg/kg SHOULD BE TESTED FOR POTENTIAL LEACHING. WHERE PLANTS WITH MODERATE PHOSPHORUS SENSITIVITY ARE TO BE USED, TOTAL PHOSPHORUS CONCENTRATIONS SHOULD BE <20mg/kg)
- ORGANIC MATTER CONTENT - AT LEAST 3% (w/w). AN ORGANIC CONTENT LOWER THAN 3% IS LIKELY TO HAVE TOO LOW A WATER HOLDING CAPACITY TO SUPPORT HEALTHY PLANT GROWTH. IN ORDER TO COMPLY WITH BOTH THIS AND THE TOTAL NITROGEN AND ORTHOPHOSPHATE CONTENT REQUIREMENTS, A LOW NUTRIENT ORGANIC MATTER WILL BE REQUIRED.
- pH - AS SPECIFIED FOR 'NATURAL SOILS AND SOIL BLENDS' 5.5-7.5 (pH 1:5 IN WATER)
- ELECTRICAL CONDUCTIVITY - AS SPECIFIED FOR 'NATURAL SOILS AND SOIL BLENDS' <1.2 dS/m.

BIO RETENTION INSTALLATION STANDARD NOTES:

THE PLACEMENT OF DRAINAGE, TRANSITION AND FILTER MEDIA LAYERS MUST BE UNDERTAKEN CAREFULLY TO ENSURE CORRECT DEPTH, SLOPE AND COMPACTION:

DEPTH: FILTER MEDIA SHOULD BE INSTALLED AND COMPACTED IN TWO LIFTS FOR DEPTHS OVER 500mm.

SLOPE: THE TOP SURFACE OF THE DRAINAGE LAYER, TRANSITION LAYER AND FILTER MEDIA LAYER SHOULD BE FLAT. A SPREADER BAR SHOULD LEVEL THE SURFACE OF EACH LAYER.

COMPACTION: THE FILTER MEDIA MUST BE LIGHTLY COMPACTED DURING INSTALLATION TO PREVENT THE MIGRATION OF FINE PARTICLES. THIS CAN BE ACHIEVED WITH A SINGLE PASS OF A LIGHT ROLLER SUCH AS A DRUM LAWN ROLLER. A VIBRATING PLATE CAN ALSO BE USED TO COMPACT SMALL BIO RETENTION SYSTEMS OR 'POZITRACK' BOBCATS CAN BE USED FOR LARGE SYSTEMS. ENSURE ONLY ONE COMPACTING PASS IS MADE OVER THE MEDIA FOR LIGHT COMPACTION.

CONTRACTOR TO ENSURE BIOFILTRATION FILTER MEDIA MEETS THE CRITERIA OUTLINED IN THE MARCH 2008 VERSION OF THE GUIDELINE SPECIFICATION FOR SOIL MEDIA IN BIORETENTION SYSTEMS (VERSION 2.01), FACILITY FOR ADVANCING WATER BIOFILTRATION.

BIO-RETENTION/DETENTION BASINS CONSTRUCTION SEQUENCE AND NOTES:

1. ESTABLISH SEDIMENT AND EROSION CONTROL MEASURES IN CATCHMENT, INCLUDING SILT FENCES, SEEDING OF ALLOTMENTS, & FULL WIDTH VERGE TURFING.
2. SURVEY BASIN LOCATION.
3. INSTALL OVERFLOW PIT AND ENSURE PIT CREST IS AT DESIGN LEVEL. THIS PIT CREST WILL THEN BE USED AS A DATUM FROM WHICH OTHER LEVELS WITHIN THE BASIN WILL BE MEASURED. THE PIT REQUIRES HOLES FOR DRAINAGE PIPE CONNECTIONS WHICH CAN BE DRILLED AT THIS STAGE OR AFTER STEP 5 BELOW.
4. CONSTRUCT KERB TURNOUTS.
5. EXCAVATE SURROUNDING LANDFORM TO DESIGN SUBSOIL LEVEL (ACHIEVING SURROUNDING LEVEL AT THIS STAGE REDUCES THE NEED FOR EARTHWORKS ADJACENT TO THE BASIN AFTER THEY HAVE BEEN CONSTRUCTED).
6. EXCAVATE BASIN TO DESIGN DEPTH ENSURING BASE OF POD HAS MINIMUM 0.25% GRADE TOWARDS PIT. ENSURE BASE OF BASIN IS FREE FROM DEBRIS.

SUPERINTENDENT INSPECTION AND SIGN OFF REQUIRED BEFORE PROCEEDING.

7. LINE SYSTEM WITH GEOFABRIC, AND EXTEND GEOFABRIC A MINIMUM OF 500 MM BEYOND TOP OF EXCAVATION. THESE ARE THE FLAPS REFERRED TO IN ITEM 13 BELOW.
8. PLACE DRAINAGE LAYER (USING CLEAN 5-7mm AGGREGATE) TO DESIGN LEVEL.
9. NOTE THAT CORRECT FUNCTIONING OF THE DRAINAGE PIPES IS CRITICAL TO THE PERFORMANCE OF THE BIORETENTION SYSTEM. INSTALL DRAINAGE LAYER TO UNDERSIDE OF PIPE LEVEL AND PLACE DRAINAGE PIPES. ENSURE PIPES ARE LAID AT MIN 0.5% SLOPE WITH NO LOCALIZED DEPRESSIONS VERIFIED USING LEVEL OR STRING LINE. ALL JOINTS AND JUNCTIONS IN PIPES TO BE SEALED. CONNECT CLEAN OUT POINTS ENSURING TOP OF CLEAN OUT POINTS ARE NOT LESS THAN 50mm BELOW OVERFLOW PIT CREST.

SUPERINTENDENT INSPECTION AND SIGN OFF REQUIRED BEFORE PROCEEDING.

10. COVER DRAINAGE PIPES WITH DRAINAGE MEDIA, ENSURING DESIGN COVER.
11. PLACE TRANSITION LAYER (USING ONLY PRESCRIBED DRAINAGE MATERIAL: 2.0mm SAND) TO DESIGN LEVEL (REFER DRAWINGS).

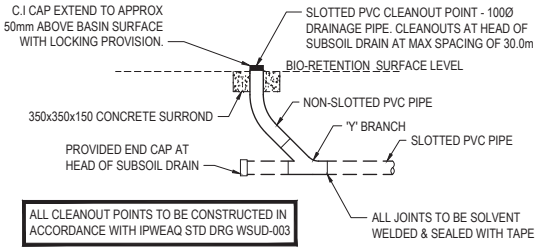
SUPERINTENDENT INSPECTION AND SIGN OFF REQUIRED BEFORE PROCEEDING.

12. PLACE FILTER MEDIA (USING ONLY PRESCRIBED MATERIAL: 0.7mm SAND) TO DESIGN LEVEL (REFER DRAWINGS). SPREAD MATERIAL USING EXCAVATOR BUCKET OR HAND TOOLS TO OBTAIN LIGHT AND EVEN COMPACTION OF FILTER MEDIA. DO NOT DRIVE OVER FILTER MEDIA WITH ANY VEHICLE AS EXCESSIVE COMPACTION CAN IMPEDE DRAINAGE THROUGH THE FILTER MEDIA. FILTER MEDIA SURFACE MUST BE LEVEL (HORIZONTAL) AND FREE FROM LOCAL DEPRESSIONS AND SET AT 100mm BELOW PIT CREST (EXCEPT FOREBAY AREA WHICH IS 200mm). AS SOON AS FILTER MEDIA IS PLACED IT MUST BE IMMEDIATELY COVERED WITH A GEOFABRIC COVER WHICH MUST REMAIN IN PLACE AT ALL TIMES EXCEPT WHEN ACCESS TO FILTER MEDIA IS REQUIRED.THIS PROTECTIVE COVER IS ONLY TO BE REMOVED BY LANDSCAPERS IMMEDIATELY PRIOR TO PLANTING.
13. LAY EXCESS GEOFABRIC FLAPS FROM BASIN OUTWARD ACROSS ADJACENT SUBSOIL AND PLACE LANDSCAPING TOPSOIL ON TOP OF THIS GEOFABRIC AND AROUND BASIN AS PER DESIGNS.
14. INSTALL PROTECTIVE PLYWOOD BARRIERS ENSURING THE CREST IS AT DESIGN LEVEL (MIN 100mm ABOVE ELEVATION OF PIT CREST) AND EXTENDS LATERALLY TO BASIN BATTERS BY 300mm, AND VERTICALLY INTO THE FILTER MEDIA BY 200mm. THIS PLYWOOD BARRIER NEEDS TO REMAIN IN PLACE FOR 12 MONTHS AND PREVENT SEDIMENT LADEN RUNOFF FROM ENTERING THE MAJORITY FOR THE BASIN AREA. AFTER 12 MONTHS ONCE THE VEGETATION IS ESTABLISHED AND THE ALLOTMENT CONSTRUCTION IS COMPLETE THESE PLYWOOD BARRIERS WILL BE TAKEN OUT AND THE SYSTEM BROUGHT ONLINE.
15. COVER INLET ZONE WITH PROTECTIVE GEOFABRIC ENSURING GEOFABRIC EXTENDS OVER CREST OF PROTECTIVE PLYWOOD BARRIER. COVER GEOFABRIC WITH MIN 50mm TOPSOIL SUITABLE FOR TURF GROWTH. SIMILAR TO THE PLYWOOD BARRIERS, THIS GEOFABRIC IS A TEMPORARY PROTECTIVE MEASURE TO PROTECT THE FILTER MEDIA IN THE INLET ZONE FROM BEING CLOGGED WITH CONSTRUCTION SEDIMENT, AND WILL BE REMOVED AFTER 12 MONTHS.
16. FLUSH DRAINAGE PIPES TO REMOVE ANY INITIAL INGRESS OF MATERIAL AND TO ENSURE ADEQUATE DRAINAGE.

FINAL SUPERINTENDENT INSPECTION AND SIGN OFF

NOTE THAT BETWEEN STEPS 5 – 16 ABOVE THE BASINS WILL BE SUSCEPTIBLE TO STORM DAMAGE. THEREFORE ONCE COMMENCED PODS MUST BE COMPLETED AS SOON AS POSSIBLE TO MINIMISE THE RISK OF STORM DAMAGE.

INSPECTION IS REQUIRED IF RAINFALL EVENT OCCURS BETWEEN CONSTRUCTION STEPS 5 – 16 ABOVE.



CLEANOUT POINT DETAIL
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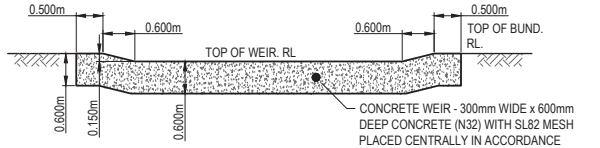

SECTION E
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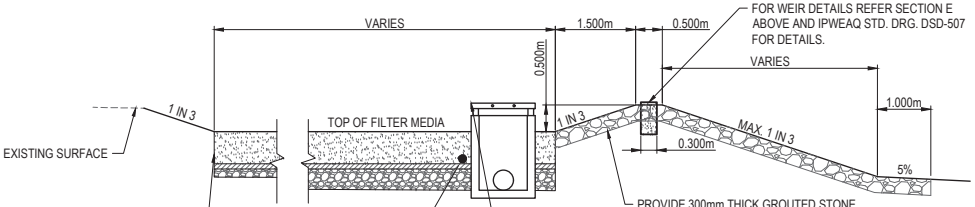

SECTION C
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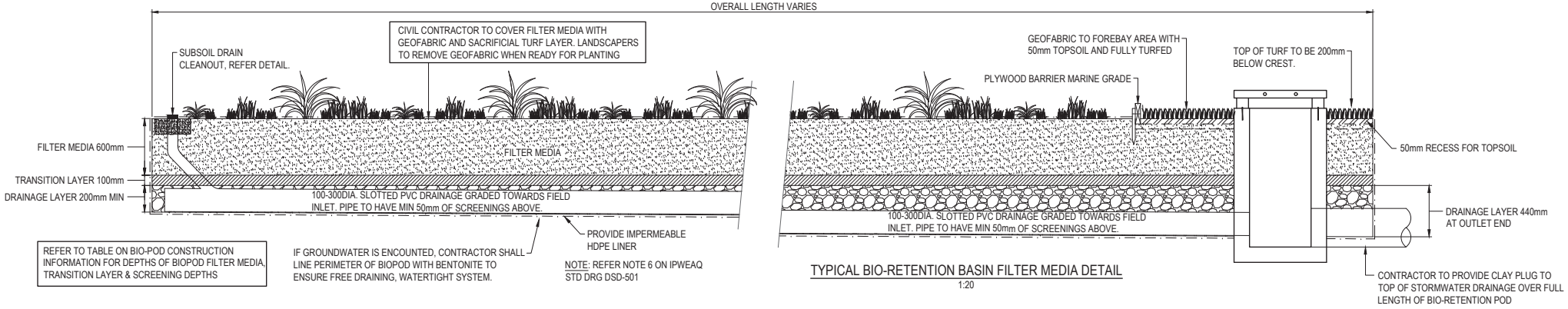
1700



REFER TO TABLE ON BIO-POD CONSTRUCTION INFORMATION FOR DEPTHS OF BIOPOD FILTER MEDIA, TRANSITION LAYER & SCREENING DEPTHS

IF GROUNDWATER IS ENCOUNTED, CONTRACTOR SHALL LINE PERIMETER OF BIOPOD WITH BENTONITE TO ENSURE FREE DRAINING, WATERTIGHT SYSTEM.

NOTE: REFER NOTE 6 ON IPWEAQ STD DRG DSD-501

TYPICAL BIO-RETENTION BASIN FILTER MEDIA DETAIL
1:20

INITIAL ISSUE	DES	DRN	CHK	APP	DATE	AMENDMENT DETAILS
	AA	RT	AA	RA	15.09.23	
A	AA	RT	AA	MH	30.05.24	ISSUED FOR APPROVAL

STATUS: FOR APPROVAL
APPROVED BY: MAX HOOPER NO: 16633 SIGN: DATE: 30.05.24
SCALE: AS SHOWN
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CLIENT: LENNIUM GROUP
PROJECT: Lilywood LANDINGS STAGE 4
DRAWING TITLE: BIO-BASIN PLANS NOTES AND DETAILS
PROJECT No. 22-000983 DRAWING No. 1702 REVISION A

DocuSign

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Not Offered via DocuSign

In Person Signer Events	Signature	Timestamp

Editor Delivery Events	Status	Timestamp

Agent Delivery Events	Status	Timestamp

Intermediary Delivery Events	Status	Timestamp

Certified Delivery Events	Status	Timestamp

Carbon Copy Events	Status	Timestamp

Witness Events	Signature	Timestamp

Notary Events	Signature	Timestamp

Envelope Summary Events	Status	Timestamps
Envelope Sent	Hashed/Encrypted	31/5/2024 | 14:09
Certified Delivered	Security Checked	31/5/2024 | 14:10
Signing Complete	Security Checked	31/5/2024 | 14:11
Completed	Security Checked	31/5/2024 | 14:11

Payment Events	Status	Timestamps

ATTACHMENT 4

Appeal Rights

Chapter 6 Dispute resolution

Part 1 Appeal rights

229 Appeals to tribunal or P&E Court

(1) Schedule 1 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.

(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 is 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 an appeal relating to the *Plumbing and Drainage Act 2018*—

(i) for an appeal against an enforcement notice given because of a belief mentioned in the *Plumbing and Drainage Act 2018*, section 143(2)(a)(i), (b) or (c)—5 business days after the day the notice is given; or

(ii) for an appeal against a decision of a local government or an inspector to give an action notice under the *Plumbing and Drainage Act 2018*—5 business days after the notice is given; or

(iii) for an appeal against a failure to make a decision about an application or other matter under the *Plumbing and Drainage Act 2018*—at anytime after the period within which the application or matter was required to be decided ends; or

(iv) otherwise—20 business days after the day the notice is given; or

(g) 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, section 1, table 1, item 1—each principal submitter for the application whose submission has not been withdrawn; and

(d) for an appeal about a change application under schedule 1, section 1, table 1, item 2—each principal submitter for the application whose submission has not been withdrawn; and

(e) each person who may elect to be a co-respondent for the appeal other than an eligible submitter for a development application or change application the subject of the appeal; 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 is 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 to an appeal by filing a notice of election in the approved form—

(a) if a copy of the notice of appeal is given to the person—within 10 business days after the copy is given to the person; or

(b) otherwise—within 15 business days after the notice of appeal is lodged with the registrar of the tribunal or the P&E Court.

(7) Despite any other Act or rules of court to the contrary, a copy of a notice of appeal may be given to the chief executive by emailing the copy to the chief executive at the email address stated on the department's website for this purpose.

231 Non-appealable decisions and matters

(1) Subject to this chapter, section 316(2), 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 the 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, any tribunal or another entity; and

(c) is not subject to any declaratory, injunctive or other order of the Supreme Court, another court, any 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 rules of the P&E Court.

ATTACHMENT 5

Infrastructure Charges Notice

In accordance with the Infrastructure Charges Resolution (No. 10) dated 5 October 2022 or as amended, there is no Infrastructure Charges applicable to the development.