

8 August 2018

Enquiries: Neil Beck
Our Ref: 44/ 2707/2018 (866644)
Your Ref: 4839/03L-JD0126

Port Pacific Estates Pty Limited
C/- Flanagan Consulting Group
Greg Applin
PO Box 5820
CAIRNS QLD 4870

Dear Sir

**Development Application for Operational Works Associated
with Reconfiguring a Lot At 2L Oasis Drive – Wonga Beach**

In relation to the above application, please find attached the Decision Notice.

Also find attached a 'Pre-Start' meeting template, which identifies the information that must be provided for Council approval, prior to the commencement of works.

The template also provides the Consulting Engineer with a format for conducting the meeting. An invitation to attend the meeting must be sent to Neil Beck giving at least five (5) working days notification if possible.

In addition to the Decision Notice, Council provides the following 'Advice Statement' which relates to issues that are relevant to the proposed works:

1. The Consulting Engineer is to present all contractors with a copy of this Decision Notice and the Council approved plans, prior to the commencement of works.

Please quote Council's application number: OP2707/2018 in all subsequent correspondence relating to this development approval. Should you require any clarification regarding this, please contact Neil Beck on telephone 07 4099 9451.

Yours faithfully

Neil Beck
A/Manager Sustainable Communities

**DECISION NOTICE — APPROVAL (WITH CONDITIONS)
(GIVEN UNDER SECTION 63 OF THE PLANNING ACT 2016)**

Please be aware that Douglas Shire Council has assessed your application and decided it as follows:

1. Applicant's details

Name: Port Pacific Estates Pty Limited

Postal Address: C/- Flanagan Consulting Group
Greg Applin
PO Box 5820 CAIRNS QLD 4870

2. Location details

Street Address: 2L Oasis Drive WONGA BEACH

Real Property Description: LOT: 2 SP: 259953

Local Government Area: Douglas Shire Council

3. Details of proposed development

Operational Works associated with the reconfiguration of land.

4. Decision

Date of decision: 8 August 2018

Decision details: Approved in full

5. Approved plans and specifications

Generally in accordance with the following drawings submitted by Flanagan Consulting Group subject to any alterations made by conditions of Development Permit for Operational Work.

Drawing Description	No	Rev
Site Plan & Drawing Index	4839-C01	A
Standard Notes	4839-C02	A
General Arrangement	4839-C03	A
Marlin Drive-Cul-De-Sac Setout & Grading	4839-C04	A
East West Drainage Channel – Plan & Long Section	4839-C05	A
East West Drainage Channel – Cross Sections Sheet 1 of 2	4839-C06	A
East West Drainage Channel – Cross Sections Sheet 2 of 2	4839-C07	A
Site Grading	4839-C08	A
Allotment Building Pads	4839-C09	A
Modification to Existing Coastal Gutter Drain	4839-C10	A

Water Reticulation	4839-C11	A
Erosion & Sediment Control Strategy	4839-C12	A
Erosion & Sediment Control Devices – Sheet 1 of 2	4839-C13	A
Erosion & Sediment Control Devices – Sheet 2 of 2	4839-C14	A
Landscape Plans		
Landscape Cover Sheet	L0.00	03
Planting Plan 1 of 1	L1.01	03
Landscape Details & Specifications	L2.01	03

6. Conditions

This approval is subject to the conditions in Schedule 1.

7. Further development permits

None Applicable

8. Properly made submissions

Not Applicable

9. Referral Agency

None Applicable

10. Currency period for the approval

This development approval will lapse at the end of the period set out in section 85 of *Planning Act 2016*.

11. Reasons for decision

The reasons for this decision are:

1. Section 60 of the *Planning Act 2016*:
 - a. to apply the conditions and advices as detailed in the approval;
 - b. to facilitate the subdivision of the land in accordance with the requirements of the subdivision approval.
 - c. Ensure the development satisfies the benchmarks of the 2018 Douglas Shire Planning Scheme & FNQROC Development Manual.
 - c. to ensure compliance with the *Planning Act 2016*.
2. Findings on material questions of fact:
 - a. the development application was properly lodged to the Douglas Shire Council on 12 June 2018 under section 51 of the *Planning Act 2016* and Part 1 of the Development Assessment Rules; and

- b. The development application contained a plans of necessary filling, drainage and infrastructure works associated with the subdivision.
- 3. Evidence or other material on which findings were based:
 - a. the development triggered code assessable development;
 - b. The application was assessed having regard to the requirements of the conditions attaching to the Reconfiguring a Lot approval and requirements of the FNQROC Development Manual in relation to the development of land for residential purposes.

12. Rights of appeal

The rights of applicants to appeal to a tribunal or the Planning and Environment Court against decisions about a development application are set out in chapter 6, part 1 of the *Planning Act 2016*. For particular applications, there may also be a right to make an application for a declaration by a tribunal (see chapter 6, part 2 of the *Planning Act 2016*).

A copy of the relevant appeal provisions are attached as Schedule 2.

SCHEDULE 1 – CONDITIONS AND ADVICE

PART 1A—CONDITIONS IMPOSED BY THE ASSESSMENT MANAGER

1. General

- a. The conditions require amendments to the drawings. The revised drawings must be submitted “for construction” and must be certified as approved by a registered professional engineer of Queensland (RPEQ).
- b. An updated Statement of Compliance must be provided with the revised drawings required under the conditions of this approval. Reference is made to FNQROC Development Manual (refer Appendix A of Application Procedures (AP1)).
- c. Materials shall be in accordance with the provisions of the FNQROC Development Manual. Where alternative materials are proposed details are to be provided to Council for consideration and approval prior to incorporation into the works.

This information must be provided prior to the pre-start meeting (or such other timeframe agreed with Council) and the elements are not approved unless confirmed by Council in writing.

2. Reconfiguring a Lot Conditions

- a. The requirements of the Reconfiguring a Lot approval must be met prior to lodging the application for a compliance certificate for the plan of survey. Council notes some elements are not addressed in the Operational Works drawings and submitted information and will need to be addressed separately.
- b. The applicant is to peg the boundaries of the Lot 1 to confirm the setback of 5 metres from the existing drain following construction.
- c. Provide annotation on the for construction drawings to address the services to Lot 3 (Conditions 5b and 12 refer).
- d. Confirmation is required that the more central alignment of the proposed east west drain does not have an adverse impact on the southern areas of the catchment, to satisfy the requirements of Condition 9 of the ROL Decision Notice. Reference is made to the Tate engineers catchment plan attached for reference.
- e. Condition 24 – Street lighting is understood to be addressed by SPA Consulting Engineers and is not part of this approval.

3. Earthworks

- a. The applicant is to ensure that any earthworks undertaken as part of the works maintains a free draining surface with no ponding of standing water resulting. The earthworks must be in accordance with any amendments proposed to the existing finished surface profiles are to be identified and reported to Council prior to being undertaken on site. Resultant amendments shall be recorded on as constructed drawings to be submitted at the completion of the project.
- b. Additional notation is to be added to the drawings to include a hold and witness point for Council and the Supervising RPEQ at the completion of the pond dewatering and prior to filling of the pond or drains on site. Note 2 on drawing 4839-C02 is to include reference to Council being invited to the Hold and Witness point inspection. To reinforce the

requirement to the Contractor, it is requested that the requirement for the Council inspection be added to the notes for the pond works on Drawings 4839-C09 and C10. The inclusion of this hold and witness point is to ensure that the RPEQ and Council inspect the works prior to placement of fill in these areas.

- c. At the completion of the works, Lot classification reports are to be provided for those lots identified in ROL Condition 10b.
- d. Offset dimensions are to be added to the drawings to demonstrate compliance with Condition 4b ii and iii of the ROL Decision Notice. Prior to the placement of fill for Lot 7 building envelope, the setout points for the proposed building pad are to be pegged and inspected on site with Council officers. The height of fill is to be nominated on the setout pegs.

4. Stormwater

- a. The applicant is to provide updated stormwater calculations and plan details prior to the pre-start meeting to confirm the following elements:
 - i. The existing and finished levels and grades in the drain between Marlin Drive and the western end of the new drainage channel. For clarity, Council is supportive of the re-profiling work and this condition seeks to ensure the Contractor is clear on the required works. The requirements of Condition 17 paragraph 3 and 4 are referenced.
 - ii. Prior to construction the works identified in the above condition, the levels are to be pegged on site and an inspection held with Council and the Supervising Engineer. A note is to be added to the drawings (or included in the Contract Specification) requiring that the Contractor places centreline pegs at 10m intervals with cut and fill depth identified on the pegs sufficient for the inspection to assess the work scope on site.
 - iii. Subject to the above clarifications, amend the notes on Drawing 4839-C04 that state the existing section of drain adjacent Lot 92 is to remain undisturbed. This section currently drain east towards the proposed cul-de-sac and Council understands it is to be regraded to run west to the north-south swale. Drawing 4839-C11 is to be updated once the work scope is confirmed and is to include the works down to the new headwall from the cul-de-sac drainage.
 - iv. Based on the above proposed drainage works, the applicant is to provide confirmation that the external catchment runoff from the south can be conveyed to the new drain and through the site with no adverse impact on the existing properties upstream from the development. Refer to Attached catchment extent provided in the previous applications for this site. Sufficient calculations endorsed by the RPEQ are to be provided for Council review prior to the prestart meeting, (reference is also made to ROL condition 7b in this regard). The calculations must include any hydraulic implications from the twin 1500mm x 730mm RCBC's providing pathway connectivity across the new drainage channel. It is unclear if the DHI modelling included this structure. Council's acceptance of the calculations is required prior to the commencement of works in the drainage swale.
 - v. Unless otherwise agreed with Council, the existing bund at the end of Marlin Drive (as identified on the road longitudinal section on Drawing 4839-C04) is to be reinstated on the western side of the cul-de-sac to prevent stormwater flowing back into Marlin Drive.

5. Water

- a. The minimum clearance between power pole or light pole footings and water mains are to be in accordance with WSA and verified and recorded by the consulting engineer during construction.

- b. The water reticulation connection to Oasis drive is to be clarified on the drawings and a reducer added if required for the 150mm to 100mm connection.

6. Roads and Paths

- a. Pavement design details are currently not included in the drawings. Please nominate the pavement depths and specification in the for-construction drawings. Subgrade CBR results, confirmation of traffic loadings adopted (as per FNQROC requirements) and final pavement design are to be provided prior to commencing pavement works.
- b. Undertake an asphalt overlay of the existing pavement which will form the driveway for Lot 3.
- c. Extend the kerb and channel on the south side of Oasis Drive and formalise a vehicle access for Lot 2. This is to prevent Lots 2 and Lot 3 sharing an access driveway which will be the responsibility of the owner of Lot 3 to maintain.
- d. Place edging kerb around the head of the cul-de-sac to formalise the turn around area and to assist in distinguishing the private driveway to Lot 3 from the balance of road pavement. Place a small sign at the commencement of the access leg advising it is a private driveway.

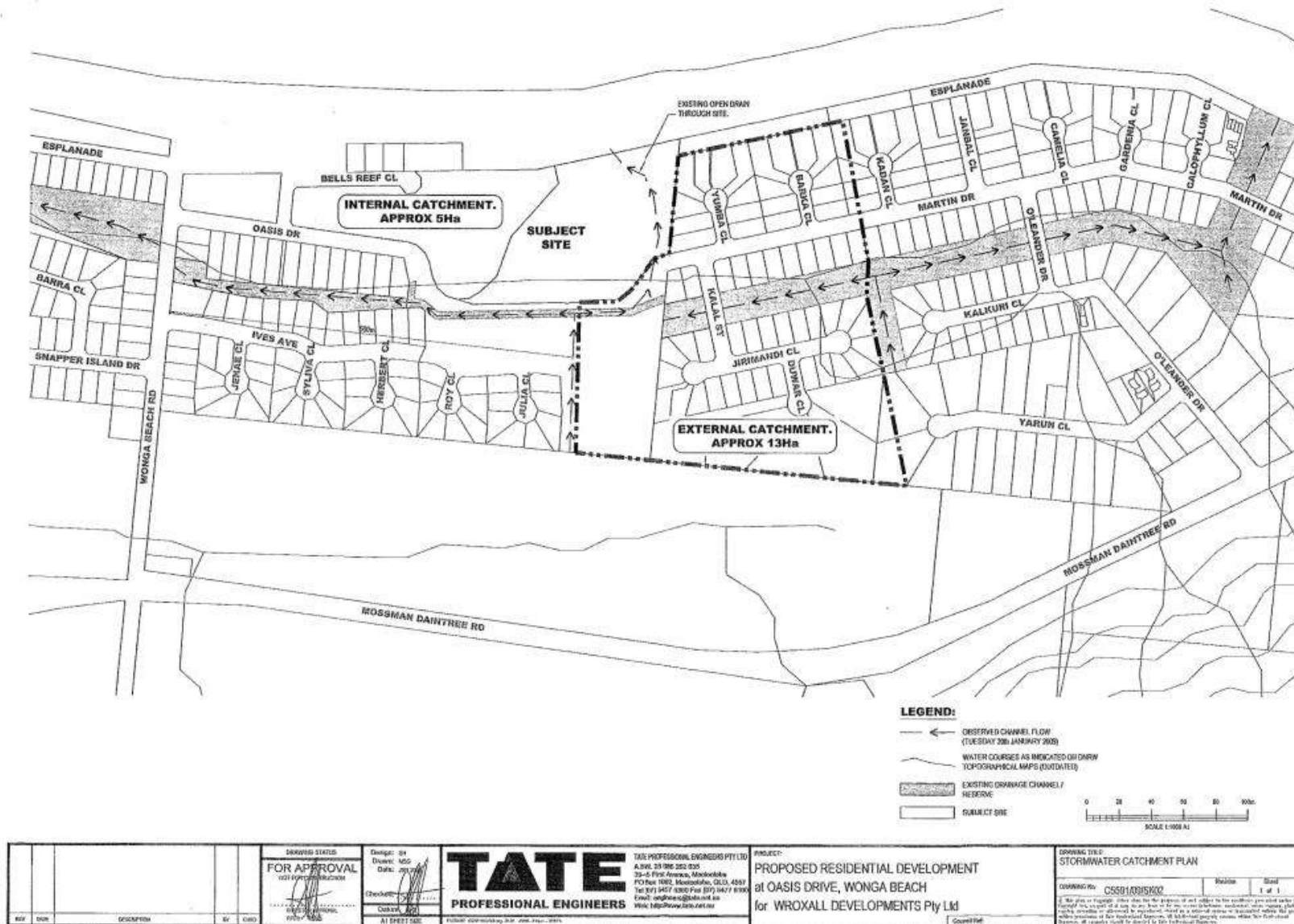
7. Miscellaneous

Prior to the pre-start meeting, the applicant must provide written evidence from Ergon and Telstra confirming arrangements have been made for the provision of services to the stage.

Advices

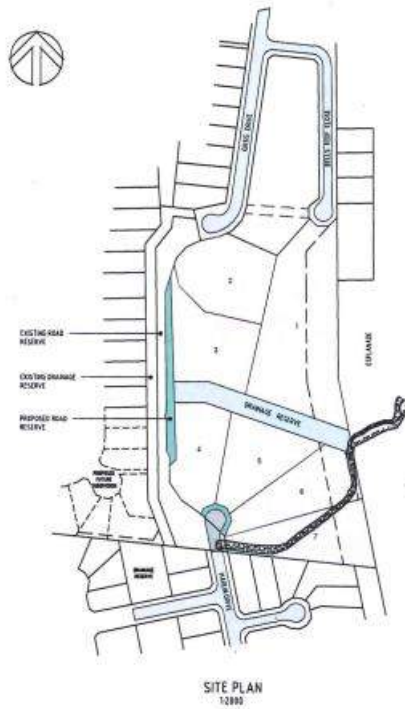
- 1. This approval does not negate the requirement for compliance with all other relevant Local Laws and other statutory requirements.
- 2. For information relating to the *Planning Act 2016* log on to www.dsdip.qld.gov.au. To access the *FNQROC Development Manual*, Local Laws and other applicable Policies, log on to www.douglas.qld.gov.au.
- 3. The Applicant is to advise the future owner of Lot 3 that the driveway exiting from the end of the cul-de-sac is deemed to be a private driveway and is the responsibility of the land owner to maintain notwithstanding the driveway is contained within the road reserve. A rates notation to this end will be placed on the property file.

ATTACHMENT 1 - TATE ENGINEERS STORMWATER CATCHMENT PLAN 2009



ATTACHMENT 2 – APPROVED PLANS

DO NOT SCALE



DRAWING INDEX PROJECT DRAWINGS

4839-C01	SITE PLAN AND DRAWING INDEX
4839-C02	STANDARD NOTES
4839-C03	GENERAL ARRANGEMENT
4839-C04	MARLIN DRIVE CUL-DE-SAC - SETOUT AND GRADING
4839-C05	EAST WEST DRAINAGE CHANNEL - PLAN & LONG SECTION
4839-C06	EAST WEST DRAINAGE CHANNEL - PEDESTRIAN BRIDGE & DETAILS
4839-C07	EAST WEST DRAINAGE CHANNEL - CROSS SECTIONS SHEET 1 OF 2
4839-C08	EAST WEST DRAINAGE CHANNEL - CROSS SECTIONS SHEET 2 OF 2
4839-C09	SITE GRADING
4839-C10	ALLOTMENT BUILDING PADS
4839-C11	MODIFICATION TO EXISTING COASTAL GUTTER DRAIN
4839-C12	WATER RETICULATION
4839-C13	EROSION AND SEDIMENT CONTROL STRATEGY
4839-C14	EROSION AND SEDIMENT CONTROL DEVICES - SHEET 1 OF 2
4839-C15	EROSION AND SEDIMENT CONTROL DEVICES - SHEET 2 OF 2

ASSOCIATED STANDARD DRAWINGS

ROADWORKS AND DRAINAGE	
S1000	CONCRETE KERB AND CHANNEL
S1016	KERB RAMP
S1035	PANDURAL/TUBULAR STEEL FENCE
S1035	PATHWAY/BIKWAY
S1044	EXCAVATION, BEDDING AND BACKFILLING OF PRECAST BOX CULVERTS
S1044	GRADED KERB INLET - PIPES & 600 DIA
S1044	KERB INLET GRATE AND FRAME
S1095	SUBSURFACE DRAINAGE PULVERISING POINTS OUTLET
D108 1318	CONSTRUCTION OF BASES WITH RECESSES AND APRONS (ALL SIZES)
WATER RETICULATION	
S2005	VALVE BOX INSTALLATION
S2005	HYDRANT BOX INSTALLATION
S2010	KERB / ROAD MARKERS
S2016	WATER RETICULATION BEDDING DETAILS - PIPE DIA < 300
S2016	WATER CONNECTION DETAILS
SED-WAT-1205-1	TYPICAL THRUST BLOCK DETAILS - MASS CONCRETE
SED-WAT-1206-1	TYPICAL THRUST AND ANCHOR BLOCKS FOR VALVES
SED-WAT-1207-1	TYPICAL THRUST AND ANCHOR BLOCKS FOR VALVE BENDS
LANDSCAPING	
S4036	BARRIER FENCE AND ROLLARDS
S5018	PARK ACCESS GATE

ASSOCIATED CONSULTANTS DATE / PROJECT PORT PACIFIC ESTATE PTY LTD PROPOSED SUBDIVISION OF 2 OASIS DRIVE, WONGA BEACH LOT 2 on SP259953		DEVELOPMENT CONSULTANTS • PROJECT MANAGERS • ENGINEERS • PLANNERS FLANAGAN CONSULTING GROUP CARNS DARWIN MACKAY TOWNSVILLE 081 400 2700 081 400 1000 071 474 1117 www.flanagancgroup.com.au		DESIGNED IFM DRAWN IFM CHECKED 4839-C01 SCALE NTS		TITLE SITE PLAN & DRAWING INDEX DRAWING No. 4839-C01 SHEET 3 OF 15 SHEETS REVISION A	
A ISSUE FOR APPROVAL DATE 02/01/2018 BY 6073		DATE 02/01/2018 BY 6073		A1 FULL SIZE		A	

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SURVEY CONTROL NOTES

SURVEY ORIGIN :	LEVEL DATUM :	ANDROID
ORIGIN OF LEVELS :		PSM 53559
		RL 13.696
MERIDIAN :		MGA ZONE 55
ORIGIN OF COORDINATES :		PSM 53559
		E 360936.781
		N 8167554.206

GENERAL NOTES

1. ALL WORKS MUST BE CARRIED OUT IN ACCORDANCE WITH THE RELEVANT PROPOSED DEVELOPMENT MANUAL SPECIFICATIONS, WHERE DIFFERENCES EXIST BETWEEN THE PLANS AND THE DEVELOPMENT MANUAL, THESE PLANS SHALL TAKE PRECEDENCE.
2. THE CONTRACTOR IS TO ENSURE A COPY OF THE OPERATIONAL WORKS APPROVAL IS AVAILABLE ON SITE. THE SITE FIDELIAN IS TO ENSURE ALL WORKS ARE UNDERTAKEN IN ACCORDANCE WITH THE APPROVAL.
3. THE LOCATIONS OF UNDERGROUND SERVICES HAVE BEEN APPROXIMATED FROM THE KNOWN POSITIONS OF VALVES, MANHOLES, ETC. PRIOR TO ANY DEMOLITION, EXCAVATION OR CONSTRUCTION ON SITE, THE CONTRACTOR MUST CONTACT RELEVANT AUTHORITIES FOR POSSIBLE LOCATION OF FURTHER SERVICES AND DETAILED LOCATIONS OF ALL SERVICES.
4. EXISTING SERVICES ARE TO BE PROTECTED FROM DAMAGE DURING CONSTRUCTION, WHERE NECESSARY THE CONTRACTOR SHALL CONFORM THE DEPTH TO EXISTING SERVICES BY POtholing BEFORE COMMENCING WORKS. THE SUPERINTENDENT SHALL BE CONSULTED WHERE THE CONTRACTOR CONSIDERS PROTECTION WORKS NECESSARY TO PROTECT THE SERVICE.

EROSION AND SEDIMENT CONTROL NOTES

1. NO EARTHWORK SHALL COMMENCE ON ANY PART OF THE SITE PRIOR TO INSTALLING APPROPRIATE EROSION MEASURES DOWNSTREAM OF THE SITE AND IN ACCORDANCE WITH THE APPROVED ESC.
2. AT ALL TIMES THE CONTRACTOR SHALL MONITOR THE PREVAILING WEATHER CONDITIONS AND TAKE ALL NECESSARY PRECAUTIONS TO CONTROL EROSION AND DOWNSTREAM SEDIMENTATION DURING ALL STAGES OF CONSTRUCTION.
3. THE IMPACT ON THE ENVIRONMENT SHALL BE MINIMISED BY OBSERVING THE FOLLOWING CONSTRUCTION PRACTICES:
 - * AREAS DISTURBED BY CONSTRUCTION TRAFFIC AND PROCEDURES SHALL BE MINIMISED.
 - * MINIMISE TRAFFIC MOVEMENTS AND SPEEDS ON EXPOSED SURFACES.
 - * REVEGETATION OF DISTURBED AREAS SHALL BE CARRIED OUT SOON AFTER THE COMPLETION OF TOPSOIL PLACEMENT.
 - * FLOW DIVERSION SHALL BE CARRIED OUT BY EARLY INSTALLATION OF DRAINS ALONG TOPS OF BATTERS WITH APPROPRIATE EROSION CONTROL DEVICES.
 - * SEDIMENT INTERCEPTION BY THE PLACEMENT OF SUITABLE RETENTION SYSTEMS ACROSS DRAINAGE LINES AND AT INTERCEPTION POINTS FOR BOTH THE CONSTRUCTION AND STOCKPILE AREAS.
4. ALL ACCESS TO AND FROM THE SITE SHALL BE VIA A TEMPORARY CONSTRUCTION ENTRANCE. THE CONTRACTOR SHALL NOMINATE A PROPOSED ACCESS LOCATION ON THE ESC PLAN FOR APPROVAL BY THE SUPERINTENDENT.
5. STOCKPILES SHALL ONLY BE LOCATED IN AREAS NOMINATED ON THE PROJECT DRAWINGS OR APPROVED BY THE SUPERINTENDENT. ALL STOCKPILES MUST HAVE APPROPRIATE EROSION MEASURES INSTALLED TO PREVENT SEDIMENT TRANSPORT. THE MAXIMUM HEIGHT OF ALL STOCKPILES MUST BE LIMITED TO 2.0M.
6. ALL PERMANENT AND TEMPORARY UNLINED SWALES AND DRAINS TO HAVE APPROPRIATE TEMPORARY EROSION PROTECTION.
7. ALL PARTIALLY CONSTRUCTED DRAINAGE STRUCTURES TO BE PROTECTED AGAINST SEDIMENT INFILTRATION DURING CONSTRUCTION.
8. ALL COMPLETED DRAINAGE STRUCTURES TO BE PROTECTED AGAINST SEDIMENT INFILTRATION UNTIL GRASSING IS ESTABLISHED.
9. ALL DISTURBED AREAS FLATTER THAN 1:ON 2 AND NOT UNDER ROAD PAVEMENT OR PATHWAY MUST BE TOPSOILED AND GRASS SEED. ALL DISTURBED AREAS 1:ON 2 OR STEEPER MUST BE TOPSOILED AND HYDROMULCHED.

18. REHABILITATION AND RE-VEGETATION IS TO BE PROGRESSIVE THROUGHOUT THE PROJECT TO ENSURE THAT ALL DISTURBED AREAS ARE RE-VEGETATED AS SOON AS POSSIBLE FOLLOWING COMPLETION OF WORKS.
19. ROAD VERGE TO BE FULLY TRULSED IMMEDIATELY FOLLOWING UPSOLING.
20. THE CONTRACTOR IS RESPONSIBLE FOR THE CONTROL OF DUST EMANATING FROM THE SITE AT ALL TIMES FOR THE DURATION OF CONSTRUCTION.
21. ALL EROSION AND SEDIMENT CONTROL MEASURES MUST BE CHECKED FOR DAMAGE, CLEANED OUT AND FULLY REINSTATED AFTER EACH RAINFALL EVENT RESULTING IN RUNOFF.
22. IF EROSION AND SEDIMENT CONTROL DEVICES HAVE BEEN FOUND TO BE DEFICIENT OR FAULTED IN SERVICE, DUE TO UNFORESEEN CIRCUMSTANCES, CORRECTIVE ACTION IS TO BE UNDERTAKEN IMMEDIATELY WHICH MAY INCLUDE AMENDMENTS/ADDITIONS TO THE ORIGINAL APPROVED EROSION CONTROL PLANS.
23. THE INSTALLATION, REMOVAL, RELOCATION OR MODIFICATION TO EROSION AND SEDIMENT CONTROL DEVICES MAY BE MADE BY DOUGLAS SHIRE COUNCIL IF DEEMED NECESSARY AND RELEVANT.
24. EROSION AND SEDIMENT CONTROL DEVICES SHALL REMAIN IN PLACE UNTIL THE TREATMENT AREA IS SUITABLY STABILISED/VEGETATED.
25. THE CONTRACTOR SHALL UNDERTAKE A FORMAL COMPLIANCE AUDIT OF THE ESC AT SIX MONTHS INTERVALS DURING THE CONSTRUCTION PERIOD OF THE PROJECT. RECORDS OF THE AUDIT SHALL BE RETAINED ON SITE, WHERE IDENTIFIED AS PART OF THE AUDIT THE ESCP SHALL BE UPDATED AND PROVIDED TO THE SUPERINTENDENT.

EARTHWORKS NOTES

1. ALL EARTHQUAKES MUST BE CARRIED OUT IN ACCORDANCE WITH AS3798 GUIDELINES ON EARTHQUAKES FOR COMMERCIAL AND RESIDENTIAL DEVELOPMENTS.
2. NO VEGETATION SHALL BE REMOVED WITHOUT PRIOR APPROVAL OF THE SUPERINTENDENT UNLESS NOTED ON THE DRAWINGS.
3. FINISHED SURFACE LEVELS SHOWN ON PROJECT DRAWINGS ARE AFTER ALL EARTHQUAKES ARE COMPLETE INCLUDING TOPSOILING. ALL AREAS ARE TO BE GRADED EVENLY BETWEEN FINISHED SURFACE LEVELS UNLESS NOTED OTHERWISE.
4. ALL BATTERS WITHIN ALLOTMENTS SHALL BE AS FOLLOWS UNLESS NOTED OTHERWISE:
 - ROAD FRONTAGE 1:1 & MAX
 - SIDE BOUNDARY 1:1.2
 - REAR BOUNDARY 1:1.2

ROADS & PATHWAYS NOTES

1. NEW ROADWAYS AND KERBS SHALL JOIN SMOOTHLY TO EXISTING WORKS, WHERE NECESSARY, EXISTING WORKS SHALL BE LIFT BACK TO FORM A NEAT JOIN.
2. PAVEMENT DESIGNATED HEREIN IS FOR A RANGE OF SUBGRADE CBV VALUES. THE CONTRACTOR IS TO CONFIRM THE SUBGRADE CBV BY TESTING IN ACCORDANCE WITH THE SPECIFICATION. RESULTS ARE TO BE PROVIDED TO THE SUPERINTENDENT FOR FINAL PAVEMENT SELECTION.
3. ALL KERB PROFILES TO BE AS PER FPNORC STD DRAWING S1809 UNLESS NOTED OTHERWISE.
4. ALL PATHWAYS SHALL BE 2.0M WIDE UNLESS IN ACCORDANCE WITH FPNORC STD DRG S1835. PATHWAY CROSSFALL MUST NOT EXCEED 2.5M.
5. CONNECTIONS TO EXISTING PATHS SHALL BE SMOOTH AND NEAT. THE MAXIMUM STEP SHALL BE:
 - 30MM ABOVE EXISTING
 - 100MM BELOW EXISTING
6. ALL KERB RAMP SHALL BE CONSTRUCTED IN ACCORDANCE WITH FPNORC STD DRG S20 ST. WIDTH OF RAMP SHALL MATCH PATHWAY WIDTH.
7. ALL STREET SIGNS AND TRAFFIC SIGNS SHALL BE INSTALLED IN ACCORDANCE WITH FPNORC STD DRG S203A AND S204A.

DRAINAGE NOTES

1. ALL REINFORCED CONCRETE PILES SHALL BE CLASS 2 UNLESS NOTED OTHERWISE. ALTERNATIVE MATERIAL TYPES SUCH AS HDPE OR FRP MAYBE USED SUBJECT TO SUPERINTENDENT'S/COUNCIL APPROVAL.
2. EXCAVATION, BEDDING AND BACKFILL FOR PRECAST BOX CULVERTS SHALL BE CARRIED OUT IN ACCORDANCE WITH FMRDC STANDARD DRAWING 554S.
3. EXCAVATION, BEDDING AND BACKFILL FOR CONCRETE PILES SHALL BE CARRIED OUT IN ACCORDANCE WITH FMRDC STANDARD DRAWING 554S.
4. BOX CULVERTS SHALL BE INSTALLED IN ACCORDANCE WITH OTHER STD Dwg 1936. CONCRETE BASES TO CULVERTS SHALL BE PROVIDED IN ACCORDANCE WITH OTHER STD Dwg 1939.
5. ALL KERB INLET PITS AND MANHOLES SHALL BE CONSTRUCTED IN ACCORDANCE WITH FMRDC STD Dwg 555S, 556S, 556A, 556B, 556C AND 557B.
6. ALL EAST-IN-SITU HEADWALLS SHALL BE PROVIDED IN ACCORDANCE WITH FMRDC STD Dwg 557S, 558S, 559S, AND 559B.
7. ALL PRECAST HEADWALLS SHALL BE PROVIDED WITH CONCRETE CUT-OFF WALL IN ACCORDANCE WITH FMRDC STD Dwg 557S. WHERE HEADWALL ADJUTS CONCRETE LINED CHANNEL, THE CUT-OFF WALL MAYBE OMITTED SUBJECT TO APPROVAL BY THE SUPERINTENDENT.
8. SUBSOIL DRAINAGE SHALL BE PROVIDED WHERE SHOWN ON THE PROJECT DRAWINGS. DRAINS SHALL ACHIEVE A MINIMUM 0.5% GRADE, FLUSHING POINTS AND OUTLETS TO BE PROVIDED IN ACCORDANCE WITH FMRDC STD DRAWING 557PS.
9. ANY STORMWATER QUALITY INTERCEPTION DEVICE SHALL BE CLEANED BY THE CONTRACTOR AND SOCKETS PROVIDED AT THE END OF MAINTENANCE. ALL COSTS TO BE BORNE BY THE CONTRACTOR.

WATER RETICULATION NOTES

1. ALL PVC AND PEPIPES SHALL BE CLASS PNH. PVC PIPES SHALL BE RUBBER JOINTED AND DUKILE BORN COMPATIBLE.
2. DKL PIPES SHALL BE CLASS PNH "TYPON" TYPE RUBBER RING JOINTED
3. FOR WATER MAINS SHALL BE INSTALLED ON A STANDARD 300 OFFSET FROM THE PROPERTY BOUNDARY UNLESS NOTED OTHERWISE ON PLANS.
4. FOR VALVES & HYDRANT BOXES INSTALLATION DETAILS REFER FIGNROD STD DROG 52000 & 52005.
5. ALL HYDRANTS AND VALVES TO BE LOCATED OPPOSITE PROPERTY BOUNDARY TRUNKATIONS AND CORNERS, UNLESS NOTED OTHERWISE ON PLANS.
6. KIRB MARKER PLATES SHALL BE PROVIDED TO IDENTIFY THE POSITION OF ALL VALVES AND HYDRANTS IN ACCORDANCE WITH FIGNROD STD DROG 52000 VERSION 4-2009. IN ADDITION TO KIRB MARKER PLATES HYDRANTS SHALL ALSO HAVE TEASPOOR MARKERS AND BLUE RETRO-REFLECTIVE MARKERS PROVIDED ON THE ROAD PAVEMENT IN ACCORDANCE WITH FIGNROD STD DROG 2000 VERSION 4-2009.
7. FOR MAIN TRENCHING, BEDDING & ANCHORAGE DETAILS REFER FIGNROD STD DROG 52005 & 52016 ENSURE COVER TO WATERMANS IS 800MM MINIMUM UNDER ROADWAYS AND 1000MM MINIMUM ELSEWHERE.
8. FOR MAIN CONNECTION DETAILS, REFER FIGNROD STD DROG 52020.
9. DUKIGULS SHOR CONDUIT MUST BE CAPABLE TO PERFORM ANY DIRECT CONNECTION OR ALTERATION TO LIVE WATER MAINS. THE CONTRACTOR SHALL WORK WITH COUNCIL, THE PROJECTS APPLICATION FORMS AND FEES FOR THESE WORKS TO BE COMPLETED. IT MAY BE POSSIBLE FOR SOME WORKS TO BE PERFORMED BY THE CONTRACTOR UNDER SPECIAL CIRCUMSTANCES AND SUBJECT TO APPROPRIATE CONDITIONS AGREED TO WITH COUNCIL.
10. HYDRANTS OR VALVES CONSTRUCTED IN CONCRETE ARE TO HAVE A COMPRESSIBLE LAYER (LAYERLEX) INSTALLED ON THE SUBGRADE. REFER FIGNROD STD DROG 2000

SITE SPECIFIC NOTES

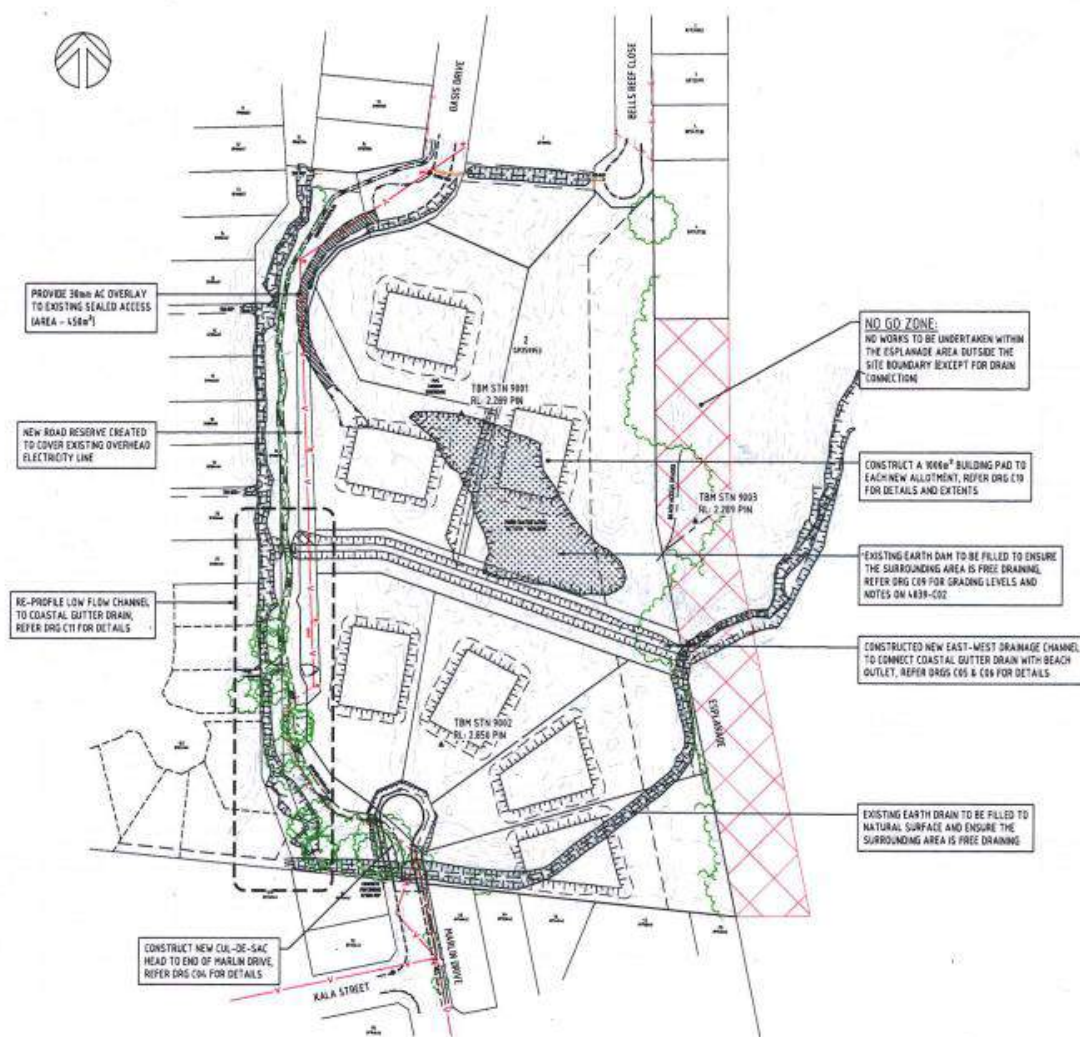
1. PRIOR TO REMOVAL OF ANY TREES, A WILDLIFE SPOTTER IS REQUIRED TO INVESTIGATE AND RELOCATE ANY IDENTIFIED FAUNA.

EXISTING DAM FILL PROCESS

1. THE EXISTING DAM TO BE DRAINED USING A FLOATING PUMP SYSTEM TO ENSURE PUMP WATER IS CLEAN BEFORE DISCHARGE.
2. AFTER DRAINING THE DAM BASE IS TO BE INSPECTED BY THE SUPERVISING ENGINEER PRIOR TO PLACEMENT OF FILL TO CONFIRM STABLE BASE OR TREATMENT AS REQUIRED TO ACHIEVE STABLE BASE.
3. FILL TO BE PLACED IN LAYERS NOT EXCEEDING 400mm THICK MAY BE LESS DEPENDING ON COMPACTION EQUIPMENT USED AS COMPACTED TO 95% STD OR PER TABLE 5.1 OF AS3798. TESTING FREQUENCY TO BE AS PER TABLE 6 OF AS3798 TO A LEVEL 2 STANDARD.

[illegible]

DO NOT SCALE



SHEETS: 1 - 4839-C01 SUBMIT 04/11/18, 2 - 4839-C02 SUBMIT 04/11/18

REV	DATE	DESCRIPTION	DATE	APPROVED	DATE	DATE
1	04/11/18	ISSUE FOR APPROVAL	04/11/18	04/11/18	04/11/18	04/11/18

ASSOCIATED CONSULTANTS

CLIENT / PROJECT

PORT PACIFIC ESTATE PTY LTD
PROPOSED SUBDIVISION OF
2 OASIS DRIVE, WONGA BEACH
LOT 2 on SP259953

FLANAGAN CONSULTING GROUP
DEVELOPMENT CONSULTANTS • PROJECT MANAGERS • ENGINEERS • PLANNERS
CARDEN DARWIN MACKAY TOWNSVILLE
081 421 1118 081 421 1118 081 421 1118 081 421 1118
www.flanagancollaborative.com.au

DESIGNED	IRM
DRAWN	IRM
SCALE	NTS

TITLE

GENERAL ARRANGEMENT

SHARING NO

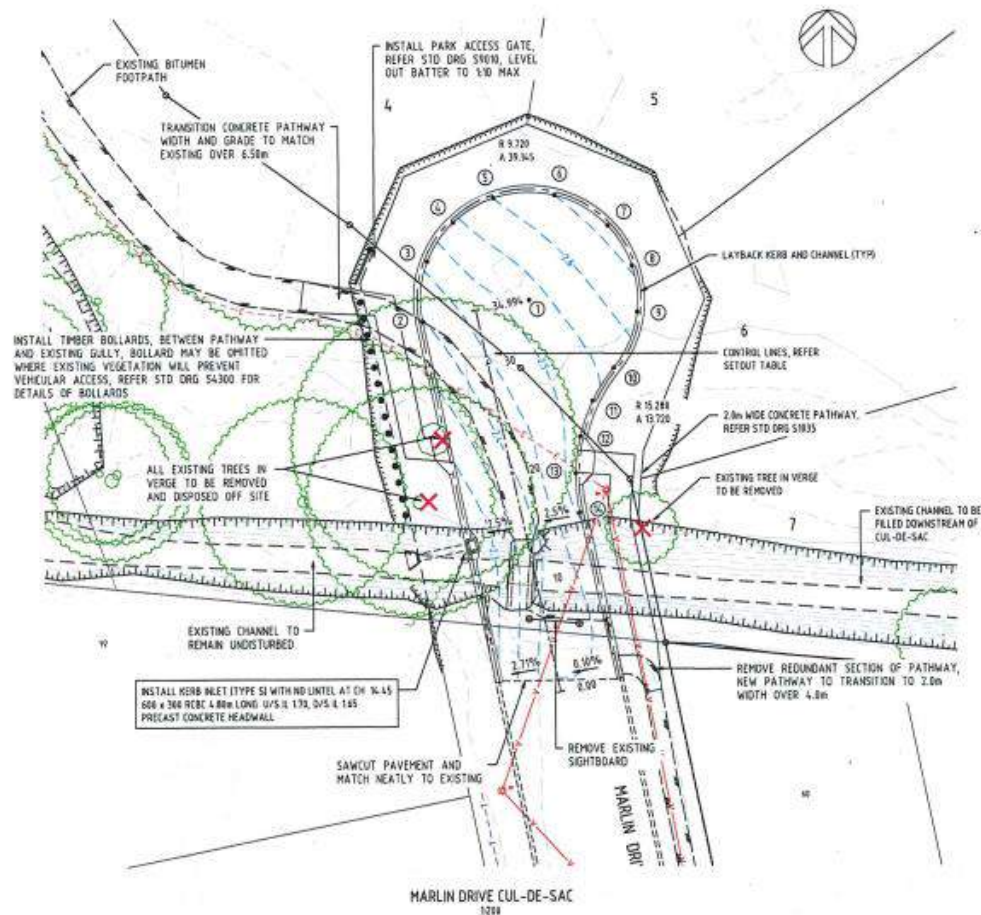
A1 4839-C03

SCALE

1:1

REVISION

A



MARLIN DRIVE - CONTROL LINE SETOUT

PT	CHAINAGE	EASTING	NORTHING	BEARING
P 1	0.000	330567.311	8191377.798	347°43'53.09"
P 2	31.994	330499.878	8191411.990	347°43'53.09"

LEGEND

- R 15.280
- A 5.246
- SETOUT POINT
- FINISHED SURFACE CONTOUR (0.05m INTERVAL)
- LAYBACK KERB AND CHANNEL (STD S1000)
- PEDESTRIAN KERB RAMP
- EXISTING TREE TO BE REMOVED

MARLIN DRIVE CUL-DE-SAC
SETOUT COORDINATES

POINT	EASTING	NORTHING	LEVEL
1	330564.639	819142.983	2.530
2	330495.117	819143.955	2.397
3	330495.573	819144.466	2.444
4	330497.902	819149.810	2.549
5	330561.494	819142.100	2.601
6	330566.959	819142.342	2.650
7	330511.690	819149.595	2.666
8	330513.851	819145.889	2.656
9	330514.297	819141.805	2.626
10	330512.174	819146.763	2.567
11	330510.284	819143.805	2.548
12	330509.158	819148.665	2.525
13	330508.741	819197.355	2.522
14	330509.068	819193.853	2.587

WARNING:

CONTRACTOR TO LOCATE AND CONFIRM DEPTH OF EXISTING LIVE ELECTRICAL LINE PRIOR TO COMMENCING CONSTRUCTION TO CONFIRM ADEQUATE COVER OR ALTERNATIVE TREATMENT TO ELECTRICAL LINE

MORE CURVE DATA

VERTICAL GRADE

VERTICAL CURVE LENGTH

VERTICAL CURVE RADIUS

DATUM: A.S.M.

	2.450	2.450	2.479	2.479	2.479	2.479
NATURAL SURFACE	2.450	2.450	2.479	2.479	2.479	2.479
CUT/FILL DEPTH	-0.000	0.000	0.000	0.000	0.000	0.000
DESIGN SURFACE	2.450	2.450	2.479	2.479	2.479	2.479
CHAINAGE	-0.000	0.000	10.000	10.000	10.000	10.000

MARLIN DRIVE LONGITUDINAL SECTION

SCALE 1:500 HORIZONTAL 1:100 VERTICAL



NOTES: 1. ALL SETOUTS TO BE DONE BY 1:45 PM ON 14/04/2018

NO.	DATE	DESCRIPTION	DESIGNED	CHECKED	DATE
1	14/04/2018	ISSUE FOR APPROVAL	DA	DA	14/04/2018
2					
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ASSOCIATED CONSULTANTS

CLIENT / PROJECT

PORT PACIFIC ESTATE PTY LTD
PROPOSED SUBDIVISION OF
2 OASIS DRIVE, WONGA BEACH
LOT 2 on SP250953



DESIGNED

BPM

BPM

4839-C04

AS SHOWN

FILE

MARLIN DRIVE CUL-DE-SAC
SETOUT & GRADING PLAN

A1

FULL SIZE

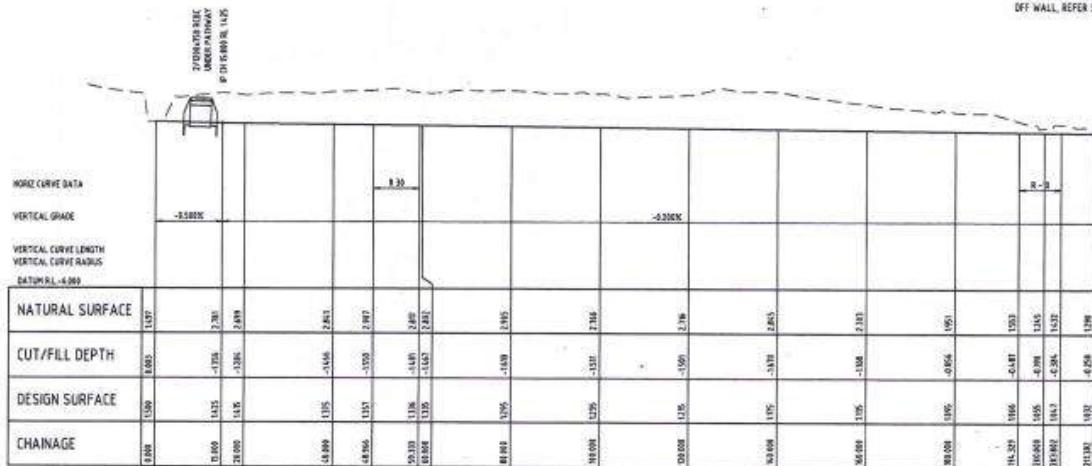
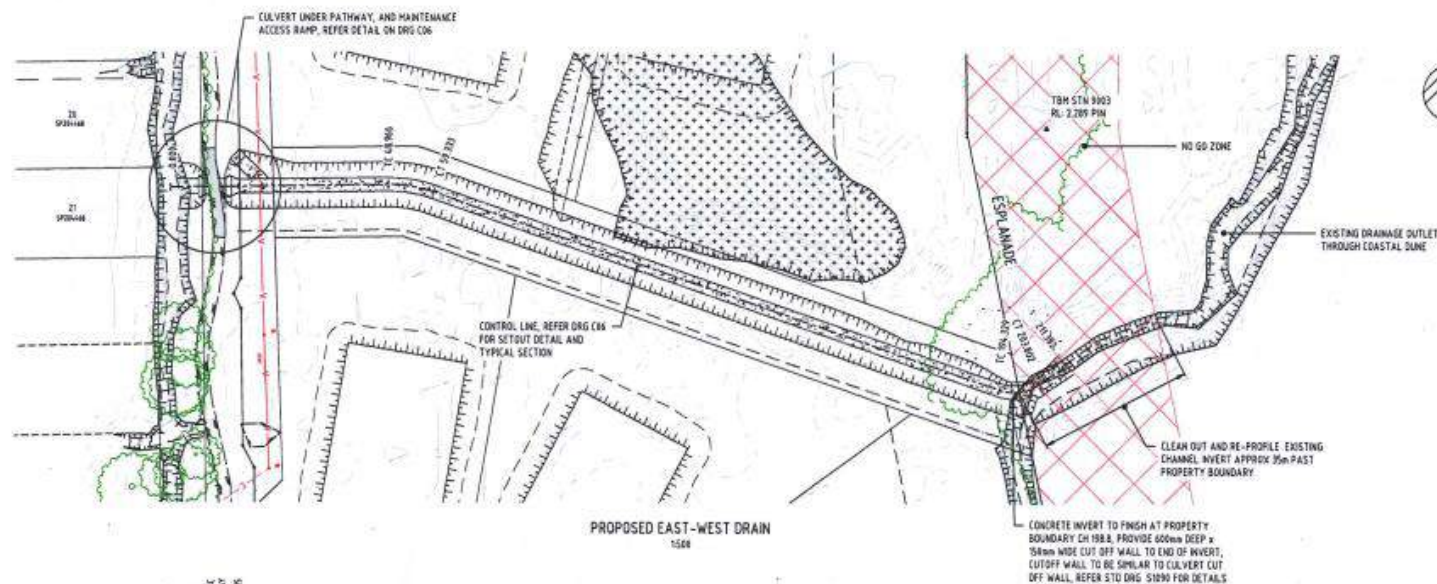
DRAWING NO.

4839-C04

SHEET 1 OF 55 SHEETS


REVISION

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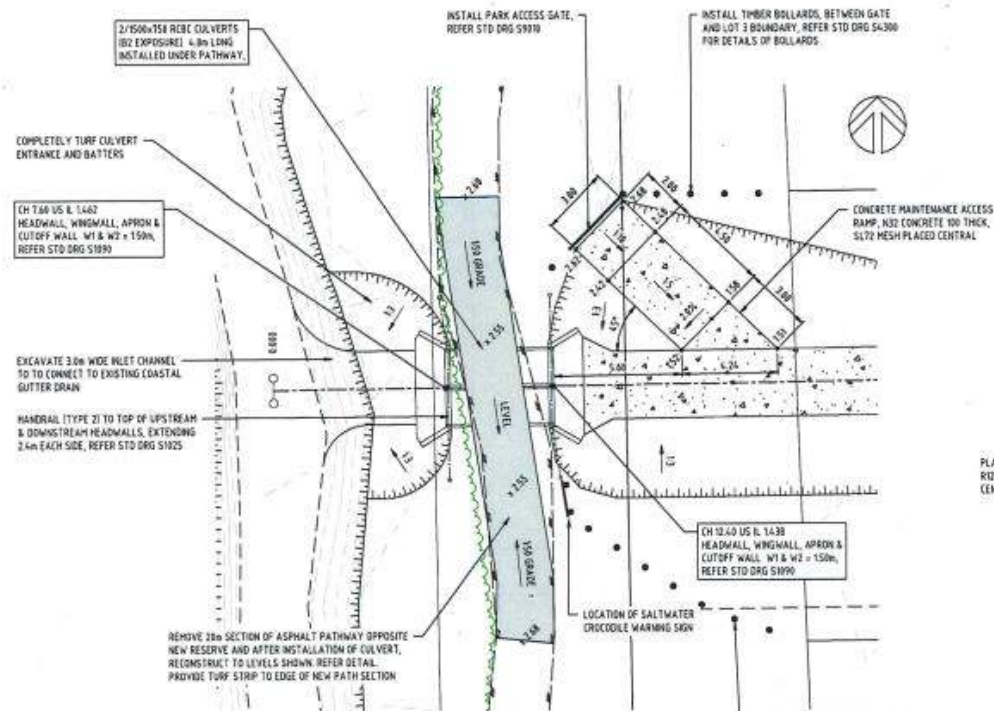
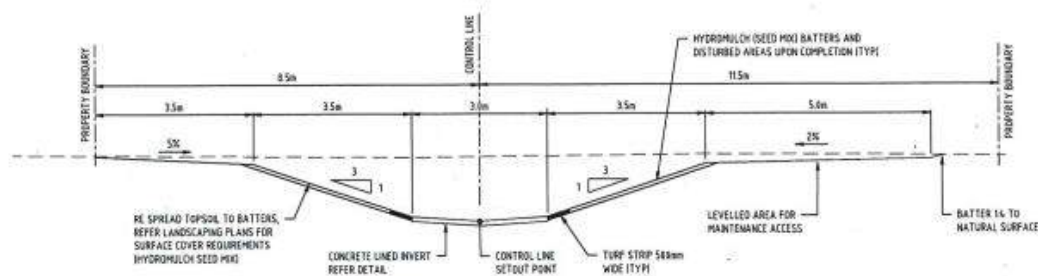


EAST WEST DRAIN - LONGITUDINAL SECTION
SCALE 1:500 HORIZONTAL, 1:100 VERTICAL

NOTES: 1. ASH-13 SURFING, 2. ASH-13 SURFING, 3. ASH-13 SURFING

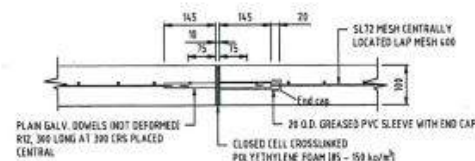
										APPROVED CONSULTANTS										Client / Project										 FLANAGAN CONSULTING GROUP <small>20/05/2020 10:00 AM</small> DARWIN MACKAY TOWNSVILLE <small>(08) 9491 9122 (08) 4998 1288 (07) 454 8737</small> www.flanaganconsulting.com.au										DESIGNED BY JRM										TITLE EAST-WEST DRAINAGE CHANNEL PLAN & LONGITUDINAL SECTION																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	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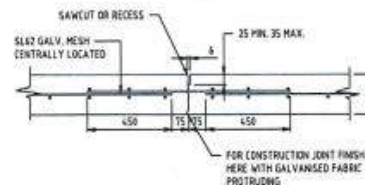
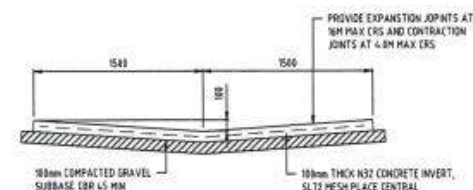
EAST-WEST DRAIN CULVERT CROSSING
1:100EAST-WEST DRAIN TYPICAL SECTION
1:50

EAST-WEST DRAINAGE CHANNEL - CONTROL LINE SETOUT

PT	CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPRAL	ALL LENGTH	DEFL ANGLE
IP 1	0.000	33044.1530	870535.538	89°13'35.44"			
TC	48.970	33044.9048	870536.190	89°13'35.44"			
P 2	54.150	33044.95.720	870536.268		30.000	10.378	18°47'54.32"
CT	58.330	330500.670	870534.550	109°01'29.75"			
TC	104.330	330628.300	870540.550	109°01'29.75"			
P 3	109.070	330633.740	870540.800		10.000	5.670	54°18'21.07"
CT	203.800	330637.330	870541.840	54°18'02.68"			
IP 4	210.380	330643.520	870546.370	54°18'02.68"			



30mm ASPHALT (14mm MAX)
150mm BASE COURSE (CBR 60)
COMPACTED SUBGRADE (95% STD)

ASPHALT PATHWAY
N.T.S.CONCRETE LINED CHANNEL INVERT
1:20CONCRETE LINED CHANNEL INVERT
1:20

NOTES: 1. 4-4839-C06, N4007-04, 1. 4-4839-C06/04/01

REV	ISSUE FOR APPROVAL	DATE	BY	DATE
A	ISSUE FOR APPROVAL	04/08/2018	GA	04/08/2018
REV	DESCRIPTION	DATE	BY	DATE
1	THIS DRAWING IS COPYRIGHT AND THE PROPERTY OF FLANAGAN CONSULTING GROUP, A REGISTERED BUSINESS NAME OF SOUTH PACIFIC CONSULTANTS PTY LTD. (INC. 002 923 067) AND MUST NOT BE REPRODUCED WITHOUT WRITTEN PERMISSION.			

ASSOCIATED CONSULTANTS

CLIENT / PROJECT

PORT PACIFIC ESTATE PTY LTD
PROPOSED SUBDIVISION OF
2 OASIS DRIVE, WONGA BEACH
LOT 2 ON SP258963

FLANAGAN CONSULTING GROUP
DEVELOPMENT CONSULTANTS • PROJECT MANAGERS • ENGINEERS • PLANNERS
CAIRNS DARWIN MACKAY TOWNESVILLE
(07) 4031 1700 (07) 4031 2020 (07) 4031 1200 (07) 4774 2727
www.flanagancg.com.au

DRAWN

IRM

CHECKED

IRM

SCALE

1:500

TITLE

EAST-WEST DRAINAGE CHANNEL
PEDESTRIAN BRIDGE DETAIL & SECTIONS

DRAWING NO.

A1

FULL SIZE

SHEET

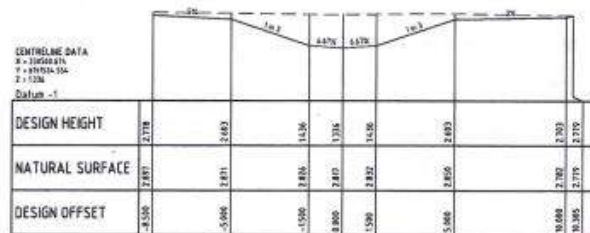
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OF 15 SHEETS

REVISION

A

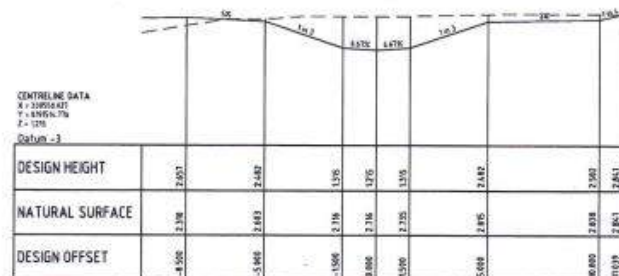
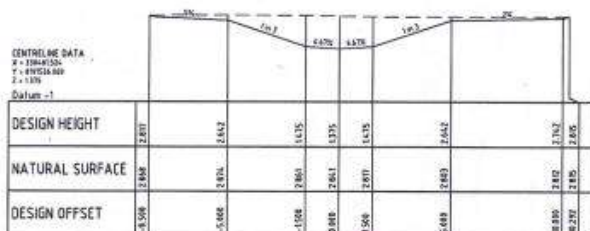
DO NOT SCALE



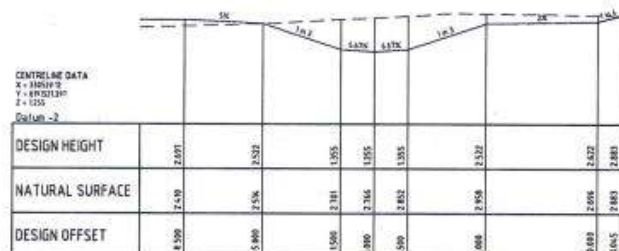
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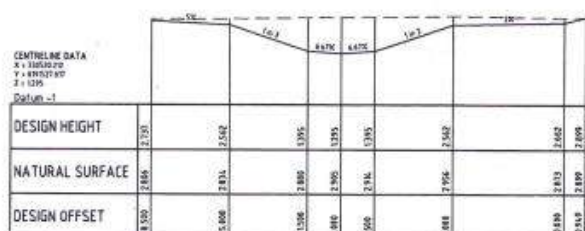
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				APPROVED CONSULTANTS		CLIENT / PROJECT		DESIGNED (IFM)		TITLE	
						PORT PACIFIC ESTATE PTY LTD PROPOSED SUBDIVISION OF 2 OASIS DRIVE, WONGA BEACH LOT 2 on SP259953		FLANAGAN CONSULTING GROUP DEVELOPMENT CONSULTANTS • PROJECT MANAGERS • ENGINEERS • PLANNERS CARNS DARWIN MACKAY TOWNSVILLE 081 402 3388 081 944 1100 081 404 3157 www.flanaganc consulting.com.au		EAST-WEST DRAINAGE CHANNEL CROSS SECTIONS - SHEET 1 OF 2	
								DRAWN (IFM)		DRAWING NO.	
								SCALE		4839-C07	
								1:100		A1	
										SHEET 1 OF 15 SHEETS	
										A	

CENTRELINE DATA
 R = 33043.76
 Y = 891435.279
 Z = 1195
 Datum = 1

DESIGN HEIGHT	2.845	1.995	1.095	1.195	2.365	2.445	2.387
NATURAL SURFACE	2.845	1.984	1.051	1.028	2.051	2.271	2.337
DESIGN OFFSET	-4.051	-1.589	0.040	1.038	0.000	0.000	10.277

180.000

CENTRELINE DATA
 R = 33043.76
 Y = 891435.279
 Z = 1195
 Datum = 1

DESIGN HEIGHT	2.724	1.821	1.067	1.167	2.456	2.459	2.456
NATURAL SURFACE	2.724	1.792	1.132	1.138	2.408	2.458	2.458
DESIGN OFFSET	-2.636	-1.590	0.000	1.038	0.000	0.000	10.277

203.802

CENTRELINE DATA
 R = 33043.76
 Y = 891435.279
 Z = 1195
 Datum = 1

DESIGN HEIGHT	2.577	2.432	1.375	1.105	1.275	2.447	2.502	2.578
NATURAL SURFACE	2.215	2.335	2.381	2.383	2.338	2.424	2.509	2.578
DESIGN OFFSET	-4.032	-5.008	-1.008	0.000	1.000	0.000	0.000	10.277

160.000

CENTRELINE DATA
 R = 33043.76
 Y = 891435.279
 Z = 1195
 Datum = 1

DESIGN HEIGHT	1.582	1.105	1.095	1.105	1.582	1.582	1.582
NATURAL SURFACE	1.582	1.105	1.105	1.105	1.582	1.582	1.582
DESIGN OFFSET	-2.381	-1.000	0.000	0.000	0.000	0.000	10.277

200.000

CENTRELINE DATA
 R = 33043.76
 Y = 891435.279
 Z = 1195
 Datum = 2

DESIGN HEIGHT	2.837	2.432	1.375	1.105	1.275	2.447	2.502	2.578
NATURAL SURFACE	2.716	2.398	2.381	2.383	2.338	2.424	2.509	2.578
DESIGN OFFSET	-4.500	-5.008	-1.008	0.000	1.000	0.000	0.000	10.277

140.000

CENTRELINE DATA
 R = 33043.76
 Y = 891435.279
 Z = 1195
 Datum = 1

DESIGN HEIGHT	1.375	1.105	1.095	1.105	1.375	2.333	2.433	2.433
NATURAL SURFACE	1.375	1.105	1.105	1.105	1.375	2.405	2.433	2.433
DESIGN OFFSET	-2.406	-1.590	0.000	0.000	0.000	0.000	0.000	10.277

194.329

CENTRELINE DATA
 R = 33043.76
 Y = 891435.279
 Z = 1195
 Datum = 1

DESIGN HEIGHT	1.579	1.102	1.092	1.102	1.579	1.579	1.579
NATURAL SURFACE	1.579	1.102	1.102	1.102	1.579	1.579	1.579
DESIGN OFFSET	-2.845	-1.596	0.000	0.000	0.000	0.000	10.277

211.382

ASSIGNED CONSULTANTS A. ISSUE FOR APPROVAL DESIGNED BY: [] CHECKED BY: [] DATE: 05/05/2018				CLIENT / PROJECT PORT PACIFIC ESTATE PTY LTD PROPOSED SUBDIVISION OF 2 OASIS DRIVE, WONGA BEACH LOT 2 on SP250953				FLANAGAN CONSULTING GROUP CONSULTING ENGINEERS • PROJECT MANAGERS • ENGINEERS • PLANNERS CAIRNS DARWIN MACKAY TOWNSVILLE 08 9400 1234 08 9400 1234 08 9400 1234 08 9400 1234				DESIGNED BY: [] CHECKED BY: [] DATE: 05/05/2018 SCALE: 1:100				FILE EAST-WEST DRAINAGE CHANNEL CROSS SECTIONS - SHEET 2 OF 2 DRAWING NO: 4839-C08 FULL SIZE SHEET 1 OF 15 SHEETS				REVISION A	
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DO NOT SCALE



LEGEND

PROPOSED BUILDING PAD

SETOUT POINT

NOTES

1. REFER DRAWING C82 FOR STANDARD NOTES.
2. ALL BATTERS TO BE 1:1 UNLESS NOTED OTHERWISE ON DRAWINGS.

PRIOR TO CONSTRUCTING BUILDING PADS, THE EXISTING EARTH DAM TO BE FILLED TO ENSURE THE SURROUNDING AREA IS FREE DRAINING. REFER D80-C89 FOR GRADING LEVELS AND C89-C92 FOR NOTES.

BUILDING PAD
SETOUT COORDINATES

POINT	EASTING	NORTHING	LEVEL
11	330574.224	819258.532	4.840
12	330547.957	819264.344	4.840
13	330555.851	819269.736	4.840
14	330582.243	819264.916	4.840
21	330527.946	819269.452	4.840
22	330491.565	819267.471	4.840
23	330497.370	819265.838	4.840
24	330533.763	819265.844	4.840
31	330516.488	819268.393	4.840
32	330478.187	819266.471	4.840
33	330483.918	819262.779	4.840
34	330520.305	819264.785	4.840
41	330502.158	819258.537	4.840
42	330475.533	819264.820	4.840
43	330481.694	819262.762	4.840
44	330500.344	819262.274	4.840
51	330548.822	819264.448	4.840
52	330536.938	819257.047	4.840
53	330534.292	819260.066	4.840
54	330558.187	819277.421	4.840
61	330553.958	819275.258	4.840
62	330549.163	819272.790	4.840
63	330583.551	819257.560	4.840
64	330582.444	819262.757	4.840
71	330562.532	819265.658	4.840
72	330557.772	819261.789	4.840
73	330586.258	819262.687	4.840
74	330645.388	819268.731	4.840

8675 1:1-4539-12 SURVEYING 1:1-4539-12 SURVEYING

NO.	ISSUE FOR APPROVAL	DATE	APPROVED	SHEET NO.	DATE
1	ISSUE FOR APPROVAL	01/01/2018	01/01/2018	01/01/2018	01/01/2018

ASSOCIATED CONSULTANTS

CLIENT / PROJECT

PORT PACIFIC ESTATE PTY LTD
PROPOSED SUBDIVISION OF
2 OASIS DRIVE, WONGA BEACH
LOT 2 on SP259853

FLANAGAN CONSULTING GROUP
ENVIRONMENT CONSULTANTS PROJECT MANAGERS + DEVELOPERS PLANNERS
CARBON DARWIN MACKAY TOWNVILLE
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DESIGNED

IRM

DRAWN

IRM

SCALE

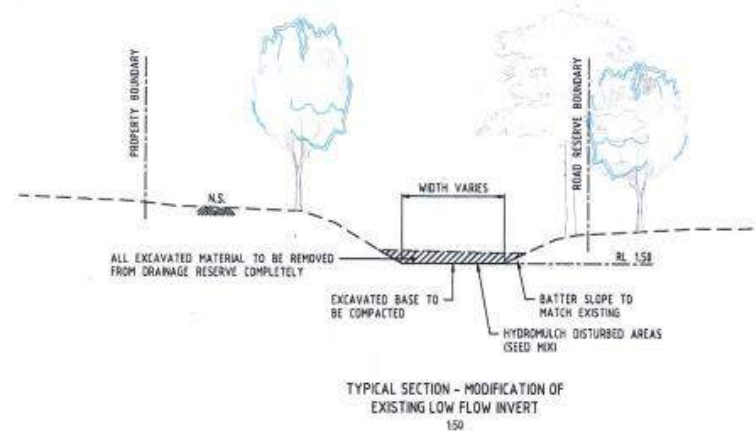
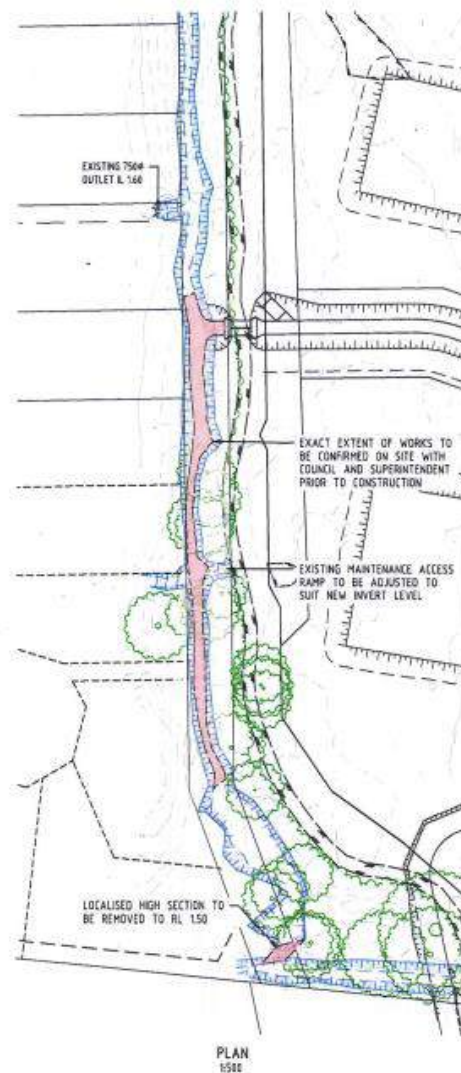
NTS

TITLE

ALLOTMENT BUILDING PADS

A1
FULL SIZEDRAWING NO.
4839-C10REVISION
A

SHEET 1 OF 15 SHEETS



LEGEND

- APPROXIMATE EXTENT OF CHANNEL IMPROVEMENT WORKS
- EXISTING LOW FLOW INVERT
- SIGNIFICANT TREES IDENTIFIED IN SITE SURVEY

NOTES

1. REFER DRAWING C02 FOR STANDARD NOTES.
2. NO TREES SHALL BE REMOVED FROM THE DRAINAGE RESERVE OR EXISTING ROAD RESERVE WITHOUT THE APPROVAL OF DOUGLAS SHIRE COUNCIL.

4839-C11 SUBMIT.dwg 1:4839-201804.dwg

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NOTES - EROSION & SEDIMENT CONTROL

- THIS EROSION AND SEDIMENT CONTROL PLAN DETAILS THE PRIMARY MEASURES THAT ARE TO BE CONSTRUCTED. THE CONTRACTOR SHALL AS A RESULT OF THE PROPOSED CONSTRUCTION SEQUENCING, INSTALL ANY ADDITIONAL MEASURES CONSIDERED NECESSARY TO LIMIT SOIL EROSION AND THE TRANSPORTATION OF SEDIMENT OFF THE PROPOSED SITE.
- NO EARTHWORKS SHALL COMMENCE ON ANY PART OF THE SITE PRIOR TO INSTALLING APPROPRIATE ESC MEASURES DOWNSTREAM OF THE SITE AND IN ACCORDANCE WITH THE APPROVED ESCP.
- ALL ACCESS TO AND FROM THE SITE SHALL BE VIA A TEMPORARY CONSTRUCTION ENTRY/EXIT. THE CONTRACTOR SHALL NOMINATE A PROPOSED ACCESS LOCATION ON THE ESC PLAN FOR APPROVAL BY THE SUPERINTENDENT.
- THE CONTRACTOR SHALL MAINTAIN AN ON-SITE DUST MANAGEMENT PROGRAM TO LIMIT TO THE TRANSPORTATION OF SEDIMENT, AND NUISANCE TO ADJOINING LAND OWNERS. CONTROL MEASURE MAY BE DONE BY ONE OR MORE OF THE FOLLOWING METHODS:
 - MAINTAINING MOIST SOIL CONDITIONS
 - CHEMICAL SEALANTS (SOIL BINDERS) PLACED OVER THE SOIL SURFACE
 - WIND BREAKS
 - RE-VEGETATING EXPOSED SURFACES
 - REMOVING TRAFFIC MOVEMENTS AND SPEEDS TO 145KM/H ON EXPOSED SURFACES
- STRIP TOPSOIL ONLY FROM CONSTRUCTION AREAS AND STOCKPILE ON SITE. STOCKPILES SHALL ONLY BE LOCATED AS SHOWN ON THE DRAWINGS OR AS APPROVED BY THE SUPERINTENDENT. ALL STOCKPILES MUST BE PROTECTED BY A CATCH DRAIN ALONG THE UPSTREAM SIDES AND SILT FENCES OR MULCH BANK ON THE DOWNSTREAM SIDES.
- TOPSOIL STRIPPED FROM THE SITE SHOULD BE RE-USED WHERE EVER POSSIBLE.
- ALL TEMPORARY EARTH STRUCTURES ARE TO BE MACHINE COMPACTED AND MAINTAINED.
- ALL PERMANENT AND TEMPORARY UNLINED SWALES AND DRAINS TO HAVE APPROPRIATE TEMPORARY EROSION PROTECTION.
- ALL PARTIALLY CONSTRUCTED DRAINAGE STRUCTURES TO BE PROTECTED AGAINST SEDIMENT INFILTRATION DURING CONSTRUCTION.
- ALL COMPLETED DRAINAGE STRUCTURES TO BE PROTECTED AGAINST SEDIMENT INFILTRATION UNTIL GRASSING IS ESTABLISHED.
- ALL KERBS MUST BE PROVIDED WITH TURF STRIPS IMMEDIATELY FOLLOWING TOPSOILING.
- ALL DISTURBED AREAS FLATTER THAN 1 ON 2 AND NOT UNDER ROAD PAVEMENT OR PATHWAY MUST BE TOPSOILED AND GRASS SEED. ALL DISTURBED AREAS 1 ON 2 OR STEEPER MUST BE TOPSOILED AND HYDROMULCHED.
- REHABILITATION AND RE-VEGETATION IS TO BE PROGRESSIVE THROUGHOUT THE PROJECT TO ENSURE THAT ALL DISTURBED AREAS ARE RE-VEGETATED AS SOON AS POSSIBLE FOLLOWING COMPLETION OF WORKS.
- ALL TEMPORARY ESC MEASURES TO REMAIN IN PLACE UNTIL ALL DISTURBED AREAS HAVE BEEN FULLY STABILISED OR RE-VEGETATED AND 80% VEGETATION COVER HAS BEEN ACHIEVED.
- ALL EROSION AND SEDIMENT CONTROLS MEASURES TO BE CHECKED FOR DAMAGE CLEANED OUT AND FULL REINSTATEMENT AFTER EACH RAINFALL EVENT RESULTING IN RUNOFF.
- A FORMAL COMPLIANCE AUDIT OF THE ESCP IS TO BE CONDUCTED AT SIX WEEKS INTERVALS DURING THE CONSTRUCTION PERIOD OF THE PROJECT.

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REV	DESCRIPTION	DATE	BY	CHKD	APPD	DATE
A	ISSUE FOR APPROVAL	01/01/2018				

ASSOCIATED CONSULTANTS

CLIENT / PROJECT

PORT PACIFIC ESTATE PTY LTD
PROPOSED SUBDIVISION OF
2 OASIS DRIVE, WONGA BEACH
LOT 2 ON SP258953

FLANAGAN CONSULTING GROUP
DEVELOPMENT CONSULTANTS • PROJECT MANAGERS • ENGINEERS • PLANNERS
DARWIN DARWIN MACKAY TOWNSVILLE
08 9451 8822 08 9451 8822 08 9451 8822
www.flanagancollaborative.com.au

DESIGNER	TITLE
IRM	EROSION & SEDIMENT CONTROL STRATEGY
DRAWN	DATE
IRM	4839-C13
SCALE	REVISION
NTS	A

Landscape Plans

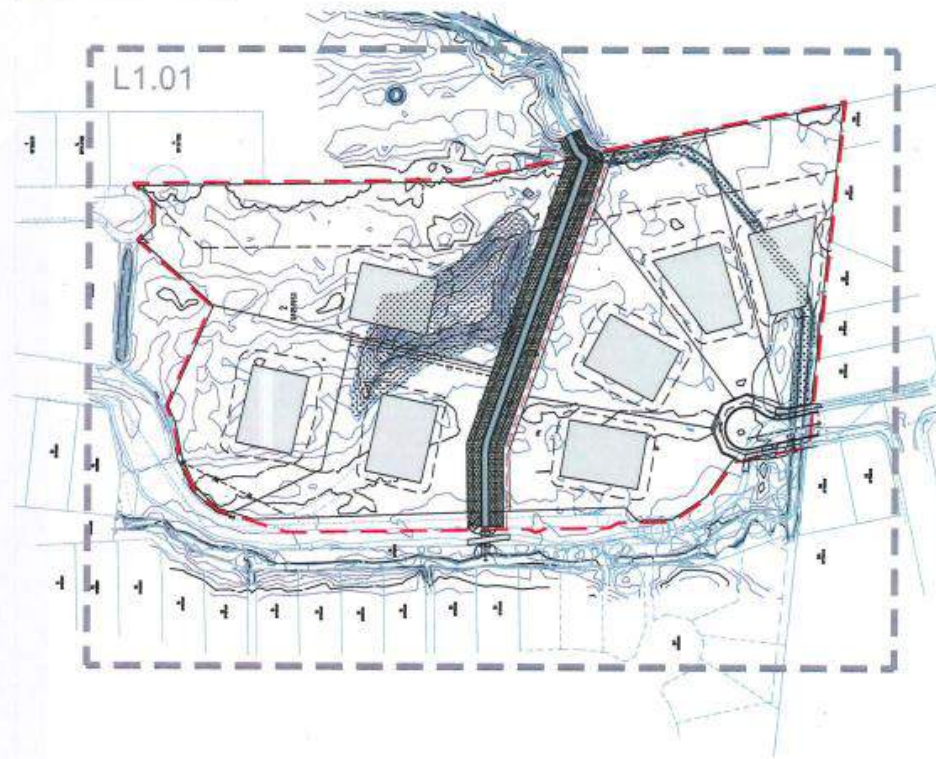
PROPOSED 7 LOT SUBDIVISION - WONGA BEACH

PORT PACIFIC ESTATES

LANDSCAPE DOCUMENTATION

Issue: OPERATIONAL WORKS
Date: 01-06-2018

SHEET PLAN 1:1000



DRAWING SCHEDULE		
DWG No.	DRAWING TITLE	ISS
101-003-C3-02.01	COVER SHEET	C3
101-003-C3-1.1.1	PLANTING PLAN 1 OF 1	C3
101-003-C3-1.2.1	DETAILS AND SPECIFICATION	C3

PLANT SPECIES		COUNTRY NAME	POTSDG	GLASS T
CODE	SPECIES			
MODULE A - Area 2002				
ATR1B	<i>ATROCACTUS</i> Steudel	Tucson Mountains	size 22	
ACQ1ten	<i>ACQUINA pendula</i>	Grand Lake Lily	size 22	
CM1Jr	<i>CMALIA</i> Isenhardt	Coniford	size 22	
CLJ1r	<i>CLUSTERTUS</i> Rafines	Western California	size 23	
EL1	<i>ELAEAGNUS</i>	Western Calif	size 23	
LO1m	<i>LOMONDA</i> Inghill	North East	size 23	
PHY1m	<i>PHYLLANTHUS</i> caudiflorus	Phil. Prudhom	size 23	
REJ1m	<i>REJIS</i> ventosa	Spain	size 22	
SCA1m	<i>SCARFUS</i> Isenhardt	East Africa	size 22	
SD1m	<i>SDOLPH</i> sp.	Spain	size 22	
PL1A	<i>PLANT</i>	Spain	size 22	
SA1m	<i>SALEP</i>	Spain	size 22	
MODULE B - Area 2003				
ARG1	<i>ARGENTHEM</i> grandifolius	Luxemburg Tree	size 16	
ARG1m	<i>ARGENTHEM</i> longi	Spain Tree	size 16	
ARC1m	<i>ARCHIDONIA</i>	Albania sp.	size 16	
ALL1B	<i>ALLIUM</i> bulbosum	Black Sea Tree	size 16	
ALL1m	<i>ALLIUM</i> bulbosum	Western Calif	size 16	
BAR1B	<i>BARBANTHUS</i> asiatica	Reich Sardinia	size 16	
BOM1m	<i>BOMBYX</i> rebe	Bombay	size 16	
BR1m	<i>BRACHYFONTEA</i> aculeata	Asia Tree	size 16	
BU1m	<i>BUCHNANIA</i> artemesia	Alania	size 16	
CA1m	<i>CALCEOLARIA</i>	Spain	size 15	
GL1m	<i>GLADIOLUS</i> Inghill	Spain Calcephyl	size 15	
CAS1m	<i>CASUARINA</i> aquilefolia	Reich Tree	size 16	
COR1m	<i>CORREA</i> aculeata	Reich Fungus	size 16	
CUP1m	<i>CUPRESSUS</i> emmenoides	Turkey	size 16	
ED1m	<i>EDONIA</i> subsericea	Reich Cherry	size 16	
MODULE C - Area 2004				
ARG1m	<i>ARGENTHEM</i> speciosum	Margrove Fan	size 16	
BAR1m	<i>BARBANTHUS</i> australe	Frederick Margrove	size 16	
CR1m	<i>CRIVIN</i> judicatus	Reich Lily	size 16	
DE1m	<i>DELINIA</i> sp.	Reich Beech	size 16	
DAW1m	<i>DAVIDSONIA</i>	Spain Gerania	size 16	
GR1m	<i>GRAPTOCLYPS</i> exaltatum	Spain	size 16	
PAN1m	<i>PANDANUS</i> indica	Thrust Calce Rose	size 16	

Take stock is to be planted promptly at 1.2m centers. The contractor shall review the plant schedule to ensure that drawings and schedules agree. Where significant detail discrepancies may exist as to the plant in the schedule, it is the contractor's responsibility to resolve immediately with the Landscape Architect and prior to planting order taking, signing work certificate or commencement of work.

GENERAL NOTES

1. Refer to Engineer's drawings for finished surface levels unless shown to Landmark drawings. Finish elevating levels to buildings and adjacent surfaces as shown or instructed by the superintendent. All new finished surfaces are to align full with existing surface levels.
2. Refer to Engineer's drawings for girth and end crosswise setting out, similar locations, parking and connecting to pavement, adjacent drains and stormwater inlets, and other details, lighting and hydraulic details.
3. Final setting for all drainage treatments to be confirmed on site by the Engineer.

UNDERGROUND SERVICES:

The locations of underground services are approximate only and their exact location should be determined on site, to guarantee a given list of existing services are shown.

TREE SETTING OUT PRINCIPLES

- 4.0m min. from electricity or telecommunications poles or pylons
- 7.2m min. from dwellings
- 4.0m min. from high-voltage transmission lines
- 3.0m from seawater pits
- 6.0 - 1.0m from back of lot
- 3.0m min. from driveway
- 10m min. from the face of the curb of the adjoining road

more

PLANS HAVE BEEN PREPARED WITHOUT ELECTRICAL DESIGN. TREE MAY NEED TO BE SITE LOCATED TO MEET PHOTIC REQUIREMENTS REGARDING LIGHT POLES.

IMPORTANT NOTE

This plan was prepared for the sole purpose of **INFORMING** ("Client") for the specific purpose of **DISCLOSURE**, **NOT** **CONFIDENTIAL** ("Purpose"). This plan is strictly limited to the Purpose and does not apply directly or indirectly and will not be used for any other application, purpose, use or matter. The plan is presented without the assumption of a duty of care to any other person (other than the Client) ("Third Party") and may not be relied on by Third Party.

c. Lempen LA relying on base and services information permitted to it by the Client or a Third Party which the base and services information is inaccurate, incomplete, incorrect, out-of-date or unreasonable;

4. The Client or any Third Party not verifying information in this plan where recommended by Landpoint LA, lodgement of this plan with any local authority against the recommendation of Landpoint LA: the accuracy, reliability, suitability or completeness of any estimates or recommendations made be referred to by Landpoint LA in this plan. Without limiting paragraph 1 or 2 above, this plan may not be copied, distributed, or reproduced by any process where this title is clearly displayed on the plan. The information, estimates and recommendations are for the use and benefit of the client and are not to be used for any other purpose or for any other use shown on this plan and are not to be used in any way. Some sources are correct for the original plan and any copies of this plan should be verified by checking against the SAR CAN. Customer boundaries are obtained by the client and are not to be used for any other purpose. All dimensions and distances from existing cadastral map.

These footcandle have not been verified and are approximate only. Landscape LA will not be liable (in negligence or otherwise) for any direct or indirect loss, damage, liability or claim arising out of or incidental to Landscape LA's lighting design services provided to or by XXXXXXXXXX where the above information is false, incomplete, inaccurate, omitted and/or unreasonable. Landscape LA will not be liable (in negligence or otherwise) for any direct or indirect loss, damage, liability or claim arising out of or incidental to Landscape LA's lighting on building interiors as provided to or by XXXXXXXXXX where the building information is incorrect, incomplete, inaccurate, omitted and/or unreasonable. Refer to CBE Engineering's drawings for floor surface loads unless shown on Landscape drawings. Refer existing loads in buildings and adjacent surface areas where instructed by the Landscape Architect. All new indoor loads shall be added to each wall and surface area. Refer to CBE Engineering's drawings for path and road crosswalk setting out.

Refer to L&L Engineer's drawings for service locations. All services are to be verified on site prior to any excavation/ construction. There is to be a minimum 1' from services. All services are inclusive only.

Final set-out for all landscape treatments to be furnished on site by the Landscape Architect.

Unless shown on the landscape drawings, refer to Structural Engineer's drawings for joining, reinforcement, structural fixings etc for all walls and pavements.

All trees marked with a 'd' adjacent to roadside signposts are to be set out on site prior to installation and approved by the Landscape Architect and Traffic Engineer.

For Lighting requirements refer Electrical Engineers drawings.

The contractor shall review the plant schedule to ensure that seedlings and schedules occur. Where insufficient detail or discrepancies may exist on either the plans or the schedule, it is the contractor's responsibility to resolve immediately with the Landscape Architect and prior to providing tender pricing, signing work contracts or commencement of work.

100

22	REVENUE FROM FINANCIAL INVESTMENTS	15,000,000.00	100
		15,000,000.00	100

01	VIDEOS FOR SPECIAL VIDEOS	12/04/2016	04
02	PROBATION	06/05/2016	01
03	PROBATION	02/06	02/06



LANDPLAN
LANDSCAPE ARCHITECTURE

PORT PACIFIC ESTATES


PROPOSED 7 LOT SUBDIVISION - WONGA BEACH

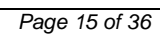
LANDSCAPE COVER SHEET

scale
1:1000



07/13/2018	0	500	200	200	400	500
Event	Approved	Date				
S.H.	S.M.	01/06/2018				

project number	1802-005	investigator	
drawing number		date	



SPECIFICATIONS

SCOPE OF WORK

The work includes the organisation for and supply of all relevant labour, materials, plant and equipment as required to execute the works.

The scope of work includes but is not limited to the following:

- Trimming of areas to be landscaped;
- Removal of deleterious material;
- Cultivation;
- Supply and spreading of additives;
- Supply and installation of imported topsoil;
- Supply and installation of mulch;
- Planting; and
- Maintenance.

WORKS BY OTHERS

- All hard pavement
- Retaining walls
- All fencing types
- Subsoil drainage

EARTHWORKS

Earthworks shall involve the removal of existing compacted material, the cultivation of subsoil, the supply and mixing in of additives, the supply and spreading of topsoil and the fine grading of such soil and existing soil profiles to all landscaped areas to form the finished levels and profiles. Finished surfaces shall finish flush with adjacent surfaces.

Preparation

Eradicate all weeds using environmentally acceptable methods, such as non-residual glyphosate herbicide in any of its registered formulae, at the recommended maximum rate.

Maintain all areas in a weed free state for the duration of the contract and Plant Establishment periods.

Cultivation

Excavate and remove from site compacted fill resulting from the building works. Cultivate all planting and turf areas to a depth of 150mm and place 100g/m² of Blood and Bone and 100g/m² of Gypsum.

IMPORTED TOPSOIL (FOR PLANTING)

Import and spread premium topsoil mix. Soil shall be free of weeds, sticks, rocks and other deleterious matter. Imported topsoil is to comply with AS4419.

MULCH

Mulch to be spread evenly across all planting areas. Mulch to planting areas shall be approved rainforest mulch free of soil, stones, weeds, rubbish or any other deleterious materials. Spread mulch to garden bed areas to a depth of 75mm, to finish 20mm below adjacent surfaces. Keep mulch clear of plant stems. Spread mulch following planting and watering in. Avoid mixing of soil and mulch materials. Do not use recycled garden mulch. Mulch to comply with AS4454.

HYDRO MULCH

Material: Hydromulch in accordance with FNRORC S8.05 specification

Application: apply mulch to batters prior to turfing

Location: Swale Batters

PLANTING AREAS

Finished soil depth to all garden areas shall be 300mm crowned towards centre of beds ensuring positive falls to drainage structures. Use 'Agriform' 10g fertilizer tablets (or approved equivalent) to base of all plant root balls at manufacturer's recommended rate.

PLANTS

Provide plants with the following characteristics:

- Large healthy root systems, with no evidence of root cut, restriction or damage;
- Vigorous well-established stock free from pests and diseases, of good form consistent with the pot size, species or variety;
- Hardened off, not soft or forced, and suitable for planting in the natural climatic conditions prevailing at the site.

Label at least one plant from each species in a batch with a durable, readable tag. Plant stock immediately after it is delivered to site. For all plant stock excavate a hole twice the diameter of the rootball and at least 200mm deeper than the rootball. Loosen compacted sides and base of holes to prevent confinement of root growth. Fill all holes to half deep with water in advance of planting, allowing time for water to soak away. After planting, fill hole with amended imported soils.

STAKES AND TIES

At least 45L stock and larger are to be staked and tied.

GRASS AREAS

Refer Civil Engineers Specifications.

SWALE TURF STRIP

Extent of turf limited to areas disturbed by building construction and shall be cultivated to 150mm depth.

Mix 1 kg/m² 'Terre Firma Organic LHR' to topsoil. Turf shall be Broad Leaf Buffalo - Axonopus compressus

Carry out fine grading of improved soil to all landscaped areas to form finished levels with falls to edges or kerbs as required, to ensure drainage of surface water to the street.

CONDUITS

The contractor is responsible for co-ordination with the building contractor to ensure that conduits under proposed paved or concreted areas have been installed. Conduits for irrigation purposes shall be 90mm PVC pipe - top min. 250mm below finished surface levels.

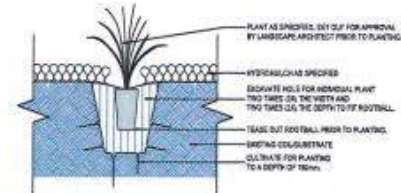
PLANTING ESTABLISHMENT

Establish and maintain the works for a period of thirteen (13) weeks from the Date of Practical Completion.

Establishment shall include the care of the contract areas by accepted horticultural practices, as well as rectifying any defects that become apparent in the works under normal 'use'. This shall include, but not be limited to, the following works:

- Repair and/or replace any defects due to failure and/or inferior quality materials and/or workmanship;
- Replace plants that have failed and/or have been damaged or died;
- Weed and pest control;
- Maintain all landscape areas in a neat and tidy condition at all times;
- Maintain fertilising and pruning as required;
- Check and adjust levels to attain those specified by addition or removal of mulch and/or topsoil.

All planted beds are to be weeded to maintain same in a grass and weed free environment. Carry out any other work that is specified or is necessary to establish the landscape works in a first class condition.



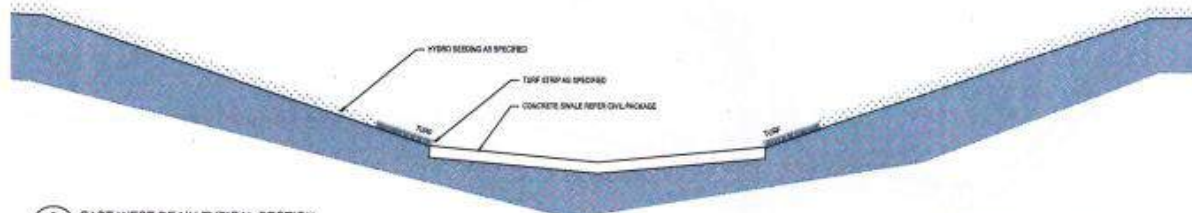
01 PT1 PLANTING

SCALE 1:10



02 TYPICAL MODULES

SCALE 1:100



03 EAST-WEST DRAIN TYPICAL SECTION

SCALE 1:10

NO.	DESCRIPTION	DATE	BY
01	REVISED FOR DESIGN WORK	01/06/2018	SM
02	REVISED FOR DESIGN WORK	01/06/2018	SM
03	REVISED FOR DESIGN WORK	01/06/2018	SM



2nd Floor, 100/101, 102/103, 104/105, 106/107, 108/109, 110/111, 112/113, 114/115, 116/117, 118/119, 120/121, 122/123, 124/125, 126/127, 128/129, 130/131, 132/133, 134/135, 136/137, 138/139, 140/141, 142/143, 144/145, 146/147, 148/149, 150/151, 152/153, 154/155, 156/157, 158/159, 160/161, 162/163, 164/165, 166/167, 168/169, 170/171, 172/173, 174/175, 176/177, 178/179, 180/181, 182/183, 184/185, 186/187, 188/189, 190/191, 192/193, 194/195, 196/197, 198/199, 200/201, 202/203, 204/205, 206/207, 208/209, 210/211, 212/213, 214/215, 216/217, 218/219, 220/221, 222/223, 224/225, 226/227, 228/229, 230/231, 232/233, 234/235, 236/237, 238/239, 240/241, 242/243, 244/245, 246/247, 248/249, 250/251, 252/253, 254/255, 256/257, 258/259, 260/261, 262/263, 264/265, 266/267, 268/269, 270/271, 272/273, 274/275, 276/277, 278/279, 280/281, 282/283, 284/285, 286/287, 288/289, 290/291, 292/293, 294/295, 296/297, 298/299, 300/301, 302/303, 304/305, 306/307, 308/309, 310/311, 312/313, 314/315, 316/317, 318/319, 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PART 1B—STANDARD CONDITIONS

General

1. The proposed works are permitted subject to any alterations:
 - a. found necessary by Chief Executive Officer at the time of examination of Engineering drawings or during construction of the works because of particular engineering requirements and.
 - b. to ensure the works comply in all respects with the requirements of the *FNQROC Development Manual* and good engineering practice; and
 - c. to comply with project specific conditions and the following standard conditions of approval.

All works must be carried out in accordance with the approved plans, conditions and specifications, to the requirements and satisfaction of the Chief Executive Officer.

2. The conditions of any Reconfiguration of Lot or Material Change of Use permits applicable to the subject lot or lots shall be complied with in conjunction with this development permit.
3. Council's examination of the documents should not be taken to mean that the documents have been checked in detail and Council takes no responsibility for their accuracy. If during construction, inadequacies of the design are discovered, it is the responsibility of the Principal Consulting Engineer to resubmit amended plans to Council for approval and rectify works accordingly.
4. Notwithstanding any approval given to engineering documents, where a discrepancy occurs between these documents and Council's standards, then Council's standards shall apply. All works must be performed in accordance with Council standards and Local Laws and other statutory requirements.
5. If in fact there are errors, omissions or insufficient detail on the plans for the purpose of construction, these deficiencies shall be made good during construction and Council reserves the right to withhold approval of construction until such deficiencies are made good to its satisfaction.
6. Work and or Technical Documents identified within these Development Approval Conditions require Council approval prior to granting Early Plan Sealing or Plan Sealing of a Subdivision Plan or the issue of a Works Acceptance Certificate, whichever occurs first.

Timing of Effect

7. The conditions of this development permit must be effected prior to the approval and dating of the survey plan, except where specified otherwise in these conditions of approval, or at Council's discretion.

Easement Documentation

8. Easement documents are to be submitted to Council's solicitors for checking in accordance with the conditions of the Reconfiguration Development Permit. Contact Council for current nominated solicitors details.

Portable Long Service Leave Notification

9. As per the QLeave – Building and Construction Industry Authority Guidelines, if the works are over \$150 000, Council must sight a copy of the receipted Portable Long Service Notification and Payment form prior to commencement of work.

Construction Security Bond

10. Lodgement of Construction Security Bond as per the *FNQROC Development Manual*, Section CP1.07, (ie, five (5) per cent of the value of the works) is required, prior to commencement of work. The bond shall be in favour of Council and in the format of cash or an unconditional bank guarantee, which must cover all aspects of the construction and have no termination date.

Third Party Agreement

11. The developer must obtain written agreement from third parties and/or Referral Agencies for any works proposed on adjacent properties. The agreement(s) must be provided prior to the associated works commencing on site. All agreements must be available for Council scrutiny, upon request.

Commencement of Works

12. Council is to receive written Notice of Intention to Commence Works and all matters relevant to the Pre-Start meeting are to be attended to in accordance with Section CP1.07, CP1.08 and Section CP1.09, of the *FNQROC Development Manual*.

Hours of Work

13. Work involving the operation of construction plant and equipment of any description, shall only be carried out on site during the following times:
 - a. 7:00 am to 6:00 pm, Monday to Friday;
 - b. 7:00 am to 1:00 pm, Saturdays; and
 - c. no work is permitted on Sundays or Public Holidays.

Any variations to the above working hours must be authorised by the Chief Executive Officer, prior to the commencement of such works.

Public Notification of the Works

14. The developer or the nominated representative must provide:
 - a. Public notification of the development in local newspapers in accordance with Section CP1.11 of the *FNQROC Development Manual*.
 - b. Signage identifying the location of the project, general allotment layout, contact numbers (including out-of-office hours emergency numbers) must be provided at all entrance points to the development. All signage must be appropriately positioned, prior to the commencement of any works on the site.

Site Inspections

15. Council requires a number of major inspections to be completed as Witness and Hold Points for Consulting Engineers and Council officers during the construction of the works. Inspections undertaken during construction shall be in accordance with Section CP1.16 (Inspection and Testing) of the *FNQROC Development Manual*. These Witness and Hold points are to be included in the contractors Inspection and Test Plan (ITP) and be made available for inspection, prior to the commencement of any works on the site.

Soil and Water Management

16. All works must be in accordance with Section CP1.13 and D5 of the *FNQROC Development Manual*, and must comply with the following:
- a. A copy of the contractor's Erosion and Sediment Control (ESC) Plan is to be submitted to Council and endorsed by the Consulting Engineer, prior to commencement of any works. In particular, the ESC Plan must address the Institution of Engineers' Australia *Guidelines for Soil Erosion and Sediment Control and the Environment Protection (Water) Policy* and Clauses CP1.06, CP1.13 and D5.10 of Council's *FNQROC Development Manual*. The ESC Plan must be relevant to all phases of the construction and be updated where necessary as works progress.
 - b. Any dewatering activities will require approval from Council's Environmental Protection Unit, telephone number 07 4099 9475 and a valid permit obtained prior to commencement.
 - c. During the construction period, the Consulting Engineer shall randomly audit and inspect ESC measures for compliance with the Engineer endorsed contractor's ESC Plan, derived from the Engineer's ESC Strategy (As per *FNQROC Development Manual* CP1 Appendix A).
 - d. It is the contractor's responsibility to ensure that the ESC Plan is updated and amended to reflect any changes in the construction methodology. All such amendments shall be approved by the Engineer and presented to Council.
 - e. The developer shall be held responsible for any rectification works required to clean up dust, pollutants and sediments that may leave the site as a result of construction activities.
 - f. The developer or their representative shall be responsible for communicating with third parties affected by any dust, pollutants or sediment leaving the site as a result of any construction activity that is associated with the project site.

Street Lighting

17. The provision of street lighting is to be in accordance with the *FNQROC Development Manual* D8 and designed to comply with the Road Lighting Standard AS/NZS 1158, a compliance certificate that has been certified by an appropriate Registered Professional Engineer of Queensland (RPEQ) must be provided to demonstrate the lighting design complies to the requirements of the Road Lighting Standard AS/NZS 1158. New street lighting is to be erected as a Rate 2 public lighting installation, Rate 1 will only be considered where an overhead electricity reticulation exists:
- a. Lighting columns, luminaires and lamps are to be of a type specified in Ergon Energy's *Lighting Construction Manual*, unless approved otherwise by Council.
 - b. The applicable lighting category for roads associated with this project having a road hierarchy of residential access and above is identified in Table D8.1 of the *FNQROC Development Manual*.
 - c. Local Area Traffic Management (LATM) devices including roundabouts, must be provided with an illumination of not less than 3.5 Lux as specified in the Road Lighting Standard AS/NZS 1158.
 - d. Street lighting located adjacent to the development frontage must be located behind the kerb (usually a minimum of 820 mm from the invert of the kerb) and spaced to meet the required lighting category for the road.

Infrastructure Plans for Utility Services

18. Approved infrastructure plans for gas, electrical and telecommunications services must be endorsed by Council, prior to the commencement of associated works.

Landscaping General

19. Landscaping shall be provided in accordance with Part D9 and Part S8 of the *FNQROC Development Manual*, unless approved otherwise by Council.
20. The landscaping works must be constructed in accordance with the approved plans and conditions. The developer must seek approval in writing from the Council for any changes to the plan or the landscaping works on the site. This approval must be obtained prior to commencement of these works on site.
21. The landscape must be maintained in good order by the developer for at least three (3) months during the Works Acceptance period, and generally timed to coincide with the Final Works Acceptance Inspection, when all landscaping works must be in a condition suitable for Council to commence regular maintenance.

Trees

22. Any trees must be planted and staked in accordance with the *FNQROC Development Manual* drawing S4210, with root barriers installed such that they are just visible at the finished surface level. Note that where footpaths are to be provided, a root barrier must also be provided between the tree and the path. Root barriers must be installed and appropriate topsoil, level of compaction and drainage provided, as specified by the manufacturer.
23. Street tree planting locations must be in compliance with *FNQROC Development Manual* D9.07.6 'Alignment and placement of Street Trees'. Trees shall be positioned a minimum of:
 - a. 7.5 metres from streetlights;
 - b. two (2) metres from the inlet or outlet of stormwater pipes;
 - c. three (3) metres from any driveways;
 - d. ten (10) metres back from the apex of both boundaries of a corner lot;
 - e. 0.8 metres – one (1) metres from the back of kerbs.
24. All trees must be watered directly after planting and prior to laying mulch. The mulch must be left clear of the trunk and be laid in accordance with *FNQROC Development Manual* drawing S4210 and S8.14, at a radius of 0.5 metre around the base of the tree and out to the back of kerb.
25. All trees must be of good vigour and health and must not be root-bound at the time of planting. They should be approximately 1.5 metres – two (2) metres tall with well-established root and branch formation. Trees should have a clear dominant central leader.
26. A joint site inspection is to be held with Council officers and developer's representative to assess the general condition of any existing trees and shrubs within six (6) metres of any property boundary abutting the road reserve, or other Council land. If any dead, dying or dangerous trees are identified during the meeting, with the landowner's consent, they are to be removed to the satisfaction of Council officers, prior to the sealing of plans for the associated lot.
27. Any trees identified on drawings to be retained, are to be protected in accordance with approved plans. This must include, but is not limited to, the erection and continued maintenance of suitable

physical barrier(s) placed around the tree to protect the tree and the root system. Additional protection of tree trunks by the fixing of timber planks using wire loops is also required unless approved otherwise by Council. Any damage caused to nominated trees as a result of construction activity, will require inspection by Council and will require a specified number of suitable replacements trees of suitable maturity to be provided to replace the loss in amenity.

Verges

28. All verges are to be covered full-width with topsoil (AS 4419/Soils for Landscaping and Garden Use) to a depth of not less than 40 mm, lightly compacted and grassed in accordance with Council's Guidelines and Specifications.
29. Any island beds or any shrub beds must have a permanent irrigation system installed, which must be connected to the Douglas Water Network. An Application for a Water Service Connection must be presented to Douglas Water & Waste to facilitate the connection, and must include the installation of a flow meter and associated valves.
30. All water reticulation, including permanent irrigation systems, are to be identified in as-constructed plans which must be submitted to Council for approval prior to the Works Acceptance (On Maintenance) meeting for landscaping.

Structures and Retaining Walls

31. Separate building certification and/or structural certification is required for any works to alter existing structures, provide new structures or construct retaining walls that are over 900 mm high. Certification by a suitably qualified engineer must be provided, prior to opening the work site to the public.

The Location of Stormwater Quality Interception Devices (SQIDs)

32. Council must approve the location of any SQIDs prior to installation. They shall be positioned to allow for economic and efficient maintenance operations, and will require a reinforced concrete hard standing area to be provided from the edge of the carriageway to the SQID location. Vehicular access from the public road reserve to the SQID must remain unrestricted.

Sewer and Water

33. All water and sewerage works must be in accordance with Sections D6 and D7 of the *FNQROC Development Manual*, and must comply with the following:
 - a. Douglas Shire Council requires a minimum of five (5) working days notice of intention to commence water and sewerage related works. The notice shall be given to the Senior Plumbing Inspector at Douglas Shire Council either in writing, by telephone 07 4099 9479, fax 07 4098 2902 or email to enquiries@douglas.qld.gov.au prior to the commencement of works.
 - b. The developer shall be responsible for confirming the location of all existing sewer, water and utility service infrastructure prior to the commencement of works on site. Any permits necessary to alter/interfere with such services must be obtained prior to the commencement of work and be available for Council inspection if required.
 - c. Any works over or within the zone of influence of Council's existing water and sewerage infrastructure must be approved by Douglas Shire Council prior to the commencement of the proposed works. Unless otherwise approved in writing, existing infrastructure impacted by the development shall be subject to the maintenance period provisions contained in this Decision Notice.

Construction works shall include any works that may impact on existing infrastructure such as, but not limited to, mobilisation of heavy earthmoving equipment, stripping and grubbing, site filling, stockpiling of materials and installation of erosion and sediment control measures.

- d. All testing and acceptance of water and sewerage works shall be in accordance with CP1 Construction Procedures of the *FNQROC Development Manual*. Works are to be certified as acceptable by Douglas Water & Waste, and any operating manuals etc be provided to Council, prior to making an application for the acceptance of the works.

Sewer

- 34. Douglas Water & Waste must be contacted to perform any direct connection to live sewer mains. Unless otherwise approved in writing, separate applications for approval on the prescribed forms shall be made to Douglas Water & Waste for each connection together with payment of the relevant fee. All connections are to be provided subject to the terms and conditions of Douglas Shire Council's 'Application for Plumbing Works'.
 - a. Amended drawings in accordance with these conditions must be approved prior to the pre-start meeting.
 - b. The Inspection and Test Plan (ITP) must be approved prior to the pre-start meeting. At project completion the completed and validated ITP must be submitted and approved prior to the issue of a Works Acceptance Certificate.
 - c. Where retaining walls are located within the zone of influence of a sewer the footings must be 1000 mm clear of the sewer and designed in accordance with the *Queensland Development Code*. Full design details and structural certification must be approved prior to commencement of works.
 - d. Minimum clearances between sewer mains and other services must be in accordance with the *Sewerage Code of Australia*. Clearances must be included on the long-section drawing.
 - e. Where a manhole is located in a batter, a flat area of 1.5 metres radius from the centre of the manhole must be provided. Where the manhole is located along a side or rear boundary and is on the 0.8 metre standard alignment then the flat area must be on at least three (3) sides.
 - f. Where an easement is required the property connection branch must be extended at least one (1) metre from the easement boundary.
 - g. House drains are to extend one (1) metre past the end of the driveway on hatchet blocks and 1.5 metres beyond the top of batters. An I.O. is to be provided at the downstream end of the house drain within one (1) metre of the boundary to delineate the end of the property connection branch.
 - h. As-constructed sewerage drawings must be approved prior to granting of Early Plan Sealing or Issue of a Works Acceptance Certificate whichever occurs first. The as-constructed submission is to include the 'Statement of Compliance – As-constructed Documentation' and must be the final issue.

Water

- 35. Douglas Shire Council must be contacted to perform any direct connection to live water mains whether being as a permanent connection, a connection for irrigation purposes or for construction water. Unless otherwise approved in writing, separate applications on the prescribed forms shall

be made to Douglas Shire Council for connections, together with payment of the relevant fee. All connections are to be provided subject to the terms and conditions of Douglas Shire Council's 'Application for a Water Service Connection'.

- a. Amended drawings in accordance with these conditions must be approved prior to the pre-start meeting.
- b. The Inspection and Test Plan (ITP) must be approved prior to the pre-start meeting. At project completion the completed and validated ITP must be submitted and approved prior to the issue of a Works Acceptance Certificate.
- c. Minimum clearances between water mains and other services must be in accordance with the *Water Supply Code of Australia* in particular the minimum clearance between water mains and sewer mains must be 500 mm with the sewer under the water main.
- d. As-constructed water drawings must be approved prior to Issue of a Works Acceptance Certificate. The as-constructed submission is to include the 'Statement of Compliance – As-constructed Documentation' and must be the final issue.

Roads and Footpaths

36. All works are to be designed and constructed in accordance with AS 1428.1-2001: '*Design for access and mobility*' – General requirements for access – New building work, and associated standard AS/NZS 1428.4 2002, '*Design for Access and Mobility*' – Tactile Indicators. The design is required to provide equal access for people with disability and include the provision of suitable ramps and landing areas and the installation of Tactile Ground Surface Indicators (TGSIs) where required.

Cultural Heritage

37. The *Aboriginal Cultural Heritage Act 2003* (the Act) seeks to protect artefacts and cultural sites that are of significance to Aboriginal people. The Act requires anyone carrying out an activity to exercise a Duty of Care. Guidelines have been produced to enable assessment of sites under the Act. These are available from Department of Environment Heritage Protection and can be downloaded from their website at www.ehp.qld.gov.au. The work identified in the project documentation is likely to require assessment of the site under the Act.

SCHEDULE 2 – PLANNING ACT EXTRACT ON APPEAL RIGHTS

CHAPTER 6, 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 any other appeal—20 business days after a notice of the decision for the matter, including an enforcement notice, is given to the person.
- Note — See the P&E Court Act for the court's power to extend the appeal period.*
- (4) Each respondent and co-respondent for an appeal may be heard in the appeal.
- (5) If an appeal is only about a referral agency's response, the assessment manager may apply to the tribunal or P&E Court to withdraw from the appeal.
- (6) To remove any doubt, it is declared that an appeal against an infrastructure charges notice must not be about—
- (a) the adopted charge itself; or
 - (b) for a decision about an offset or refund—
 - (i) the establishment cost of trunk infrastructure identified in a LGIP; or
 - (ii) the cost of infrastructure decided using the method included in the local government's charges resolution.

230 Notice of appeal

- (1) An appellant starts an appeal by lodging, with the registrar of the tribunal or P&E Court, a notice of appeal that—
- (a) is in the approved form; and
 - (b) succinctly states the grounds of the appeal.
- (2) The notice of appeal must be accompanied by the required fee.

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

SCHEDULE 1 APPEALS

1 Appeal rights and parties to appeals

- (1) Table 1 states the matters that may be appealed to—
 - (a) the P&E court; or
 - (b) a tribunal.
- (2) However, table 1 applies to a tribunal only if the matter involves—
 - (a) the refusal, or deemed refusal of a development application, for—
 - (i) a material change of use for a classified building; or
 - (ii) operational work associated with building work, a retaining wall, or a tennis court; or
 - (b) a provision of a development approval for—
 - (i) a material change of use for a classified building; or
 - (ii) operational work associated with building work, a retaining wall, or a tennis court; or
 - (c) if a development permit was applied for—the decision to give a preliminary approval for—
 - (i) a material change of use for a classified building; or
 - (ii) operational work associated with building work, a retaining wall, or a tennis court; or
 - (d) a development condition if—
 - (i) the development approval is only for a material change of use that involves the use of a building classified under the Building Code as a class 2 building; and
 - (ii) the building is, or is proposed to be, not more than 3 storeys; and
 - (iii) the proposed development is for not more than 60 sole-occupancy units; or
 - (e) a decision for, or a deemed refusal of, an extension application for a development approval that is only for a material change of use of a classified building; or
 - (f) a decision for, or a deemed refusal of, a change application for a development approval that is only for a material change of use of a classified building; or
 - (g) a matter under this Act, to the extent the matter relates to—

- (i) the Building Act, other than a matter under that Act that may or must be decided by the Queensland Building and Construction Commission; or
 - (ii) the Plumbing and Drainage Act, part 4 or 5; or
 - (h) a decision to give an enforcement notice in relation to a matter under paragraphs (a) to (g); or
 - (i) a decision to give an infrastructure charges notice; or
 - (j) the refusal, or deemed refusal, of a conversion application; or
 - (k) a matter that, under another Act, may be appealed to the tribunal; or
 - (l) a matter prescribed by regulation.
- (3) Also, table 1 does not apply to a tribunal if the matter involves—
- (a) for a matter in subsection (2)(a) to (d)—
 - (i) a development approval for which the development application required impact assessment; and
 - (ii) a development approval in relation to which the assessment manager received a properly made submission for the development application; or
 - (b) a provision of a development approval about the identification or inclusion, under a variation approval, of a matter for the development.
- (4) Table 2 states the matters that may be appealed only to the P&E Court.
- (5) Table 3 states the matters that may be appealed only to the tribunal.
- (6) In each table—
- (a) column 1 states the appellant in the appeal; and
 - (b) column 2 states the respondent in the appeal; and
 - (c) column 3 states the co-respondent (if any) in the appeal; and
 - (d) column 4 states the co-respondents by election (if any) in the appeal.
- (7) If the chief executive receives a notice of appeal under section 230(3)(f), the chief executive may elect to be a co-respondent in the appeal.

Extract of Schedule 1 of the Planning Act 2016

Table 1 Appeals to the P&E Court and, for certain matters, to a tribunal			
1. Development applications An appeal may be made against— <ul style="list-style-type: none"> (a) the refusal of all or part of the development application; or (b) the deemed refusal of the development application; or (c) a provision of the development approval; or (d) if a development permit was applied for—the decision to give a preliminary approval. 			
Column 1 Appellant	Column 2 Respondent	Column 3 Co-respondent (if any)	Column 4 Co-respondent by election (if any)
The applicant	The assessment manager	If the appeal is about a concurrence agency's referral response—the concurrence agency	1 A concurrence agency that is not a co-respondent 2 If a chosen assessment manager is the respondent—the prescribed assessment manager 3 Any eligible advice agency for the application 4 Any eligible submitter for the application

Table 2
Appeals to the P&E Court only

<p>2. Eligible submitter appeals</p> <p>An appeal may be made against the decision to give a development approval, or an approval for a change application, to the extent that the decision relates to—</p> <p>(a) any part of the development application for the development approval that required impact assessment; or</p> <p>(b) a variation request.</p>			
Column 1 Appellant	Column 2 Respondent	Column 3 Co-respondent (if any)	Column 4 Co-respondent by election (if any)
<p>1 For a development application—an eligible submitter for the development application</p> <p>2 For a change application—an eligible submitter for the change application</p>	<p>1 For a development application—the assessment manager</p> <p>2 For a change application—the responsible entity</p>	<p>1 The applicant</p> <p>2 If the appeal is about a concurrence agency's referral response—the concurrence agency</p>	<p>Another eligible submitter for the application</p>
<p>3. Eligible submitter and eligible advice agency appeals</p> <p>An appeal may be made against a provision of a development approval, or failure to include a provision in the development approval, to the extent the matter relates to—</p> <p>(a) any part of the development application or the change application, for the development approval, that required impact assessment; or</p> <p>(b) a variation request.</p>			
Column 1 Appellant	Column 2 Respondent	Column 3 Co-respondent (if any)	Column 4 Co-respondent by election (if any)
<p>1 For a development application—an eligible submitter for the development application</p> <p>2 For a change application—an eligible submitter for the change application</p> <p>3 An eligible advice agency for the development application or change application</p>	<p>1 For a development application—the assessment manager</p> <p>2 For a change application—the responsible entity</p>	<p>1 The applicant</p> <p>2 If the appeal is about a concurrence agency's referral response—the concurrence agency</p>	<p>Another eligible submitter for the application</p>

Note:

Attached is a Rights of Appeal Waiver form (Schedule 3). Please complete and return this form if you are satisfied with the approval and agree to the conditions contained therein and you wish to waive the 20 day appeal period available under the *Planning Act 2016*