

17 December 2019

**Enquiries:** Neil Beck  
**Our Ref:** OP 2019\_3370/1 (932112)  
**Your Ref:** Q184103

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Port Douglas Land Developments Pty Ltd  
C/- Cardno (Qld) Pty Ltd  
PO Box 1619  
CAIRNS QLD 4870

**Email:** Maurice.sheehan@cardno.com.au

Dear Sir

**INFORMATION REQUEST**  
**(Given under Section 12 of the Development Assessment Rules)**

Thank you for your development application for the following premises received on 14 November 2019.

**Applicant Details**

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**Name:** Port Douglas Land Developments Pty Ltd  
**Postal Address:** C/- Cardno (Qld) Pty Ltd  
PO Box 1619  
CAIRNS QLD 4870  
**Email:** or etp@etp.co.nz

**Property Details**

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**Street Address:** Captain Cook Highway CRAIGLIE  
**Real Property Description:** LOT: 2 TYP: SR PLN: 431  
**Local Government Area:** Douglas Shire Council

**Application Details**

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**Application Number:** OP 2019\_3370/1  
**Approval Sought:** Development Permit  
**Nature of Development Proposed:** Operational Works  
**Description of the Development Proposed:** Operational Works (Stage 1A & 1B Craiglie Subdivision)

## Additional Information Requested

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The following additional information is requested in order to complete an assessment of the application:

### Earthworks

1. During the pre-lodgement and design phase meetings, there was no discussion regarding the proposed 30,000m<sup>3</sup> of cut from this stage. Justification for the high volume of cut is required given no approvals exist over the proposed filling areas. It is also noted that the proposed cut profile compromises the road grades and stormwater (surface flow) capacity. Council Officers are not supportive of the design in its current form.
2. Part of the proposed fill area is on road reserve. As there is no tenure over the road reserves, plans are to be amended to exclude filling of these areas.
3. Part of the filling is proposed on lots that are not the subject of the application. Please remove the fill from these lots or provide a new application with the lots nominated in the application.

### Roadworks

4. Significant sections of the proposed road have grades less than the 0.5% minimum grade nominated in the FNQROC Development Manual. Council does not support the reduced grades. It is noted that by reducing the extent of cut at the western ends of the road the road grades could be increased and provide improved drainage and maintenance outcomes.

Amended drawings are to be submitted with all roads meeting or exceeding the minimum road grade of 0.5%.

Verge widths are to be in accordance with the FNQROC Development Manual. Particular attention should be made to verge widths adjacent truncations of lot boundaries (i.e. Lot 8 at intersection of Roads 2 & 5).

### Stormwater

5. The proposed filling is not consistent with the extent modelled in the advice to Council under cover of letter dated 12 April 2019 - Cardno Reference: Q184103 L003 01.  
  
Confirmation is required that the proposed filling will not have a detrimental drainage impact on adjoining landowners. The advice must include appropriate supporting documentation to enable the confirmation to be verified.
6. It is noted that the underground stormwater system (minor event system) appears to have been designed to convey flows from a larger recurrence interval event than the FNQROC recommended design ARI per Section D4 Table 4.3. The hydraulic grade line on the drawings is for the 5-year ARI event. Please provide the hydraulic grade line for the 100-year ARI (or other design event if applicable) to show that the pipe flows and captures are achieved.
7. The starting water level for the pipe system does not appear to correlate with the levels shown in the flood modelling outputs in Appendix B of the Flood Impact Assessment report, (Cardno Reference Q184103 dated 16 October 2019).
8. Page 16 of the flood impact assessment report indicates that "drainage gully works" have been modelled in assessing the flood immunity of Stage 1. The operational works does not appear to detail the drainage gully works for the footprint shown on the image on page 16 of the report. Clarification is required on the works necessary to provide the appropriate flood immunity and drainage capacity to service Stage 1.

9. Provide the cross section of the drain profile as required in Condition 13 d. of the ROL which states the following:-

*d. It is unclear how the ground levels for the existing lots have been entered into the flood model and whether the current model set up excludes flow from entering existing lots. In order to properly understand the proposed drain and culverts operation and impacts, cross sections of the drain profile at regular intervals upstream and downstream from the culverts are required. The sections should show:*

- i. the proposed drain profile, including the need for a finish to stabilise the drain banks, such as rock lining;*
- ii. existing lot levels on the north side and proposed development levels on the south;*
- iii. the modelled peak flood level for the 5, 10- and 100-year AEP events, and*
- iv. the resulting freeboard;*

10. For the revised design submission with the amended road grades, provide engineering calculations to demonstrate that the flows from the 100 year ARI event is contained within the road reserves.

11. The calculations table provided indicate the approach flow to stormwater pit 7/1 is 93L/s. The calculations table indicates that the capture into pit 7/1 is 93L/s and that there is no bypass flow.

The kerb return grading confirms that this pit is an on-grade pit. With reference to the Kerb inlet Capacity charts in FNQROC, a comparison of the captured flow to the approach flow for an "On-grade – Type S " pit confirms that it is not possible to capture all of the approach flow at this approach flow rate. The inputs and setup of the PC drain model are to be reviewed to confirm that the appropriate pit designations are adopted and reflect the finalised road and kerb designs.

12. Provide a severe impact assessment to demonstrate safe conveyance of flows in the event the downstream water levels "drown out" the pipe system. Note: this applies to the revised road grading as the current road grades are not supported by Council Officers.

13. The southern diversion drain shown on Cardno Drawing Q184103-CI-1266 shows a longitudinal grade of 0.06% for 200m. This is not acceptable to Council and the design must be revised to ensure that there will not be issues with standing water and that the capacity of the drain is appropriate to provide immunity to the adjoining developed land. Calculations on the catchment, runoff and capacity of the drain are to be provided.

14. The eastern diversion drain shown on Cardno Drawing Q184103-CI-1267 does not include chainages or sufficient setout for Council officers to review the levels and the relationship to the outlet 10/1. In addition, the longitudinal section shows a grade of 0.1%. As per the previous condition, this flat grade is not supported by Council for operational and maintenance reasons and potential health issues with standing water. Appropriate calculations are required to demonstrate drainage capacity.

15. Drainage outlet 10/1 does not drain to the invert of the eastern drain. Provide details of the grading and capacity of the drain including upstream (diversion drain) flows. The starting tailwater level must be justified based on drain hydraulics or backwater flooding per the flood model, whichever is the greater.

## **Water Reticulation**

16. Provide details of the 100mm dia and 63mm dia water mains crossing over the proposed 7/2700x900 RCBC on Wabul Street.
17. Drawings to include details of trunk water main along Captain Cook Highway in accordance with Conditions 8.c. and 10.a.

### **Sewer Reticulation**

18. Noting amendments required to the design from the earthworks and roadworks RFI items above, the sewer reticulation grading is to be revised and optimised so that gravity sewers shall have a depth of no greater than 3m in accordance with the FNQROC Development Manual.

### **Sewage Pump Station and Rising Main**

19. In accordance with Condition 8.a., the applicant is to meet with Council Sewerage Officers to confirm known capacity issues and determine a suitable connection point where sufficient capacity exists.
20. Provide advice as to why minimum rising main velocity of 0.75m/s is not achieved.
21. Sewage Pump Station access and pad area details to be shown on drawings in accordance with Condition 10.b. It is noted that Trunk Infrastructure drawing Q184103-CI-003(3) refers to civil drawings for these details which appear to be missing from the drawings.
22. The Engineering Drawings provided for the pump station do not comply with FNQROC D7.17. With reference to D7.17, please provide a 'project specific design drawing' which includes:
  - a. Generator building (if applicable);
  - b. Switchboard drawings;
  - c. Detailed cross-section and plan of emergency storage infrastructure, or calculations confirming additional emergency storage infrastructure is not required;
  - d. Calculations supporting the provision of wet well storage;
  - e. Calculations showing that flotation forces are counteracted for all buried or partially buried structures; and
  - f. Structural calculations where necessary for the pump well and associated works;

Alternatively, where the pump station is proposed to be a packaged system, please include a notation requiring the details to be provided prior to placing the order. Elements including storage volume and times should be provided with the response to this request for further information.

### **General**

23. Provide details for vehicle access gate between lots 19 and 20 to allow vehicular access to the drainage reserve in accordance with Condition 3.d.
24. Confirmation is required as to why the proposed Ergon padmount substation and cable connection to Road 5 cul-de-sac are shown as easement in the park lot rather than road reserve or freehold lot in favour of Ergon Energy.

25. Civil Works drawings included in “Appendix C.1” are noted as “For Approval – Not To Be Used For Construction Purposes”. These drawings are to be approved by a suitably qualified RPEQ and submitted to Council prior to the pre-start meeting.
26. External Works drawings included in “Appendix C.2 – Trunk Infrastructure” are noted as “Preliminary Only – Not To Be Used For Construction Purposes”. These drawings are to be approved by a suitably qualified RPEQ and submitted to Council prior to the pre-start meeting.

#### **Advice Statement**

Douglas Shire Council will nominate the installation location of district water meters (required under Condition 10.c of the ROL approval) as a condition of the operational works approval.

#### **Due Date**

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The due date for providing the requested information is 27 March 2020 accordance with section 14.2 of the Development Assessment Rules, if you do not provide a response before the above due date (or a further agreed period), it will be taken as if you have decided not to respond to the information request and Council will continue with the assessment of the application.

Please quote Council’s application number: OP 2019\_3370/1 in all subsequent correspondence relating to this development application.

Should you require any clarification regarding this, please contact Neil Beck on telephone 07 4099 9451.

Yours faithfully

**Paul Hoyer**  
**Manager Environment & Planning**