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YOUR REF:	
OUR REF:	8/10/166 (4003733)

5 July 2013

Coral Gardens NZ Limited & Others C/- VDM Consulting PO Box 3766 SOUTHPORT QLD 4215

Dear Sir/Madam

### INFORMATION REQUEST FOR OPERATIONAL WORKS DOUGLAS GARDENS - LOT 2 ON SR431 – CAPTAIN COOK HIGHWAY & ANDREASSEN ROAD – CRAIGLIE

After a preliminary examination of the above application, the following information is required in order to complete an assessment of the proposal:

#### 1. General:

a. The drawings included in this submission suggest that earthworks are proposed on Stage 2 when the Development Approval for Reconfiguring a Lot approved by Council on 22<sup>nd</sup> February 2011 (Our Ref: 8/13/1547 – 3070475) was granted only for Stage 1 (Refer to Extent of Approval Condition); therefore, any proposed work on Stage 2 is in contradiction with the approval and needs to be deleted from drawings (i.e., earthworks, drainage, stormwater works, access roads, etc.).

When submitting future Operational Works Applications (i.e., Stage 2), any proposed stormwater outlet points can only be located on private property (i.e., Head Wall/51 - NQL Properties Pty Ltd) if a consent/permit from the owner of the land is submitted with the application.

- b. Approved Decision Notice Condition 7 (Acid Sulphate) Requests an acid sulphate investigation be undertaken, and although the Applicant has supplied two investigations they are too old (July 2001 and August 2006 respectively); therefore, an updated acid sulphate investigation, following Condition 7, is to be submitted.
- c. The approved Reconfiguration Lot Drawing QC002863-02-SK07 Rev (A) Proposed Layout Stage 1 – General Lot and Stage 1 boundaries differ from the Operational Works drawings submission, and the proposed Temporary Pump Station Access Road and Stormwater Line from Field Inlet 1/60 to the Temporary Concrete Headwall 3/60 are located on private property (NQL Properties Pty Ltd). The submitted drawings are to be amended to reflect the

granted proposed layout drawing and also to change the stormwater line's (1/60 to 3/60) alignment to be inside the applicant's property.



- d. Approved Decision Notice Condition 10(b) Requests the construction of a Roundabout on Andreassen Road at the entrance of Stage 1.The submitted plans state that it will be built later. Please provide the reason for this decision.
- e. Please confirm if the existing Andreassen Road section shown below (red circle) is to be demolished and the area re-established.



f. Approved Decision Notice Condition 35 – Requests that a landscape plan needs be submitted prior to the issue of a Development Permit for Operational Works, particularly in relation to proposed planting in the park adjacent to the drainage basin. This condition has not been satisfied with this application.

- g. Considering that this area is a low wet site and may have a very poor subgrade, the applicant is to confirm with calculations based Austroads Pavement Design A Guide to the Structural Design of Road Pavements that the shown road pavements will be adequate for this location; otherwise, a suitable subgrade stabilisation method is to be included. The type of asphalt (i.e., AC10 or DG14) is to be noted as well.
- h. Please indicate provisions made for Bus Stops at this Stage.

# 2. Drainage:

- a. Further to item 1a, a temporary cut-off open drain with the capacity to convey the  $Q_{100}$  flow from the Stage 1 catchment area, (side slopes of 1 in 4), is to be built from the detention pond to discharge into either:
  - 1. The Southern Diversion Drain or
  - 2. The Andreassen Road drain to reach Spring Creek

The applicant is to confirm either the existing drain or creek will have the capacity to receive the additional stormwater. Also, rock check dams are to be installed every 50.00 metres to minimise the impact of erosion and reduce water velocities within the drain. The Contractor will be responsible for maintaining this drain and rectifying any erosion issues over the life of the current drain. The drain will be redesigned and reshaped once the wet season has finished, following the FNQROC standards and the aesthetic of the development. Details and drainage calculations are to be submitted to Council.



b. Approved Decision Notice Condition 13, requests a Drainage Easement having a minimum width of 15.5 metres between the Stage 1 boundary and the management lot boundary (between lots 19-20 of proposed stage 1 (as indicated on VDM Consulting Plan – SK07-A; Proposed Layout, dated 15/09/2010) and the parcels of land downstream from the proposed discharge point to a Lawful point of discharge. The easement is to be included on drawings, to provide a secured overland flow path for the discharged stormwater.

- c. On drawing GC120023:01-C101 Rev (A), the Applicant is to confirm if the shown trapezoidal open drain (1 in 2 batters) on Andreassen Road Ch140.00 to Ch260.00 is part of an existing swale; if not, slopes are to be 1 in 4.
- d. The provided Stormwater/Drainage Management Plan states on page 1 Introduction: "This management plan is to be considered as part of a Development Application and provides conceptual stormwater management design details. <u>The level of detail provided within this report is not suitable for</u> <u>construction purposes</u>, a Detailed Stormwater Management Plan outlining <u>detailed designs will need to be completed in conjunction with detailed civil</u> <u>design documentation"</u>. The Applicant needs to confirm when this detailed civil design documentation will be supplied.
- e. It is understood that the proposed 10m/15m wide swale is to be narrowed as indicated below. The applicant is to provide a typical channel section of the narrowed area, and with drainage calculations (based on the QUDM) identify the afflux caused by the proposed swale reduction in the larger events and any detention of flows in the lower events given the open drain importance in terms of conveyance of upstream stormwater. Also, a drainage easement covering the proposed swale area is to be included.



f. The Applicant needs to clarify the reasoning for stormwater lines 1/52 - 2/51, 1/53 - 4/51 and 1/54 - 5/51 designed to flow from Andreassen Road back to the subdivision and not vice versa. The Applicant needs to consider that the proposed swale will be narrowed from 10m to 2.0m approximately, and therefore, the afflux could eventually overflow into the pits at Andreassen Road and flow back to the proposed development causing flooding problems. The photos below demonstrates flooding problems experienced on Andreassen Road in recent times, suggesting a 2m wide drain may not have enough capacity to convey the catchment. As indicated above, the proposed Concrete

Headwall 51 is shown to be located on private property (NQL Properties Pty Ltd), which will not be accepted.





Photo Looking East Along Andreassen Road



Photo Looking West along Andreassen Road, Water at this point was approx. 600mm. deep



Photo Looking West along Andreassen Road, Water at this point was approx. 400mm. deep with a strong current. The deepest point was approx. the tree on the left

- g. Approved Decision Notice Condition 14 (Detention Basins) Requests a Drainage Reserve covering the area to be used as a detention basin. The reserve is to be shown and noted on drawings.
- h. The Applicant is to confirm if approvals from the Department of Environmental & Resources Management are required for carrying out works in a watercourse, and if needed, copies of these approvals are to be submitted to Council.
- i. Details of the proposed GPT are to be provided (i.e., standard drawing, levels, dimensions, etc.).
- j. The fill levels are to be rechecked, particularly in the lower ends of catchments C and D. It needs to be taken into account that the drain and levee will increase flood levels outside Port Pacific at the lower end as the flood water is diverted to the east. In earlier reports, Cardno suggest it could be 100 to 300mm. Proposed fill levels should take this into account.
- k. Council considers that the proposed Typical Channel Section A shown on Drawing GC120023-C201 Rev (A) is to be redesigned to keep the 10.00m width along Andreassen Road until reaching Spring Creek, as the post development pattern of flows through the highway and down the alignment of Andreassen Road will leave Council with an ongoing maintenance cost. The Q<sub>100</sub> flow down Andreassen Road by VDM is 18.6m3/sec. That's 0.5m deep across 18.00m of road at 2m/sec., which is not considered as a minor flow.

## 3. Erosion and Sediment Control:

- a. The applicant has not provided a staged Erosion & Sediment Control Strategy (ESCS) in accordance with FNQROC Development Manual section AP 1.31. A staged strategy is required to detail ESC measures to be employed during each phase of construction (i.e., stripping / earthworks, trenching / service installation, stormwater/ roadworks completion). The contractors ESC plan is to be developed in accordance with CP 1.05 and be consistent with each phase of the ESC strategy. The ESC strategy should outline the strategy for dust management as well, and also if dewatering is required then a dewatering strategy to satisfy Council that the works will comply with the Environmental Protection Act 1994 regarding water quality and pH (i.e., Section 440ZG prescribed water contaminants).
- b. If dewatering is to be carried out, the Applicant is to submit the strategy. All activities relating to the discharge of groundwater must comply with Section 440ZG of the Environmental Protection Act 1994 which states:

440ZG Depositing prescribed water contaminants in waters and related matters A person must not —

- 1. Unlawfully deposit a prescribed water contaminant
  - In waters; or
  - In a roadside gutter or stormwater drainage; or
  - At another place, and in a way, so that the contaminant could reasonably be expected to wash, blow, fall or otherwise move into waters, a roadside gutter or stormwater drainage; or

2. Unlawfully release stormwater run-off into waters, a roadside gutter or stormwater drainage that results in the build-up of earth in waters, a roadside gutter or stormwater drainage.

Please be advised that the following is considered to be prescribed water contaminants in accordance with Schedule 9 of the Environmental Protection Regulation 2008:

- Earth, meaning sand soil, silt and mud
- A substance that has a pH outside the range 6.5 to 8.5

### 4. Sewer

- a. Provide a revised master plan and calculations for the sewerage network to accommodate development to the south (L24) and east (L1-6) of the subject lot. The master plan should include conceptual sewer layout and design of the adjoining lots to show feasibility of the connection points and optimization of the internal sewer design to limit sewer depths to 3m.
- b. Provide amended design calculations of the sewer rising main to accommodate the external catchments. .
- c. Provide detailed design drawings of the proposed pump station and revised sizing calculations to include external catchments and staging of the development. These drawings are to include but not limited to details of land tenure, 30m separation distance, sealed access and manoeuvre areas, electricity supply, water supply, lighting, pump station internal layout, access for pump removal, external valve pit, inlet dropper pipe, benching and emergency pump out connection, Q100 level, FSL's, overflow, set-out details from property boundaries, . Note that the pump station should be located within a freehold lot and the access to the PS should be inside the development.
- d. Provide a detail of the bandage joint connection referred to on drawing GC120023: EX C120 Rev (A).
- e. Provide the copies of drawing I.P.W.E.A.Q STD Dwg W-0041 and W-0080 shown on water and sewer rising mains notes on drawing GC120023: EX C102 Rev (A).
- f. Provide amended longsection drawings to include clearances (i.e. between the sewer rising main and the future channel and services).

### 5. Water

- a. Provide an amended drawing showing the 300dia trunk water main extended to the proposed roundabout on Andreassen Rd. Council would not permit a trunk main running through the site as indicated on SK05.
- b. Provide an updated hydraulic analysis that includes models at the various staging of the development. We note that the ultimate model has been completed.

- c. Provide amended water reticulation drawing that shows rider mains not road crossings.
- d. Provide details of the proposed water main where it crosses the proposed stormwater drain and future channel to confirm cover and clearances.
- e. Provide longsection and design detail of the proposed water main crossing of Andreassen Road.

#### 6. Other:

- a. A landscape plan is required to be submitted along with this submission, in accordance with the requirements of the FNQROC Development Manual and the Douglas Shire Planning Scheme Landscape Code and Policy.
- b. The Weed Management Plan submitted does not cover the wash down requirements of the FNQROC Development Manual AP1.34 Pest Management.

Please note that the information response to Council should include two complete copies of the response and if plans form part of the response then two sets of such plans at scale and an electronic copy in PDF format should also be provided.

Council advises that attention to these items may create additional issues of concern which may require further clarification if necessary.

Should you require further information or assistance, please contact Development Engineer Walter Moreno-Neisa of Council's Development Engineering Branch on telephone number (07) 4044 3379, email address <u>w.moreno-neisa@cairns.qld.gov.au</u>

Yours faithfully

Graham Boyd Manager Development & Regulatory Services