

LOT 51 - WONGA BEACH DEVELOPMENT

Current Status

- Material Change of Use (MCU) approved by Cairns Regional Council April, 2011.
- Lodgement of a Reconfiguration of a Lot (ROL) lodged with Cairns Regional Council 28th July, 2011 (Appendix A).
- Information Request for additional information regarding ROL requested by Cairns Regional Council 8th September, 2011.

Note: Information request response is due September, 2013. Response to be finalised April, 2013.

Summary of Responses to Cairns Regional Council's Information Request:

Item 1 - Flood Study

A detailed Integrated Stormwater Management Plan has been undertaken by BMT WMB (Brisbane Office). Results and recommendations as follows:

- Flood Impact Assessment - "the flooding investigation for the site demonstrated that the site can be developed in such a way as to have no adverse flooding impacts on adjacent properties. Peak ARI flood levels and inundation extents for ARI 100 year design flood event have been established. These levels will allow the determination of building envelopes in suitable locations and the setting of floor levels for residential dwellings. Consideration of storm tide and climate change has been considered within this assessment".
- Stormwater Quality Management Plan - "the modelling results show that with the integration of the proposed stormwater management strategy, the pollutant removal targets can be achieved. Furthermore, the proposed development (and associated stormwater management strategy) is predicted to result in a decrease in total suspended solids, total phosphorus and total nitrogen pollutant load compared to the predevelopment case".

Item 2 - Queensland Coastal Plan & State Planning Policy

To be addressed in our response to Council that the Coastal Plan's State Planning Policy has been suspended by the Queensland Government in October, 2012. The Draft Coastal Protection State Planning Regulatory Provision has effect in place of the Coastal Plan's State Planning Policy for a period of 12 months and the Integrated Stormwater Management Plan prepared by BMT WMB takes into consideration the matters to be considered in the Draft Coastal Protection SPRP in relation to "Storm Tide and Climate Change" within its assessment.

Item 3 – Detailed Contour Plan

The Plan was provided as part of the ROL lodged in July, 2011 (Appendix C) and an updated Plan dated 7th January, 2013 (Appendix D) will be forwarded to Council as part of our Information Request response.

Item 4 – Site Filling

The detailed Integrated Stormwater Management Plan prepared by BMT WBM outlined:

“the results indicate that the development can be accommodated within the proposed extent without adverse flooding impacts on adjacent properties. Due to the large lot sizes, filling is only proposed for roads, house pad areas and possibly for local drainage. It is recommended that as many lots as possible be configured to maximise the location of building envelopes on the flood free areas. Where lots are potentially flood affected, building envelopes should be nominated at a level to provide appropriate flood immunity. It is anticipated that filling will be the main method of providing immunity in building envelopes however high set dwelling or a combination of filling and high set dwellings will be considered”.

In addition to the above mentioned report above prepared by BMT WBM, PDR Engineers are undertaking a cut and fill report that will be forwarded to Council as part of our Information Request response. PDR Engineering has outlined:

“We currently plan to provide a drawing that will show Council our proposed fill levels and how we intend to manage stormwater flows. This plan will be based on the principles outlined in the BMT WBM stormwater management plan and will also address water quality issues. We are confident that Council will accept the proposal as a practical solution satisfying both stormwater control and water quality requirements”.

Item 5 – Ecology Report & Wetlands Setbacks

An updated Wetlands Assessment Report has been undertaken by Dr Paul Clayton from RPS Australia East. Based on Dr Claytons “Recommendation is that a minimum 20m buffer be applied to Wetland Areas in the Development Site”. The reconfiguration Proposal Plan (Appendix B) has been updated to reflect his recommendation.

Item 6 – Development Footprint & Buffer Zones

This matter has been addressed in conjunction with Item 5 above.

Items 7, 8 & 9 – Master Plan, Staging Plan & Revised Lot Configuration

As addressed in the Reconfiguration Proposal Plan (Appendix B).

Item 10 – Traffic Impact Assessment

A Traffic Impact Assessment is currently being finalised by PDR Engineers. PDR's preliminary advice is as follows:

"The analysis indicates that the additional daily traffic increase on Snapper Island Drive is 686 vehicles. This is well within the capacity of the existing road infrastructure and minimum upgrading will be required. At the Vixie Road/Mossman-Daintree Road intersection the increase in vehicles is 12 vehicles in the AM and PM, peaks minimum upgrading will be required. At the Wonga Beach Road/Mossman-Daintree road intersection the increase is 275 Vpd and 55 vehicles in the AM and PM peaks. Limited upgrading should be required and we anticipate that the acceleration and deceleration lanes may need to be extended".

Item 11 – Water & Sewer Infrastructure

A Water Reticulation Report is currently being finalised by PDR Engineers, however, PDR require further information from Cairns Regional Council (Ricky Hewitt to supply). PDR's preliminary advice is as follows:

"Our initial investigation indicates that the existing supply from Snapper Island Drive will be insufficient to provide water with sufficient fire fighting quantities and pressure and this will be confirmed by the Council report. If this is the case we may need to investigate extending the main supply main from Wonga Beach Road to Vixie Road (along the highway) and then connect this main to the subdivision".

Note that a sewer design is not required as lot sizes of 2000m² or greater are proposed and onsite effluent disposal is intended.

Item 12 – Onsite Effluent Disposal

An onsite Wastewater Management Assessment has been undertaken by Gilbert Sutherland Pty Limited. Conclusion is as follows:

"the results of the site inspection and soil investigation demonstrate that the wastewater generated by a typical four (4) bedroom, five (5) person household can be applied within the proposed residential development at Vixie Road, Wonga Beach".



8 September 2011

ENQUIRIES: Neil Beck
PHONE: (07) 4044 3548
FAX: (07) 4044 3836
YOUR REF: 9339/OCK/KK/L69705
OUR REF: 8/13/1625 (3307055)

RECEIVED
12 SEP 2011

BY: _____

Wonga Beach Aquaculture Resort Pty Ltd
C/- RPS Australia East Pty Ltd
PO Box 1949
CAIRNS QLD 4870

Attention: Owen Caddick-King

Dear Sir,

**INFORMATION REQUEST - RECONFIGURING A LOT (1 LOT INTO 99
LOTS) VIXIES ROAD, WONGA**

Reference is made to the above matter. After a preliminary examination of the above application, it is apparent that the proposed reconfiguration plan has given little regard to the conditions of the Preliminary Approval with specific reference to setbacks, drainage and flooding constraints, road reserve widths (public transport) and the ability to service the development with particular reference to effluent disposal.

A comprehensive response to each condition of the Preliminary Approval is requested. In addition, the following information is required in conjunction with addressing conditions of the Preliminary Approval.

1. Acknowledging that the DHI International flood study was originally undertaken for Council, the input parameters adopted at that time have since been superseded and does not suitably address or represent best practice for the development of coastal areas. It is considered that the study has very limited applicability for determining levels in new developments.

An updated study must be undertaken. The updated study is to adopt a tail water level of 2.73m AHD at the ocean outlet and is to model the full extent of the drainage path(s) between the development and the outlet.

In addition, the updated local drainage study of the site must determine the drainage impacts on properties / areas external to the site.

1/6

For all correspondence:
✉ **PO Box 359 Cairns Q 4870**
www.cairns.qld.gov.au
council@cairns.qld.gov.au

Council Chambers
119-145 Spence Street, Cairns Q 4870
P: 07 4044 3044 | F: 07 4044 3022

Mossman Administration Centre
64-66 Front Street, Mossman Q 4873
P: 07 4099 9444 | F: 07 4098 2902

In particular, the study must address the following:

- a. The contributing catchment boundaries;
- b. The extent of the 100 year ARI flood event in relation to the site both pre and post development;
- c. Primary and secondary flow paths for the 2, 5, 10 and 100 year ARI flood events, (Reference is made to Section 6.3.1. of the DHI International flood study advising on a "network of overland flow paths" throughout the catchment area);
- d. Identify any requirement for drainage easements;
- e. Identify the need and tenure for flood detention areas to ensure a no worsening impact on downstream properties for the entire development. Particular regard is to be given to the impact of development on the high storage and extensive groundwater infiltration that is currently occurring within the site;
- f. Information on the proposed works and any impacts proposed at the drainage outlet from the proposed development;
- g. The stability and integrity of the principle drainage line (north-south alignment) in the western portion of the site to determine suitable setbacks.

Amend the layout plan accordingly.

2. Provide further information addressing the policy intent of the Queensland Coastal Plan and the State Planning Policy with respect to how the development responds to the adverse impacts of storm tide inundation and sea level rise. In particular, a risk assessment of sea level rise (0.8 metres by 2100) and a storm tide event greater than 1 metre must be undertaken along with an adaptation strategy demonstrating that the development can be mitigated against such impacts through location, design construction and operating standards.
3. Provide a detailed contour plan clearly identifying the contours within the various drainage swales within the site and the drainage line adjacent the western boundary in order to determine / clarify the top of bank and provide substantiation for the nominated location. Some areas within the survey do not appear to support the nomination of this line as representing the top of bank with grouping of contours indicating steeply sloping banks outside the nominated alignment of top of bank.

The detailed contour plan must nominate the boundary of Lot 51 and the existing line of vegetation adjacent both the eastern and western boundary and for vegetation contained within the site. The plan must also identify the area which is mapped as remnant vegetation for comparison purposes.

4. The layout of the development does not reflect the drainage regime of the site and the notion of filling 50% of the residential lots is not supported. All residential lots must be filled to achieve Q100 flood immunity to a level as determined by the drainage study.

The revised lot layout will require significant filling to achieve grading and drainage of the site in accordance with the outcomes of the drainage study. Information in the form of a Site Works Plan identifying existing surface contours and proposed finished surface contours is to be provided. The Site Works Plan is to identify the height of fill batters and be represented as coloured contour plans i.e contour the fill height depths. All lot must drain to road frontages and avoid rear allotment drainage.

5. In determining the development footprint, please note that the supporting ecologist's report does not contain sufficient detail in accordance with Policy 7.1 of the FNQ Regional Plan to support the setback distances being proposed from the declared wetlands. Given the lack of detail, concern is raised with respect to other environmental factors and hydrological characteristics of the wetlands, and the likely impact that the development will have on the declared wetlands. It is requested that the layout plan be amended to comply with the generic setbacks from the wetlands or provide an updated report which adequately addresses the following:

Vegetation

- a. Quality of vegetation with species identified including rare and threatened species, width of riparian vegetation, how the current vegetation can maintain bank stability and prevent erosion, rehabilitation of riparian vegetation where necessary, fauna and habitat values.

The report must also investigate and provide comment on the existing vegetation located adjacent the northern boundary and central to the site. Opportunities to retain this vegetation is to be explored as part of the development.

Hydrology

- b. Provide additional information addressing wetland hydrology (recharge and discharge) and how proposed development will effect these processes, effect on wetlands from run-off and measures to ensure urban development does not negatively affect water quality (WSUD), downstream effects over time.

In addition, provide information concerning the management of wetland fauna including crocodiles (proposed stormwater detention areas) and monitoring of the impact of the development on wetland quality.

6. Undertake a review of the development footprint. The layout appears to encroach within the buffer zones and appears to be inconsistent with the representations in other parts of the submission. This includes the representations in the wetland report.

Please note that all wetland buffer areas are to be clear of development including residential lots, road reserves, fill batters, drainage or other associated infrastructure.

7. Provide revised Master Plans reflecting the current lot layout or amended lot layout as a consequence of the information request. The Master Plans lodged in support of the application show an earlier road and lot layout that is quite different from the current proposed layout.

The Master Plans are to be reviewed to ensure consistency between the representations that have been made in the various reports and conditions of the Preliminary Approval. For example the Wetlands report recommends that stormwater be directed away from the mapped wetlands towards the centre of the site (section 2.3.3 of the Wetlands assessment). The Wetlands assessment also nominates minimum buffers that the Master Plans will need to respect unless otherwise determined by Information Request Item 4.

8. Provide a staging plan in accordance with Condition 9 of the Preliminary Approval.
9. Rationalise the layout for Lots 96 – 99 to provide appropriate road frontage and dimensions consistent with the Preliminary Approval.

10. A traffic impact assessment to be submitted in accordance with Austroads guide to Traffic Management Part 12 "Traffic Impacts of Development" prepared by a suitably qualified and experienced Traffic Engineer which includes but is not limited to the following:

- a. The prediction of road traffic generated by the proposed development;
- b. Traffic distribution and travel patterns;
- c. Analysis of the impact of the increased development related traffic on Council roads (cross sections) and intersections between the development and the highway and identification of any mitigation works required to mitigate these impacts;
- d. Analysis of expected traffic volumes on Snapper Island Drive and suitability of the existing road and nearby intersections to carry this level of traffic;
- e. Details of the proposed layout and an analysis of intersections at the entrance and exit points of the development that connect on to the existing Council roads, particularly at Vixie Road/Connector Road as the proposed plan has only one access onto Vixie Road.
- f. Amend the road reserve width of the Minor Collector to have a minimum road reserve width of 20 metres;
- g. How the connector road is to cross the creek (connection from lot 56 to 84);
- h. Detail pedestrian and cyclist movements to and from the development;
- i. Analysis of internal traffic circulation and accommodation of pedestrian and cycle facilities; and
- j. Any staging of the development and road construction to be outlined along with expected traffic distributions during each stage of the development.

11. Water and Waste is of the opinion that the site should be connected to town services for water and sewerage. On-site treatment and disposal is

considered problematic on this site for a number of reasons including flooding, cumulative impacts, design and management. Consequently the following further information is on the basis of connecting the site to town services.

- a. Provide a sewerage design report outlining how sewage generated from the site will be conveyed to and serviced by Council's existing sewerage infrastructure, and identify any pump stations, rising mains, trunk mains and treatment facilities (Mossman Treatment Plant) are required to be constructed or upgraded to cater for the development.
- b. Provide a water design report outlining how Council's existing water supply infrastructure can cater for the increased demand generated by the development and identify any upgrades that are required to be undertaken by the Developer.

12. Should on-site treatment be pursued, the following information is required

- a. An on-site treatment and disposal evaluation report prepared by a recognised expert in the field such as Simmons and Bristow and Gilbert Sutherland.
- b. The report being comprehensive and as a minimum includes the following:-
 - (i) A detailed evaluation of lot based on-site effluent disposal system and community based effluent disposal systems;
 - (ii) MEDLI modelling to assess the suitability of both the lot and community based on-site effluent disposal system;
 - (iii) Analysis of site constraints in terms of land area, setback distances, groundwater table, groundwater quality, wet weather storage requirements and soil types;
 - (iv) Solutions to enable effluent disposal to land to be incorporated in the development;
 - (vi) Design of effluent disposal area; and
 - (vii) Management and ownership strategies and control measures to ensure performance of the system design.
- c. A flood study that will confirm flood constraints on the site consistent with proposed on-site system.

Should you require any further information or assistance, please contact Mr. Neil Beck of Council's Development Assessment Team on telephone number (07) 4044 3548.

Yours faithfully

A handwritten signature in black ink, appearing to be 'K. Reaston', written over a light blue horizontal line.

Kelly Reaston
Manager Development Assessment

APPENDIX B

Reconfiguration Proposal Plan

RPS Revision G

Dated: 14th March, 2013

Legend

- Site boundary
- Toe of frontal dune
Approximated from edge of Remnant Vegetation
- Erosion prone area boundary
110m from toe of frontal dune or HAT, whichever provides the greater erosion prone area
- Eastern edge of developable area
Limited to Highest Astronomical Tide RL 1.76 AHD or edge of DERM's Future Agency Response Plan
- Top of bank
From field survey
- Setback from HES Wetland (20m from Mapped HES Wetland - Eastern Bay)
(20m from Top of bank - Western Bay)
- DERM Referral Agency Response
(Vegetation) Plan
Final RARP 2009/006/03
- Dominant Remnant of Concern
Regional Ecosystem 2003 RE Mapping
Approximate location
- 6m Setback from Road Frontage
- 10m Setback from Mapped Remnant Vegetation
No new lot boundaries or roads are permitted within 10 metres of edge of mapped remnant vegetation
- 20m Setback from Mapped Remnant Vegetation
No building development is permitted within 20 metres of edge of mapped remnant vegetation
- 15m x 20m Minimum Building Envelope
- 50m x 50m Rural Settlement Minimum Rectangle

Statistics

Total Site Area 38.93 ha
Total No. of Allotments 99
4000m² + 7
Average 4142m²

2000m² + 92
Average 2360m²

Total Open Space 10.4 ha
Active Open Space 2.25 ha
Passive Open Space 5.86 ha
DERM Vegetation Plan 2.29 ha

Total Length of New Road 3145 m
15.5m Wide Road 1951 m
20m Wide Road 1194 m
Area of New Road Reserve 5.71 ha

IMPORTANT NOTE

1. This plan was prepared for the sole purpose of the client for the specific purpose of accompanying an application to the Cairns Region of Council for a 'Reconfiguration of Land' as described on this plan. This plan is strictly limited to the Purpose and does not apply to any other use or purpose and will not be used for any other application, purpose, use or matter. The plan is prepared solely for the client's use and is not to be relied upon by any other person (other than the Client (Third Party)) and may not be relied upon by any Third Party.

2. RPS Australia East Pty Ltd will not be liable (in negligence or otherwise) for any direct or indirect loss, damage, liability or damage of any kind.

3. A Third Party relying on this plan, using or relying on the plan, is advised that the plan is not a final plan and is not to be relied upon by any Third Party. The plan is not a final plan and is not to be relied upon by any Third Party. The plan is not a final plan and is not to be relied upon by any Third Party.

4. The Client or any Third Party not verifying information in this plan, where recommended by RPS Australia East Pty Ltd, is advised that the plan is not a final plan and is not to be relied upon by any Third Party. The plan is not a final plan and is not to be relied upon by any Third Party. The plan is not a final plan and is not to be relied upon by any Third Party.

5. The accuracy, reliability, validity or completeness of any information or estimates made or obtained by RPS Australia East Pty Ltd in this plan, is not guaranteed.

6. Without limiting paragraph 1 or 2 above, this plan may not be copied, distributed, or relied upon by any person unless this note is clearly displayed on the plan.

7. Scale shown is correct for the original plan and any copies of the plan. The plan is not to be relied upon by any Third Party. The plan is not a final plan and is not to be relied upon by any Third Party. The plan is not a final plan and is not to be relied upon by any Third Party.

8. The dimensions, area, size and location of improvements, land information (if shown) and number of lots shown on this plan are approximate only and may vary.

9. The boundaries shown on this plan are not to be relied upon by any Third Party. The plan is not a final plan and is not to be relied upon by any Third Party. The plan is not a final plan and is not to be relied upon by any Third Party.

10. The contents of this plan are conceptual only, for approval purposes. All lots, features, areas and dimensions are approximate only. Subject to relevant studies, Survey, Engineering and Government approvals.

11. Survey base information has been compiled from the merger of detail surveys carried out over the site at various times from 1990/00 to the 1990/00s. RPS Australia East Pty Ltd takes no responsibility for any differences between original data and current values.

Stage	No Lots
1	14
2	11
3	13
4	12
5	12
6	10
7	15
8	12
Total	99

Amendments
A: Amend lots and statistics
B: Amend lots and statistics
C: Amend lots and statistics per mapped vegetation setbacks
D: RWP: Add Stage 10s
E: AMW: Revise lots 95/99
F: AMW: Revise HES setback - lots 61-63 & 80, 82, 83, 85, 89, 92, 94, 98
G: AMW: Revise connector road width

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APPENDIX D

**Detailed Survey Plan
RPS**

Dated: 7th January, 2013

