

9 February 2018

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Attention: Joel Herbert

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Please address all communications
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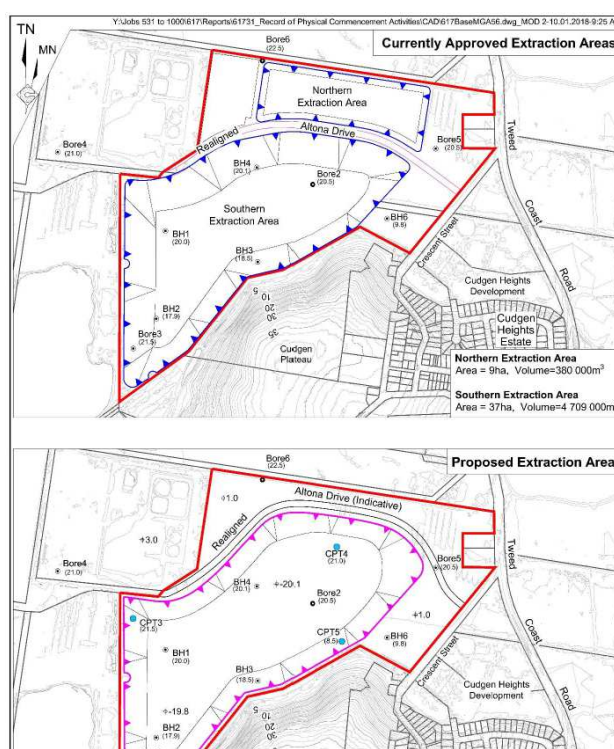
ABN: 90 178 732 496

Dear Mr Herbert,

**RE: Tweed Shire Council Submission Cudgen Lakes Sand Quarry
MP05_0103B MOD 2**

I refer to your e-mail of 17 January 2018 in which you seek comment on the Cudgen Lakes Sand Quarry MP05_0135B MOD 2 (Council Reference DA08/1266).

It is noted that the main elements of the subject modification application are the consolidation of the previously approved "northern" and "southern" extraction areas, and the realignment of Altona Road to the north of the consolidated lake. This rationalises quarry operations to a single permanent processing area. Also proposed are increases to final batter slopes of the lake from 1:5 to 1:3. This increases total volumes of the extraction, and as no changes to annual extraction rates are proposed, the life of the quarry resource will be extended.



There are no objections to the application in principle, however certain details are lacking from the application to enable full conditional support (Flooding, Drainage and Strategic Context of Sports Fields). Accordingly Council is requesting that the Department request additional information from the applicant and that Council is further invited to provide comment on any amended conditions before an ultimate determination is made by the Department.

Please note Council's comments on the following matters:

1. Flood Impacts

There is known concern from residents in Kingscliff, Chinderah and Cudgen regarding the potential impacts of further floodplain development, including the subject quarry, on existing flood risk to residential estates. This concern has increased since the March 2017 floods, which exceeded 5% AEP / 20 year ARI levels in the West Kingscliff basin.

The applicant has not provided any modelling of the proposed realigned roadway or quarry bunding to verify their position that the modification will result in improvement / no worsening of flood impacts compared to the approved development. While the total footprint of the quarry will be reduced by the deletion of the northern resource, this area was to be filled and reinstated to pre-development levels. In the modified plan, a larger lake will result.

The applicant should be requested to update flood modelling in the individual and cumulative development cases. The applicant has already accessed Council's base flood models for this purpose, so this should not be an onerous task. The modelling will need to clearly depict all bunded areas and spillways, the reconfigured processing area, and the realigned road embankment to provide relevant outputs for flood level, velocity and duration.

2. Drainage Impacts

An existing east-west open drain runs alongside Altona Road, connecting surrounding land to the main Kingscliff – Chinderah drain and ultimately the Tweed River. The existing consent requires realignment of this drain in conjunction with the realignment of Altona Road. Given the modification significantly increases the length of road, and therefore the drain also, **the application should provide hydraulic information confirming the adequacy of a new drain, its dimensions, and that it can be adequately contained within the proposed 20m wide road reserve.**

3. Batter Stability

The application includes a batter stability assessment by Cardno, supporting the proposal to increase final batter slopes, and thereby increasing available yield from the quarry. The design specifies a minimum 10m setback from top of batter to the edge of the realigned road reserve, and the assessment considers uniform loading at the ground surface within this zone. **Clarification should be sought from the consultants that this assessment is adequate for the section of batter adjacent to Altona Road, given this area will be subject to considerably higher loads and vibrations from heavy vehicles, and will contain a realigned drainage channel which may influence subsoil conditions in this zone.**

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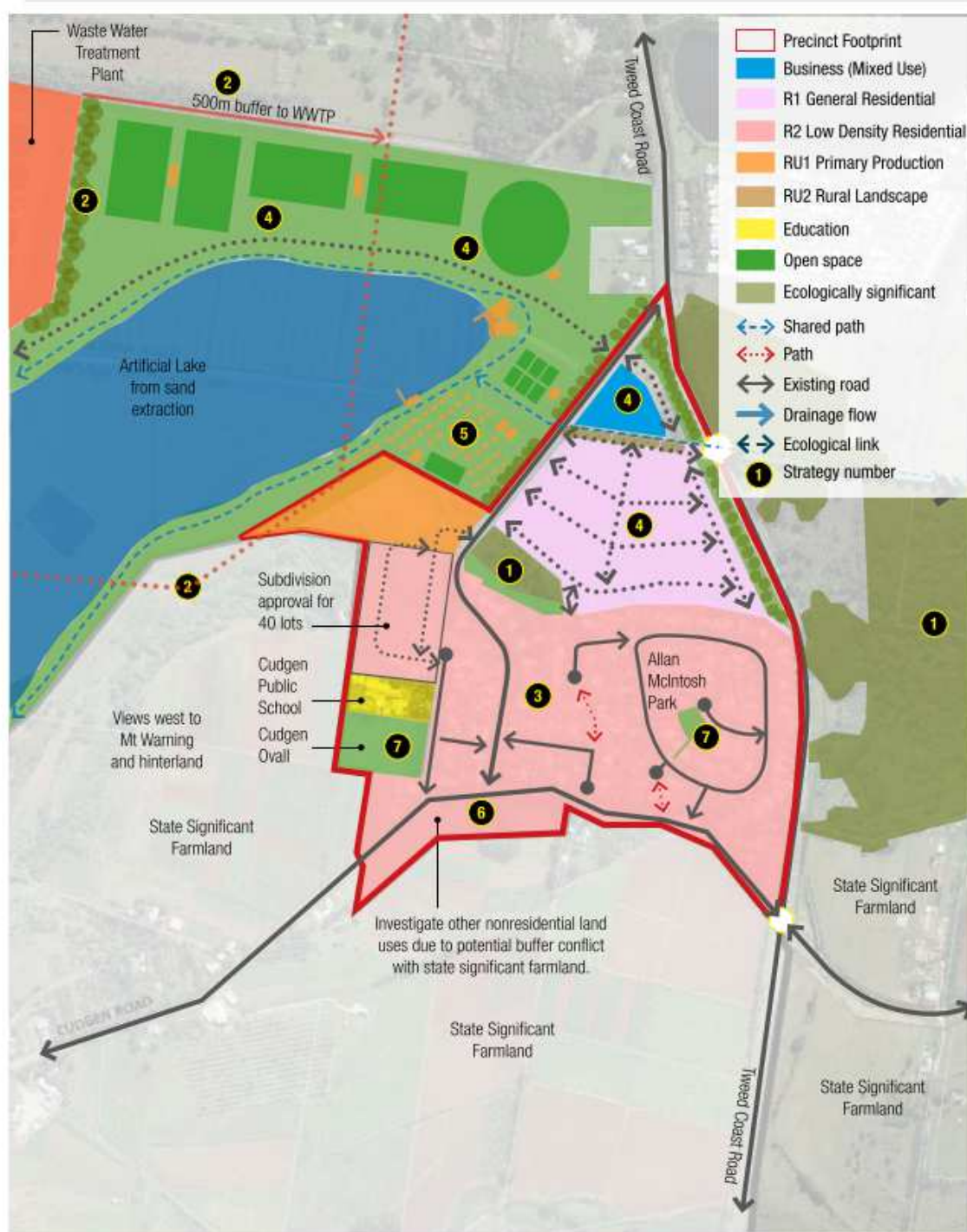


Figure 11.2 Cudgen Village Indicative Structure Plan

11.5 Cudgen Precinct Draft Strategies

1. Facilitate the protection and management of land identified as environmentally and/or ecologically important through appropriate land use zoning and provision for ongoing habitat management. s.
2. Maintain a 500m buffer surrounding the waste water treatment plant restricting residential development within that buffer. Plant a 10m wide landscape buffer to interface edges.
3. Continue to promote more innovative, contextual and climatic responsive housing design within the existing precinct and new future development sites thought implementation of DCP A1.
4. Facilitate future development of the developable portion of the R1 greenfield development site (Lot 1 DP 828298) and investigate expansion of a residential land use into part of Lot 4 DP 727425 and to the west into part of Lot 21 DP 1082482 through an integrated concept or master plan planning proposal process to achieve a balance and mix of housing types including low density residential, medium density residential housing, provision of a small local centre east of Crescent Street combined with open space and environmental protection where appropriate. The master plan should also include:
 - Detailed design of the intersection of Altona Road with Tweed Coast Road and the Turnock Street extension (dependent on final alignment).
 - Demonstration of how passive solar design principles have been embedded to include a generally a grid street network resulting in regular shaped allotments with good solar and passive design opportunities.
 - Integration of water sensitive urban design as part of the overall subdivision design.
 - Provision of active and passive open space integrated with a future artificial lake resultant from and future sand extraction works.
 - Identification of lands to be dedicated for compensatory planting as a result of any vegetation clearing which may be nominated for removed from part of the identified development site as part of the concept/master plan process. A compensatory rate of 12:1 will generally be applied.
- If Council's Open Space Strategy indicates there is no need for further active and passive open space areas within this location, Council will consider the potential for light industrial uses adjoining the wastewater treatment plant outside a minimum 200m buffer.
5. Investigate future opportunity to establish a holiday park or 'eco-village' accommodation adjoining the future artificial lake as part of the precincts concept or master plan process to address key opportunities and constraints including flooding constraints.
6. Produce a developer initiated and funded stormwater drainage strategy for the precinct, and identify methods to fund and implement the works necessary to achieve development of the precinct, while protecting the integrity of receiving environmental land.
7. Review the existing R2 Low Density Residential zoning over Lot 101 DP 1056576 for a more appropriate land use given the incompatibility between this use and the adjoining state significant farmland and buffers required.
8. Further embellish and upgrade existing open space facilities including Cudgen Oval and Allan McIntosh Park as part of Council's Open Space Strategy and works program.
9. Further investigate appropriate water based activities over the future artificial lake could include a range of active and passive uses.

A 9.5ha section of land was explored as a possible future structured spaces area within the new business and knowledge precinct (north/east of the subject site). This plan has not been endorsed or publically exhibited and requires liaison with the land holder to lock in any future allocation of sports fields.

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Figure 6.4 Business and Knowledge Precinct - Indicative Structure Plan - Education Campus Option

6.5 Business & Knowledge Precinct Strategies

4. Facilitate the protection and management of land identified as environmentally and/or ecologically important through appropriate land use zoning and provisions for ongoing habitat management.
5. Facilitate the future development of the Business and Knowledge Precinct as a regionally significant employment generating precinct through an integrated concept plan, planning proposal and site specific development control plan (DCP) process. The business and knowledge precinct will establish an integrated and connected urban structure and diverse mix of employment generating land uses including a business park, a retail centre, light and creative industries, cultural and entertainment uses, community facilities, opportunity for a health and/or education campus, network of open spaces and a mix of residential housing types. The integrated planning process is to be supported by:
 - A developer initiated and funded economic and retail centres feasibility assessment to evaluate proposed staged land use and floor area development scenarios/projections within the context of the broader Tweed retail and centres hierarchy;
 - A developer initiated and funded site specific flood mitigation strategy which identifies lands to be filled, evacuation routes and location of surface drains as integrated with the road and open space structure / networks.
 - A developer initiated site master plan illustrating urban structure, building heights and 3d massing study, network of open space and public domain, view and visual impact analysis.
 - A developer initiated traffic impact study based on envisaged land use floor area density outcomes.
 - A Site Contamination and Rehabilitation Plan over the decommissioned WWTP site to determine appropriate future uses.
6. Provide opportunity for the development of a commercial / business park within the precinct up to 20m in height to encourage more intensive employment generating land uses, commercial and business opportunities.
7. Facilitate change of land use from IN1 General Industrial to B5 Business Development over lands to the west of Tweed Coast Road facilitating opportunity for large floor plate retail if traffic access and flood management strategies, as initiated and funded by the developer, can be satisfactorily demonstrated through a planning proposal process.
8. Create a principle east-west connector road linking Tweed Coast Road with the precinct including investigating the need for a through connection across the drainage corridor to Kingscliff Street to the east. This connector road should:
 - Facilitate the development of a main street configuration within this precinct which may provide shop top housing, fine grain active retail street level and widened pedestrian public domain street edge.
 - Create a tree lined boulevard with widened drainage swale to provide a high level of visual amenity and ecological habitat.
 - Include a dedicated shared pedestrian and cycle lane network throughout the precinct with shade, seating, lighting and water points at regular intervals.
 - Integrate street lighting, parking, landscape bays and WSUD streetscape elements.
9. Facilitate a mix and diversity of medium density housing opportunities through an R1 or R3 zoning including residential flat buildings up to 16.6m, affordable and aged housing, student accommodation (if co-exists with a University Campus). Achieve affordable housing outcomes through co-ordinated negotiations between Council, the developer and affordable housing providers to meet agreed affordable housing benchmarks established through an Affordable Housing Strategy to be undertaken by the developer.
10. Develop a network of connected open space within the precinct. Require the creation of a large open space area to cater for the passive and active recreational needs of future residents which should be appropriately sized and open on all sides to encourage a high level of accessibility and visibility as a defining element of the future character of the precinct. Open space area adjoining the north-south drainage corridor, over the rehabilitated WWTP site could act as an overland flow storage area. As part of the overall precinct open space and environmental strategy, embellish the north-south drainage corridor as a defining 'green corridor' for combined drainage, vegetation, open space and shared pathway uses.
11. Create a 20m wide vegetative buffer to Tweed Coast Road frontage providing a 'green screen' to the site with opportunity plant out with large street trees and under storey vegetation.

5. Relationship with Other Development Applications

DA05/1450 approved road and drainage works as follows:

Stage 1 To provide a road and drain in a new location to replace the existing which it replaces.

The creation of a new 21m wide road reserve (to ultimately replace the Altona Drive road reserve), and the construction of a road within the road reserve to the same standard as the existing road (Altona Drive).

Relocation of the existing drain running adjacent to Altona Drive to within the new road reserves. Closure of part of the existing Altona Drive and Crescent Street road reserves and transferred to Gales Projects Pty Ltd.

Stage 2 Upgrade the Stage 1 road and raise the level of the road and upgrade pavement width (in principle approval sought)

Stage 3 To provide a new road to the east of Crescent Street and new intersection with Tweed Coast Road (in principle approval sought).



Figure 1 – approved road diversion of Altona Drive from DA05/1450



Figure 2 – modified S96 proposal of the road diversion for Altona Drive (ie: further north again)

In association with this DA Council approved a Construction Certificate CC11/0272 which commenced 11 August 2011.

Works substantially commenced on site when the applicant boxed out approximately 100m of the realigned road before the consent lapsed.

Council undertook careful consideration of this DA as the Kingscliff Sewerage Treatment Plant and other land holders have access over Altona Road and Council sewer assets are located in the proximity of the works proposed.

DA05/1450 had several conditions to protect access to Kingscliff Sewerage Treatment Plant, access to other properties, existing water and sewer services and the provision for future sports fields as follows:

3. The road must be a minimum of 30 metres south of the location currently proposed. Such plan is to be lodged with Council for approval prior to issue of a construction certificate and it to accommodate the structured open space as shown in the indicative structural open space plan (as attached to this consent for your reference).

[GENNS02]

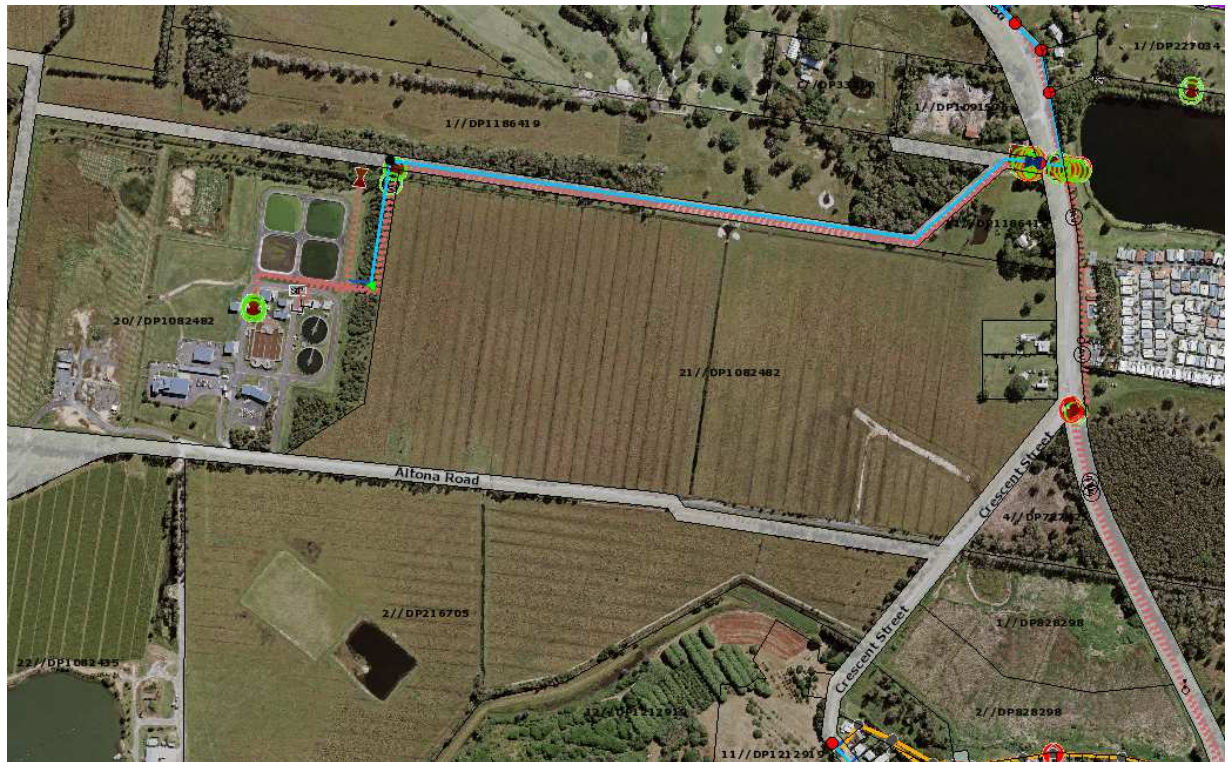


4. Any works to be carried out within the adjoining road reserve is subject to application and approval being issued by Tweed Shire Council as the road authority. Application for these works and receipt of approval is to be obtained prior to the issue of a construction certificate for works within the development site.

[PCC0075]

61. The existing road reserve (Altona Drive) shall not be extinguished and will remain in the ownership of Council for a period of three (3) months from the date of registration of subdivision certificate for the new road to allow satisfactory servicing arrangements to be made by existing or approved developments who rely on this road corridor for their servicing needs.

[PSCNS01]



Council GIS showing the assets to the north of the lot within the road easement.

Therefore any approval issued by the Department that requires a different road alignment to that approved under DA05/1450 may necessitate the applicant lodging a S96 Modification to DA05/1450 with an amended associated Construction Certificate (fees per hour). **The Department could consider requesting the applicant lodge a concurrent DA/S96 for the amended road alignment to the Mod currently being determined by the Department to ensure all Government and Council consents continue to align.**

6. Operational Noise

A Noise Impact Assessment was completed for the previous modification in 2015. Modelling demonstrated that noise does not exceed the adopted noise criteria except in a light northerly and only by 0.4dB (inaudible difference) at Lot 11 in DP 1212919 the site of a recently approved 40-lot residential subdivision shown diagrammatically below.



The Department has advised that the exceedance is insignificant and that noise impacts from the proposal are acceptable.

The proposed modification including the change in location of the processing site is not anticipated to change the noise modelling outputs or exceed the adopted noise criteria. No further considerations required.

7. Traffic Noise

The change in the traffic consideration appears to provide a better traffic noise outcome when compared to the existing alignment due to the increase in buffer distances to residence to the south. No increase in daily or peak traffic loads are proposed.

8. Acid Sulfate Soils

The proposed amendments are not considered to materially change previous assessments undertaken relating to Acid Sulfate Soils. The main interaction with Acid Sulfate Soils relates to the dredging operation and the proposed batter slope modification will not increase any potential Acid Sulfate Soil impacts above what was previously assessed. Existing monitoring and management strategies are considered adequate and no further considerations are required.

9. Groundwater

The proposed amendments are not considered to materially change previous assessments undertaken due to no change in extraction rate. The main interaction with groundwater relates to the dredging operation and the proposed batter slope modification will not increase any potential groundwater impacts above what was previously assessed. Existing monitoring and management strategies are considered adequate and no further considerations are required.

10. Air Quality

An Air Quality Impact Assessment was completed for the previous modification in 2015. The Department has advised that the temporary processing area would not result in any likely exceedances to the existing approved criteria, and is satisfied that the air quality impacts from the proposed modification would be low and acceptable.

A review of the Air Quality Impact Assessment in light of the proposed amendments has been undertaken and no further air quality considerations are required.

11. Future Conditions to be modified

Council requests an opportunity to review and changes to the recommended conditions of consent.

Please request additional information from the applicant as detailed throughout the above letter and provide Council an opportunity to review any additional information and amendments to the approved conditions of consent.

Should you have any enquiries in regard to this matter please contact Council's Team Leader Development Assessment Denise Galle on 02 6670 2459.

Yours faithfully

Lindsay McGavin
MANAGER DEVELOPMENT ASSESSMENT AND COMPLIANCE