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10 April 2012

Ms Felicity Greenway
A/Director
Mining & Industry Projects
Department of Planning & Infrastructure
GPO Box 39
SYDNEY NSW 2001

Attention: Paul Freeman

Dear Ms Greenway

Re: Mackas Sand Access Road Modification (08_0142 MOD 1)

Thank you for email of 23 March 2012 providing Port Stephens Council's submission dated 22 March 2012 in regard to Mackas Sand Access Road Modification (08_0142 MOD 1). The submission raises a number of Environmental and Engineering matters which are addressed at Points A and B below.

Further to our discussions, additional information is also provided in regard to justification for the proposed alternate haul route. This is addressed in Point C below.

A. Environmental

1. Port Stephens Koala Plan of Management

Port Stephens Koala Management Plan (PSC 2002) is discussed in Section 5.7 of the Modification EA (Umwelt January 2012). The proposed development site is identified as providing supplementary koala habitat (as identified in Port Stephens Koala Management Plan) and concludes that the proposed development will disturb less than 1 hectare of potential habitat for koala and will not result in fragmentation of koala habitats. An assessment of significance (Appendix D of Modification EA) concludes that the proposed development will not result in significant loss of potential habitat for the koala.

The proposed development complies with performance criteria of the Port Stephens Koala Management Plan as discussed below:

a) Minimise removal of native vegetation within Preferred Koala Habitat

The alignment of the proposed alternate haul route has been selected to minimise the removal of vegetation within Preferred Koala Habitat.

b) Maximise retention and minimise degradation within Supplementary Koala Habitat and Habitat Linking Areas

The alignment of the proposed alternate haul route has been selected to maximise retention and minimise degradation within Supplementary Koala Habitat and Habitat Linking Areas.

c) Minimise removal of any individuals of preferred koala food trees on-site

The alignment of the proposed alternate haul route has been selected to minimise removal of preferred koala food trees.

d) Where appropriate restore and rehabilitate areas identified as Koala Habitat/Buffers and Linking Areas

No Koala Habitat/Buffers and Linking Areas that are appropriate restoration or rehabilitation have been identified.

e) Make provision for long term management and protection of koala habitat

The proposed development has taken into consideration long term management and protection of koala habitat through minimising disturbance to koala habitat and limiting vehicle speeds to 40 km/h or less along the proposed alternate haul route.

f) Not compromise potential for safe movement of koalas

The proposed development makes provision for safe koala movement through limiting vehicle speeds to 40 km/h or less along the proposed alternate haul route.

g) Restrict development to defined envelopes

The proposed development will be restricted to a defined development footprint.

h) Minimise threat to koalas from dogs, motor vehicles and swimming pools

The proposed development will not result in increased dog numbers in the area, limits traffic speeds to 40 km/h along the proposed haul route and does not include any swimming pools.

2. Rough Doubletail – *Diuris praecox*

Potential impact of the proposed development on *Diuris praecox* has been assessed under the EPBC Act and referred to Department of Sustainability, Environment, Water, Population and Communities (DSEWPC). DSEWPC has advised verbally that the development is not considered a controlled action in regard to *Diuris praecox*.

3. Mitigation Measures

Mitigation measures set out in Section 6.0 of Appendix 3 of the Modification EA (Umwelt January 2012) form part of the proposed development.

B. Engineering

The engineering matters raised in Council's submission are the same matters as were identified in Section 2.1.2 of the Modification EA (Umwelt January 2012) which came from a letter from Port Stephens Council to Mackas Sand dated 22 June 2011. This letter was superseded by Port Stephens Council's revised requirements which were set out in a letter to Mackas Sand dated 2 March 2012. The requirements of the 2 March 2012 letter were addressed in the Response to Submissions (Umwelt) dated 19 March 2012.

C. Justification for Alternate Haul Route

As discussed, there are numerous reasons that the modification to consent to enable construction and use of the proposed alternate haul route is sought. These include:

- The proposed alternate route provides certainty of access to the approved extraction area on Lot 218. As discussed in the Response to Submissions (Umwelt 19 March 2012), there is uncertainty in regard to the nature and scope of the agreement between Mackas Sand and Towers. This is demonstrated in correspondence from Hills Solicitors acting on behalf of Towers dated 29 May 2009 which states:

We do not consider that any document we have viewed can be regarded as an Agreement or in any way binding.

- As discussed in the Modification EA, the proposed modification does not preclude use of the existing approved haul route in the future if an agreement was obtained.

- There is a significant and increasing shortage of supply of sand for the Sydney market. Mackas Sand receives inquiries regarding supply of sand to the Sydney and Newcastle markets on a daily basis due to this sand shortage. A significant proportion of this shortfall in supply could be largely met from extraction operations on Lot 218 once certainty of access to the resource can be gained.

- The currently approved access route will require the extraction and removal of an elevated sand knoll that is currently used as part of Worimi Sand Dune Adventures. Worimi Local Aboriginal Land Council has stated maintenance of this knoll is an important component of the sand adventure tours.

- The knoll and the mobile dunes along the approved alignment to the Lot 218 extraction area are up to approximately 30 metres high and would require significant sand removal to enable a stable road surface to be constructed. Once the road was constructed, significant effort would be required on an ongoing basis to remove windblown sand from the road surface so that trucks could safely and efficiently use the haul route as access to the extraction face can only be gained from the western end of the extraction area.

- In addition, the section of the dune at the western end of the approved extraction area on Lot 218 appears to be underlain by a former transgressive dune (see Figure 2.6) that was stabilised by vegetation before being subsequently buried by mobile sand. Excavation of the access road in this area to achieve a grade that is suitable for quarry trucks is likely to encounter this buried dune surface requiring the excavation of buried soil profiles associated with the stabilised dune. As shown on Figure 4.10 of the Modification EA (Umwelt January 2012), this section of the haul road is located within the Danger Area for unexploded ordnance and as such any excavation into the buried soil profile would require ongoing testing for unexploded ordnance in accordance with the requirements of the Unexploded Ordnance Management Plan (Appendix 5 of Modification EA (Umwelt January 2012)).

- Any excavation into the buried soil profile to establish the approved access road will also need to be undertaken in accordance with the requirements of the approved Aboriginal Cultural Heritage Management Plan (Umwelt 2009). The extent and duration of these works is unknown and is dependent on time taken to satisfactorily achieve any unexploded ordnance clearance that may be required and undertake archaeological testing as required by the Aboriginal Cultural Heritage Management Plan (Umwelt 2009).

- If the approved route was to be established, unexploded ordnance and archaeological management works could not be commenced until an agreement is reached in regard to access over Towers land and sufficient material is excavated and removed to enable the proximity and extent of the former dune surface (now buried) to be defined. It is estimated that unexploded ordnance testing and archaeological testing could take in the order of 6 to 10 weeks to complete after the location of the buried soil is identified. If archaeological material that is outside the scope of the Aboriginal Cultural Heritage Management Plan (Umwelt 2009) is encountered, significantly longer delays could result. As this route only provides one access point to the extraction face, supply of sand would likely cease until all necessary unexploded ordnance and archaeological management works were completed. As a result, the risks associated with establishing the currently approved route are high even if an agreement is reached with Towers and could pose ongoing challenges in terms of continuity of sand supply to Sydney and Hunter markets from Lot 218.

- The alternate haul route uses Stockton Bight Track which is a public road and then traverses land owned by parties associated with Mackas Sand and Worimi Local Aboriginal

Land Council and hence provides certainty of access (if approval for the modification sought is granted).

- The alternate haul route traverses a relatively flat route requiring limited excavation and provides direct access to the approved Lot 218 extraction area. The alternate route accesses the mobile sand dune within the Lot 218 extraction area at an elevation of 3 to 4 mAHD and hence doesn't require excavation through buried former stabilised dunes to establish the haul route or the extraction area.

- The alternate haul route is located wholly within vegetated and stabilised dunes that are not subject to inundation with mobile sand and that can be readily maintained in a safe and trafficable state.

- The alternate haul route also facilitates access to extraction faces to the east, south and west of the entrance point of the haul route to the extraction area on Lot 218. This provides greater operation efficiency than use of the approved haul route and provides contingency extraction opportunities during periods when significant movement of mobile sand may temporarily restrict access to an extraction face. This allows greater certainty of sand supply to markets and significantly reduced start up risk.

Should you require clarification or further detail in regards to the responses above do not hesitate to contact me on (02) 4950 5322 or at pjamieson@umwelt.com.au.

Yours faithfully

Peter Jamieson
Director