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Your ref DA/251/2013

Development Assessment & Compliance Department
Lake Macquarie City Council
126-138 Main Road
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07 November 2014

Att'n: Janine Koppel, Erosion & Sediment Control Officer

Dear Janine,

RE: DA/251/2013 Masters Windale, Pacific Hwy – Pre-DA Advice: Erosion & Sediment

We refer to Lake Macquarie City Council's email requesting further additional information regarding Erosion and Sediment control for the abovementioned DA located at Bennetts Green Windale. We understand that a Soil and Water Management Plan is required in order to satisfactorily address Council's DCP No1 and LEP 2004 requirements.

Please refer to the itemised response below (original comments are shown in italics) and attached Soil and Water Management Plan (SWMP) drawings 302816-C-DR-XX-00-0210 to 0214 (Rev P1).

1.0 Planning Provisions

The area of disturbance associated with the development is over 2500m². Lake Macquarie LEP 2004, Clause 31(2)(c), requires a Soil and Water Management Plan (SWMP) for developments where the area of soil surface exposure is greater than 2500m². In addition, LMCC's DCP No.1 Section 2.1.11 (Erosion Prevention and Sediment Control) states that for developments over 2500m², a SWMP is required. The Plan does not comply with the requirements of LMCC's LEP or DCP.

As the area of disturbance is greater than 2500m², a Soil and Water Management Plan (SWMP) has been prepared for the site including provision of detailed calculations, as per the requirements of Lake Macquarie City Council's LEP 2004 and DCP No1. Please refer to the attached plans.

It should be noted that given the early stage of the project, the SWMP is to be reviewed by the selected

contractor prior to commencement of the construction phase. The contractor is responsible for the final preparation of a SWMP and Construction Management Plan to suit their intended staging, methodologies, plant equipment, etc.

2.0 Site Risk

The site is considered high risk due to:

- *Proximity to a watercourse/water body or drainage line to south of development.*
- *Very high - moderate soil erodibility*
- *High – moderate soil erosion hazard*
- *Dispersible soils – as no soil tests results were provided with the application, the Newcastle Soil Landscape Map identified the soils as part of the Warners Bay Soil Landscape. This soil landscape is known for its highly dispersible soils.*
- *Large area of disturbance*

The SWMP has been prepared on the following basis:

- The proximity of Crockers Creek to the South is noted.
- As soil testing has not been undertaken at this preliminary stage of the development, characteristics of the Warners Bay Soil Landscape have been adopted from Table C13 of the “Blue Book” for the purpose of undertaking calculations. Soil testing is to be undertaken prior to the commencement of construction to verify all parameters for the calculation of basin size.
- It is noted that although the area of disturbance is large, the grading of the site is generally relatively flat (approximately 1-3%) contributing to relatively lower soil loss in the calculations.

3.0 Plan Quality

The SWMP (Drawings 0110 and 0111) has been assessed. The site is considered high risk. The Plan does not comply with the requirements of LMCC’s LEP or DCP. The submitted plan is not adequate as it does not provide the detail required to enable assessment of its overall ability to prevent environmental harm. Works concurrent with the submitted SWMP are unlikely to prevent environmental harm.

The applicant is required to submit a revised SWMP in line with LMCC DCP No.1 Section 2.1.11 (Erosion Prevention and Sediment Control) and address all items listed for developments over 2500m².

The attached revised SWMP has been prepared to address items listed in the DCP No1 Section 2.1.11 Erosion Prevention & Sediment Control (dated 10 February 2014) with key points as follows:

- The DCP states that the maximum area of exposure at any one time is to be restricted to 2.5 hectares. As such the site total area of approximately 8ha has been divided into four areas with associated sediment basins to enable staged management of soil exposure.
- As required by the DCP, the design storm for the sediment basins has been adopted as the 30min duration, 3-month average recurrence frequency (estimated at 19.39mm/hr intensity based on the IFD table contained in LMCC’s drainage handbook 2004)

In addition, the applicant must address:

- 1. Capacity of "sediment retarding basin" is given as 582m³ on drawing 0111 and 450m³ on drawing 140. Please clarify.*

Revised calculations for sediment basin volumes have been undertaken using the "Blue Book" "Detailed Calculation" spreadsheet and are documented on the attached plans. Please note that the "450m³" volume noted on the site plan DA drawing refers to the volume of the final on-site detention (OSD) basin. The temporary sediment basin is proposed in the same location in order to make use of the excavation.

- 2. Site access would be safer on South Street rather than Pacific Highway*

Site access has been documented off South Street, please refer to the updated plan. Please note that secondary access has been maintained off Pacific Highway to accommodate access to the south-eastern portion of the site depending on staging of the works.

- 3. Clear delineation of stages*

The works have been divided into stages to enable management of exposed areas. Preliminary staging boundaries are documented on the attached plan. The actual staging of the works is to be assessed by the contractor prior to construction and the SWMP to be revised if required.

- 4. No erosion and sediment control measures are permitted outside the site including on local and state roads. All erosion and sediment control measures must adequately prevent pollution before water leaves the site.*

Refer to the attached SWMP plans documenting control measures within the site only.

- 5. Due to the dispersible nature of the soils onsite, as evidenced by the condition of the creekline to the east of the site, I am concerned that if the proposed above ground onsite detention basin holds any water on a permanent basis, it may fail. This may be due to water in basin causing soils to disperse and tunnel to the creekline especially if the height of the retained water is higher than the creekline. Construction methods for basin should address this.*

The proposed on-site detention (OSD) basin has a discharge control outlet in the base, as documented on the DA site plans. This means that while it detains and slowly releases stormwater, it should not hold any water on a permanent basis.

The proposed sediment basins have been documented in accordance with the standard detail from the "Blue Book".

6. *The applicant shall also submit with the SWMP, a Statement of Compliance, stating that:*
- The Plan has been developed by an appropriately qualified professional in erosion and sediment control;*
 - The Plan complies with the requirements of a SWMP as set out in LMCC's DCP No. 1;*
 - The Plan and associated documents, calculations and drawings, have been prepared to a standard which, if properly implemented, will achieve the water release criteria of 50mg/L of Total Suspended Solids (TSS) as identified in LMCC DCP No.1 and The Blue Book (Managing Urban Stormwater – Soils and Construction. Landcom, 2004); and*
 - All erosion and sediment control measures are in accordance with the latest version of The Blue Book (Managing Urban Stormwater – Soils and Construction. Landcom, 2004) or other current recognised industry standard for erosion and sediment control for Australian conditions.*

A 'Statement of Compliance' letter can be provided once all Council comments are closed out.

We trust that this information meets Council's satisfaction. Should you require any further information please do not hesitate to contact the undersigned.

Yours faithfully,



Mott MacDonald Australia

JAMES GILLIGAN

CIVIL ENGINEER

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Enclosed: Soil and Water Management Plans 0210 to 0214 inclusive