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Camden Council
PO Box 183
CAMDEN NSW 2570

18 September 2012

Attention: J. Vella

Dear Madam,

**Re: Carrington Centennial care
90 Werombi Road Grasmere – Paling Court Redevelopment**

In response to Council's letter dated 10 August please find below additional information for your reference.

Item 1

For the Paling Court redevelopment we have worked out that between the new and old roof areas the increase in roof area is approximately 1,534m². Rainwater collection and sizing is based on additional roof areas for the proposed development.

In reference to road impervious catchment increase for the proposed redevelopment including all new access roads on the southern side of Paling Court redevelopment, the increase in surface area would be approximately 1,575m².

The entire surface runoff of these areas is directed into a bioswale which was submitted to Council as part of the S96 application. Drawings and documents were sent directly to J. Vella from Camden Council on 7th September.

A model was set up using the MUSIC software package to evaluate the effectiveness of the proposed water quality treatment system at the Paling Court RACF, Camden. The site is proposed to have a bioswale which treats the majority of the runoff from the road and carpark area with the roof area bypassing the swale and connecting directly to the road stormwater drainage system. The reduction requirements for water quality from Camden Council are as follows:

- Gross Pollutants - 90% reduction
- Total Suspended Solids - 85% reduction
- Total Phosphorus - 65% reduction
- Total Nitrogen – 45% reduction

MUSIC Model

The post developed site was modelled as a single urban catchment node, with the area draining to the bioswale. A bioswale is to be located along the central open area of the site capturing runoff from the road area. The proposed location is as shown on drawing No. MMD-304720-C-DR-DA-03. An area of 0.265ha

was calculated as being directed to the bioswale from the road areas with an impervious percentage of 100%.

From the proposed layout a bioswale of 40m long and 1m wide is proposed on the site, which gives a surface area for infiltration in the bioswale of 40m². A detail of the proposed bioswale is shown on drawing No. MMD-304720-C-DR-DA-05.

The MUSIC model was run to compare the post development pollutant loads without treatment compared with the post development pollutant loads with treatment. The results are shown in the below Table.

MUSIC Output – Post Developed Reduction in Annual Loads

Parameter	Post Developed Load	Post Developed Load After Treatment	% Removal Achieved
Total Suspended Solids (kg/yr)	406	4.34	98.9%
Total Phosphorus (kg/yr)	0.797	0.183	77.1%
Total Nitrogen (kg/yr)	5.50	1.19	78.3%
Gross Pollutants (kg/yr)	60.6	0.00	100.0%

As can be seen from the removal percentages achieved these results show that it achieves council pollutant reduction requirements.

Item 6

We have been engaged by Carrington Centennial Care to assess and report on the existing sewer pump-out system for the proposed redevelopment of Paling Court. The report will address if the existing Paling Court sewer pump-out has adequate capacity for the proposed redevelopment. The report will also address issues such as blockages of pumps and minimise down time of pumps, by introducing alarm valves to be triggered earlier. The Paling Court redevelopment will use minimum WELS 4 star rated fixtures and tapware to minimise water usage and wastage which will improve operational parameters for the proposed redevelopment.

Item 7

The proposed Paling Court redevelopment will have 126 new beds. The redevelopment will be split up between low care, high care, memory care and low transitional care.

In terms of trade waste requirements, the main rooms that will generate trade waste discharge would be cafe, kitchen and beauty salon. All these areas will have trade waste pre-treatment system in compliance with Sydney Water. Prior to any CC issue, design documents will need to be submitted to Sydney Water for their approval. This would also be outlined once we officially make application for a Section 73 Certificate, once DA documents are released by Council.

Item 8

As stipulated previously we are in the process of completing a report on the waste water system serving Paling Court. As part of the design, any works for the existing sewer pump-out system will be submitted to Sydney Water for their review and approval prior to any construction commencement on site.

Sydney Water have outlined in a letter to Council, dated 10/07/12, outlining that the existing 225mm sewer main in Ferguson Road has sufficient capacity for the proposed development.

Part of our report we will address concerns that council have in reference to any sewer effluent overflow and to prevent any pollution of downstream waterways by introducing an earth mound bund downstream of the pump out system.

Any other concerns that council may have associated with the sewer pump out matter can be conditioned as part of the DA, which would give everyone time to finalise the issue prior to construction commencement

Yours faithfully



Mott MacDonald Australia

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ASSOCIATE DIRECTOR, BUILDING SERVICES

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