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Ref: 11291-a1  
Your Ref: X/900/2011

The General Manager  
Blue Mountains City Council  
Locked Bag 1005  
KATOOMBA 2780

Attention: Ms Kim Barrett

Dear Sir/Madam

**Subject: Sydney Drinking Water Catchment SEPP  
DA No X/900/2011; Lots 202, 203, 204 & 205 DP 751647  
117-121 Shipley Road, Blackheath**

I refer to your letter received 28 October 2011 requesting the concurrence of the Chief Executive under Clause 11 of *State Environmental Planning Policy (Sydney Drinking Water Catchment) 2011* (the SEPP) with a proposal for a fire brigade station to be serviced by an amended soil mound system. A revised MUSIC stormwater quality model and concept stormwater management plan was received on 23 May 2012.

The subject property, which has been inspected by the Sydney Catchment Authority (SCA), is located within the Warragamba catchment which forms part of Sydney's water supply.

The following documents have been considered in the assessment of the application:

- a Statement of Environmental Effects (dated April 2011) and a letter to Council (dated 6 March 2012) both prepared by BBC Consulting Planners
- Site Plans prepared by Kollanyi Architects Pty Ltd, and
- a revised Water Cycle Management Study (WCMS) (dated 25 March 2012), an addendum to the WCMS (dated 23 April 2012) and the revised MUSIC stormwater quality model and associated hand annotated Concept Stormwater Management Plan (dated 23 May 2012) all prepared by NSW Public Works.

The SCA notes that the land use application refers to Lots 202, 203, 204 and 205, however, the fire brigade station and associated infrastructure is only proposed to be constructed on Lots 204 and 205.

It is also noted that the so called 'Concept Stormwater Management Plan' prepared by NSW Public Works, showing the proposed stormwater and wastewater management measures is essentially hand drawn and has no drawing number, author name or date. This plan still shows a section of the sand mound for wastewater management not an amended soil mound as agreed. The applicant has agreed to provide a properly drafted and designed stormwater management plan prior to the construction stage of the development. These matters have been addressed in conditions below.

Based on the SCA's site inspections and the information provided, the proposed development has been assessed by the SCA as being able to achieve a neutral or beneficial effect on water quality provided appropriate conditions are included in any development consent and are subsequently implemented. The Chief Executive would therefore concur with Council granting consent to the application subject to the following conditions being imposed:

## **General**

1. The site layout and works shall be as specified in the Statement of Environmental Effects (dated April 2011) and a letter to Council (dated 6 March 2012) both prepared by BBC Consulting Planners and shown on the Site Plans prepared by Kollanyi Architects Pty Ltd (Drawing No. CAT.2B A-01; Rev. C; dated 16/11/2010). Any revision to the site layout or external works shall be agreed to by the Sydney Catchment Authority.

*Reason for Condition 1- The Sydney Catchment Authority has based its assessment under the State Environmental Planning Policy (Sydney Drinking Water Catchment) 2011 on this version of the development.*

## **Wastewater Management**

2. The amended soil mound system shall be designed, located and installed in accordance with the manufacturer's specifications, and *Designing and Installing On-site Wastewater Systems* (SCA, 2012) but with the following specific requirements:
  - the septic tank shall have a minimum volume of 3000 litres and shall be fitted with an outlet filter
  - if required, the septic tank shall be connected to a pump well with a minimum volume of 2000 litres
  - if a pump well is installed, the collection well pump shall be set so as to commence operation when the effluent level reaches 65% full and switch off when the holding tank is 50% full, and an alarm system shall be installed that is triggered when the pump fails or when the holding tank is 75% full
  - the size and design of the amended soil mound system shall be based on a minimum wastewater loading of 600 litres per day, and a design loading rate based on the limiting soil layer
  - the amended soil mound shall be located as indicated on the hand annotated Concept Stormwater Management Plan prepared by NSW Public Works (author, number and date not specified)
  - the site for the mound shall be levelled and shall have a minimum cut of no more than 0.25 metres into the slope
  - the effluent distribution pipe from the tank or pump well to the mound shall be fitted with a non-return valve, and shall be buried at a minimum depth of 300mm (500 mm under an access way) and laid in a manner that provides protection against mechanical damage or deformation
  - the mound shall be capped with a soil of moderate permeability, e.g. loam to clay loam, to minimise rainfall infiltration and promote evapo-transpiration, and shall be fully turfed prior to occupation of the building
  - the mound area shall be fenced-off from vehicles
  - the mound area shall be mown regularly with grass clippings to be disposed of away from the mound, and
  - all run-on and stormwater collected from any hard surface areas shall be diverted away from the mound area, eg by means of a stabilised bund or drain with provision for energy dissipation at the outlet to prevent scouring or erosion.
3. The on-site wastewater management system shall be maintained according to Section 5 of the Department of Local Government's guidelines *On-site Sewage Management for Single Households* (1998), AS/NZS 1547:2012 *On-site Domestic Wastewater Management*, and the manufacturer's requirements.
4. All effluent shall be assimilated within the boundaries of the property.

5. No effluent management areas shall be located within 150 metres of a named river, 100 metres of any perennial or intermittent creek or watercourse, or within 40 metres of a dam or drainage depression.
6. Appliances and fixtures with at least a four star ratings shall be installed in the building to minimise the volume of wastewater produced.
7. These conditions of consent relating to wastewater management shall be provided to the installer of the on-site wastewater management and effluent disposal system.
8. The installers of the wastewater management and effluent disposal systems shall certify to Council in writing that the wastewater management and effluent disposal systems have been constructed and installed as per these conditions of consent and in accordance with the Sydney Catchment Authority's current recommended practice referred to in Condition 2, and that the systems have been tested and are functioning properly.
9. No Occupation Certificate shall be issued until Council has received the certification from the installers and approved the on-site wastewater management system under the *Local Government Act 1993* as being consistent with these conditions.

*Reason for Conditions 2 to 9 – To ensure that the on-site wastewater management system is appropriately designed, located and installed so as to have a sustainable neutral or beneficial effect on water quality over the longer term.*

#### **Stormwater Management**

10. A properly drafted and detailed stormwater management plan for the proposed development shall be prepared based on the hand annotated Concept Stormwater Management Plan and the MUSIC stormwater quality modelling (File Name Shipley\_Pre\_v2c3.sqz; dated 23 May 2012) both prepared by the NSW Public Works. The plan shall be provided to Council and the Sydney Catchment Authority prior to issuance of an operational consent for the development.
11. The final stormwater management plan shall include but not limited to the following stormwater treatment and management measures, including location and associated section details:
  - a rainwater collection system with a minimum rainwater tank capacity of 30,000 litres to collect roof runoff from the building for internal and external non-potable reuse
  - all parking and hardstand areas associated with the development, which shall be levelled and constructed in a manner that ensures runoff is directed for treatment by the proposed stormwater treatment measures
  - grassed swales to divert stormwater runoff to the bioretention systems or to divert clean runoff to the surrounding area via armoured level spreaders, and
  - two linear bioretention systems.
12. The bioretention systems shall incorporate the following dimensions and specific requirements:
  - bioretention system 1 shall have a minimum surface and filter area of 100 square metres
  - bioretention system 2 shall have a minimum surface and filter area of 80 square metres
  - an extended detention depth above the filter of 0.3 metres
  - a minimum total filter depth of 0.6 metres
  - a filter media consisting of a clean sandy loam with a median filter-media particle diameter of 0.5 millimetres

- an underdrain outlet located at a minimum depth of 0.6 metres
  - be planted with appropriate moisture-tolerant deep-rooted vegetation
  - incorporate a minimum 2 metre wide overflow weir
  - both the overflow and underdrain shall discharge to stabilised grassed or vegetated areas in a manner that does not result in erosion
  - be protected from vehicular damage by bollards, fences, slotted kerbs or similar permanent structures, with signs to be erected to advise of the nature and purpose of their water quality management function, and
  - be protected by sediment and erosion control measures during any construction and post-construction phase until the ground surface is revegetated or stabilised.
13. Any variation to stormwater treatment and management measures shall be agreed to by the Sydney Catchment Authority.
14. All stormwater management measures shall be certified by a stormwater consultant approved by the Sydney Catchment Authority as having been constructed as specified in these conditions.

*Reason for Conditions 10 to 14 – To ensure appropriate stormwater quality management measures are designed, located and implemented so as to achieve a sustainable neutral or beneficial impact on water quality, particularly during wet weather over the longer term.*

#### **Operational Environmental Management Plan**

15. An Operational Environmental Management Plan (OEMP) shall be prepared providing the location and details of all wastewater and stormwater management structures, and specifying the requirements and responsibilities for inspection and maintenance of such systems. The OEMP shall be developed in consultation with the Sydney Catchment Authority and Council prior to the occupation of the building.

*Reason for Condition 15 – To ensure wastewater and stormwater treatment and quality control measures are appropriately operated and maintained so as to achieve a sustainable neutral or beneficial impact on water quality, over the longer term.*

#### **Remnant Native Vegetation**

16. Vegetation clearing for the construction of the fire brigade station and associated infrastructure and fire asset-protection zone purposes shall be minimised. Services such as phone and electricity lines and the like shall be installed along cleared areas and/or access driveways without additional clearing of vegetation.
17. All cleared pervious areas including the asset protection zone shall have, or be re-vegetated, with grasses and/or shrubs so as to stabilise the ground surface and prevent soil erosion.

*Reason for Conditions 16 & 17 – To ensure that the water quality impacts of the proposed development are minimised so as to have a sustainable neutral or beneficial effect on water quality over the long term.*

#### **Other**

18. Conditions 8, 14, 15 and 17 above shall be carried out prior to occupation.

*Reason for Condition 18 – To ensure there is an overall and sustainable neutral or beneficial impact on water quality during all stages of the proposed development.*

### **Construction Activities**

19. A Soil and Water Management Plan shall be prepared for all works proposed or required as part of the development by a person with knowledge and experience in the preparation of such plans. The Plan shall meet the requirements outlined in Chapter 2 of NSW Landcom's *Soils and Construction: Managing Urban Stormwater* (2004) manual - the "Blue Book" and shall be to the satisfaction of Council.
20. Effective erosion and sediment controls shall be installed prior to any construction work including access to the site. The controls shall prevent sediment and contaminated water leaving the construction site or entering natural or constructed drainage system, and shall be regularly maintained and retained until works have been completed and groundcover established or ground stabilised.

*Reason for Conditions 19 & 20 - To manage adverse environmental and water quality impacts during the construction phase of the development and to minimise the risk of erosion, sedimentation and pollution within or from the site during this construction phase.*

Under Clause 11 of the SEPP, Council must provide the SCA with a copy of its determination of the application within 10 days of the determination.

If you wish to discuss this matter further please contact Dr Girja Sharma on 4724 2459.

Yours sincerely



**MALCOLM HUGHES**  
**Manager Planning & Assessments**

14/6/12