NSW GOVERNMENT | Department of Primary Industries

OUT13/6886

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Dear Ms Mulcahy,

1, 1A, & 5 Avon Road and 8 Beechworth Road Pymble (MP 08_0207 & MP 010_0219)
Comment on the Preferred Project Report

I refer to your letter dated 18 January 2013 to the NSW Office of Water, a division within the Department of Primary Industries, in respect to the above matter.

The NSW Office of Water provides the comments detailed in Attachment A.

For further information please contact Janne Grose, Planning and Assessment Coordinator (Penrith office) on 4729 8262, or at; Janne.Grose@water.nsw.gov.au.

Yours sincerely

Phil Anquetil
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Attachment A

1, 1A, & 5 Avon Road and 8 Beechworth Road Pymble (MP 08_0207 & MP 010_0219)

Preferred Project Report
Comment by NSW Office of Water

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1. Riparian Land

The Preferred Project Report (PPR) states the drainage line located on the site is not shown as a blue line on the 1:25 000 topographic map for the area and accordingly the drainage line is not defined as a river under the *Water Management Act 2000* (WMA) (page 14). The Office of Water advises that the blue line on a topographic map is just a guide and is not to be used to make the final determination of whether a watercourse on a site is defined as a river or not. Additional information such as whether there is a blue line directly downstream from a site and a site inspection to determine continuation of the watercourse is also used. The PPR also indicates the drainage line does not exhibit bank features (page 47 and 48 and Appendix J) and the drainage line does not sustain a permanent presence of water (see Appendix A of Appendix J).

The main relevance for determining whether the watercourse is a river for the Office of Water is when a licence or approval is required under the WMA for dam construction and channel works or for works within 40m of the watercourse. As WMA approvals are excluded from a Part 3A approved project the key aspects for Office of Water are determining the following:

- whether the capacity of proposed structures will require licensed entitlement which is not excluded from a Part 3A project, and
- whether the proposed works within 40m of watercourses are consistent with the *Guidelines for Controlled Activities on Waterfront Land* (CAA Guidelines).

The applicant is required to provide further details on the capacity of the proposed structures and any other structures on the site to determine additional licensing requirements. This is detailed further in the surface water licensing section below.

In terms of the application of the CAA Guidelines, key aspects relevant to this project include:

- Detention basins are permitted on-line on first and second order streams however these are to be dry and vegetated and not for water quality treatment purposes.
- Detention basins require an equivalent vegetated riparian zone for the stream order.

The Stormwater Management Plan indicates the proposal for two on-line weirs and associated constructed wetlands for water quality control. The Office of Water advises this is not consistent with the CAA Guidelines and has concerns with the ability of these structures to perform the desired water quality function. Based on other similar proposals key management issues of blue green algae and aquatic weed issues need to be comprehensively understood including the potential impacts on downstream environments. It is recommended water quality treatment for the development is dealt with off line to mitigate potential impacts on the downstream watercourse and the Lane Cove River.

The Stormwater Management Plan also indicates the existing drainage line running through the centre of the site is proposed to be enhanced by construction of a dry rock creek bed. It is recommended the drainage line is rehabilitated to mimic a stable natural creek system from the local area.

Figure 25 in the PPR which shows an artist's impression of the rehabilitated bushland along the watercourse includes mown grass areas immediately adjacent to the watercourse (see page 33). It is recommended the riparian area is vegetated with fully structured local native plant species from the local vegetation community.

It is noted the Vegetation Management Plan provides management measures to be in place for the next 5 years, this longer maintenance period is supported.

2. Groundwater

The site is located within the mapped extent of the Sydney Basin Central Groundwater Source, which is not a highly productive groundwater source. Furthermore, the impacts likely to arise from the development are expected to be restricted to the Ashfield Shale groundwater environment, not that within the Hawkesbury Sandstone (which makes up the bulk of the resource within the gazetted Sydney Basin Central Groundwater Source).

The Office of Water has previously provided a response in relation to the proposed development indicating that a licence under Part 5 of the *Water Act 1912* may be required to authorise the dewatering necessary for building construction. That advice was provided on the basis of the limited information supplied to the Office of Water for the initial assessment.

The documents provided with the application have not addressed the potential impact of the development on the groundwater system beneath the site in respect of the requirements of the *NSW State Groundwater Policy Framework Document* (1997), the *NSW State Groundwater Quality Protection Policy* (1998), the *NSW Groundwater Dependent Ecosystems Policy* (2002), or the *NSW Aquifer Interference Policy* (2012). It should be noted that the latter Policy was published well after the lodgement of the application with the planning agency.

Given the low permeability of the Ashfield Shale (published range from investigations in the nearby Chatswood area between 2×10^{-8} and 9×10^{-6} metres per second), the extent of impacts arising from the development are expected to be minor in both depth and lateral extent. Notwithstanding the lack of assessment in respect of the abovementioned policy documents, the anticipated extraction of groundwater from the fractured rock shale environment is expected to be minor, if any.

3. Water Licensing

(i) Surface Water

The Office of Water *Farm Dams Assessment Guide* provides details on Harvestable Rights and the calculation of the Maximum Harvestable Right Dam capacity (MHRDC).

Dams capturing up to the harvestable right capacity are not required to be licensed. Harvestable Right dams can be located on hillsides, gullies and minor watercourses that do not have permanently flowing waters and which are first and second order watercourses in accordance with the Strahler system of stream ordering.

The Harvestable Right gives landholders the right to capture and use for any purpose 10% of the average annual runoff from their property. The Harvestable Right has been defined in terms of an equivalent dam capacity called the Maximum Harvestable Right Dam Capacity (MHRDC). The MHRDC is determined by the area of the property (in hectares) and a site-specific run-off factor.

The maximum harvestable right dam capacity for the subject site is 1.0 ML. Details need to be provided on the combined capacity of the ponds/weirs and the estimated capacity of each pond needs to be provided. Any capacity of the total of all the dams on the property greater than the MHRDC may require a licence.

(ii) Groundwater

If the project requires interception of groundwater and/or dewatering the proponent is advised to seek the relevant approvals under the *Water Act 1912* and the *Water Management Act 2000* prior to commencement of activities.

End Attachment A