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Our ref ER22868
Your ref LEP002/12

Attention: Mr Karu Wijayasinghe

Dear Mr Wijayasinghe

Planning Proposal to rezone 120-188 Hawkesbury Valley Way, Clarendon to B7 Business Park

Thank you for your letter of 17 March 2014 seeking comment on the above planning proposal. The NSW Office of Water (Office of Water) comments on the planning proposal are provided at **Attachment A** for consideration.

In summary, the Office of Water recommends:

- the planning proposal clarifies the riparian corridor widths to be established along Rickabys Creek; the mapped Sydney Regional Environmental Plan (SREP 20) wetland (No. 145); the Freshwater Wetlands (EEC) and the existing large dam within the site,
- the riparian corridors within the site are zoned E2 rather than maintaining the existing RU4 zone,
- the rezoning proposal provides details on how the riparian corridors are to be protected, rehabilitated and managed in the future,
- proposed areas of encroachment into the riparian corridors by certain works (such as detention basins etc) are identified at the planning stage to ensure these areas of encroachment are adequately offset
- details are provided to assess the potential impacts of developing the site on groundwater (including groundwater flows, groundwater quality etc) and groundwater dependent ecosystems, and
- the NSW Dams Safety Committee are consulted if there is potential for new development downstream of any existing or proposed dams.

Should you require further information please contact Janne Grose, Water Regulation Officer on (02) 4729 8262 at the Penrith office.

Yours sincerely

Mitchell Isaacs
Manager, Strategic Stakeholder Liaison Unit
11 April 2014

Planning proposal to rezone 120-188 Hawkesbury valley Way, Clarendon to B7

The subject site is currently zoned part RU4 (Primary Production Small lots) and part E2 (Environmental Conservation). The Planning Proposal seeks to amend the zoning across the majority of the site to B7 Business Park to support commercial and light industrial uses.

The NSW Office of Water has reviewed the Planning Proposal and associated documents and provides the following comments:

Waterways and Riparian Land

Riparian Corridor widths

Section 2.1 of the Proposed Amendment to Hawkesbury LEP 2012 Report (September 2013, Rev 3) indicates the eastern and southern boundary of the site is defined by Rickabys Creek. It is noted the low lying areas of Rickabys Creek are identified (in part) as a mapped Sydney Regional Environmental Plan (SREP 20) wetland (No. 145) and Freshwater Wetlands (EEC) occur near the creek (see Figure 1, Ecological Constraints Assessment Report). Section 4.3.6 of the Ecological Constraints Assessment Report also indicates the large dam within the study area appears to have previously been a large wetland area associated with the open floodplain of Rickabys Creek (page 30).

The Ecological Constraints Assessment Report recommends setbacks to the SREP 20 wetland and Rickabys Creek in accordance with the NSW Office of Water Controlled Activity Guidelines 2012 and it recommends that any landscape management would involve the provision of a buffer between the proposed development and the SREP 20 wetlands of up to 100 m (page 39).

The Infrastructure Plan shows an OSD is proposed to be located within 100 m of the creek but the plan does not overlay the location of the SREP 20 wetland boundary or the riparian setback around the wetland and it is recommended the planning proposal provides this information. Based on Figure 1 in the Ecological Constraints Assessment Report it appears that the SREP 20 wetland boundary is in close proximity to the OSD and the proposed basin may not be outside the recommended 100m buffer setback.

It appears the proposed OSD is also to be located in an area identified in the Hawkesbury LEP 2012 on the Terrestrial Biodiversity map (sheet BIO_008DA) as “*connectivity between significant vegetation*” and it is recommended the planning proposal clarifies this and provides a scaled plan which overlays this information.

The Planning Proposal needs to clarify the width of the riparian corridors proposed to be established at the site. It is recommended the riparian corridor widths along the SREP 20 wetland, Rickabys Creek, Freshwater Wetland and around the large dam are at least consistent with the Guidelines for Controlled Activities on Waterfront Land (2012) but it is recommended the setback requirements of other regulatory agencies are also considered, particularly as the planning documents outline that:

- Rickabys Creek provides potential habitat for the Nationally listed threatened Macquarie Perch;
- the Freshwater Wetlands are EEC and

- the dam provides high quality foraging habitat for the threatened Large-footed Myotis,

Please note, the Guidelines for Riparian Corridors on Waterfront Land recommend for wetlands a 40 m wide riparian corridor width. As the large dam appears to have previously been a large wetland area associated with Rickabys Creek, it is recommended a 40 m wide riparian setback is also provided around the dam. It is suggested the rezoning proposal also provides details on the stream order at the site for Rickabys Creek in accordance with the Strahler system, as the SREP 20 wetland does not occur along the full length of the creek.

It is recommended a scaled plan is provided which shows the location of:

- Rickabys Creek; the SREP 20 wetland; the Freshwater wetland and the existing large dam
- top of bank
- the proposed riparian corridor widths to be established along Rickabys Creek, the SREP 20 wetland, Freshwater Wetland and the existing large dam
- the 100 m buffer (as recommended by the Ecological Constraints Assessment Report) between the proposed development and the SREP 20 wetlands
- the site boundary
- “*significant vegetation*” and “*connectivity between significant vegetation*” that occurs along the creek as identified in the Hawkesbury LEP 2012 - Terrestrial Biodiversity map (sheet BIO_008DA) and other remnant riparian vegetation
- the footprint of the proposed development including the proposed OSDs

It is recommended any proposed areas of encroachment into the riparian corridors by certain works (such as detention basins etc) are identified at the planning stage to ensure these areas of encroachment are adequately offset. Encroachments into the riparian corridor must only occur within the outer 50 percent of the vegetated riparian zone and must be offset on the site by an equivalent area connected to the riparian corridor in accordance with the Office of Water Guidelines for Controlled Activities (2012).

Rehabilitation of the Riparian Corridors

The Ecological Constraints Assessment Report recommends “*a significant level of potential revegetation works to improve the local landscape particularly adjoining the mapped SREP 20 wetlands*”, revegetation along the riparian fringes of Rickabys Creek and replanting around the existing large dam (page 31). The report notes there is currently a small amount of native vegetation present up to approximately 10 m from the creek edge and this managed via slashing and/or grazing (page 14). As part of the rezoning proposal it is recommended details are provided on how the riparian corridors are to be protected, rehabilitated and managed in the future. The Office of Water recommends the riparian land at the site is rehabilitated in accordance with a vegetation management plan consistent with the Office of Water’s Controlled Activities guidelines.

It is also recommended the Local Land Services are consulted to obtain the latest best practice guidelines /information for riparian restoration.

Zoning of Rickabys Creek / wetlands and riparian land

The Proposed Amendment to Hawkesbury LEP 2012 Report indicates the rezoning recognises the importance of the key natural features of the site, including its riparian corridor to Rickabys Creek and provides appropriate preservation of these environmentally sensitive parts of the site (see Section 4, page 15). It notes the zoning proposal does not seek to amend the existing E2 zoning at the site, or reduce the environmental protection standards that apply to the land and this includes the retention of environmentally sensitive lands adjacent to Rickabys Creek in the RU4 and E2 zones (see Table 2, page 17). Comparing the current Land Zoning Map (Sheet LZN-008DA) with the Wetlands Map (Sheet WET_008DA) in the Hawkesbury LEP 2012, the E2 zone only applies to the wetlands but the E2 zone does not apply to the riparian land adjacent to the wetlands and Rickabys Creek. The rezoning proposal provides an opportunity to improve the environmental protection that currently applies at the site, particularly as part of the site is proposed to be rezoned to support commercial and light industrial uses.

The Office of Water's preference is to apply an E2 zoning to the riparian land at the site rather than maintaining the current RU4 zone. It is recommended the proposed zoning map is amended and a scaled plan is provided which overlays the proposed zones and the riparian corridors at site.

Ownership and management

It is recommended the specialist studies address the future ownership and management of the riparian land. The Office of Water prefers riparian land to be under council ownership and management (rather than private ownership) to ensure riparian land is protected, maintained and managed in a consistent manner.

It is recommended merit based consideration is given to assess whether the riparian land needs to be protected, enhanced and maintained in public ownership at the site, for example because it has flora and fauna, biodiversity values, etc.

Dam Safety

It is recommended that the NSW Dams Safety Committee are consulted if there is potential for development downstream of any new or existing dams (www.damsafety.nsw.gov.au).

Water quantity and quality treatment and the protection of downstream environment

Section 6.1.1 of the Infrastructure Due Diligence Report refers to Council's DCP which outlines the minimum requirement for all developments is that the average annual pollutant load discharged from the site shall be no greater than for existing conditions (page 15). The water quantity and quality management measures for the proposed development need to provide a high degree of protection from the proposed land use change to protect the sensitive downstream receiving environment. It is recommended the water quality management measures improve upon any high levels of existing pollutants rather than maintain an existing poor pollutant load.

The different pollutant loads between pre and post development need to be assessed as there will be differing types of pollutants which will be coming off the future commercial development (for example oils, grease, general litter, etc) compared to the current RU4 Primary Production land.

Section 6.2.2 of the Infrastructure Due Diligence Report indicates that flows from the stormwater detention basin would be discharged overland to Rickabys Creek (page 19). The discharge of flow from the proposed basin is an important aspect of the design to avoid the concentration of flows and any scouring of nearby Rickabys Creek and SREP 20 wetlands.

Groundwater

The Infrastructure Due Diligence Report (Sep 2013) refers to a Geotechnical Report prepared by Douglas Partners (page 12 and 14). It is recommended the Geotechnical Report is included as part of the supporting documents for the formal exhibition of the planning proposal, particularly as Section 5.3 of the Due Diligence Report notes that localised pockets of water/perched water table exist towards the low point of the site and these areas may need to be excavated and moisture conditioned prior to re-compaction (page 12) and Section 5.7 of the report indicates the building foundations may be constructed as bored piers and there is concern that the piers may be susceptible to water ingress from groundwater (page 14).

The Proposed Amendment to Hawkesbury LEP 2012 Report notes that groundwater is expected to follow the natural topography and the nearest surface water receptors are Rickabys Creek and the dams on the site (page 35). The Planning Proposal does not provide sufficient details to assess the potential impacts of developing the site on groundwater (including groundwater flows, groundwater

quality etc) and groundwater dependent ecosystems and it is recommended groundwater details and mitigation measures are provided as part of the rezoning proposal to assess potential impacts.

In its submission on the draft Hawkesbury LEP 2009 (dated 14 April 2010), the Office of Water provided council with some suggested groundwater clauses for inclusion in the LEP. These clauses are repeated below to provide guidance on potential groundwater issues that may need to be addressed.

Suggested groundwater resource protection clause

Groundwater quantity management

- (1) The objective of this clause is to ensure that excessive localised groundwater extraction as a result of the subdivision of rural residential properties is prevented.
- (2) This clause applies to:-
 - (a) proposed developments in which a single property is to be subdivided into multiple land parcels.
 - (b) individual property developments within existing subdivisions in an area where a water management plan or water sharing plan is current.
 - (c) sites where spot rezonings have occurred.
- (3) Consent must not be granted for development to which this clause applies unless arrangements for the proper utilisation and protection of the groundwater resource have been made that are satisfactory to the NSW Office of Water.
- (4) Consent must not be granted for development to which this clause applies unless the consent authority has specifically considered the need for a water license to be obtained from the NSW Office of Water as part of the development, and the existence of any embargoes that would prevent any such license application being accepted.

Suggested groundwater quality protection clause

Groundwater quality protection

- (1) The objectives of this clause are to:-
 - (a) recognise the value of groundwater and the potential for that resource to become contaminated, with consequent impacts on many environmental settings.
 - (b) protect groundwater resources from the adverse impacts of inappropriate development.
 - (c) maintain the environmental values of groundwater according to the most sensitive existing and potential long-term beneficial use of that resource.
 - (d) preserve groundwater resources as a potential non-potable alternative water supply.
 - (e) maintain the environmental support function of groundwater by avoiding development impacts that alter water quality.
 - (f) recognise the potential for groundwater to be gradually degraded due to cumulative (additive, synergistic or antagonistic) impacts of similar developments, or over long periods of time.
- (2) This clause applies to:-
 - (a) potentially contaminating development as identified in Appendix A of *'Managing Land Contamination, Planning Guidelines SEPP 55 – Remediation of Land'*.
 - (b) designated development as listed in the *'Environmental Planning and Assessment Regulation 2000'*.
 - (c) any development within the extent of "environmentally sensitive areas" as they have been defined in the *'Local Government (General) Regulation 2005'*.

- (3) Consent must not be granted for development to which this clause applies unless the consent authority has considered the impact of the proposed development on underlying and surrounding groundwater resources and is satisfied that appropriate measures have been adopted to avoid these impacts.
- (4) Consent must not be granted for development to which this clause applies unless the consent authority has specifically considered the following:-
- (a) the need for a water license to be obtained from the NSW Office of Water as part of the development, and the existence of any embargoes that would prevent any such license application being accepted.
 - (b) the design of the development and the potential for its below-ground extent to impede, dam or otherwise obstruct the passage of groundwater flow.
 - (c) the management of stormwater or roof runoff within and around the development and any potential degradation or deterioration of local groundwater quality that might occur as a result.
 - (d) the management of greywater or wastewater generated from the development and any potential degradation or deterioration of local groundwater quality that might occur as a result.
 - (e) the existence of groundwater users in the vicinity of the development and the potential for them to be adversely impacted by the land use that has been proposed for the site.
 - (f) the vulnerability of groundwater locally and the pollution potential of the development.
 - (g) the presence and distribution of groundwater dependent ecosystems (environmental attributes having a dependence on groundwater), in the vicinity and the potential for adverse impacts to occur as a result of the development.
- (5) Consent must not be granted for development to which this clause applies unless it has been demonstrated that it consistent with the spirit and principles of the NSW State Groundwater Policy, and, specifically ‘*The NSW State Groundwater Quality Protection Policy*’.

Suggested groundwater dependent ecosystem clause

- (1) The objectives of this clause are:
- (a) to ensure that development takes account of impacts on groundwater systems and other users of groundwater, and recognises any relevant management plans for those areas, and;
 - (b) to protect and enhance groundwater quality and groundwater dependent ecosystems, and;
 - (c) to protect the cultural heritage values of groundwater systems.
- (2) This clause applies to:-
- (a) any development identified as having a separation distance requirement from environmentally sensitive areas within the ‘*EIS Guidelines*’ prepared by the NSW Department of Urban Affairs and Planning or its successor.
 - (b) a scheduled activity under the *Protection of the Environment and Operations Act 1997*.
 - (c) any development within the extent of “environmentally sensitive areas” as they have been defined in the ‘*Local Government (General) Regulation 2005*’.
- (3) Consent must not be granted for development to which this clause applies unless arrangements for the proper protection of groundwater dependent ecosystems have been made that are satisfactory to the NSW Office of Environment and Heritage or its successor.
- (4) Consent must not be granted for development to which this clause applies unless the consent authority has specifically considered the following:-

- (a) the recommendations in any relevant water management plans applying to the groundwater resource and specifically to groundwater dependent ecosystems.
- (b) whether the development will increase groundwater extraction for water supply purposes and the impact of this extraction on groundwater levels and the surrounding environment.
- (c) the potential for the development to impact on recharge to groundwater systems.
- (d) any effect of the development on the functions of groundwater dependent ecosystems (such as habitat, groundwater levels and connectivity).
- (e) any effect of the development on cultural heritage values.
- (f) the need for specific measures to:
 - (i) protect and enhance the ecological functions (such as habitat, groundwater levels and connectivity) of the groundwater system and groundwater dependent ecosystems, and;
 - (ii) protect cultural heritage values, and
 - (iii) minimise the risk of changes to the existing groundwater quality, and;
 - (iv) manage any increase in extraction of water from the groundwater system for domestic and stock uses, and;
 - (v) manage any effect of the development on recharge to the groundwater system.

End Attachment A