Natural Environment Referral Response - Riparian

Application Number:	DA2020/0484

Date:	01/09/2020
To:	Lashta Haidari
Land to be developed (Address):	Lot 7335 DP 1152473 , 7335 / 1152473 Hakea Avenue FRENCHS FOREST NSW 2086 Lot 7336 DP 1152473 , 7335 / 1152473 Hakea Avenue FRENCHS FOREST NSW 2086

Reasons for referral

This application seeks consent for the following:

- All Development Applications on land, and located within 40 metres of land, containing a watercourse, or
- All Development Applications on land containing a wetland, or located within 100m of land containing a wetland,
- All Development Applications on land that is mapped as “DCP Map Waterways and Riparian Land”.

And as such, Council's Natural Environment Unit officers are required to consider the likely impacts on drainage regimes.

Officer comments

Final comments 1/9/20
The applicant has provided updated plans that satisfy the concerns below. The application is supported and conditioned.

21/8/20 - Email sent to applicant requiring more detail and changes to engineering plans for creek. 2020/490850 summary below.

NRAR have confirmed no controlled activity permit required.
Feedback:

1. While the bridge is detailed in the landscape plans, it is not included in the engineering plans. The landscape detail must be replicated in the engineering detail, particularly the cross section at the pedestrian bridge showing the design finish line (including the bridge).
2. We believe the submitted design for the creek cross-section is not constructible. Consider having average boulders of 500mm in depth + 300mm gravel under the existing terrain (to maintain the creek cross section area), so between 800mm to a metre of cut will be necessary to place the rocks. The impact on the riparian corridor should be marked up. If the soils are bad, the temporary cut will need to be gentler (more impact on the riparian – we’ll accept this). Prepared subsoil, geotextile, 300mm thick granular bedding, boulders, rock pitching according to diagram provided in email.
3. I’m satisfied regarding the provision put in place to ensure the safety of pedestrians leaving the

bridge onto the road, and will accept the proposed location of the pier for the bridge on the Kanooka Way side.

Comments provided 1/6/20
The impact of stormwater on the creek passing through the development site (Watercourse 1), including sediment and erosion controls, has been dealt with under the Water Management referral.

The applicant has provided a suitable riparian zone and planting plans.
The only cross-sections provided for the creek are in the Landscape Plan and these are of insufficient detail. A long section and cross-section of the creek is required marked with chainages to show how infrastructure crossing the creek is located.
The pedestrian bridge location must be improved to ensure that the bridge piers are not inside 'top of bank'; currently the bridge pier on the Kanooka Way side of the creek is inside the 'top of bank' in order to allow sufficient space for a kerb ramp. Pedestrians are also released straight into the roadway.
The Waterway Impact Statement notes that stabilisation will be required at the location of the bridge, but none is described in the civil plans. Rock sizing, placement and/or other stabilisation methods should be indicated. Details and cross sections should be provided of any other stabilisation work required around the upstream and downstream culverts.
The WIS also notes the need for either fencing or landscaping along the boundary of the riparian area. Landscaping is preferred as long as there is a clear distinction between mowed areas and areas to be retained, to prevent machinery encroaching on the riparian area.

A referral has been made to the Natural Resources Access Regulator for their general terms of approval. These must be obtained before development approval is given, as the riparian referral will refer to the NRAR's advice.

The proposal is therefore supported.

Note: Should you have any concerns with the referral comments above, please discuss these with the Responsible Officer.

Recommended Natural Environment Conditions:

CONDITIONS TO BE SATISFIED PRIOR TO THE ISSUE OF THE CONSTRUCTION CERTIFICATE

Updated Soil and Water Management Plan for in-stream works
The applicant must update the soil and water management plan to demonstrate how sediment will be managed for in-stream works.

For in-stream works a Silt Curtain/Rock Filter Dam or Sediment Weir/Staked Straw Bale Barrier is to be installed immediately downstream of the proposed site prior to any disturbance of soil in or beside the waterway. A staked straw bale barrier may only be used when works will be completed and banks stabilised prior to forecast rain and within five days of starting in-stream work. A clean water diversion must be set up to divert creek flows around the work site.

Controls can be removed once in-stream work has been completed and banks have been appropriately stabilised.

Details demonstrating compliance are to be submitted to the Certifying Authority prior to the issue of the Construction Certificate.

Reason: To promote the long-term sustainability of ecosystem functions.

Detailed Design of Creek Works
A certificate from a from a suitably qualified engineer who has membership of Engineers Australia and the National Engineering Register (NER), stating that the creek works have been designed in accordance with the Revision 3 plans prepared by Tonkin and dated 25 August 2020 and the approved Waterways Impact Statement.

The certificate shall be submitted to the Certifying Authority prior to the release of the Construction Certificate.

Reason: To ensure creek works are completed in accordance with the consent approval.

Design of Stormwater Outlet Structure to Creek
Stormwater outlet structures to the creek must be designed in accordance with DPI Water's Guidelines for Outlet Structures on Waterfront land. Guidelines can be found at http://www.water.nsw.gov.au/__data/assets/pdf_file/0009/547254/licensing_approvals_controlled_activit-structures.pdf. Visual impacts must also be minimised.

No mortar is to be used on the outlet. Rocks must be placed using an interlocking system with varying rock sizes. Rock size should range from 80-300mm and be placed to 300mm deep (with a keystone downslope) according to the following specifications:
Dmin = 20mm
D10 = 80mm (ie. only 10% smaller than 80mm)
D50 = 150mm
D90 = 300mm
The surface should be a textured finish to break up and dissipate sheet flows.

This design is to be submitted to the Certifying Authority prior to the release of the Construction Certificate.

Reason: To protect the surrounding creek bank from the effects of localised erosion.

CONDITIONS THAT MUST BE ADDRESSED PRIOR TO ANY COMMENCEMENT

Installation and Maintenance of Sediment and Erosion Controls

Council proactively regulates construction sites for sediment management.

Sediment and erosion controls must be installed in accordance with Landcom's 'Managing Urban Stormwater: Soils and Construction' (2004) and the Erosion and Sediment Control Plan prepared by Tonkin (including conditioned updates) prior to commencement of any other works on site.

Erosion and sediment controls are to be adequately maintained and monitored at all times, particularly after periods of rain, and shall remain in proper operation until all development activities have been completed and vegetation cover has been re-established across 70 percent of the site, and the remaining areas have been stabilised with ongoing measures such as jute mesh or matting.

The discharge of sediment-laden waters from the site may result in clean-up orders and/or fines under Council's Compliance and Enforcement Policy and legislation including Protection of the Environment Operations Act 1997 and Contaminated Lands Act 1997.
Reason: Protection of the receiving environment

CONDITIONS TO BE COMPLIED WITH DURING DEMOLITION AND BUILDING WORK

Notifications for creek works

The applicant shall provide 48 hours notice to Council's Catchment team at catchment@northernbeaches.nsw.gov.au when the creek works reach the following stages:

a) Installation of in-stream sediment and erosion controls

b) Commencement of boulder placement around stormwater outlets and other structures in the creek

Reason: To ensure compliance with the consent approved plans.

CONDITIONS WHICH MUST BE COMPLIED WITH PRIOR TO THE ISSUE OF THE OCCUPATION CERTIFICATE

Certification for Creek Works

A certificate from a Civil Engineer, who has membership to Engineers Australia and the National Engineers Register must be provided, stating that the creek works have been completed in accordance with the plans (Revision 3) prepared by Tonkin dated 25 August 2020.

The certificate shall be submitted to the Principal Certifying Authority prior to the release of the Occupation Certificate.

Reason: To ensure creek works are completed in accordance with the consent approval.

Works as Executed Drawings – Creek Works
Works as Executed Drawings for the creek works, including surveyed levels, must be prepared and submitted to the Principal Certifying Authority prior to the release of the Occupation Certificate.

Reason: Enabling effective asset management.