Neutral or Beneficial Effects Assessment

As the proposal is being assessed under Part 5 of the EP&A Act, this Neutral or Beneficial Effects (NorBE) assessment has been completed in consideration with the WaterNSW *NorBE Assessment Guideline 2021*. As detailed in Section 3 of the REF, a separate Part 5 (prepared by WCC) assessment will be prepared for the ancillary components of the proposal that are not on NPWS land. The Part 5 assessment will include a NorBE assessment in accordance with the WaterNSW *NorBE Assessment Guideline 2021*.

Table 1 Identifiable potential impact on water quality checklist (sourced from NorBE Assessment Guideline 2021)

Criteria for identifiable water quality impact	Relevant to the project	Comments
Flow of water is concentrated on part of the site during construction or operation	Yes	The trail network will be built to IMBA standards, which included are designed to efficiently disperse water from trail surfaces. However, there is potential for runoff to concentrate along the trails.
Flow of water is impeded on part of the site during construction or operation	Yes	The trail network is designed to follow the natural contours of the landscape, minimising the need for drainage line crossings. Where required, drainage line crossings would include rock armoured bed level crossings or raised trail bridges. These features are not likely to impede the flow of water. Note that the trail network would only cross two ephemeral 1st order tributaries of Kembla Creek within Schedule 1 land.
Proposed development during construction or operation will discharge effluent (including to sewer), dust, stormwater or other pollutants	No	Human faecal waste will be completely containerised in portable toilets, subject to regular servicing to empty and prevent overflow, and disposed of off-site as per legislative requirements. Whilst this is not relevant to this Part 5 proposal, this will be further assessed in the Part 5 development application referred to in Section 3 of the REF.
Any other matter considered to result in an identifiable impact on water quality	No	

NorBE assessment – will there be a neutral or beneficial effect on water quality?

(Assessment must consider surface and ground water and must consider construction and operational phases)

Are there any identifiable potential impacts on water quality?

What pollutants are likely during construction or operational phase

Major potential pollutants are sediments (fine & coarse), nitrogen, phosphorus, pathogens and hazardous chemicals and contaminants such as oil/fuel.

Potential pollutants that may be derived from the project during the construction and operational phases include the following:

- Sediments
- Hydrocarbons (equipment fuel)
- Weeds and soil pathogens
- Waste including ablution and toilet waste (construction phase).

For each pollutant list the safeguards needed to prevent or mitigate potential impacts on water quality (these may be WaterNSW endorsed current recommended practices (CRPs) and/or equally effective other practices)?

Sediments	During the construction phase, sediment controls will follow the Landcom (2004) Soils and Construction guidelines and will include: Sediment Fabric or EcoLog™ Coir Fibre Logs used as sediment barriers or controls. These features will be installed prior to any clearing works commencing. The trail alignments will be clearly demarcated to ensure that the approved construction footprint is adhered to. A best practice (Landcom 2004) self-auditing program for site stabilisation and erosion controls will be implemented for the site. The timing of the site inspections will be on a periodic basis and at opportunistic times such as during and immediately following rainfall events that cause run-off. The following elements would be inspected: • condition of stockpiles and rehabilitation areas (including records of any slumping). • Condition of sediment and erosion control structures. • Whether sediment or other pollutants are leaving the site or have the potential to do so. • Maintenance requirements, and locations where sediment is disposed. Following completion of each audit, records will be provided to the site manager for further planning and implementation of appropriate controls. The trail network is designed to follow the natural contours of the landscape, minimising the need for drainage line crossings, and reducing the protentional for erosion. Where required, rock armouring would be installed along the trails to mitigate erosion.
Hydrocarbons	All major refuelling (>200 L) exercises will be undertaken outside of Schedule 1 lands. Spill kits are located at each work site to manage minor spills. All equipment will be fit for purpose and in good working order.
Weeds and soil pathogens	A Weed Management Plan (WMP) will be developed prior to the construction phase of the proposal. Any weeds removed during the construction phase will be disposed appropriately outside the study at an authorised facility.
Human Faecal Waste	Human faecal waste will be completely containerised in portable toilets, subject to regular servicing to empty and prevent overflow, and disposed of off-site as per legislative requirements.

	Any permanent facilities are to be subject to a separate Part 5 assessment (see REF document for details).	
General	Entry to any Schedule 1 land will be in accordance with a WaterNSW access agreement, including restrictions due to rainfall.	
Environmental Safeguards		
Will the safeguards be adequate for the time required? How will they need to be maintained?	Yes — all safeguards proposed for the construction phase will be installed and maintained for the duration of construction activities. During the operational phase, regular inspections and maintenance would be employed, as per Section 6.2 of the REF, to ensure all drainage features and erosion mitigation measures are functioning correctly.	
Will all impacts on water quality be effectively contained on the site by the identified safeguards (above) and not reach any watercourse, water body or drainage depression? Or will impacts on water quality be transferred outside the site for treatment? How? Why?	Yes – any potential impacts on water quality would be effectively contained at the site by the above safeguards.	
Is it likely that a neutral or beneficial effect on water quality will occur? Why?	Yes – it is likely that the proposal would have a neutral effect on water quality.	
Prepared by / Date	Kai Whitaker - Niche Environment and Heritage – February 2022	

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