

Appendix C

Neutral or beneficial effect on water quality assessment

Neutral or Beneficial Effect Assessment

State Environmental Planning Policy (Sydney Drinking Water Catchment) 2011 relates to the use of land within the Sydney drinking water catchment. In accordance with clause 12 of the SEPP, TfNSW is required to consider whether or not an activity to which Division 5.1 of the EP&A Act applies will have a neutral or beneficial effect on water quality before carrying out the activity. This assessment for the proposal is provided in the table below.

Factor	Impact
<p>1. Are there any identifiable potential impacts on water quality?</p> <p>What pollutants are likely?</p> <p>During construction and/or post construction?</p>	<p>Identified potential pollutants are sediments (fine and coarse), nitrogen, phosphorus, pathogens, hazardous chemicals and contaminants such as oil/fuel.</p> <p>These pollutants are not new to the catchment as there is no new land use proposed as part of the proposal. However the project increases the generation of these pollutants as widening facilitates more traffic movements through the area, and increased pavement areas reduce the pervious portions of the catchment which provide treatment for runoff and filtration of the pollutants.</p> <p>Specific water quality pollutant generation during construction result from the disturbance of soil in demolition and excavation, stockpiling and sedimentation from unfinished surfaces.</p>
<p>2. For each pollutant, list the safeguards needed to prevent or mitigate potential impacts on water quality (these may be WaterNSW endorsed current recommended practices and/or equally effective other practices)</p>	<p>Safeguards, or water quality protection measures, that need to be in place during the construction.</p> <ul style="list-style-type: none"> • Perimeter sedimentation control (fence) and swale drains/bunds • Stabilised construction access including shaker pads • Wash down facilities for trucks and plant • Sedimentation basin • Spill control/oil separator at discharge locations <p>Safeguards, or water quality protection measures, that need to be in place during operational stages of the project.</p> <ul style="list-style-type: none"> • Bioretention basin to Council specification • Gross pollutant trap • Stormwater attenuation
<p>3. Will the safeguards be adequate for the time required? How will they need to be maintained?</p>	<p>The Construction Environmental Management Plan (CEMP) will include the regular maintenance of the construction stage water quality improvement measures including roles and responsibilities for monitoring the quality and effectiveness of the measures at each stage of construction. This includes regular inspection and cleanout of the mitigation measures which will capture varying loads of pollutants at stages of construction dependent on the current activities on-site.</p> <p>Operational phases of the proposal will include maintenance regimes to the stormwater reticulation network, gross pollutant trap and bioretention/stormwater attenuation facilities. This includes the management of vegetation, removal of pollutant loads and system blockages, and replacement of any filtration media to a maintenance program dependent on the size and specification of the measures selected during detailed design stages.</p>
<p>4. Will all impacts on water quality be effectively contained on the site by the identified safeguards (above) and not reach any watercourse, waterbody or drainage depression?</p> <p>Or will impacts on water quality be transferred outside the site for treatment? How? Why?</p>	<p>The project drains to controlled areas for water quality and as such MUSIC modelling has been undertaken to determine the impacts and treatment required to achieve no worsening of pollutants in discharge water reaching the receiving environment.</p> <p>The impacts on water quality of the project will be managed on-site through collection of runoff, reticulation to the gross pollutant trap and subsequent discharge to the bio-retention basin. Bioretention to be collocated with the stormwater attenuation basin such that runoff peak volumes are not increased as a result of the proposal.</p>
<p>5. Is it likely that a neutral or beneficial effect on water quality will occur? Why?</p>	<p>When the activity has been completed, the level of pollutants will be lower than before construction. Current water quality improvement measures for the discharge of stormwater are minimal and mainly comprise treatment through informal measures such as overland flows routed through vegetation providing filtration through infiltration. The post developed treatment measures will remove gross pollutants and further reduce residual pollutants through biofiltration prior to discharge.</p>