

Environmental Protection Act 1986

Section 39A(7)

PUBLIC ADVICE

Proposal: Armadale Road to North Lake Road Bridge

Proponent: Main Roads Western Australia

Decision:

The EPA considers that the proposal is unlikely to have a significant impact on the environment and does not warrant formal assessment.

Background:

On 20 August 2018, Main Roads Western Australia referred the Armadale Road to North Lake Road Bridge proposal to the Environmental Protection Authority (EPA) under section 38 of the *Environmental Protection Act 1986* (EP Act). The proposal included Main Roads Western Australian (Main Roads) upgrading sections of Armadale Road and the Kwinana Freeway in the City of Cockburn which comprise a bridge, roads and associated infrastructure.

The Proposal is to:

- realign and extend Armadale Road from Solomon Road to North Lake Road;
- duplicate and upgrade intersections along Armadale Road between Solomon Road and Ghostgum Avenue;
- construct a new bridge and on/off ramps over Kwinana Freeway; and
- construct a southbound collector distributor road along the Kwinana Freeway between Berrigan Drive and Armadale Road.

Relevant Statutory and Administrative Provisions

The EPA has considered the proposal in accordance with the requirements of the EP Act and the *Environmental Impact Assessment (Part IV Divisions 1 and 2) Administrative Procedures 2016* and *Procedures Manual*.

Materials considered in making this decision

The EPA has considered and had regard to the referral information, which is available on the EPA's consultation hub, any comments received during the 7 day comment period, information conducted through its own inquiries and any further information requested from the proponent and government agencies.

The proposal was advertised for public comment and the Environmental Protection Authority (EPA) notes that no public comments were received.

Consideration

In making its decision on whether to assess the proposal, the EPA had regard to various matters, including the following (as outlined in the EPA's *Statement of Environmental Principles, Factors and Objectives*):

- a) values, sensitivity and quality of the environment which is likely to be impacted
- b) extent (intensity, duration, magnitude and geographic footprint) of the likely impacts
- c) consequence of the likely impacts (or change)
- d) resilience of the environment to cope with the impacts or change
- e) cumulative impact with other projects
- f) connections and interactions between parts of the environment to inform a holistic view of impacts to the whole environment
- g) level of confidence in the prediction of impacts and the success of proposed mitigation
- h) public information that informs the EPA's consideration of the likely effect of the proposal, if implemented, on the environment.

In considering the potential direct and indirect impacts of the proposal on the **Flora and Vegetation, Terrestrial Fauna, Terrestrial Environmental Quality, Inland Waters and Social Surroundings**, the EPA has had particular regard to:

- the existing highly modified environment of the proposal, majority being located on previously cleared land currently used for infrastructure, commercial and residential purposes;
- the proposal is adjacent to Armadale Road and the Kwinana Freeway, major high volume traffic roads of the southern metropolitan corridor;
- the low level of public interest in this proposal and issues relating to the environmental factors;
- the environmental values within and surrounding the proposal area;
- the lack of threatened ecological communities and threatened or priority flora species within the development envelope (DE);
- the small scale of clearing (5.7 hectares (ha), of which 2.0 ha is mapped as degraded quality) remnant native vegetation;
- the small scale of clearing (1.9 ha) of Priority Ecological Community (PEC) – (Priority 3) *Banksia Dominated Woodlands of the Swan Coastal Plain*, which occurs on the outer edge adjacent to the Kwinana Freeway, leaving the remaining PEC intact in a contiguous area;
- the relatively small scale clearing of isolated habitat (of varied quality) for conservation significant species including: Black Cockatoo foraging habitat (8.4

ha); Quenda (8.4 ha) and Perth Lined Skink (13.8 ha). Surveys found a lack of suitable Black Cockatoo breeding hollows within the development envelope (DE);

- the DE is mapped as having a 'moderate' to 'low' risk of acid sulfate soil (ASS) occurring within 3 m of natural soil surface. Some excavation below the groundwater table may require localised and temporary dewatering during the construction phase;
- the constructed road formation will lie above the maximum groundwater table and no ongoing groundwater drainage will be required for operations;
- the new road infrastructure will drain into treatment and infiltration areas designed in accordance with the Western Australian Planning Commission (WAPC) *Better Urban Water Management framework* (October 2008) and the DWER *Stormwater Management Manual for Western Australia*;
- three geomorphic wetlands are mapped within the DE, none of which are listed as conservation category;
- the Armadale Road portion of the DE, intersects one Wellhead Protection Zone (WHPZ), located predominantly within a Priority 3 Public Drinking Water Source Area (PDWSA);
- construction activities have potential to generate noise, dust and vibration, but are short and temporary in duration;
- operation of the road has potential to increase traffic noise and change in the visual character from some aspects. The modelling of the road with proposed management measures such as noise walls predicts a decrease in noise impacts from forecasted traffic increases over time;
- the mitigation strategies proposed by the proponent to avoid and minimise impacts, which include:
 - implementation of a Project Environmental Management Plan (PEMP) including management measures to address vegetation clearing demarcation, site access control, weed and dieback management, topsoil management, erosion, dust and sediment control, tree and vegetation retention, fauna management, landscaping with native vegetation, spill response procedures, surface water/ drainage management and waste and fire management.
 - implementation of an Acid Sulfate Soils (ASS) and Dewatering Management Plan (ASSDMP), developed in accordance with DWER Contaminated Sites guidelines prior to excavation and dewatering commencing, including ASS and potential ASS treatment and dewatering and discharge management;
- additional mitigation strategies proposed by the proponent to avoid and minimise impacts include:
 - all fuel or chemical storage will be compatible with DWER water resource protection objectives;

- storage of fuel or chemicals within Priority 2 and Priority 3 PDWSAs will require written approval from DWER;
- construction noise will be managed in accordance with the *Environmental Protection (Noise) Regulations 1997*;
- further noise assessments will be conducted as part of the detailed design to determine practicable noise mitigation measures in accordance with *WAPC State Planning Policy 5.4 Road and Rail Transport Noise and Freight Considerations in Land Use Planning*;
- development of a noise and vibration management plan for any out-of-hours works, with adoption of minimal vibration techniques for construction;
- provision of a noise wall;
- minimising elevation and visual intrusion of bridge as far as is practicable; and
- implementation of a complaints phone line and response process.

In addition to the above, the EPA notes the presence of other statutory processes that can manage the potential impacts to Flora and Vegetation, Terrestrial Fauna and Inland Waters, including:

- a clearing permit from DWER under Part V Division 2 (clearing) of the EP Act for native vegetation clearing and associated terrestrial fauna habitat impacts; and
- a groundwater abstraction licence from DWER under the *Rights in Water and Irrigation Act 1914* (RIWI Act) for any abstraction of groundwater for dewatering purposes during construction (if required).

In summary, although the proposal raises a number of environmental issues, the EPA considers that its objectives for **Flora and Vegetation, Terrestrial Fauna, Terrestrial Environmental Quality, Inland Waters and Social Surroundings** can be met.

The EPA is of the view that the potential impacts can be adequately managed through the implementation of the proposal in accordance with the referral documentation, which includes the proponent's management and mitigation measures, implementation of the EPA's advice given to other relevant decision making authorities, and dealt with by other statutory processes. These include Part V Division 2 (Clearing) of the EP Act and the RIWI Act.

1. Advice and Recommendations regarding Environmental Issues

The EPA notes there are two options for the construction of the proposal which differ in terms of the depth of excavation and extent of dewatering:

- Option A does not involve excavation below the groundwater table or require any dewatering, thus avoiding potential disturbance and/or oxidation of ASS;

- Option B involves excavation of approximately 2000 m³ of material below the groundwater table, which may result in disturbance and oxidation of ASS;
- Option B involves temporary and localised dewatering during construction; and
- Option A and B do not involve ongoing groundwater drainage or dewatering during operations.

The EPA notes from the proponent's *Armadale Road to North Lake Road Bridge - EPA Referral Supporting Document* (August 2018) (EPA RSD) that:

- the proposal partially coincides with a Priority 3 Public Drinking Water Source Area and a Well Head Protection Zone (WHPZ). The DWER has advised that construction activities will need to be carefully managed and undertaken in accordance with DWER guidelines (available on DWER website); and
- the proposal area is mapped as having a 'moderate to low' risk of ASS occurring within 3 m of natural soil surface.

Based on the above the EPA recommends that the proponent refer the:

- its measures for managing impacts of construction on water quality in the WHPZ; and
- an Acid Sulfate Soils and Dewatering Management Plan (ASSDMP) (as committed to in the referral documentation) that includes ASS and potential ASS management in accordance with DWER guidelines,

to DWER for review and endorsement prior to commencement of construction activities.



Tom Hatton
Chairman

11 October 2018