



24. Findings and Conclusions

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24.1 EIS Findings

TOR Requirements:

A balanced overview of the project's impact should be provided together with recommendations based on the studies presented, the environmental management plan and conformity of the project with ESD policy.

The key findings of the EIS are:

- 29 property owners will be directly affected by the project. Properties include residential, industrial, Royal Queensland Golf Club, Brisbane City Council (old airport site, Bulimba Creek and Kedron Brook floodplain) and BAC land.
- The project is consistent with the key State and Local Government land use and transport planning policies, strategies and guidelines.
- The project is not significantly constrained from a geotechnical aspect. Extensive embankments on weak soils are required north of the Brisbane River, and these will need to be designed in accordance with good engineering practice in terms of stability and settlement characteristics.
- Erosion of soils within the project corridor can be adequately mitigated by implementing best practice erosion and sediment control measures during construction.
- Potential Acid Sulphate Soils (ASS) occur within Bulimba Creek floodplain and north of the Brisbane River. Potential impacts from disturbing these soils will be mitigated by minimising disturbance in high risk areas and by implementing an ASS Management Plan during construction.
- Potential contaminated soil may occur on industrial properties, the old airport site and BAC land. Potential impacts from disturbing these soils will be mitigated by minimising disturbance in high risk areas, undertaking further contaminated land investigations and implementing Site Remediation Plans approved by the Environmental Protection Agency during construction.
- The potential impacts of the proposed upgrade works upon flood levels within the Bulimba Creek and Kedron Brook floodplains have been assessed using detailed 2-dimensional hydraulic modelling. Whilst the predicted increases in flood levels are minor, there are many properties already adversely affected by flooding in these areas and as such mitigation of the impacts was considered essential.
- A range of mitigation options have been investigated for both waterways using the detailed hydraulic model. The solution at both crossing locations involves localised earthworks in the immediate vicinity of the Bulimba Creek crossing and downstream of the Kedron Brook Floodway crossing. The introduction of these solutions fully mitigates against the impacts of the proposed upgrade works.
- Potential impacts on surface water quality will be minimal due to the implementation of appropriate construction erosion and sediment control measures and the implementation of a "treatment train" approach to operational stormwater management.

- Based on existing data, the groundwater resource potential within the project corridor is low and there is generally poor groundwater quality. Groundwater monitoring will occur on BAC and Council land during construction to ensure the project does not impact on the groundwater resource.
- The overall impact of the project will result in a slight increase in air quality impacts for receptors close to the Motorway however all predicted concentrations are below the relevant guidelines.
- Compliance with operational noise criteria can be achieved through the upgrade of noise barriers along the corridor. Construction noise and vibration can be adequately mitigated by implementing a Construction Noise and Vibration Control Plan and associated mitigation measures.
- No significant flora and fauna species are located within the project corridor. Koalas and wallabies occur in the adjacent bushland areas associated with the Koala Coast Area (east of Motorway) and Belmont Hills Bushland (west of Motorway) and move between the two areas. Fauna exclusion fencing and fauna underpasses will be installed to minimise the potential for road kills of koalas and wallabies and improve road safety for road users.
- The potential impact on a small area of Lewin's Rail habitat on BAC land will be mitigated by minimising construction activities in this area and rehabilitating the area early in the construction program.
- A relatively small number of mangroves and other marine plants will need to be cleared in the Bulimba Creek and Kedron Brook Floodway areas. The areas to be lost are small in comparison with the extent of similar marine plant communities associated with each of these waterways and other communities present within the region.
- Minor aquatic habitat loss will occur as a result of the project. The potential impact on aquatic flora and fauna in the vicinity of watercourse crossings and downstream are manageable.
- No Indigenous and European cultural heritage sites are directly affected by the project. A Cultural Heritage Management Plan will be implemented during construction to minimise the potential impact on cultural heritage items being disturbed during earthwork activities.
- The social impacts of the proposal on residents will be relatively small due to the containment of much of the physical property impacts within or close to the existing alignment of the Motorway. Some minor recreation facilities will be affected, as will access to these areas. There will be disruption effects on a number of businesses due to construction activities and the need for relocation of some businesses.
- The direct economic impacts of the project on the Brisbane Moreton region include:
 - direct effects will be \$1.4 billion in additional Gross and Queensland Outputs and \$683 million in Gross Regional Product (GRP) from the construction;
 - the direct labour effects from the construction phase will be in 5,919 new jobs (full time equivalent) which will generate \$465 million in wages and salaries; and
 - the direct economic impacts annually from the operation of the project will be \$24.6 million in additional Gross Output, \$15.4 million in additional GRP and 258 full time equivalents resulting in wages and salaries of \$11.7 million annually.

- The Benefit Cost Ratio (BCR) of 3.83 has been calculated for the project which represents a Net Present Value (NPV) of \$3.597 billion over the 30 year assessment period providing a strong economic justification for proceeding with the project.
- Visual impacts are expected to be low given the proposed planting of native species endemic to local conditions and integrating urban design and ornamental lighting strategies to improve the aesthetics of interchanges and bridge structures.
- The GUP presents a significant opportunity to deliver a major component of planned pedestrian and bicycle networks in the form of a river crossing in the area of the Gateway Bridge. A pedestrian and bicycle crossing on the new Gateway Bridge complies with the objectives of Cycle South East, the Integrated Regional Cycle Network Plan and the Moreton Bay Cycleway.

24.2 Conclusion

With the effective implementation of the Environmental Management Plan during detailed design, construction and operation, the environmental impact assessment carried out for the Gateway Upgrade Project has identified no significant environmental impacts with all identified potential adverse impacts being manageable during design, construction and operation.

Local community impacts are anticipated to be minimal and the project will provide significant traffic and economic benefits for the ATC area, Brisbane Airport, the Port of Brisbane and the regional community of SEQ.