

9. Conclusion

This chapter provides the justification for the proposal taking into account its biophysical, social and economic impacts, the suitability of the site and whether or not the proposal is in the public interest. The proposal is also considered in the context of the objectives of the EP&A Act, including the principles of ecologically sustainable development as defined in Section 193 of the Environmental Planning and Assessment Regulation 2021.

9.1 Justification

The proposal is consistent with a number of strategies and plans including:

- Premier's Priorities
- Future Transport Strategy 2056
- State Infrastructure Strategy 2018-2038: Building Momentum
- Regional NSW Services and Infrastructure Plan.

The proposal would meet the key strategic objectives within the above strategies and plans (refer to Section 2.1.1 for further detail).

The Great Western Highway East – Katoomba to Blackheath forms part of the broader upgrade of the Great Western Highway between Katoomba and Lithgow. The proposal, as part of the broader upgrade, is needed to provide a safer and more efficient link between Central West NSW and the Sydney Motorway network.

Without the proposal, the highway between Katoomba and Blackheath would continue to be constrained resulting in suboptimal traffic movement along the corridor and impacts to the local communities in the Blue Mountains, particularly in Katoomba, Medlow Bath and Blackheath.

In particular, without the proposal, the highway would continue to experience:

- slow travel speeds with limited overtaking opportunities and steep gradients (more than double the recommended maximum level)
- delays of up to 80 minutes in peak times and hours if there is an incident
- reduced freight efficiency by limiting access for safer and more sustainable high productivity vehicles
- limited access during incidents and natural disasters
- higher than state average crash rates, and
- socio-economic amenity impacts for local communities with high through traffic volumes and congestion.

The proposal comprises critical components of the broader Great Western Highway Upgrade Program and would adversely impact the realisation of the considerable local and regional benefits to be gained by the Upgrade Program if the proposal does not proceed.

The Upgrade Program would improve transport links for freight, commuters, travellers and tourists between the Central West and the east coast cities including Sydney, Newcastle and Wollongong. It would also better connect local communities in the Blue Mountains to jobs, health care, education and other services both within townships and in neighbouring regional cities and strategic centres.

On its own, the proposal would deliver the following benefits to the community and transport customer:

- increased road capacity from one lane either direction to two lanes either direction to improve travel speeds and reduce delays during peak times
- improved access during traffic incidents or other emergency incidents including natural disasters

- upgrading to latest road specifications could allow for improved freight access including use by higher productivity vehicles
- improved travel efficiency would result in improved amenity for local communities and improved access for the local community.

In conjunction with the broader Great Western Highway Upgrade Program, the proposal would result in beneficial impacts, including improved:

- resilience and emergency management conditions
- connectivity for all road users along and across the corridor
- active transport links
- consistency of travel conditions
- network efficiency and freight productivity
- safety for all road users
- quality of surface water run off to the surrounding environment
- local amenity through heritage interpretation.

9.1.1 Social factors

The proposal would result in positive long-term social impacts during operation through providing improved road capacity and safety on the Great Western Highway between Katoomba and Blackheath. These safety improvements would address the existing local community concern of congestion and safety.

While the proposal has been designed to minimise impacts to live traffic on the highway, there would be some short-term localised disruptions to highway traffic during construction. This could result in traffic delays and inconvenience to the local community. To minimise this potential disruption, further consultation with key stakeholders and the local community would be carried out.

Construction noise and vibration generated by the proposal may also temporarily impact the amenity of local residents. These potential noise impacts would be minimised and managed in accordance with Transport for NSW's CNVG.

The proposal would be constructed in an area with a rich Aboriginal and non-Aboriginal heritage value, which is of importance to the local community. A heritage interpretation strategy would be developed for the entire Great Western Highway Upgrade Program to reinterpret heritage along the length of the highway between Katoomba and Lithgow to tell the history of the area. This would include the heritage interpretation area at Pulpit Hill.

9.1.2 Biophysical factors

The proposal may result in some minor adverse biophysical impacts, which are largely limited to impacts during the construction phase of the proposal and are not expected to significantly impact the biophysical environment.

The proposal would involve removal of up to 47.56 hectares of native vegetation, which could lead to a reduction of threatened fauna habitat within the proposal area. There may also be a risk of fauna injury and mortality from construction movements. However, most of the vegetation likely to be affected by the proposal is located adjacent to the Great Western Highway and has been subject to historic clearing and edge effects. It is thinned in areas and some areas are dominated by a range of introduced species. It is also unlikely that any threatened fauna species would be reliant on the habitat within the proposal area considering the extensive high-quality habitat nearby within the Blue Mountains National Park.

Overall, the proposal is not likely to significantly impact threatened species, populations, ecological communities or their habitats.

As part of the proposal, Transport is seeking to acquire a parcel of land to provide biodiversity offsets for the project as well as compensatory land for the national park revocation. This offset land could be protected as part of the Blue Mountains National Park.

9.1.3 Economic factors

The proposal would improve road capacity and safety along the Great Western Highway. This would have an indirect positive impact on the local and regional economy, as it would reduce the likelihood of traffic delays from road incidents along the highway. The proposal would therefore contribute to improved productivity and reduced costs associated with traffic delays for road users.

In conjunction with the broader Great Western Highway Upgrade Program, the proposal would improve transport link for freight, commuters, travellers and tourists between the Central West and the east coast cities including Sydney, Newcastle and Wollongong. It would also better connect local communities in the Blue Mountains to jobs, health care, education and other services both within townships and in neighbouring regional cities and strategic centres.

9.1.4 Public interest

The proposal is justified to be in the public interest on the basis that it improves the capacity and safety of Great Western Highway to address current community concern without any significant negative long-term impacts on society, the biophysical environment or the local economy. The proposal is also aligned with several strategic policies and government strategies, such as Future Transport Strategy 2056 (Transport, 2018b) and Road Safety Plan 2021 (Transport, 2018d).

9.2 Objects of the EP&A Act

The objects of the EP&A Act provide a framework within which the justification of the proposal can be considered. A summary of this assessment is provided in Table 9-1.

Table 9-1: Objects of the EP&A Act

Object	Comment
<p>1.3(a) To promote the social and economic welfare of the community and a better environment by the proper management, development and conservation of the State's natural and other resources.</p>	<p>The proposal would increase capacity and reduce delays, particularly through peak periods thereby improving movement and connectivity along the Great Western Highway between Katoomba and Blackheath. There would also be economic flow on benefits to economic productivity and growth for freight carriers and vehicles travelling to the industrial precincts in the broader study area, in addition to benefits for existing and future businesses in the surrounding area.</p> <p>In conjunction with the broader Great Western Highway Upgrade Program, the proposal would improve transport links for freight, commuters, travellers and tourists between the Central West and the east coast cities including Sydney, Newcastle and Wollongong. It would also better connect local communities in the Blue Mountains to jobs, health care, education and other services both within townships and in neighbouring regional cities and strategic centres.</p> <p>However, it is recognised that there would be some short-term socio-economic impacts during construction (particularly from amenity impacts and traffic delays).</p> <p>The overall proposal has been designed where possible to minimise impacts on the environment and the community. A number of management measures would be implemented to minimise any environmental impacts associated with the overall proposal.</p>

Object	Comment
1.3(b) To facilitate ecologically sustainable development by integrating relevant economic, environmental and social considerations in decision-making about environmental planning and assessment.	<p>Ecologically sustainable development has been considered throughout the proposal and documented in Section 4.2.5 and Section 6.10.1. An options process was also undertaken for the proposal that has considered a range of constraints to identify the least environmental impact (refer Section 2.4).</p> <p>Mitigation measures are proposed to minimise impacts including vegetation clearing and water quality impacts. This includes preparation of a Construction Soil and Water Management Plan and Construction Flora and Fauna Management Plan to further identify opportunities to minimise impacts.</p>
1.3(c) To promote the orderly and economic use and development of land.	The upgrade of the Great Western Highway between Katoomba and Blackheath is required to reduce congestion and support efficient movement of people and freight through the Blue Mountains.
1.3(d) To promote the delivery and maintenance of affordable housing.	Not relevant to the proposal.
1.3(e) To protect the environment, including the conservation of threatened and other species of native animals and plants, ecological communities and their habitats.	<p>While vegetation removal has been minimised, the proposal would still result in the removal of vegetation. To mitigate these impacts, offsets would be provided. The potential impacts on vegetation, threatened species, population and ecological communities are discussed in Section 6.3.</p> <p>It is also noted that a section of the Blue Mountains National Park would be revoked for the proposal. Where not required for the final footprint of the proposal, as much vegetation as possible would be retained to minimise potential indirect impacts on the national park.</p> <p>A survey and long-term monitoring program for the Eastern Pygmy-possum would be developed to survey the size and extent of the population within the surrounding area to assist in conservation efforts.</p> <p>The potential for water quality impacts to the surrounding sensitive environment area (both the national park and the Special Catchment Areas) has meant that a robust water quality strategy has been developed as part of the proposal. This includes the used of bio-retention basins, on site storage basins and Gross Pollutant Traps. Transport would continue to consult with Water NSW and Blue Mountains City Council to further develop the strategy through the detailed design phase.</p>
1.3(f) To promote the sustainable management of built and cultural heritage (including Aboriginal cultural heritage).	<p>The proposal would not impact on any known Aboriginal heritage sites or items, however, is in an area of broader cultural value. The proposal would impact on non-Aboriginal heritage sites including the Bonnie Doon Reserve and Pulpit Hill area. The proposal would retain and upgrade the existing heritage interpretation area on Nellies Glen Road to interpret the heritage significance of the area.</p> <p>As part of the broader Great Western Highway Upgrade Program, a heritage interpretation strategy would be developed to display both the Aboriginal and non-Aboriginal heritage value along the project.</p>
1.3(g) To promote good design and amenity of the built environment.	<p>While the two proposals pass through large areas of natural environment and scattered rural residential areas, an urban design and landscape strategy would be developed to consider the surrounding built environment. The urban design and the landscape concept for the proposal has been developed to achieve an integrated outcome that helps fit the overall proposal as sensitively as possible into its context and to minimise the impacts of the overall proposal on the existing landscape character of the surrounding area.</p> <p>On the approaches to the villages of Katoomba and Medlow Bath, landscaping and urban design would be used to provide a change in environment for drivers to know that they are coming into a village.</p> <p>The proposal would also include the retention of existing active transport trails and would provide a new trail between Medlow Bath and Blackheath.</p> <p>Progressive landscaping would be undertaken throughout the construction, and Landscaping Plans will include revegetation with local native vegetation species, suitable for the riparian zone.</p>

Object	Comment
	During construction and operation there would be impacts on amenity and community values. These are discussed in Section 6.7.5. Adverse amenity impacts during construction and operation would be mitigated through a range of mitigation measures.
1.3(h) To promote the proper construction and maintenance of buildings, including the protection of the health and safety of their occupants.	Not relevant to the proposal.
1.3(i) To promote the sharing of the responsibility for environmental planning and assessment between the different levels of government in the State.	Not relevant to the proposal.
1.3(j) To provide increased opportunity for community participation in environmental planning and assessment.	Section 5 outlines the community and stakeholder consultation carried out during various stages of the proposal. This REF will be placed on public display and further consultation will be carried out with the community if the proposal is determined to proceed.

9.2.1 Ecologically sustainable development

Ecologically sustainable development (ESD) is development that improves the total quality of life, both now and in the future, in a way that maintains the ecological processes on which life depends. The principles of ESD have been an integral consideration throughout the development of the project.

ESD requires the effective integration of economic and environmental considerations in decision-making processes. The four main principles supporting the achievement of ESD are discussed below.

The precautionary principle

The precautionary principle deals with reconciling scientific uncertainty about environmental impacts with certainty in decision-making. It provides that where there is a threat of serious or irreversible environmental damage, the absence of full scientific certainty should not be used as a reason to postpone measures to prevent environmental degradation.

This principle was considered during route options development (refer to Chapter 2). The precautionary principle has guided the assessment of environmental impacts for this REF and the development of mitigation measures.

Stakeholder consultation considered issues raised by stakeholders and a range of specialist studies were undertaken for key issues to provide accurate and impartial information to assist in the evaluation of options. The concept design of the proposal has sought to minimise impacts on the natural environment, particularly to the Blue Mountains National Park and heritage values of the study area while maintaining engineering feasibility and safety for all road users.

A number of safeguards have been proposed to minimise potential impacts and to respond to stakeholder concerns and areas of scientific uncertainty. These safeguards include the commitment to further develop the water quality strategy and to undertake further biodiversity investigations during further stages of the proposal. Other safeguards are identified in this REF and these would be implemented during construction and operation of the proposal. No safeguards have been postponed as a result of lack of scientific certainty. A CEMP would be prepared before construction starts. This requirement would ensure the overall proposal achieves a high-level of environmental performance. No safeguards and management measures would be postponed as a result of a lack of information.

Intergenerational equity

Social equity is concerned with the distribution of economic, social and environmental costs and benefits. Inter-generational equity introduces a temporal element with a focus on minimising the distribution of costs to future generations.

The proposal would not result in any impacts that are likely to adversely impact on the health, diversity or productivity of the environment for future generations. The proposal would make sure that road and traffic conditions within the overall proposal area would not continue to worsen in the future. The key risks of 'do nothing' are that, without the proposal, the highway would continue to experience:

- slow travel speeds (of up to 80 minutes in peak times and hours if there is an incident) with limited overtaking opportunities and steep gradients (more than double the recommended maximum level)
- reduced freight efficiency by limiting access for safer and more sustainable high productivity vehicles
- limited access during incidents and natural disasters
- higher than state average crash rates.

Should the proposal not proceed, the principle of intergenerational equity may be compromised, as future generations would inherit a lower road condition which could involve substantial increases in travel times due to a lack of alternative routes. Section 2.4 also highlights the options that were considered for the proposal and the highly constrained environment that needed to be considered. As part of the proposal, potential compensatory land for the impact to the Blue Mountains National Park has also been identified in this REF.

Aboriginal heritage assessment and Non-Aboriginal heritage assessment was carried out for the proposal. As part of the broader Great Western Highway Upgrade Program, a heritage interpretation strategy would be undertaken for the entire upgrade to embed heritage along the route.

Conservation of biological diversity and ecological integrity

As stated earlier, the proposal has been designed to limit the removal of native vegetation and TEC's where practical. A thorough assessment of the existing biodiversity environment was undertaken to identify and manage any potential impacts of the proposal on local biodiversity. It is acknowledged that the proposal would result in impacts on biodiversity, largely due to the up to 47.56 hectares removal of vegetation that is the habitat to several native plant communities, TECs, flora and fauna species. The BAR determined that the proposal is unlikely to lead to a significant impact on threatened species, populations, ecological communities or their habitats, and a referral of this proposal for consideration as a controlled action under the EPBC Act is not required.

Where possible, design refinements and construction methodology would be refined to further minimise vegetation removal as part of the proposal. A landscaping or revegetation plan would be implemented as part of the proposal to revegetate areas using locally endemic species. A biodiversity offset strategy and National Park compensatory land package would be developed as part of the proposal to provide protection to further sections of vegetation.

Improved valuation, pricing and incentive mechanisms

The principle of internalising environmental costs into decision making requires consideration of all environmental resources which may be affected by the carrying out of a project, including air, water, land and living things.

The REF has examined the environmental consequences of the proposal and identified safeguards and management measures to manage the potential for adverse impacts. The requirement to implement these safeguards and management measures would result in an economic cost to Transport. Some of these measures include:

- provision of surface water and groundwater quality monitoring during construction
- provision of operational water quality controls, including retention basins and scour protection
- further investigations into ancillary facilities to assess land suitability for proposed commercial/industrial land use to ensure the safety of future workers and to provide a baseline site condition
- retention and expansion of the existing Pulpit Hill heritage interpretation area
- further investigations into the archaeological significance of the Pulpit Hill and Environs and House and Orchards (former Glenara Cottage) heritage items
- further vibration assessments of identified heritage items (refer to Section 6.4.4)
- revegetation with local native vegetation species
- urban design and landscaping, including visual screening, where possible within impact areas identified as moderate or high impact
- biodiversity offsetting
- a national park compensatory land package
- provision of noise mitigation measures
- ongoing consultation with the community and stakeholders through detailed design and construction phases.

The implementation of safeguards and management measures would increase both the capital and operating costs of the proposal. This signifies that environmental resources have been given appropriate valuation. The concept design has been developed with an objective of minimising potential impacts on the surrounding environment. This indicates that the overall proposal is being developed with an environmental objective in mind.

9.3 Conclusion

The proposed upgrade of the Great Western Highway between Katoomba and Medlow Bath and Medlow Bath to Blackheath is subject to assessment under Division 5.1 of the EP&A Act. The REF has examined and taken into account to the fullest extent possible all matters affecting or likely to affect the environment by reason of the proposed activity.

This has included consideration (where relevant) of conservation agreements and plans of management under the NPW Act, biodiversity stewardship sites under the BC Act, wilderness areas, areas of outstanding value, impacts on threatened species and ecological communities and their habitats and other protected fauna and native plants. It has also considered potential impacts to matters of national environmental significance listed under the Federal EPBC Act.

A number of potential environmental impacts from the proposal have been avoided or reduced during the concept design development and options assessment. The proposal as described in the REF best meets the project objectives but would still result in some impacts on biodiversity, heritage and socio-economic factors.

Transport has commenced the revocation process with National Parks and Wildlife Service for a portion of land reserved as national park. Transport intends to exclude from its determination any works requiring revocation until such time that a decision has occurred, via an Act of Parliament.

Safeguards and management measures as detailed in this REF would ameliorate or minimise these expected impacts. The proposal would also result in increased capacity, reducing travel times and increasing access during traffic incidents or natural disasters. On balance the proposal is considered justified and the following conclusions are made.

Significance of impact under NSW legislation

The proposal would be unlikely to cause a significant impact on the environment. Therefore, it is not necessary for an environmental impact statement to be prepared and approval to be sought from the Minister for Planning and Public Spaces under Division 5.2 of the EP&A Act. A Biodiversity Development Assessment Report or Species Impact Statement is not required. The proposal is subject to assessment under Division 5.1 of the EP&A Act. Consent from Council is not required.

Significance of impact under Australian legislation

The proposal is not likely to have a significant impact on matters of national environmental significance or the environment of Commonwealth land within the meaning of the *Environment Protection and Biodiversity Conservation Act 1999*. A referral to the Australian Department of Agriculture, Water and the Environment is not required.