

Chapter 20 Cumulative impacts

This chapter identifies and discusses the anticipated cumulative impacts of the Proposal. These cumulative impacts relate to the combined effect of individual impacts of the Proposal as well as the cumulative effect of this Proposal together with nearby projects that form part of the Pacific Highway Upgrading Program. This chapter also discusses the cumulative impacts of the Proposal with other planned projects or activities in the study area.

20.1 Introduction

Section 228 (2) of the *Environmental Planning and Assessment Regulation 2000* requires that environment assessment under Part 5 of the Act takes into account any cumulative environmental effect of the Proposal with other existing or likely future activities. In addition, the RTA has recognised the potential for network-wide impacts resulting from the overall Pacific Highway Upgrading Program through the preparation of the *Pacific Highway Upgrading Program – Strategic Assessment* (SKM 2000).

20.2 Cumulative impact of the Pacific Highway Upgrading Program

To the immediate north and south of the Project, the status of the Pacific Highway is:

- At its southern end, the Proposal would connect with the proposed dual carriageway of the Cooperook to Moorland project, at Camp Obadiah. This 10.3 km proposal is currently undergoing environmental assessment.
- At the northern end of the Proposal, the road would connect with the existing dual carriageway highway near Bobs Creek Road at Herons Creek. From this point, the highway consists of dual carriageway for a distance of 19 km to just north of the Oxley Highway interchange.

Together with other recent and concurrent upgrade projects, these projects would provide approximately 120 km of continuous dual carriageway for the Pacific Highway from just north of Bulahdelah to the junction with the Oxley Highway to the west of Port Macquarie.

The cumulative impact of upgrading the Pacific Highway from Moorland to Herons Creek in the broader context of the Pacific Highway Upgrading Program includes both positive and negative impacts. These impacts include:

Positive impacts:

- substantial reductions in travel time – by May 2003, a travel time saving of approximately 55 minutes had been achieved through the completion of 23 major and 19 smaller projects under the Pacific Highway Upgrading Program (RTA 2003a); the Proposal would contribute to the achievement of further travel time savings to the extent of about three minutes consistent with the overall Program objective of having a travel time saving of 60 to 90 minutes by 2006 for the entire 667 km length of the Pacific Highway between Hexham and the Queensland border
- improvements in road safety resulting from the provision of an additional 22 km of divided road which has a substantially lower accident rate in rural areas than undivided road (see Table 4-5)

- consequential improvements in travel efficiency for local and regional businesses resulting from travel time savings
- improved accessibility to and from major towns including Taree and Port Macquarie as well as accessibility improvement from Sydney and Newcastle through to the whole north coast region and Brisbane
- increased opportunities for tourism development based on improved accessibility of coastal and nearby areas.

Negative impacts:

- loss of highway-related trade for some businesses in Johns River and Kew as a result of the bypassing of these two townships – to varying degrees, this impact has been experienced along other sections of the upgraded highway and, overall, has resulted, and is likely to continue to result, in a substantial change in the way services are provided to highway users
- loss of vegetated land, creation of further barrier effects for the movement of native fauna and additional fragmentation of fauna habitat – these impacts would be mitigated by replanting of available sections of road reserve as part of comprehensive landscape strategies for the Proposal and inclusion of fauna underpasses and other measures to facilitate fauna movement
- disturbance of a number of sites of cultural heritage significance.

Overall, the negative impacts of the Proposal would primarily affect the natural environment along the alignment, together with residents living close to the proposed alignment and businesses with a high reliance on highway-related trade. The benefits of the Proposal would be experienced by both the travelling public and residents of Johns River and Kew. The design of the Proposal and the mitigation measures are intended to ameliorate the adverse environmental impacts on nearby residents and the natural environment.

20.3 Cumulative impacts with other projects or activities in the study area

There are relatively few other planned or approved projects within the study area that would be impacted by or would be implemented concurrently with the Proposal and that would have a cumulative impact on the local environment.

Projects recently approved or planned for the study area in the short to medium term are:

- A 17 lot rural residential estate has been approved on Stewarts River Road, north of Johns River township. This subdivision would be bisected by the Proposal with two existing and eight future lots being severed or directly impacted and the remainder of the subdivision layout likely to require modification (see Section 16.3.6).
- The recently approved Lake Ridge large lot residential estate northeast of Kew would have five lots affected by the Proposal (see Section 16.2.4).
- The Proposal would impact land on the western side of the Taylors Quarry property that is situated to the east of Kew on Ocean Drive. Current land uses would not be affected as the quarry no longer operates, and the Proposal is also unlikely to impact land identified for a future waste transfer station development by Hastings Council.
- The concept design of the Proposal considered the recent construction of the Kew/Kendall STP that would allow further residential developments to proceed in the study area. The Proposal would require 2.7 ha of land acquisition from the STP, however the operation of the highway frontage of the STP property would not be affected.

- Hastings Council proposes to extend the sewerage system to Herons Creek village by construction of a rising main between the STP and the village. The timing of construction has not yet been established by Council. Details of the Proposal have been provided to Council to ensure that there would be no conflict between the rising main and the highway upgrade.

20.4 Cumulative impact of the Proposal

The principles of ESD have been applied to the development of the Proposal and various measures proposed to reduce the cumulative social, environmental and economic impacts of the Proposal.

20.4.1 Cumulative social impacts

The Proposal would result in noticeable improvements in the amenity of the townships of Johns River and Kew through the removal of large volumes of through traffic, including a substantial proportion of heavy traffic, especially at night. In particular, this would result in:

- reduced levels of traffic noise, with associated reductions in sleep disturbance at night
- reduced levels of vehicle emissions
- improvements in local accessibility through the removal of traffic congestion
- improvements in local road safety
- opportunities to undertake urban design improvements that would not otherwise be possible with the presence of the Pacific Highway in the centre of the township.

When combined, these changes would noticeably improve the amenity of houses and community facilities fronting or near the existing highway. Residents located near the proposed alignment would be affected, particularly by noise. However, mitigation measures are integrated into the concept design for the Proposal where the noise assessment has indicated that noise levels would exceed the relevant criterion or be acute (see Section 19.5) and to ensure that the new road fits appropriately into the local environment.

A number of property owners would be affected by loss of all or part of their property to accommodate the Proposal. However the cumulative impact would not be such as to adversely affect the nature and supply of the housing stock in the study area or its overall demographic structure or agricultural production at a regional level.

20.4.2 Cumulative impacts on conservation resources

The Proposal would result in the loss of some native vegetation and, as a result, fauna habitat. However, as discussed in Chapter 10 in relation to terrestrial ecology and Chapter 11 in relation to aquatic ecology, it is not considered likely that the Proposal would significantly reduce the biodiversity in the locality or region. The impact on conservation resources of the Proposal is acknowledged by the incorporation of extensive measures into the design of the road which, individually and collectively, would mitigate particular and cumulative impacts on native vegetation and fauna habitat. These measures, in particular the proposed fauna movement points under the bridges and fauna fencing, would reduce the roadkill of native fauna.

20.4.3 Cumulative economic impacts

After the opening of the Proposal, the provision of highway-related services is likely to be substantially lost from existing businesses in Johns River and Kew. This is also likely to result in employment losses if alternative local employment opportunities are not developed. The role of Kew in particular, as a town with significant highway servicing function, would be changed substantially, along with many other towns along the highway, through the implementation of highway bypasses as part of the Pacific Highway Upgrading Program.

However, this change offers opportunities for businesses in Kew and Johns River to change marketing strategies or develop new economic activities such as product diversification. Bypassing of the two townships may also increase business in other non-highway related services, such as overnight accommodation.

The extent of agricultural, forestry, fishing and oyster farming activities directly affected by the Proposal is minor in local and regional terms. Therefore, the Proposal should not cause any significant adjustments to these economic activities individually or collectively.

The enhancement in road conditions, safety, efficiency and reduced travel times are likely:

- to enhance access to the region for local tourism
- to increase opportunities for commerce, industry and tourism between Sydney and Brisbane, and other major centres
- to attract further economic development to the mid-north coast of NSW
- to increase the activity of the service industry between Port Macquarie and Taree
- to improve fuel efficiency due to better horizontal and vertical road alignments
- to increase accessibility to and within the region.

20.5 Summary of cumulative impacts

The Proposal is consistent with State, regional and local transport and land use planning policies and controls. It is a major element of the Pacific Highway Upgrading Program that would improve traffic safety, transport efficiency and amenity for some residents and commercial areas adjacent to the existing highway.

The cumulative impacts of the Proposal can be summarised as follows:

- There would be noticeable improvements for Johns River and Kew that would be key elements in the definition and implementation of measures to develop new economic roles for the townships to offset the loss of highway-related trade.
- There would be direct and cumulative negative impacts on conservation resources primarily through the loss of some vegetated land, and the associated introduction and/or consolidation of barriers to local and regional fauna movements and the fragmentation of habitat areas. The provision of mitigation measures, together with a practical and effective environmental management and monitoring program, would help to avoid or mitigate the contribution of the Proposal to these cumulative impacts.