New England Highway bypass of Muswellbrook

Chapter 6.16 Cumulative impacts

Transport for NSW | October 2021

6.16 Cumulative impacts

6.16.1 Study area

Cumulative impacts could be experienced if construction or operation of the proposal coincides with construction or operation of other local development, such as other road upgrades, public work or private development.

A desktop review of the major project register on the DPIE website completed on 2 September 2021 identified major projects within the Muswellbrook LGA which have the potential to contribute to cumulative impacts with the proposal. These projects are listed in Table 6-70.

Table 6-70: Major projects within the potential to contribute to cumulative impacts with the proposal (major projects register)

Project	Description	Status and timing	Distance from the proposal
Muswellbrook Waste Management Facility	This project involves the development of a new Muswellbrook Waste Management Facility comprising an upgrade to the existing waste management facility integrated with a new landfill development encompassed by the Facility The project involves the design and construction of a new landfill void within Muswellbrook Waste Management Facility and the upgrade of existing infrastructure	EIS preparation stage. Secretary's Environmental Assessment Requirements (SEARs) have been issued. As yet no approval issued for the project Timing not confirmed	Ten metres - adjacent to the proposal
Pacific Brook Christian School	The project involves the construction of a Christian school catering for up to 600 students. The current school site is located at 30 Sowerby Street, Muswellbrook. The school proposes to relocate to a permanent location at 72-74 Maitland Street (New England Highway), Muswellbrook and establish a new school at this site.	EIS preparation stage. SEARs have been issued. As yet no approval issued for the project Timing not confirmed	Three kilometres to the west
Mount Pleasant Optimisation Project	This project proposes to optimise the Mount Pleasant Operation, including access to additional run-of-mine (ROM) coal reserves, and to extend approved life of the mine from 2026 to 2048	More information required. EIS and response to submissions have both been prepared. As yet no approval issued for the project Timing not confirmed	Three kilometres to the west

Project	Description	Status and timing	Distance from the proposal
Bayswater Power Station Upgrade	This project proposes to improve the management of ancillary processes over the remaining operating life of Bayswater and to facilitate an improved rehabilitation outcome for the ash disposal area The project involves: • Augmenting the existing ash disposal area • Creation of a salt cake disposal landfill • Improvements to water management around the coal handling plant	Assessment stage. As yet no approval issued for the project Timing not confirmed	11 kilometres to the south
Bowmans Creek Wind Farm	This project proposes to install around 70 – 80 wind turbines. A new powerline and local road upgrades to Hebden Road, Muscle Creek Road and Rouchel Road/Stoney Creek Road are proposed to provide access from the New England Highway	Response to submissions stage. As yet no approval issued for the project Timing not confirmed	Nine kilometres to the east
Maxwell Solar Farm	The project proposes to develop a new 25 megawatt solar project. The project is located on a rehabilitated overburden emplacement area associated with the former Drayton coal mine, which ceased operations in December 2017	Approved / Determined in August 2020 Construction to last 12-18 months.	6 kilometres south
Singleton Bypass – New England Highway	This project proposes to construct a New England Hwy bypass around the township of Singleton	Project determined in August 2020 Timing for construction of the bypass is expected to be from Mid 2022 to mid 2026	30 kilometres to the south east

The Muswellbrook Council website identifies Development Applications recently determined within the LGA, including major developments and Council infrastructure maintenance work. Approved projects generally include upgrades to residential properties, residential subdivisions and Council water infrastructure upgrades that would not have a cumulative impact with the proposal.

6.16.2 Potential impacts

The construction of the proposal is expected to commence in late 2022 and is anticipated to finish in about three and a half years. The extent of potential cumulative impacts can only be assessed in regard to project information and schedules available at time of publication.

Construction

Cumulative impacts could occur where construction of the proposal and other developments are being carried out in parallel. The key cumulative impacts during construction could include:

- Increased construction vehicle traffic on local roads
- Cumulative air and noise impacts associated with multiple construction activities
- Temporary changes to visual amenity.

Potential cumulative impacts would be temporary and environmental safeguards and management measures would be implemented as appropriate.

The severity of potential cumulative impacts would vary between locations and would generally be dependent on the types of work being carried out, the timing and duration of the work relative to each other, the distance between the work and the receivers and sensitivity of the receiver. In relation to the identified mining and power projects these are ongoing operations or extensions to operations at existing sites which would have low potential to result in cumulative impacts. The nominated road projects may have the potential to cause cumulative construction traffic delays at other locations on the New England Highway or in the vicinity of the highway, however as the timing of the upgrades to roads as part of the Bowmans Creek Wind Farm project are currently unknown, there is a low potential for cumulative impacts to occur. Cumulative impacts associated with consecutive construction with the Singleton Bypass proposal would be likely as both proposal construction timeframes would overlap.

Table 6-71 provides a summary of the potential cumulative impacts associated with each identified proposal during construction.

Table 6-71: Anticipated cumulative impacts during construction

Project	Cumulative impacts
Muswellbrook Landfill	Depending on the timing of each construction phase, the ongoing and cumulative impacts of multiple projects being undertaken back to back or over similar timeframes may result in construction fatigue impacts on residents and for non-residential premises in the region. There may also be an increase in construction related impacts (ie noise and dust), particularly as the Waste Management Facility is directly adjacent to the proposed alignment. Given the location of the nearest sensitive receivers, cumulative impacts are expected to be minimal
Pacific Brook Christian School	Similar to the potential impacts identified above, depending on construction timeframes, there is potential for construction fatigue impacts as well as construction traffic impacts. It is considered likely that this project would also use New England Highway as a haulage route for construction vehicles (refer to Figure 3-6). If construction timeframes overlap, potential traffic impacts would be addressed in the TMP.
Mount Pleasant Optimisation Project	Mount Pleasant is an existing operation west of the proposal. The modifications and life extension of the mine is identified to occur away from Muswellbrook. Further, the activities carried out in the expansion would be generally consistent with current operations of the Mount

Project	Cumulative impacts
	Pleasant Mine and is not anticipated to result in cumulative impacts with the proposal during the extension phase of the project
Bayswater Power Station Upgrade	Bayswater Power Station is about 11 kilometres south east of Muswellbrook and is situated between Muswellbrook and Singleton. No noticeable cumulative impacts are anticipated to occur with this proposal
Bowmans Creek Wind Farm	Access to the site would be via the New England Highway and then on designated local roads. Given the construction stages of each project are unlikely to overlap, cumulative impacts with this project are not likely to occur
Maxwell Solar Farm	No noticeable cumulative impacts are anticipated to occur with the project
Singleton Bypass New England Highway	Given the construction stages of each project are likely to overlap, cumulative impacts with this project may occur. Depending on the timing of each construction phase, the ongoing and cumulative impacts of multiple construction stages along sections of the New England Highway being undertaken back to back may result in construction fatigue impacts on motorists frequently using the new England highway, residents and businesses in the region. Consecutive construction of the proposal with Singleton Bypass could potentially have the following impacts: • Prolonged construction vehicle movements between Singleton and the proposal • Prolonged traffic delays and disruptions along the New England as a result of construction activities • Demand for similar materials and generation of waste materials at the same time • Construction fatigue at sensitive residential receivers located in close proximity to the proposals and for road users travelling between Scone and Singleton

Operation

The proposal, combined with other approved and proposed road upgrade projects would result in cumulative traffic benefits on the New England Highway and surrounds through the increased capacity of the road network, improved traffic flow and journey times and improved road safety.

The proposal, combined with other approved and proposed road upgrade projects may contribute to a cumulative loss of rural and agricultural land, however impacts are anticipated to be minor.

There are not anticipated to be any negative cumulative impacts associated with the concurrent operation of the proposal and the projects listed in Table 6-70. The operation of the Singleton Bypass and Muswellbrook Bypass would provide an improved road user experience, improved travel time reliability and Level of Service.

6.16.3 Safeguards and management measures

The majority of cumulative impacts would be mitigated and managed by the safeguards and management measures outlined throughout Section 6 of this REF and summarised in Section 7.2.