



Figure 7-5 Land use zonings

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Exclusion zones would be demarcated by temporary security fencing and signage. Access would be managed via gates on the two designated access roads. The location of temporary security fencing and access gates is shown in **Figure 1-3**.

The expanded exclusion zone would include areas which are currently publicly accessible, including mountain bike trails recently established by Hornsby Shire Council. For the duration of the project, public access to these areas would be restricted to maintain public safety.

Detailed consultation would be undertaken with the community and Hornsby Shire Council to provide for the safe undertaking of project activities in the area. Restrictions to public access would be in place for the duration of activities at the quarry site for safety reasons. Some existing mountain bike trails would be closed at the start of the project to maintain public safety. Sections of bike trails to be closed are shown in **Figure 4-5**. The majority of bike trails which fall within the proposed construction area are sections graded as easy or intermediate. The majority of trails graded as more difficult and advanced are located to the south and north of the construction area and may continue to be available for use by mountain bike riders for the duration of the project. Temporary crossing access (across Quarry and Bridge Roads) for the bike trails is being investigated. Locations under further investigation as potential access points or areas to minimise project footprint intrusion on bike trails, are identified in **Figure 4-5**. Based on these investigations, access would be maintained to as many of the trails as possible, where reasonable and feasible and safe to do so.

At the completion of the works, the project disturbance area would be rehabilitated to a standard agreed to with Hornsby Shire Council and access to the public would be reinstated to current conditions. Exclusion fencing would be retained around the quarry void if it continues to pose a public safety risk.

Property access

The project may temporarily impact delivery access for the Hornsby TAFE site at the termination of Bridge Road (refer to **Figure 1-3** for the location of this property access point). Bridge Road is the preferred access road for spoil truck haulage to the site and would share access with the access for Hornsby TAFE. Temporary disruptions to this access may result from haulage activities, particularly during the peak haulage period.

Consultation has occurred with the TAFE and will continue to occur during detailed design to develop appropriate mitigation measures to ensure access to the TAFE would be maintained. This would include the preparation of a Traffic Management Plan identifying traffic protocols for the shared access road (including right of way and appropriate safety protocols to ensure the safety of TAFE visitors, students and staff).

Impacts on community facilities

The project has been designed to avoid direct impacts to community facilities, with the exception of unavoidable restrictions to existing mountain bike trails.

Temporary closure of sections of the Hornsby Mountain Bike Trail within the Hornsby Quarry site boundaries would be required to ensure public safety during project activities. As discussed previously, the majority of trails expected to be affected would be sections graded as easy or intermediate. The majority of trails graded as more difficult and advanced are located to the south and north of the construction area. Some of these trails would continue to be available for use by mountain bike riders for the duration of project. A map showing the trails that are proposed to be closed and those that would remain open during the project is provided in **Figure 4-5**. Locations under further investigation as potential access points or areas to further minimise project footprint intrusion on bike trails, are also identified in **Figure 4-5**. Based on these investigations, access would be maintained to as many of the trails as possible, where reasonable and feasible and safe to do so. Appropriate signage would be erected prior to and during works to advise the public of the alterations to mountain bike and pedestrian access, including information regarding alternative cycling routes.

Impacts on surrounding development

Land uses present in the vicinity of the construction site include residential development, places of worship, businesses, schools and hospitals (see **Figure 7-5**). These land uses are likely to be sensitive to the presence of a nearby work site and susceptible to amenity impacts.

Amenity impacts include any factors that affect the ability of a resident, visitor or business owner to enjoy their home and daily activities, for example, noise, vibration, or changes to air quality. Amenity impacts from the project and associated management and mitigation measures have been discussed in detail in **Section 6.2** (Noise and vibration) and **Section 6.3** (Air quality).

Through the application of appropriate management and mitigation measures as detailed in the relevant sections of this EIS, temporary amenity impacts can be suitably addressed and would allow for surrounding land uses to continue during the project.

Land use compatibility and development potential

The project would not lead to land use changes, fragmentation, severance or sterilisation of neighbouring land as there is no requirement to acquire, temporarily or permanently, any properties to facilitate the project. Amenity impacts would be temporary and able to be managed through the implementation of suitable mitigation measures. As such, the project would lead to no permanent change to the land use or development potential of any surrounding sites.

The project would introduce surface construction facilities within an area that is zoned for and utilised as public recreation (RE1). These facilities would be temporary and would be dismantled and removed from the site at the completion of works. The project would therefore only temporarily restrict the land use and development potential of the site. In the longer term, the project would facilitate the realisation of the full potential of the site for public recreation, if Hornsby Shire Council proceeds with rehabilitation and development for public recreation purposes in the future.

7.5.3 Environmental management measures

No permanent change to the land use or amenity of surrounding sites would result from the proposed works. The project is unlikely to lead to land use changes, fragmentation, severance or sterilisation of land and there is no requirement to acquire, temporarily or permanently, any properties to facilitate the works. The project may also facilitate separate future recreational development opportunities on the site, if Hornsby Shire Council proceeds to rehabilitate and develop the site for recreational purposes in the future.

Mitigation and management measures would be implemented to avoid, minimise or manage impacts to land use and property. These mitigation and management measures are listed in **Table 7-37**.

Table 7-37 Environmental management measures – Land use and property

Impact	No.	Environmental management measure	Timing
Property access.	LP1	Where property access is affected as a result of the project, consultation with the property owner(s) would be undertaken prior to the commencement of construction and would include the identification of temporary alternate access for affected properties.	Detailed design / during the project.
Community notification.	LP2	The TAFE and surrounding landowners would be provided with advanced notification of relevant project schedules, construction works and changes to access arrangements.	Pre-commencement and during the project.
	LP3	Community updates would be provided on changes to the local road network within the project area during construction.	During the project.

Impact	No.	Environmental management measure	Timing
Impacts on community facilities.	LP4	Opportunities to maintain public access to the Hornsby mountain bike trail and pedestrian trail network, where reasonable and practical, would be explored with Hornsby Shire Council.	Pre-commencement and during the project.
	LP5	Appropriate signage would be erected prior to and during the project to advise the public of the alterations to mountain bike trails and pedestrian access, including information regarding alternative cycling and walking routes.	Pre-commencement and during the project.

7.6 Non-Aboriginal heritage

A technical working paper: non-Aboriginal heritage assessment (**Appendix I**) has been prepared to assess the potential impact from the project on non-Aboriginal heritage and identify appropriate environmental management measures. This section provides a summary of the technical working paper. **Table 7-38** sets out the SEARs as they relate to non-Aboriginal heritage and where in this EIS these have been addressed.

Table 7-38 SEARs - non-Aboriginal heritage

SEARs	Where addressed
Impacts to State and local historic heritage (including conservation areas, built heritage, landscapes and archaeology) should be assessed, including—in particular—the Hornsby Diatreme and surrounding vegetation, Hornsby Heritage steps, the Old Mans Valley Cemetery, street trees on Dural Street, and the TAFE college. Where impacts to State or locally significant historic heritage are identified, the assessment shall:	Impacts to State and local historic heritage have been assessed in Section 7.6.4 and in Appendix I .
Outline the proposed mitigation and management measures (including measures to avoid significant impacts and an evaluation of the effectiveness of the mitigation measures) generally consistent with the guidelines in the NSW Heritage Manual (Heritage Office and DUAP 1996).	Mitigation and management measures are described in Section 7.6.6 and in Appendix I .
Be undertaken by a suitably qualified heritage consultant(s) with relevant heritage expertise (note: where archaeological excavations are proposed the relevant consultant must meet the NSW Heritage Council's Excavation Director criteria).	The technical working paper: non-Aboriginal heritage has been prepared by a suitable qualified heritage consultant(s). Refer to Appendix I .
Include a statement of heritage impact for all heritage items/conservation areas to be impacted (including significance assessment). This should include detailed mapping of all heritage items and how they are affected by the proposal.	A statement of heritage impact is included in Section 7.6.5 and in the technical working paper at Appendix I .
Include details of any proposed mitigation measures (architectural and landscape).	Mitigation and management measures are described in Section 7.6.6 and in Appendix I .
Consider impacts from, including but not limited to, vibration, demolition, archaeological disturbance, altered historical arrangements and access, landscape and vistas, and architectural noise treatment (as relevant).	Impacts to State and local historic heritage have been assessed in Section 7.6.4 and in Appendix I .

SEARs	Where addressed
Where physical archaeological test excavations are proposed, develop an appropriate archaeological assessment methodology, including research design, in consultation with the Heritage Council of New South Wales (for items of State significance) and the Department, to guide the test excavations, and include the results of these excavations.	Not relevant to this project.
Provision of future mitigation strategies for all identified archaeological impacts that would arise from the proposal.	Mitigation and management measures are described in Section 7.6.6 and in Appendix I .

7.6.1 Assessment methodology

The methodology used to identify non-Aboriginal heritage items within the study area included a search of relevant heritage registers and schedules. A literature review and field survey and has been conducted in accordance with the following guidelines:

- NSW Heritage Manual (NSW Heritage Office & NSW Department of Urban Affairs and Planning, 1996c).
- The Burra Charter (the Australia ICOMOS charter for places of Cultural Significance) (ICOMOS (Australia), 2013).
- Assessing Heritage Significance (NSW Heritage Office, 2001a).
- Assessing Significance for Historical Archaeological Sites and 'Relics' (NSW Heritage Branch, 2009).
- Heritage Curtilages (NSW Heritage Office & NSW Department of Urban Affairs and Planning, 1996a).
- Levels of Heritage Significance (NSW Heritage Office, 2008).

Study area

The study area for the non-Aboriginal heritage assessment has been informed by the footprint of the project (project disturbance footprint) and is shown in **Figure 7-6** and **Figure 7-7**.

Literature and database review

A review of archaeological and historical data relevant to the project was undertaken, which included heritage registers, databases and schedules, local histories and archaeological reports. This literature and data review was used to identify known non-Aboriginal heritage sites located within the study area.

Searches of the following relevant heritage inventories were undertaken on 2 December 2013 and 9 April 2015 for items within or immediately adjacent to the study area:

- Statutory:
 - World Heritage List (World Heritage Committee, UNESCO).
 - The Commonwealth Heritage List (Australian Heritage Council).
 - The National Heritage List (Australian Heritage Council).
 - The State Heritage Register (NSW Heritage Branch, OEH).
 - The State Heritage Inventory (NSW Heritage Branch, OEH)
 - Section 170 Heritage and Conservation Register compiled by Roads and Maritime.

- Section 170 Heritage and Conservation Register compiled by Sydney Trains.
- Section 170 Heritage and Conservation Register compiled by Transport for NSW.
- Section 170 Heritage and Conservation Register compiled by Sydney Water.
- Schedule 5 of the Hornsby LEP
- Non-statutory:
 - The Register of the National Estate (Australian Heritage Council).
 - The Register of the National Trust of Australia (NSW).

Non-Aboriginal heritage items identified through searches of these databases and registers are listed in **Table 7-38**. The locations / curtilage of these items are shown in **Figure 7-6**.

Field inspection

Known non-Aboriginal heritage items and areas identified as having the potential to be impacted (either directly or indirectly) by the project were subject to a targeted inspection to determine their current condition. Results from these inspections were used to inform an assessment of potential impacts on non-Aboriginal heritage values. The field assessment methodology consisted of:

- Recording of structures and/or features identified at each site.
- Assessment of the historical significance of structures/features.
- Photographs of the structures/features with details maintained in a photo log.
- Recording of the position of the site with a Global Positioning System (GPS).

This methodology addressed the current condition of the site, mapped its location and compiled sufficient data to compare with existing recordings and observations made during past assessments.

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