

8.8 Indigenous heritage

This section summarises the Indigenous heritage impacts likely to be associated with the Quakers Hill to Vineyard Duplication Project based on the key findings of Technical Paper 4 – Indigenous Heritage, contained in Volume 2. Measures proposed to manage the identified Indigenous heritage impacts are also outlined. Existing Indigenous heritage values within the vicinity of the Project are described in Section 3.8.

8.8.1 Assessment approach

The key objective of the Indigenous heritage assessment was to identify Indigenous archaeological and cultural heritage values in the vicinity of the Project that may be affected during the construction of the Project. A Statement of Heritage Impact (SoHI) was prepared for this assessment, in accordance with the Department of Planning's (Heritage Branch) *Statement of Heritage Impact 2004*, to determine the effect that the Project could have on the Indigenous heritage values and/or places identified in the Project area (refer Section 3.9).

Areas identified as potential archaeological deposits (PADs) were defined according to their land form elements and the degree of land use impact (such as previous utility installations and vegetation clearing for agricultural purposes). The extent of PAD areas were constrained to the area of land that was surveyed during the Indigenous heritage assessment (refer Technical Paper 4). As such, the areas of PAD identified for this assessment may extend outside of the survey area. This is particularly relevant for the survey area within the Commonwealth land, where the survey was restricted to within 50 metres of the rail corridor.

8.8.2 Indigenous heritage impacts

The area that would be impacted by the Project is shown in Figure 8-13. Figure 8-13 also shows the Indigenous heritage items and areas of PAD (refer Section 3.8) relative to the impact area of the Project.

The Project would directly impact seven Indigenous heritage sites and ten areas of PAD. These impacts are summarised in Table 8-42, and described below. Stage 1 of the Project would impact four of these sites and seven areas of PAD. Stage 2 would impact three Indigenous heritage sites and three PADs.

The areas of PAD are predicted to be situated within the topsoil of the Blacktown soil landscape for PADs V1, V2, S1, S2, QVP and Q4; and at various depths from below the immediate ground surface within the alluvial South Creek and Berkshire Park soil landscapes for PADs V2, V3, Q1, Q2 and Q3.

Past land use activities, including the original construction and ongoing maintenance of the existing rail corridor, urban development, road construction and maintenance and drainage management works are likely to have substantially affected the integrity of the sub-surface deposits within the rail corridor and many areas outside of the rail corridor, which have been identified as having low heritage constraint. Excavation works to be undertaken during construction of the Project within the existing rail corridor are, therefore, unlikely to encounter archaeological deposits.

The Project would impact seven Indigenous finds and is also likely to encounter undisturbed and/or partially disturbed archaeological remains within the areas of PAD identified as Q1, Q2, Q3, Q4, QVP, S1, S2, V1, V2 and V3.

The PADs identified in the Indigenous heritage assessment (Technical Paper 4 in Volume 2) have the potential to hold archaeological material in its primary context. As such, they have the potential to generate meaningful information that could expand the present knowledge of past Indigenous land use, site distribution and movement through the landscape and are, therefore, considered to be of moderate or high significance. While a large body of information already exists in relation to the Indigenous archaeological sites of the Cumberland Plain, there are still substantial data gaps that can only be addressed through the ongoing assessment of PADs such as those identified above. A further assessment may provide more detailed information about changes in technology and occupation through time, and spatial relationships between sites, which cannot be accurately discerned just through surface artefact recordings.



Figure 8-13a Location of identified Indigenous heritage items and areas of PAD relative to the area impacted by the Project
 Note: Project detail shown is indicative only, subject to detailed design.

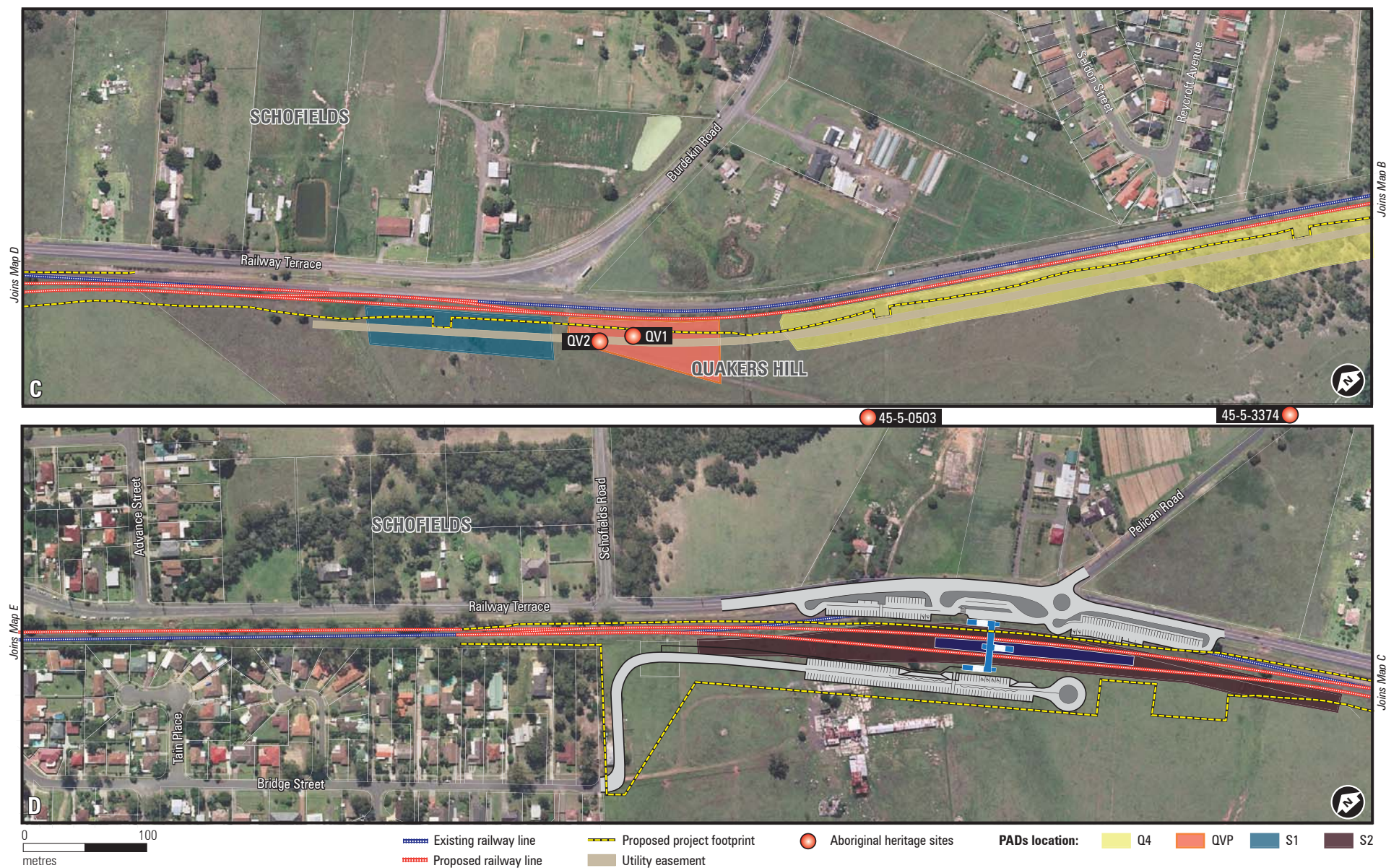


Figure 8-13b Location of identified Indigenous heritage items and areas of PAD relative to the area impacted by the Project
 Note: Project detail shown is indicative only, subject to detailed design.



Figure 8-13c Location of identified Indigenous heritage items and areas of PAD relative to the area impacted by the Project
 Note: Project detail shown is indicative only, subject to detailed design.

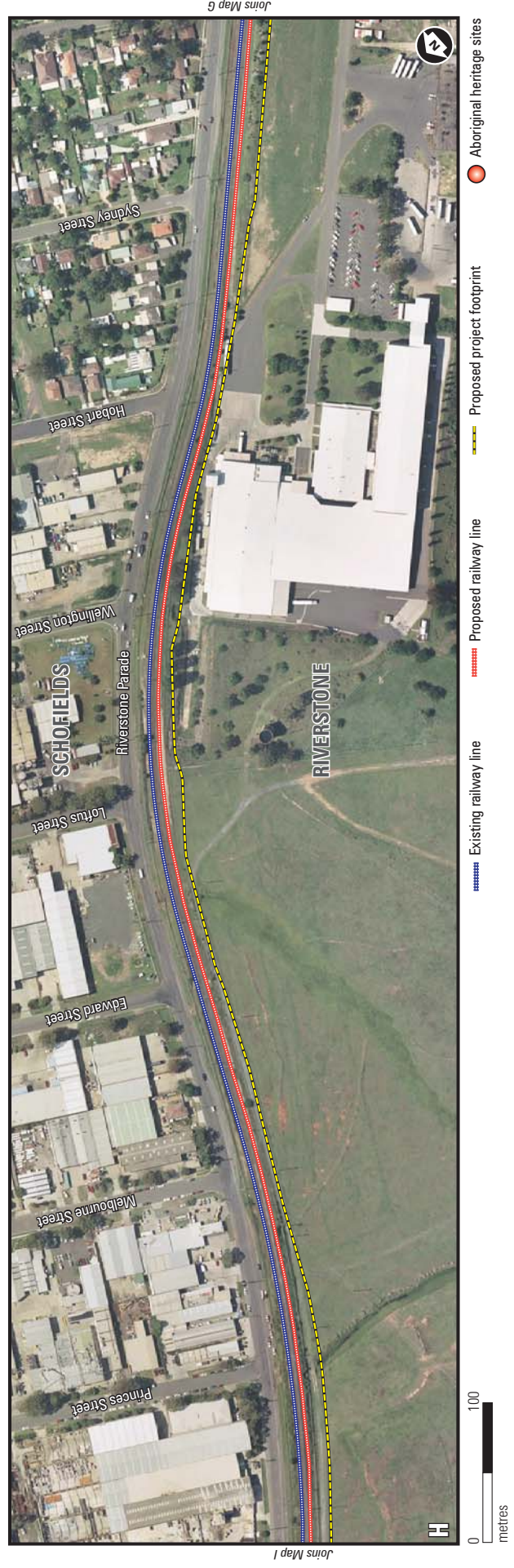
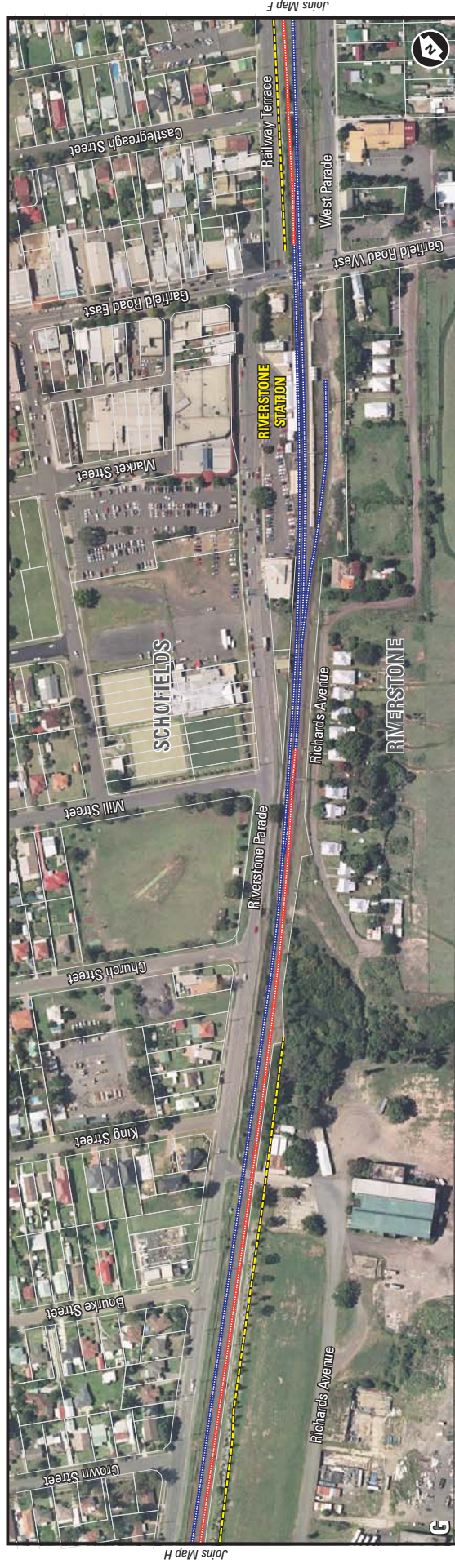


Figure 8-13d Location of identified Indigenous heritage items and areas of PAD relative to the area impacted by the Project

Note: Project detail shown is indicative only, subject to detailed design.

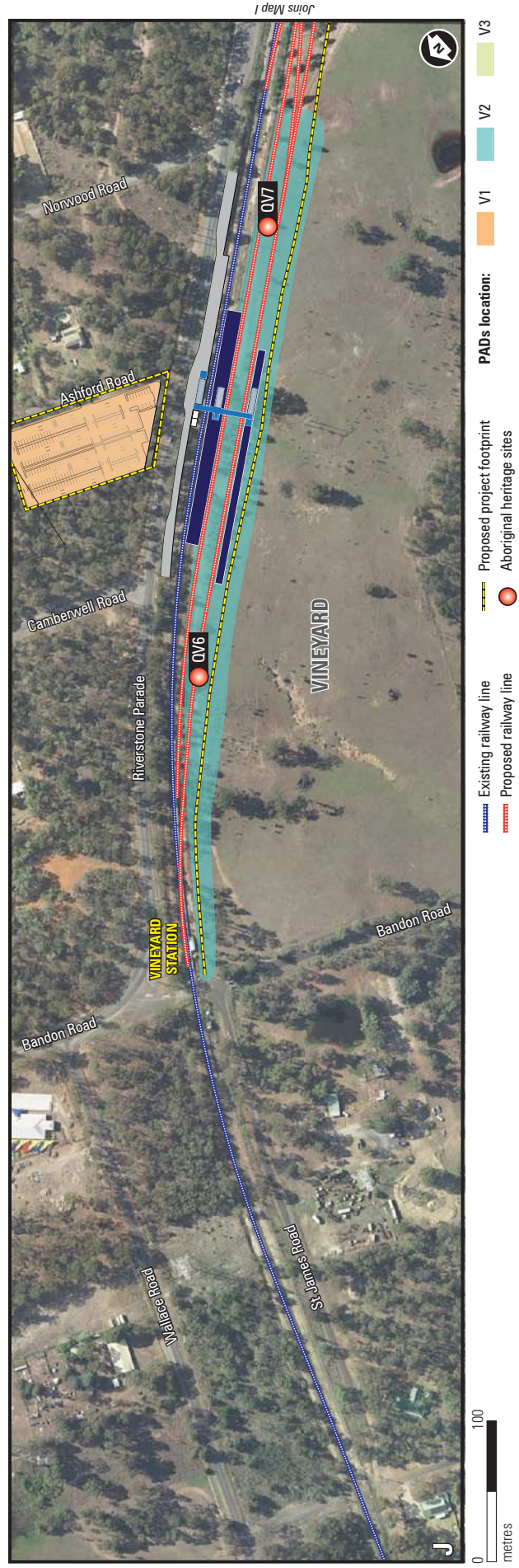


Figure 8-13e Location of identified Indigenous heritage items and areas of PAD relative to the area impacted by the Project
 Note: Project detail shown is indicative only, subject to detailed design.

Table 8-42 Summary of likely impacts to identified Indigenous heritage items and areas of PAD

Area of PAD/ Indigenous sites	Proposed area of disturbance	Impact	Archaeological potential
PAD Q1	Partial impact to a 15 metre (approximate) strip of land adjacent to the rail corridor.	<p>Partial Impact to PAD Q1.</p> <p>PAD Q1 occurs in a similar landscape context to previously recorded open camp sites (45-5-0358, 45-5-0321).</p> <p>Site 45-5-0358 was targeted for test excavations along the creek flats of the tributary, prior to the installation of the Metropolitan Water, Sewerage and Drainage Board pipeline. In situ material was found as part of this investigation, with radio carbon dating returning a date of 3450 ± 60 before present (BP).</p>	Moderate
PAD Q2	Partial impact to a 15 metre (approximate) strip of land.	<p>Partial impact to PAD Q2.</p> <p>PAD Q1 occurs in a similar landscape context to previously recorded open camp sites (45-5-0358, 45-5-0321).</p> <p>Site 45-5-0358 was targeted for test excavations along the creek flats of the tributary, prior to the installation of the Metropolitan Water, Sewerage and Drainage Board pipeline. In situ material was found as part of this investigation, with radio carbon dating returning a date of 3450 ± 60 BP.</p>	Moderate
PAD Q3	Partial impact to a 10 metre (approximate) strip of land.	<p>Partial impact to PAD Q3.</p> <p>Sites QV3 and QV4 found to the north of PAD Q3 occur within a similar landscape context to previously recorded open camp sites 45-5-0358 and 45-5-0321 (registered on the AHIMS database).</p> <p>Site 45-5-0358 was targeted for test excavations along the creek flats of the tributary, prior to the installation of the Metropolitan Water, Sewerage and Drainage Board pipeline. In situ material was found as part of this investigation, with radio carbon dating returning a date of 3450 ± 60 BP.</p>	Moderate
Sites QV3 and QV4	The Project would impact QV3 and QV4.	<p>Sites QV3 and QV4 would be impacted by the Project. While these sites are associated with extensive occupation of the area with sub-surface deposits, these sites have been tested and recorded previously. No further information can be gained from these finds.</p>	Low
PAD Q4	Partial impact to a 15 metre (approximate) strip of land.	<p>Partial impact to PAD Q4.</p> <p>PAD Q4 is thought to be part of a wider site complex containing previously registered sites 45-5-0503, 45-5-0497, 45-5-0471 and potentially 45-5-3374.</p> <p>The previously registered sites will not be impacted by the Project.</p>	Moderate

Area of PAD/ Indigenous sites	Proposed area of disturbance	Impact	Archaeological potential
PAD QVP; Sites QV1 Sites QV2	<p>The Project would impact Site QV1 and Site QV2.</p> <p>There would be a partial impact on PAD QVP up to 15 metres from the Rail Corridor.</p>	<p>The Project would impact on Site QV1 and Site QV2 within PAD QVP. The Project would have a partial impact on PAD QVP.</p> <p>Both sites (QV1 and QV2) are considered to be continuous with registered sites 45-5-0503 and 45-5-0471 (registered on the AHIMS database).</p> <p>Site 45-5-0503 comprises a small scatter of silcrete flakes in a localised erosion scour approximately 180 metres from the rail corridor near the Aerodrome runway. Site 45-5-0503 is thought to be part of a wider site complex that includes sites 45-5-0497 and 45-5-0471.</p>	High
PAD S1	Partial impact to a 15 metre (approximate) strip of land.	<p>Partial impact to PAD S1.</p> <p>Two sites QV1 and QV2 and 3 previously recorded sites (45-5-0503, 45-5-0497 and 45-5-0471) occur within a similar landscape context within several hundred metres of PAD S1.</p> <p>Sites QV1 and QV2 within PAD QVP would be impacted by the Project (refer above).</p>	Moderate
PAD S2	Site of the new Schofields Station would impact on the full extent of PAD S2 as identified in Technical Paper 4.	<p>PAD S2 is impacted by a subsurface electricity cable. This cable is likely to have disturbed the context of any potential archaeological deposits.</p> <p>However, there is still the potential for undisturbed sub surface material to be present across the PAD and wider Schofields Station area. This will be further defined as the detailed design is progressed.</p>	Moderate
PAD V1	<p>Site of the car park at Vineyard would impact on the full extent of PAD V1 as identified in the Technical Paper 4.</p> <p>Phase 1 of the car park (70 spaces) would have a partial impact on PAD V1.</p>	<p>Land use impacts in this area of PAD are minimal. Vegetation communities are assessed with good structural integrity, with a species complement characteristic of the pre-European equivalent (refer Section 8.6). As such ground surface disturbance has been minimal. Therefore, there is the potential for undisturbed sub-surface material to be present across the PAD.</p>	Moderate
Site QV5	The Project would impact on site QV5.	<p>Item comprises one red silcrete flaked piece.</p> <p>This site is not thought to be associated with any subsurface deposits due to past land disturbance.</p>	Low
PAD V2 Site QV6 Site QV7	<p>Location of the new Vineyard Station would impact a 35 metre (approximate) strip of land from the existing rail corridor.</p> <p>Both sites QV6 and QV7 would be impacted by the Project.</p>	<p>Both sites, QV6 and QV7, are located within PAD V2 and would be impacted by the Proposed works.</p> <p>Land use impacts in the vicinity of V2 constitute historic land clearance and agricultural practices. An electricity easement cross the PAD near Norwood Road, the installation of which is likely to have disturbed the integrity of any potential sub surface deposits. The impact of this easement is, however, confined in space. Therefore, there is potential for undisturbed sub-surface material to be present across the PAD.</p>	Moderate

Area of PAD/ Indigenous sites	Proposed area of disturbance	Impact	Archaeological potential
PAD V3	Partial impact to PAD V3 up to 12 metres (approximate) from the existing rail corridor.	Several Telstra installations and one sewerage line cross this PAD at varying points. The impact of these services to the integrity of the PAD is linear and confined in space. Other land use impacts in the vicinity of V3 are minimal. While historic land clearance and continued agricultural use of the land will have impacted the topsoil to varying degrees in the vicinity of the PAD, archaeological material is commonly found below the plough zone in similar contexts across the Cumberland Plain.	Moderate

8.8.3 Management measures

Measures proposed to manage the potential Indigenous heritage impacts associated with the Project should consider the context of broader land use change and development proposed in the Project area and surrounds. For example, the proposed new Vineyard Station is within the Riverstone West precinct of the NWGC, which was released for redevelopment in June 2006 (refer Section 3.14). The future development of this area will be managed through the GCC *Precinct Assessment Method and Protocols*. Notwithstanding this, the following measures would be implemented to manage potential Indigenous archaeological heritage impacts:

- Indigenous archaeological sites QV1, QV2, QV3, QV4, QV5, QV6 and QV7 would be registered on the DECC AHIMS database in accordance with Section 91 of the *National Parks and Wildlife Act 1974*, which requires the Director-General of the DECC to be notified of the location of any Indigenous objects.
- PAD V1, V2, V3, S1, S2, Q1, Q2, Q3, Q4 and QVP would also be registered on the DECC AHIMS database.
- During detailed design, consideration would be given to further reducing the area of impact to PAD QVP as an area of High Heritage Constraint.
- Indigenous Heritage management measures would be developed as part of the CEMP in consultation with the registered Indigenous stakeholders and describe the measures to be implemented to:
 - protect Indigenous objects/sites outside of the disturbance area as identified in the specialist Indigenous Archaeological and Cultural Heritage Assessment (Technical Paper 4 in Volume 2) and the SoHI
 - salvage and/or conserve any Indigenous objects found in the disturbance area
 - respond to the discovery of any new Indigenous objects or artefacts during construction
 - consult with and involve registered Indigenous stakeholders in the salvage, conservation and management of Indigenous cultural heritage on the site
 - induct site staff to be aware of the presence of Indigenous heritage objects/sites within and outside the area of disturbance
 - liaise with all registered Indigenous stakeholders.