4. Additional investigations and clarifications to the Environmental Assessment

This chapter provides a summary of additional investigations that have been undertaken since the exhibition of the Environmental Assessment (refer to Appendix E and F). This chapter also provides clarifications to the Environmental Assessment in response to feedback received from the community during the exhibition period.

4.1 Additional investigations

4.1.1 Flora and fauna

Since the exhibition of the Environmental Assessment, an addendum to the *Quakers Hill to Vineyard Duplication Biodiversity Assessment* has been prepared to assess the proposed modifications to the Schofields footbridge location (refer Section 5.1.1) and utility corridor (refer Section 5.1.2). An additional survey of the study area was undertaken on 1 July 2009 in the following areas:

- Existing Schofields Station — the survey was undertaken to identify the tree species that are located in the development footprint for the proposed Schofields pedestrian footbridge (refer Figure 5-1 and Section 5.1.1).
- Oppy Reserve, Quakers Hill — the survey was undertaken to confirm the results of the previous ecological assessment for the area of the proposed widened utility corridor between Quakers Hill Parkway and Manorhouse Boulevard (refer Figure 5-3 and Section 5.1.2).

The addendum to the biodiversity assessment is provided in Appendix E and summarised in the following sections.

Schofields pedestrian footbridge

Flora

The trees located within the footprint of the Schofields pedestrian footbridge, as described in Section 6.2.2 of the Environmental Assessment and subsequently modified in Section 5.1.1 of this document, are summarised in Table 4-1.

Table 4-1 Flora species located within the footprint of the Schofields pedestrian footbridge

Location proposed in Environmental Assessment	Revised location proposed in Submissions Report
▪ There are 11 trees located within the proposed footprint. ▪ Four of these trees (located along Bridge Street) are large remnant *Eucalyptus moluccana* and *E. tereticornis*, both species native to the Cumberland Plain. ▪ Seven of these trees are located on the eastern side of the rail line along Railway Terrace. These trees consist of four large *E. microcorys*, one *E. viminalis*, one *Callistemon citrinus*, and one *C. salignus*.	▪ There are 17 trees located on the western side of the rail corridor (within the rail corridor boundary). ▪ The trees represent a mix of species that are native to the Cumberland Plain (remnant trees) and other non-indigenous native species from other areas in NSW and Queensland that have been planted on site (refer Table 2-1 of Appendix E). ▪ Three trees native to the Cumberland Plain, *E. tereticornis*, are present in the development footprint and based on their size are likely to be remnant.

Vegetation community condition

The condition of the vegetation along Bridge Street, to the west of Schofields Station, is regarded as poor. The vegetation has lost most of its species and has had its structure modified significantly by past land use activities including vegetation clearing and planting of non-indigenous tree species. The vegetation has a discontinuous canopy and very few shrubs. Exotic species including introduced pasture grasses, herbaceous and woody weeds have replaced the indigenous ground cover and shrub layers. The vegetation community does not represent any mapped vegetation communities on the Cumberland Plain structurally or floristically.

Vegetation community significance

Based on the conservation significance classifications assigned to vegetation on the Cumberland Plain in the *Final Native Vegetation Mapping of the Cumberland Plain, Western Sydney* (NSW National Parks and Wildlife Service 2002a; 2002b), the conservation significance of the vegetation along Bridge Street to the west of Schofields Station is classified as 'Other Remnant Vegetation'. The classification 'Other Remnant Vegetation' is considered all native vegetation that does not fall into the conservation significance classes of 'Core habitat', 'Support for core habitat', or 'Urban remnant trees' (NSW National Parks and Wildlife Service 2002b).

A desktop biodiversity assessment revealed that there were two Threatened ecological communities known to be present within the area:

- Cumberland Plain Woodland – listed as Endangered under the NSW *Threatened Species Conservation Act 1995* (TSC Act) and the EPBC Act.
- River-flat Eucalypt Forest on Coastal Floodplains of the NSW North Coast, Sydney Basin and South East Corner Bioregions – listed as Vulnerable under the TSC Act.

While *E. tereticornis* is present in the canopy as three individuals, this is not sufficient to classify the vegetation as Cumberland Plain Woodland for the following reasons:

- The understorey is highly disturbed and does not contain any indigenous native species sufficient to re-establish the characteristic native understorey of Cumberland Plain Woodland.
- The vegetation does not contain regrowth that is likely to achieve the near natural structure of Cumberland Plain Woodland or is a seral stage towards that structure.

While it is recognised that River-flat Eucalypt Forest on Coastal Floodplains of the NSW North Coast, Sydney Basin and South East Corner Bioregions may exist as a fragmented stand of remnant Eucalypt species (e.g. *E. tereticornis*), due to past land use and disturbance, the vegetation along Bridge Street within the rail corridor to the west of Schofields Station does not constitute this Endangered ecological community for the following reasons:

- the vegetation (three *E. tereticornis* trees) does not form part of a wildlife corridor that has connective importance at a local or regional scale
- the vegetation (three *E. tereticornis* trees) is unlikely to provide an important winter food source for arboreal mammals and birds
- the vegetation does not provide any significant habitat components such as hollow-bearing trees that are important to the life cycle of migratory, non-migratory, and/or nomadic species
- the vegetation does not contain threatened flora
- the vegetation is unlikely to contain a viable seed bank due to the past land use in the area (i.e. as a rail corridor).

Fauna habitat value

The fauna habitat value of the vegetation along Bridge Street, to the west of Schofields Station, is classified as poor. This is due to the absence of essential fauna habitat elements, such as old growth trees, fallen timber, a dense continuous tree canopy, a dense understorey of shrub species, or a thick leaf litter layer. Furthermore, the vegetation does not form any habitat links with other remnant vegetation in the landscape, as these links have been severed by extensive vegetation clearing in the past.

There are limited fauna habitat features in the rail corridor as the vegetation has been cleared and/or maintained by mowing or slashing. However, the vegetation is likely to provide foraging habitat and refuge for common reptiles, including Skinks and Blue Tongue Lizards, as well as foraging and nesting habitats for small birds including Fairywrens, Finches and Willie Wagtails. Other generalist species of bird that are ubiquitous in the landscape, including the Australian Magpie, Laughing Kookaburra, Australian Raven, and Noisy Miner are likely to forage in this vegetation. The trees present in the rail corridor are generally young and consequently none were observed to have hollows. *E. tereticornis* may have suitable temporary roosting sites for microbats under loose bark.

Oppy Reserve, Quakers Hill

The additional survey undertaken for the area of the proposed widened utility corridor (i.e. between Quakers Hill Parkway and Manorhouse Boulevard) confirmed the results of the previous ecological assessment. The two vegetation communities documented in Sections 3.6 and 8.6 of the Environmental Assessment (Alluvial Woodland and Shale Plains Woodland) are also present within the area of the proposed widened utility corridor (refer Figure 5-3).

4.1.2 Noise and vibration

Since the exhibition of the Environmental Assessment, an addendum to the *Quakers Hill to Vineyard Duplication Noise and Vibration Assessment Construction and Operations* has been prepared for the Project. This addendum provides a more detailed assessment of the potential noise impacts from the operation of the bus interchanges and associated car parking facilities and the new Schofields and Vineyard stations. The addendum to the noise report is provided in Appendix F and summarised in the following sections.

Assessment approach

The road traffic noise assessment was based on the predicted increase in road traffic volumes during the busiest 1 hour period as a result of the Project. The primary noise metric that was used to describe the predicted traffic noise in the assessment comprised:

- $L_{Aeq(1\ hour)}$ — the busiest 1-hour 'equivalent continuous noise level'. The $L_{Aeq(1\ hour)}$ represents the typical L_{Aeq} noise level from all road vehicle noise events during the busiest 1-hour of the assessment period.

The $L_{Aeq(1\ hour)}$ noise levels were predicted at the closest sensitive receiver locations during the year 2023 for the following scenarios:

- vehicle movements to/from the bus interchanges and commuter car park along the access road
- vehicle movements within bus interchanges and car parking facilities.

Heavy vehicle movements (apart from buses) were not included in the assessment and vehicle movements would not increase as a result of the Project.

Noise criteria

The *Environmental Criteria for Road Traffic Noise* (ECRTN) provides road traffic noise assessment guidelines for proposed roads or residential land use developments as well as assessment criteria for other sensitive land uses. The ECRTN criteria would apply to noise from road traffic movements associated with the proposed bus interchange and commuter car park facilities at the new Schofields and Vineyard Stations. The relevant development categories from the ECRTN are provided in Table 4-2. The assessment criteria as described within the ECRTN are stated as being applicable for a projected timeframe that extends to a period of 10 years immediately after the road opens. As such, an assessment year of 2023 (based on an opening year of 2013) has been used in the following assessment. It should be noted that the noise criteria presented within the ECRTN noise policy document are guidelines, and as such, are not mandatory.

Table 4-2 ECRTN road traffic noise criteria

Type of development	Criteria		Where criteria are already exceeded
	Day 7 am-10 pm (dBA)	Night 10 pm-7am (dBA)	
Land use developments with potential to create additional traffic on local roads	$L_{Aeq(1\ hour)}$ 55	$L_{Aeq(1\ hour)}$ 50	In all cases, the redevelopment should be designed so as to not increase existing noise levels by more than 2 dBA. Refer to Appendix F for further discussion.
Land use developments with potential to create additional traffic on collector roads	$L_{Aeq(1\ hour)}$ 60	$L_{Aeq(1\ hour)}$ 55	

Traffic noise impacts from vehicle movements to/from the car parking facilities

Schofields Station – eastern car park

The eastern car park at Schofields Station would be accessed via Railway Terrace, which is already subject to large volumes of traffic. The increase in traffic numbers on this road as a result of the Project would be minimal, and as such, the noise level increase would be considered negligible.

Schofields Station – western car park

The western car park at Schofields Station would be accessed via Bridge Street, which is not subject to large volumes of traffic. The western car park at Schofields Station would have capacity for approximately 120 vehicles. It is not unreasonable to assume that half of these spaces would be filled in the worst-case 1 hour period, resulting in 60 hourly vehicle movements. The ECRTN $L_{Aeq\ (1\ hour)}$ criterion for local roads (55 dBA) is predicted to be exceeded during events where more than 53 vehicle movements are made along Bridge Street in the worst-case 1 hour period. As such, the noise levels at the nearest residential receiver along Bridge Street are predicted to exceed the $L_{Aeq\ (1\ hour)}$ 55 dBA criteria by 0.6 dBA during the year 2023. It should be noted, however, that a 1 dBA to 2 dBA change in sound level is difficult (if not impossible) for people to detect; whilst a 3 dBA to 5 dBA change corresponds to a small, but noticeable, change in loudness. On this basis, the predicted 0.6 dBA exceedance of the ECRTN criteria is considered acceptable.

Vineyard Station

The Stage 1 car park at Vineyard Station would have capacity for approximately 70 vehicles. In the unlikely event that every space is filled during the worst-case 1 hour period, the ECRTN $L_{Aeq\ (1\ hour)}$ criterion for local roads (55 dBA) is not predicted to be exceeded at the closest receiver on Ashford Road during the year 2023.

Traffic noise impacts from vehicle movements at bus interchanges and car parking facilities

There would be a number of noise sources associated with vehicles operating within car parking facilities, which would typically include noise from vehicle movements, vehicle doors being slammed as well as engines being started and idling.

The predicted 2023 receiver noise levels at the closest properties in the vicinity of the new Schofields and Vineyard stations is provided in Table 4-3.

Table 4-3 Predicted noise levels due to vehicle movements within car parking facilities during 2023

Car parking facility	Nearest residential receiver (m)	Traffic movements in busiest 1 hour period (light vehicles/buses)	ECRTN criterion $L_{Aeq(1\ hour)}$ (dBA)	Predicted daytime $L_{Aeq(1\ hour)}$ (dBA)
Schofields – western	175	115/18[1]	55 (local road)	48
Schofields – eastern	35	115/18	60 (collector road)	58
Vineyard	40	35/18[2]	55 (local road)	52

Notes 1: The assessment of traffic noise does not include bus movements. While buses would frequently service Schofields Station, they would not be required to access the western car park, and therefore, would not make use of Bridge Street.

2: The assessment of traffic noise does not include bus movements as buses would not be required to access the Vineyard Station car park.

As shown in Table 4-3, all predicted noise levels from vehicle operations at the closest residential properties to the new Schofields and Vineyard stations would meet the appropriate ECRTN criteria. Notwithstanding this, it is likely that the predicted increase in noise levels would be noticeable (particularly from bus operations) as a bus interchange facility is not currently in operation at either of the new stations. It is noted, however, that heavy vehicle road traffic is not new to this area. Other heavy vehicles, such as large trucks, regularly utilise nearby roads. On this basis, it is unlikely that the L_{Amax} noise levels for the future situation would be greatly affected by the commissioning of the proposed bus interchanges.

Mitigation of operational traffic noise

Post-construction noise monitoring would be undertaken on the commissioning of the new Schofields and Vineyard stations to verify the results of the noise modelling undertaken for the addendum noise assessment (refer Appendix F). As stated in SoC no. 27 (refer Table 6-1), 'following completion of construction, operational noise monitoring shall be undertaken to confirm compliance with the predicted noise levels identified in the Environmental Assessment. Should the results of monitoring show that the Project specific noise levels are exceeded, then any additional feasible and reasonable mitigation measures shall be implemented in consultation with the affected property owners.'

TIDC would consult with the Strategies and Land Release Branch and other relevant stakeholders to reduce the potential noise related impacts through land use planning and operational measures. Land use planning measures could include appropriate land use zoning (such as commercial and industrial) and design.

Conclusion of the addendum noise assessment

Whilst noise levels are predicted to marginally exceed the ECRTN criteria at Bridge Street, the 0.6 dBA exceedence is considered acceptable. It is noted, however, that the addendum to the noise assessment (refer Appendix F) concluded that, when considering the very low existing ambient noise environments at both stations, it is likely that the operation of the proposed bus interchange and car parking facilities would be noticeable in the areas immediately surrounding both stations.

4.2 Clarifications to the Environmental Assessment

The following clarifications to the Environmental Assessment have been noted following feedback provided in public submissions and during the Community Information Sessions (refer Section 2.2.5).

4.2.1 Construction access – Bridge Street and Vernon Road

There was an inconsistency in the proposed construction access route to the new Schofields Station between Section 8.2 and Chapter 10 of the Environmental Assessment. As described in Section 3.2.3, the preferred construction access route would be via Vernon Road and a haul route constructed on private property. Bridge Street would be used as an alternative construction access route to the new Schofields Station construction compound.

As discussed in Section 3.2.3, all construction vehicles would initially need to use Bridge Street to enable site setup and for constructing the access haulage roads (linking the site to Vernon Road). Once established, the majority of vehicles (light and heavy) would enter the site via the haul road and Vernon Road. Access via Bridge Street would be maintained mainly for light vehicles (as required) and as a backup route to ensure access is maintained to the Project site. During the demobilisation phase of the project (the final 2-3 months prior to handover in 2011), access through Vernon Road would be removed and traffic directed through Bridge Street. The proposed construction access route to the construction compound at the relocated Schofields Station is shown in Figure 4-1, while construction access routes for the wider Project area are shown in Figure 4-2.

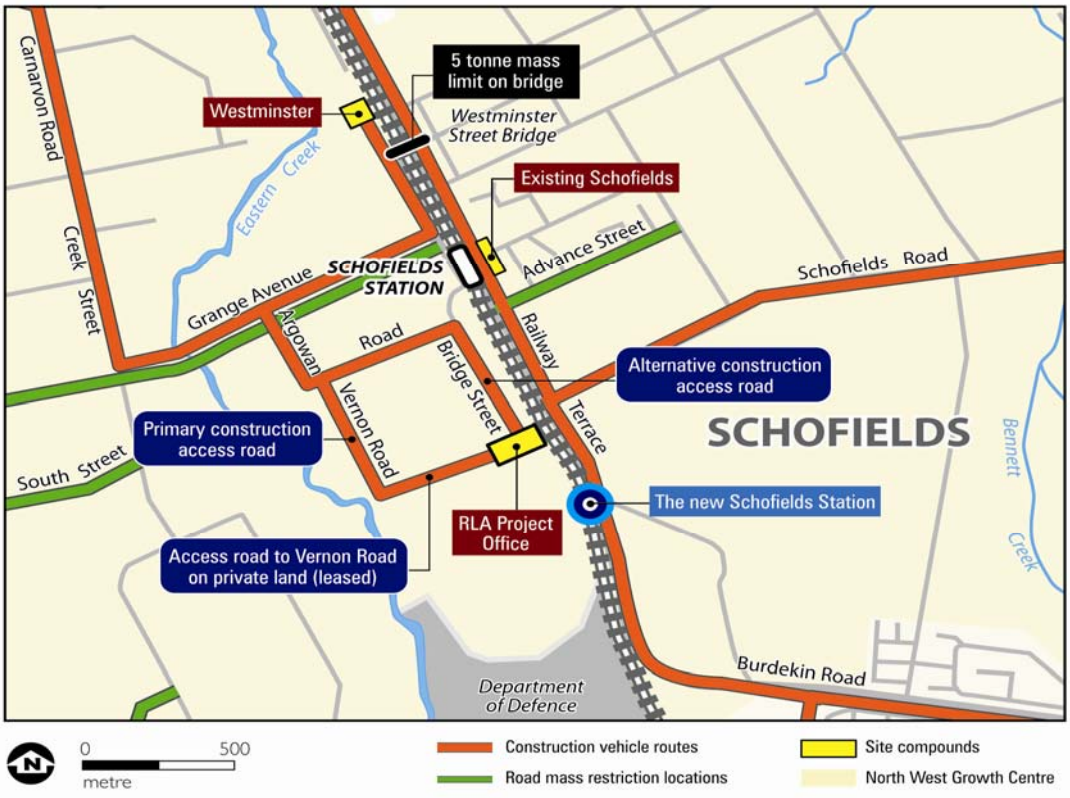

Figure 4-1 Proposed construction access routes to the construction compound at the new Schofields Station and western track works

Figure 4-2 **Proposed construction access routes**

At the peak of earthworks and construction, it is expected that the average maximum heavy vehicle movements would be three to four trucks per hour through each of the gates to the construction compound (i.e. eight truck movements per hour at the Vernon Road and Nirimba access points). These truck movements at this maximum rate would occur intermittently during the construction of the Project.

It is expected that the maximum light traffic at Vernon Road would be 400 vehicle movements per day (assuming 200 staff members and one car per person during the peak times of construction, such as during possessions, which is likely to be between March and October 2010). The construction workforce would generally access the site around 7 am, while staff members would access the site during working hours. As stated in SoC no. 25, 'construction activities will be undertaken between the hours of 7 am and 6 pm Monday to Friday, 8 am and 1 pm Saturdays and no work on Sundays or public holidays, except as otherwise approved in the Environmental Protection Licence for the Project, TIDC's Construction Noise Strategy (Rail Projects), or as agreed with relevant authorities.'

All construction traffic associated with the site compound at the new Schofields Station would be managed through the implementation of a Traffic Management Plan that would be prepared as part of the CEMP.

4.2.2 Businesses at Schofields

Section 8.3.4 of the Environmental Assessment provided an assessment of the expected business impact on the *3D Paint and Colour* shop as a result of the proposed relocation of Schofields Station. While this shop was located in the Schofields village centre at the time of writing the Environmental Assessment, it is acknowledged that this business has since been replaced with a pet grooming parlour (*Paws With Panache*). Notwithstanding this, the relocation of Schofields Station is expected to have a minimal to no impact on this business as most patrons are expected to make a dedicated trip to the pet grooming parlour. As such, the business impact assessment provided in Section 8.3.4 of the Environmental Assessment is still considered to be valid. TIDC would consult with the owners of this business during the construction of the Project.

In addition, the location of St Joseph's Catholic Church and Grange Avenue were incorrectly noted as being 400 metres from the existing Schofields Station. The intersection of Bridge Street and Grange Avenue is approximately 100 metres from the station entrance on Railway Terrace. St Joseph's Catholic Church is located on Grange Avenue, and is approximately 300 metres to the junction of Grange Avenue and Bridge Street.

4.2.3 Shared user path between Schofields village and the relocated Schofields Station

Clarification was requested about the shared user path proposed to be constructed between the existing and the new Schofields stations. As described in Section 3.2.1, a shared pedestrian/cyclist user path would be provided along Railway Terrace to connect the existing Schofields Station site with the new Schofields Station. This path would be an off-road path and would incorporate CPTED principles to manage potential safety and security issues. Such measures would include appropriate lighting and landscaping treatments to allow passive surveillance (refer to Section 3.2.1). An indicative illustration of the shared user path is shown in Figure 4-3.

Figure 4-3 **Indicative layout and cross-section of the shared user pathway between existing and new Schofields Station**

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

4.2.4 Cyclist facilities

Some community members sought clarification on the cyclist facilities that would be provided as part of the Project. In summary, a shared pedestrian/cyclist user path is proposed between the existing and new Schofields stations. The provision of bike racks and space for bike lockers at the Schofields, Riverstone and Vineyard stations would be determined during detailed design in consultation with the MoT. The current design for Schofields Station indicates that approximately 40 bike racks would be provided at the new Schofields Station, as well as concrete padmounts to allow for bike lockers to be installed in the future.

Additional cycle paths are not proposed as part of this Project. As described in Section 3.1.3 of the Environmental Assessment, the development of additional cycleway infrastructure alongside the rail corridor could be provided by developers in the future as development of the NWGC continues (GCC 2008c). An indicative plan for additional cycle paths that the Strategies and Land Release Branch proposes to develop within the NWGC is shown in Figure 4-4.

Paths located within road reserves would be constructed by developers and dedicated to Blacktown City Council through conditions of development consent (GCC 2008c). Paths within land zoned for open space will be funded through Section 94 Contributions (GCC 2008c).

The cyclist facilities provided as part of the Project would allow for integration with the Strategies and Land Release Branch's plans for cycle paths as proposed in precinct planning documents for the NWGC, where possible.

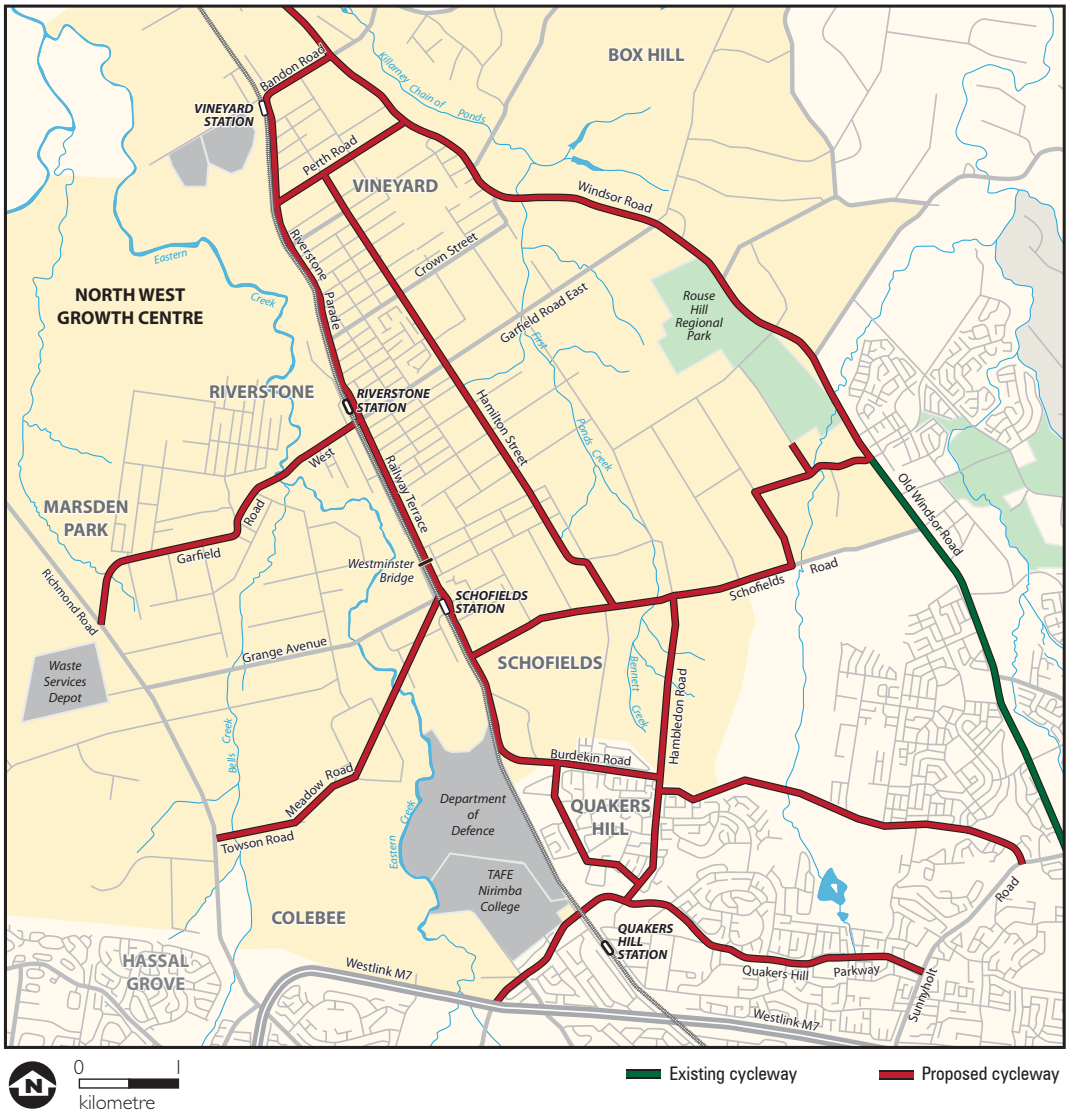

Figure 4-4 **Cycle paths proposed to be developed by the Strategies and Land Release Branch**

Source: Growth Centres Commision (2007) Riverstone and Alex Avenue - Transport and Access Study, October 2007

4.2.5 Flood risk maps of Schofields

Clarification was requested on the justification provided in Chapter 5 of the Environmental Assessment for the relocation of Schofields Station based on the impact of flooding around the existing Schofields Station, which would prohibit higher density development in this location. The flood risk maps (as provided by Blacktown City Council data) do not show the current station as being flood affected; however, the surrounding area to the west of the station is shown as being flood affected, thus limiting the development potential of the area. The justification used in Chapter 5 of the Environmental Assessment states:

- The fragmented ownership and flooding impacts around the existing Schofields Station would limit the ability to provide higher densities closer to the station and thus limit the efficiency of transit-oriented development in the future.
- The area around the proposed relocated Schofields Station is not affected by the 1 in 100-year flood level allowing for higher density of transit-oriented development to occur around the proposed station on a greenfield site.

The Environmental Assessment, therefore, does not state that 'high density buildings couldn't be built', rather that the current high risk flood prone areas that exist in parts north and south of the existing Schofields Station, together with the surrounding fragmented ownership of land, would limit the ability to provide higher density development to cater for the additional 17,000 new residents that the Strategies and Land Release Branch are planning for the Alex Avenue precinct (GCC 2009a).

It should also be reiterated that the decision to relocate Schofields Station approximately 800 metres south of its existing location was selected as the preferred project option based on a whole-of-government decision, taking into consideration the wider benefits to the community within the environmental constraints presented. In addition, each justification presented in the Environmental Assessment forms the basis for relocating Schofields Station, and no one reason should be considered in isolation. Justification for relocating Schofields Station has been discussed in detail in Section 3.2.2.

4.2.6 Kiss-and-ride facilities at Schofields Station

Some community members sought clarification as to why no kiss-and-ride facilities are proposed on the western side of the new Schofields Station. As stated in Section 6.2.1 of the Environmental Assessment, a kiss-and-ride facility would be provided on the western side of the new Schofields Station.

4.2.7 Noise mitigation

A few community members sought clarification about the proposed location of noise barriers or the need to provide other 'at-receiver' reasonable and feasible noise mitigation treatment. Some community members were also concerned that their properties would not receive noise mitigation measures, while their neighbours would.

The noise and vibration assessment considered the likely noise trigger levels that would apply to the Project, as specified in the DECC's (2007) IGANRIP. The noise and vibration assessment also indentified locations where operational rail noise levels are predicted to exceed the IGANRIP trigger levels. In summary, these locations included:

- Quakers Hill Preschool (located on the corner of Pearce and Lalor roads) — exceedence of the overall $L_{Aeq(1hour\text{-}internal)}$ trigger level of 45 dBA predicted for 2023.
- Manorhouse Boulevard, Quakers Hill — exceedence of the overall $L_{Aeq(15\ hour)}$ trigger of 65 dBA at eight residential receivers with a corresponding increase of more than 2 dBA during 2023. Exceedence of the L_{Amax} trigger of 85 dBA at all residential receivers that face directly onto the rail corridor during 2023. However, the L_{Amax} noise levels are not predicted to increase by 3 dBA or more as a result of the Project.
- Bridge Street and Tain Place, Schofields — Exceedance of the L_{Amax} trigger of 85 dBA at six residential receivers with a corresponding increase of more than 3 dBA during 2013 and 2023.

As described in Section 8.4.9 of the Environmental Assessment, noise mitigation may be required at Quakers Hill Preschool, Manorhouse Boulevard, Bridge Street and Tain Place.

The next phase of the operational noise assessment will be to reassess the operational noise levels in light of the detailed design and determine the 'reasonable and feasible' mitigation to be implemented. This would be undertaken as part of the detailed design process in consultation with the community.

As described in Section 6.2.6 of the Environmental Assessment, three options for noise mitigation are proposed for further consideration: at-source measures (i.e. rail dampers), at-corridor measures (i.e. noise barriers) and at-receiver measures (i.e. architectural treatment of buildings). A general hierarchy of at-source, at-corridor then at-receiver measures would be used during the development of the detailed Project design, where practicable. This approach is supported by the DECC in the IGANRIP. The most appropriate mitigation measures would be selected during the detailed design phase of the Project in consultation with the community.

At this stage in the assessment process, the preferred noise mitigation option would be the use of at source noise control, which could include the use of rail dampers on both tracks adjacent to the affected receivers (subject to the current trials being successful), with consideration of architectural treatments (including boundary fence installation or upgrade) at residential receiver locations. The use of building treatments would, however, be subject to feedback from the community consultation process, detailed design and confirmation of noise levels following post-operation noise monitoring to validate predictions and trials of rail dampers.

As stated in SoC no. 27 (refer Table 6-1), 'following completion of construction, operational noise monitoring shall be undertaken to confirm compliance with the predicted noise levels identified in the Environmental Assessment. Should the results of monitoring show that the Project specific noise levels are exceeded, then any additional feasible and reasonable mitigation measures shall be implemented in consultation with the affected property owners.'

4.2.8 Mapping of vegetation communities

DECC noted in their submission that the vegetation mapping illustrated in the Environmental Assessment (Figures 3-19 and 8-11) and Biodiversity Assessment (Figure 4-1 of Technical Paper 5) did not include Endangered ecological communities mapped as polygon class TXU (canopy cover less than 10% - Urban Areas) in the *Native Vegetation of the Cumberland Plain, Western Sydney* (National Parks and Wildlife Service 2002a).

It is acknowledged that, while the vegetation mapping presented in the Environmental Assessment and associated Technical Paper were based on the *Native Vegetation of the Cumberland Plain, Western Sydney* (National Parks and Wildlife Service 2002a), the mapping did not include Endangered ecological communities mapped as polygon class TXU (canopy cover less than 10% - Urban Areas). As such, additional vegetation mapping has been undertaken for the Project to include this vegetation community. The revised vegetation maps for the Project are shown in Figure 4-5.

While Endangered ecological communities mapped as polygon class TXU (canopy cover less than 10% - Urban Areas) were not included in the vegetation mapping included in the Environmental Assessment or the Biodiversity Assessment, all vegetation within the Project footprint was field verified during the preparation of the Biodiversity Assessment. As such, the addition of the Endangered ecological communities mapped as polygon class TXU into the vegetation maps will not change the conclusions reached in the Environmental Assessment.

4.2.9 Consideration of station location options

Clarification was sought with regard to whether Option A (i.e. the construction of a new station at Nirimba, as described in Section 5.4.1) also included an upgrade of the existing Schofields Station. It is acknowledged that Section 5.4.1 did not include discussion of the existing Schofields Station as part of Option A. To clarify this issue, it is was assumed that Option A would require an upgrade of the existing Schofields Station configuration to accommodate the proposed track duplication, as the existing station would not be able to service the two sets of tracks.

During the development of the project, a number of options were considered for the station locations (Options A, B and C as described in Section 5.4.1 of the Environmental Assessment). As described in Section 3.2.2, Option C (i.e. the relocation of Schofields Station approximately 800 metres south) was selected as the preferred option based on a whole-of-government decision, taking into consideration the wider benefits to the community within the environmental constraints presented. This option was subsequently progressed to the Environmental Assessment stage.

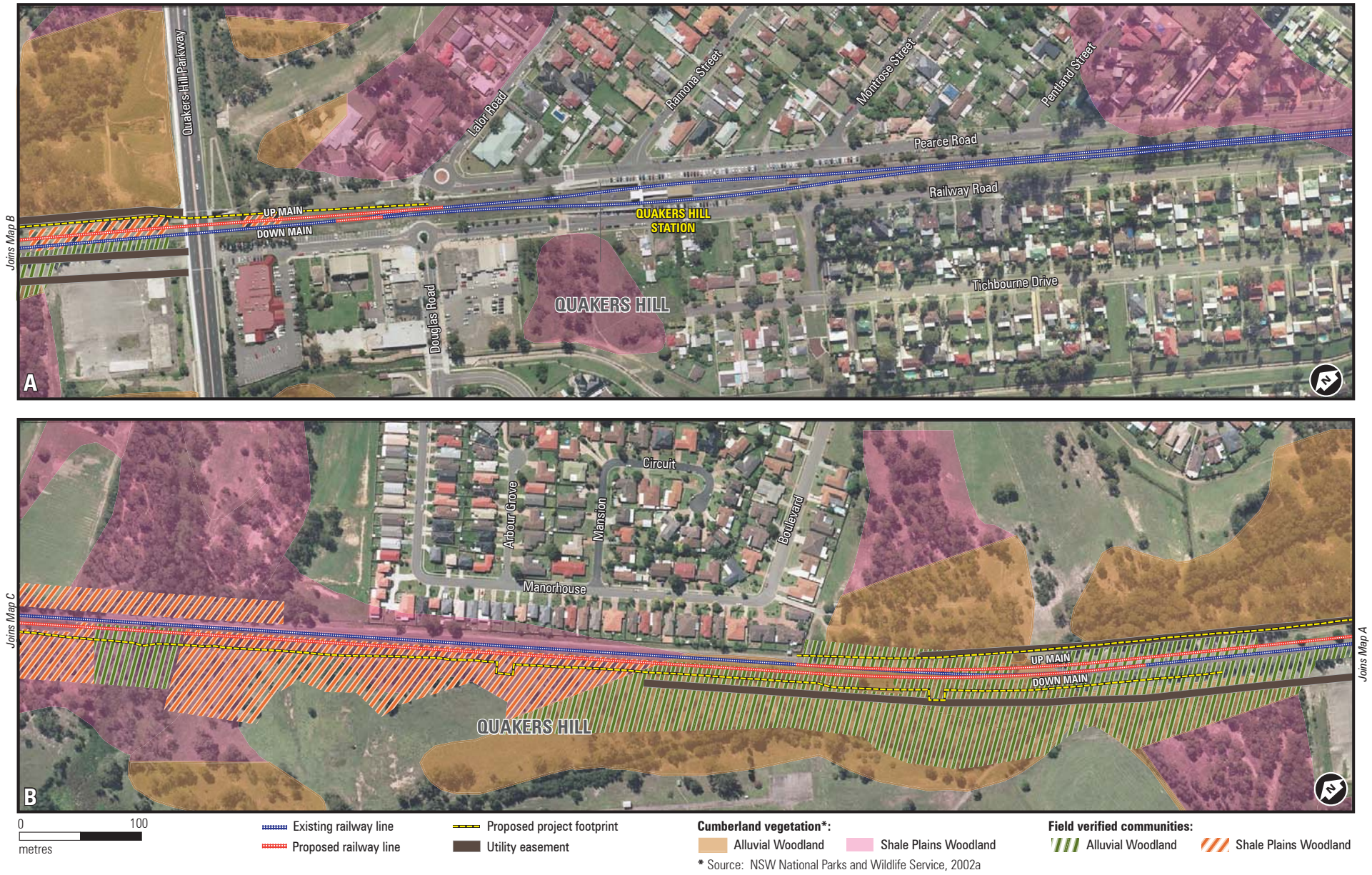

Figure 4-5a Revised mapping of vegetation communities relative to the area impacted by the Project

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

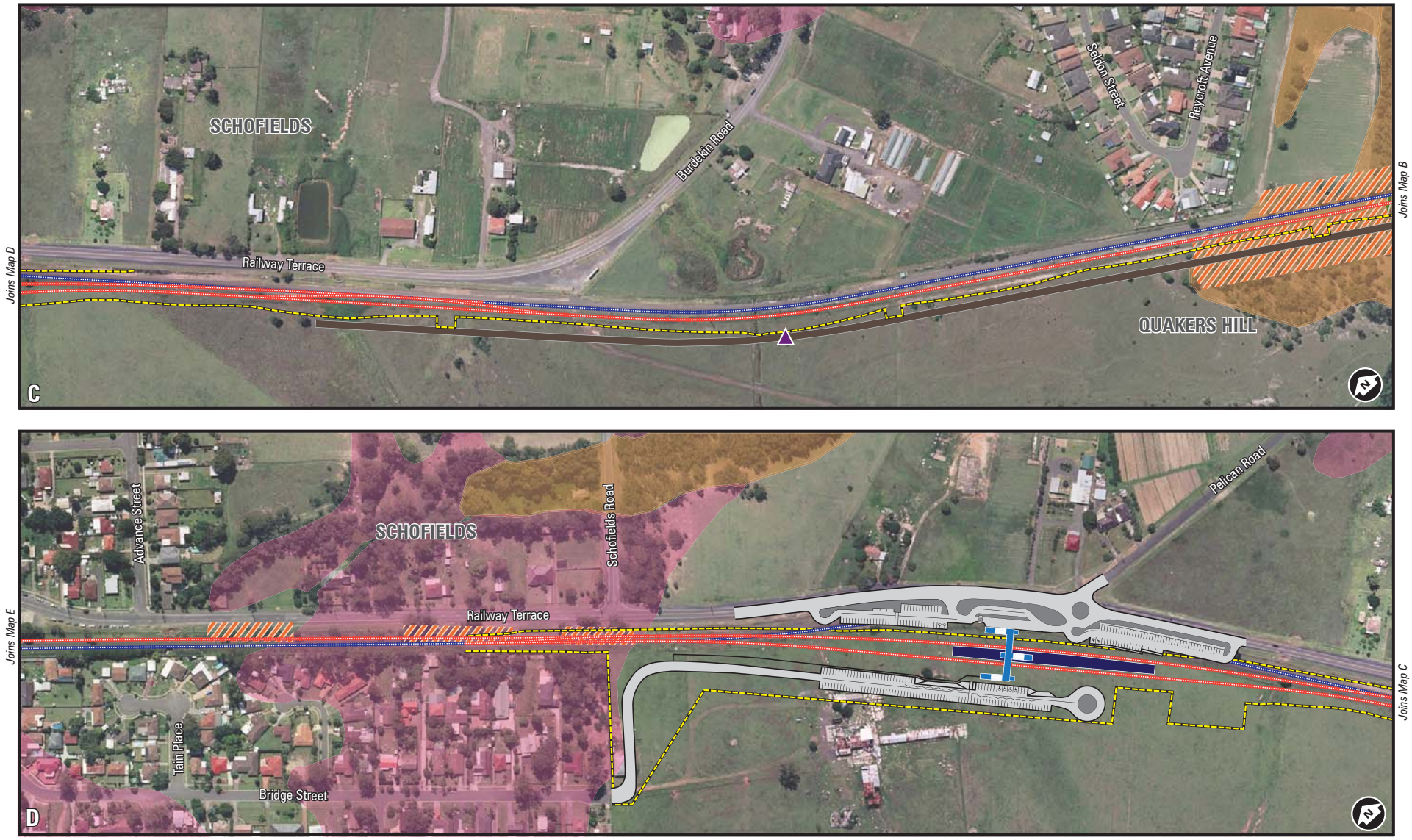

Figure 4-5b Revised mapping of vegetation communities relative to the area impacted by the Project

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

Figure 4-5c Revised mapping of vegetation communities relative to the area impacted by the Project

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

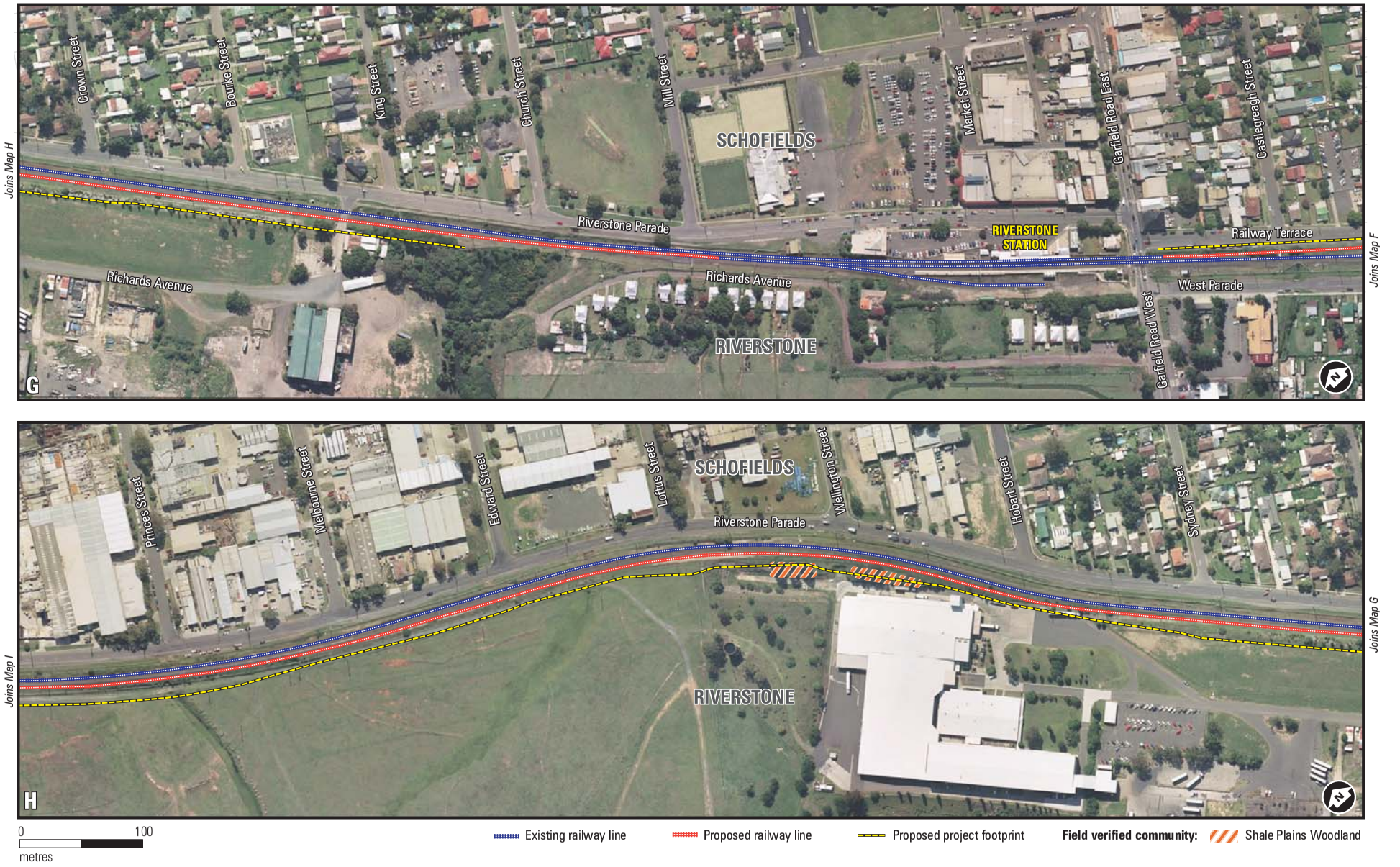

Figure 4-5d Revised mapping of vegetation communities relative to the area impacted by the Project

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

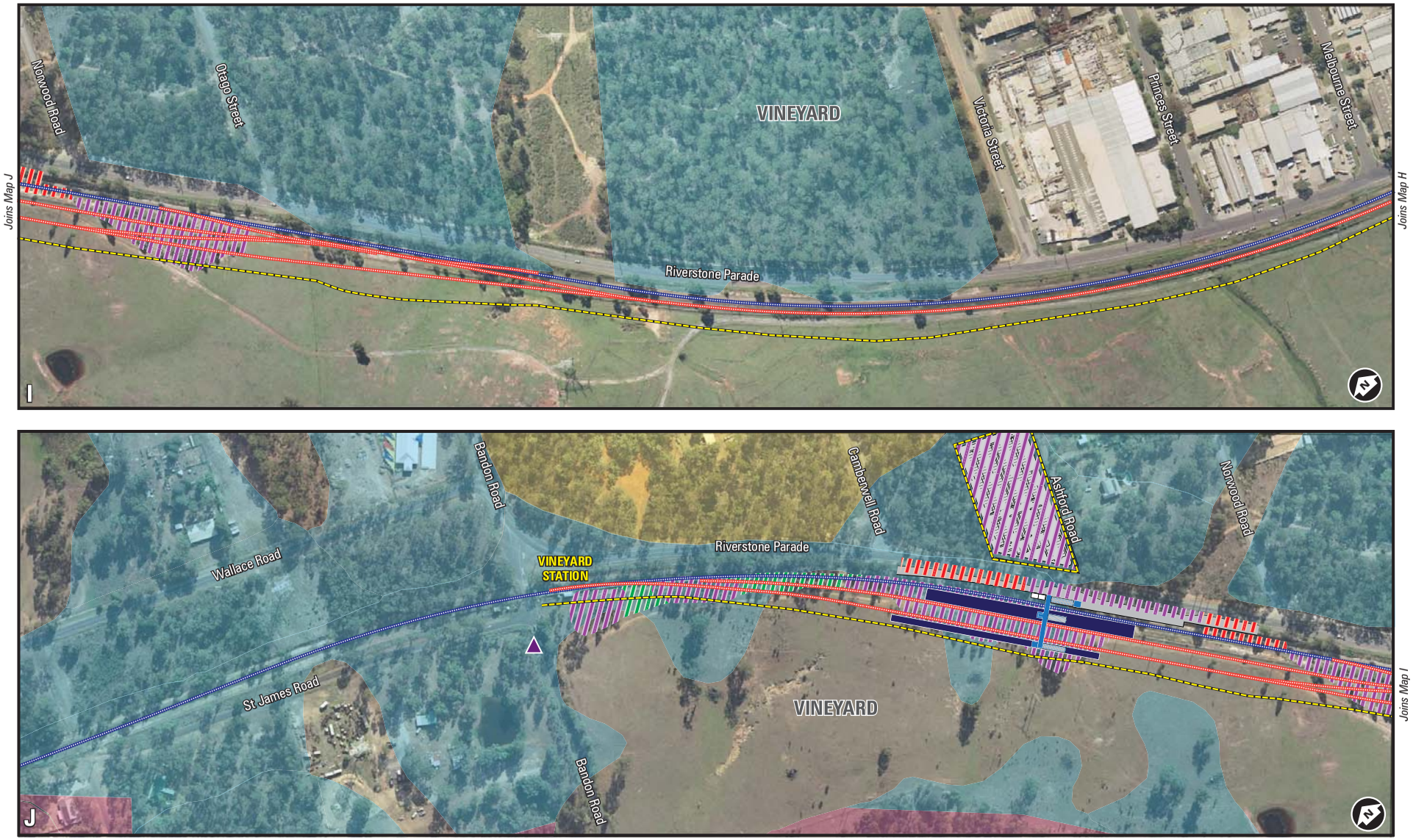

Figure 4-5e Revised mapping of vegetation communities relative to the area impacted by the Project

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

4.2.10 Naming of the new stations

Clarification was sought with regard to the naming of the new Schofields and Vineyard stations. The terms adopted in the Environmental Assessment were used for the purpose of distinguishing between the existing stations and those proposed to be delivered as part of this Project. The new stations would retain the name of the existing stations (i.e. Schofields and Vineyard stations), as the stations would still be located within the boundaries of the Schofields and Vineyard suburbs, respectively. The retention of existing station names would assist in addressing community concern regarding the impact of the relocation of Schofields Station on the cohesion of the existing Schofields community (i.e. the perceived creation of 'old' and 'new' Schofields communities).

4.2.11 Garfield Road treatment

The Project does not include plans to remove the level crossing at Garfield Road. Further treatment of Garfield Road, therefore, is dependent on the RTA and the consultation and assessment process that would be conducted separately to this Project.

At the time of exhibiting the Environmental Assessment, Section 6.2.6 of the Environmental Assessment noted that the RTA proposed to replace the vehicle level crossing at Garfield Road, which is anticipated to be completed prior to an increase in rail services. TIDC has been advised by the RTA that this status has not changed.

The Project would improve public safety by providing a footbridge across the rail line during Stage 2. The further design of the footbridge would be detailed in consultation with the RTA, RailCorp and the Strategies and Land Release Branch of the Department of Planning.

With respect to the Garfield Road level crossing, a grade-separated crossing of the rail line would be needed to achieve the optimal benefit from Stage 2 of the Project. The construction of Stage 2 would be coordinated with RailCorp, the RTA, TIDC and the Strategies and Land Release Branch. If the Riverstone Railway Overpass is not competed prior to the proposed increase in train services, then the level of service of the Garfield Road level crossing is expected to degrade (i.e. the level crossing would be closed to vehicular traffic more often). SoC no. 23 provides commitment to a Garfield Road Contingency Plan stating that 'the proponent would develop a contingency plan in conjunction with the RTA and the Strategies and Land Release Branch on the delivery of alternative access across the rail line in the event that the Garfield Road level crossing is not replaced prior to commissioning of Stage 2.'