5. Modifications to the Project

5.1 Design changes

Several minor modifications have been made to the Project design since the exhibition of the Environmental Assessment. These modifications have been made in response to feedback received from project stakeholders during the exhibition period as well as from the identification of future opportunities and constraints with the proposed Project design as presented in Chapter 6 of the Environmental Assessment.

The proposed design changes to the Project are described in the following sections. The following sections also provide an assessment of the impacts likely to be associated with each design change. These assessments demonstrate that such modifications are minor and can be adequately managed with the application of suitable mitigation measures, and as such do not require a Preferred Project Report in accordance with Section 75H(6) of the EP&A Act.

5.1.1 Schofields pedestrian footbridge

The proposed location of the Schofields pedestrian footbridge, as described in Section 6.2.2 of the Environmental Assessment, has been amended to take advantage of an opportunity to reduce the total walking distance between the eastern and western sides of the rail corridor. The new location of the pedestrian footbridge is proposed to be at the site of the existing Schofields Station (refer Figure 5-1). While the overall height of the footbridge would remain the same (i.e. 8 metres from ground level to the footbridge floor), relocating the footbridge to this location would reduce the total walking distance by approximately 100 metres (refer Table 5-1) for footbridge users. This reduction would arise from shortening the up and down ramps due to the topography of the ground in this area with no resultant change to the height above the track.

The footbridge would be constructed during Stage 1 of the Project, as originally proposed in the Environmental Assessment. The existing pedestrian level crossing would not be removed until the footbridge has been commissioned.

An assessment of the impacts likely to be associated with the proposed modification to the Schofields footbridge location is provided in the following sections. A summary of these impacts, relative to the impacts documented in the Environmental Assessment, is provided in Table 5-1.

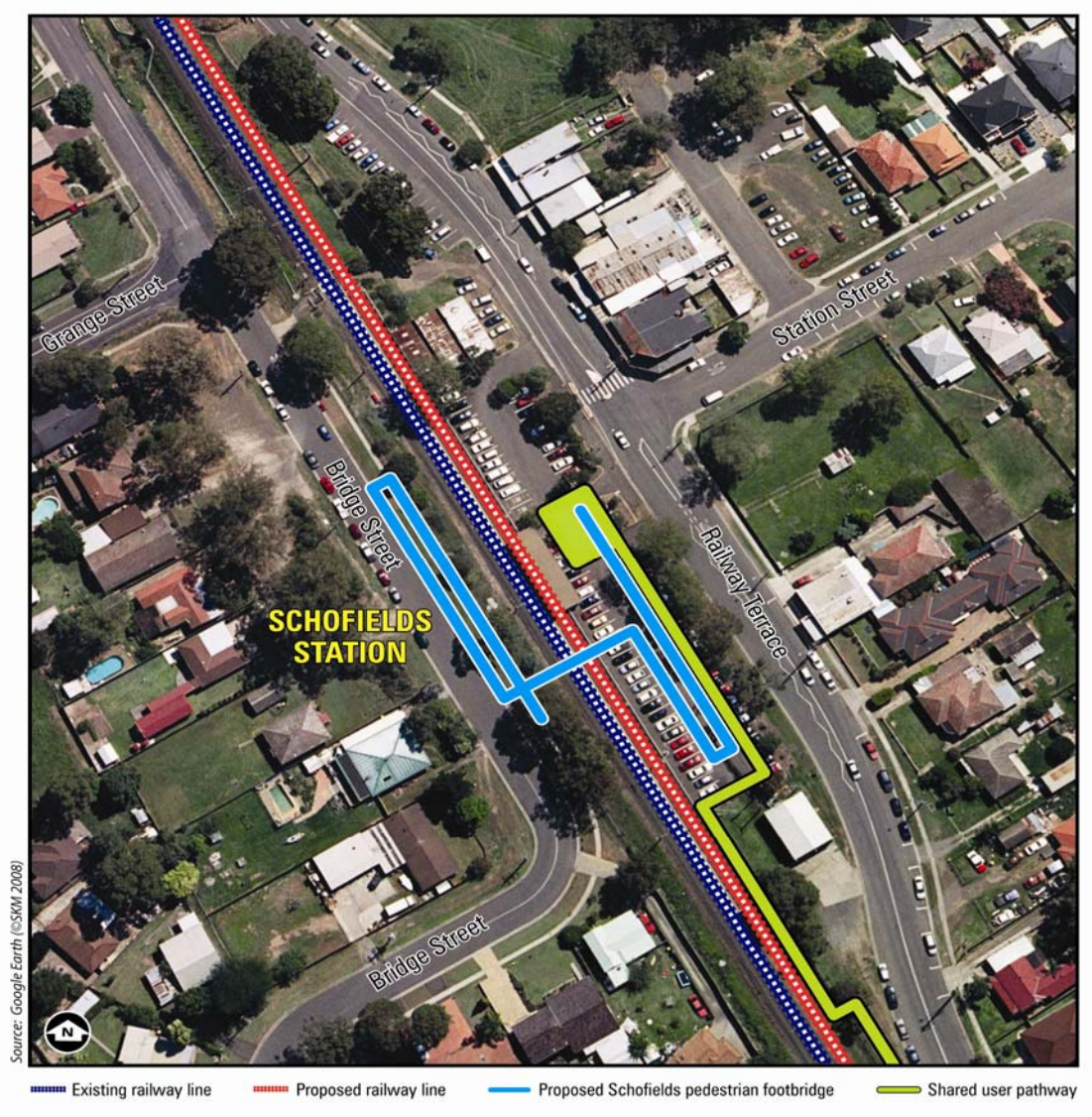
Traffic and transport

Construction impacts

It is anticipated that the construction of the footbridge would disrupt commuter car parking at the existing Schofields Station as the footprint of the proposed footbridge would require the loss of around 25 parking spaces.

Management of impacts

Any loss of commuter car parking prior to the commissioning of the new station would be offset at a ratio of at least one to one to overcome the impacts to commuter car parking availability at this location.



Note: Indicative only, subject to detailed design

Figure 5-1 Amended location of the Schofields pedestrian footbridge

Flora and flora

Construction impacts

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 modification of the footbridge location. This addendum is provided in Appendix E and summarised in Section 4.1.1.

The construction of the Schofields pedestrian footbridge would require the removal of 17 trees along the western boundary of the rail corridor (refer Table 2-1 of Appendix E). It should be noted, however, that the revised footbridge location would avoid the clearing of 11 trees from the original footbridge location (refer to Section 6.2.2 of the Environmental Assessment). Therefore, the proposed modification to the footbridge would result in the clearing of an additional six trees.

The trees to be removed are largely planted non-indigenous native species, with the exception of the three *E. tereticornis* that are native to the Cumberland Plain, and based on their size are likely to be remnant trees (refer Appendix E). The condition of the vegetation along Bridge Street is regarded as poor with low conservation significance and poor fauna habitat value (refer Section 4.1.1). Consequently, the removal of the trees is unlikely to cause any significant ecological impacts in the area.

It should be noted that all of the 17 trees that would be cleared for the construction of the footbridge are located within an area with biodiversity certification under the Growth Centres SEPP. It is considered that development is not likely to significantly affect any Threatened species, population or ecological community, or the habitat of any of these.

Management of impacts – biodiversity offsets

All of the native vegetation proposed to be cleared for the Schofields pedestrian footbridge occurs within the NWGC biodiversity certified area. Certified areas are those that are likely to be of lower conservation value.

The project would impact on 4.33 hectares of native vegetation (refer Table 5-2). The *Quakers Hill to Vineyard Rail Duplication Environmental Assessment* has followed the DGRs and assessed the impacts to biodiversity in accordance with the *Draft Guidelines for Threatened Species Assessment under Part 3A* (DEC 2005) and the requirements of the Biodiversity Certification for the Growth Centres. The impact of the Project on native vegetation was further assessed in an addendum to the *Quakers Hill to Vineyard Duplication Biodiversity Assessment* (refer Appendix E).

Assessments of significance have concluded that the Project would not have a significant impact on Threatened species or Endangered ecological communities. Offsets for vegetation impacted by the Project are, therefore, not proposed for areas located within the NWGC. However, it should be noted that biodiversity certification conferred on the Growth Centres SEPP has considered the impacts to vegetation on a landscape scale.

Biodiversity certification aims to achieve strategic-scale conservation and aims to move away from site-to-site assessment and decision-making to provide greater certainty in land use planning and conservation. Biodiversity certification has considered the NWGC as a whole and the cumulative impacts have been assessed and offsets have been calculated on a regional basis through planning mechanisms. As such, the impacts are considered at a larger scale to this Project and take into consideration the cumulative impacts of projects within the region.

Biodiversity certification will provide $530 million to purchase areas of high conservation value or to enter into private conservation agreements, both within and outside the Growth Centres. Biodiversity certification aims to establish a coordinated offsets program based on landscape scale conservation outcomes, rather than a number of smaller project specific programs, in order to improve the biodiversity outcomes for the region.

Native vegetation that is proposed to be cleared from areas outside of the NWGC and the biodiversity certified area would be offset through a vegetation replacement package. As stated in SoC no. 33 (refer Table 6-1 in Chapter 6), A vegetation replacement package will be developed for the 0.09 hectares of native vegetation that is located outside the NWGC and the biodiversity certified area (comprising 0.08 hectares of Alluvial Woodlands and 0.01 hectares of Shale Plains Woodland). This package would be developed with consideration to offsets prescribed for non-certified areas under the Biodiversity Certification in consultation with the Department of Planning and DECC. Impacts to vegetation located outside of the NWGC and biodiversity certified area are discussed in Section 5.1.2 of this report.

Visual amenity

Operational impacts

As described in Section 9.1.2 of the Environmental Assessment, the visual sensitivity of the Schofields village centre is considered moderate as it comprises only a few key facilities, including the existing station, shops and surrounding residential properties. Constructing the pedestrian footbridge in the amended location would have a high visual impact on adjacent residential properties as the new footbridge would be substantially higher than any other development in the surrounding area. While the magnitude of this impact is consistent with that documented in the Environmental Assessment for the original footbridge location, it is likely that, without the adoption of adequate mitigation measures, the revised footbridge location would have a greater visual impact on the Schofields village centre. This would be due to the footbridge becoming a more dominant feature within the Schofields village centre.

Approximately five to six Bridge Street properties would have a direct view of the Schofields pedestrian footbridge. This would be an increase of approximately two to three properties relative to the original footbridge location. There is the potential that the footbridge, and associated ramps, could overshadow some residential properties during the mornings, particularly those with a small offset distance between the footbridge and the residential dwelling.

In addition, the use of lighting on the footbridge and associated ramps could result in light spill impacts to adjacent residential properties. Light spill is associated with the inefficient, unnecessary or excessive use of artificial lighting. Light spill occurs where light falls outside the area intended to be lit, for instance by shining over a fence into a neighbouring property.

Management of impacts

The visual impacts associated with the Schofields pedestrian footbridge would be managed through design. The use of Australian Standards and relevant design guidelines (such as those used and endorsed by TIDC, RailCorp and the Department of Planning) would help guide the design to minimise visual impacts where possible.

The footbridge would be designed to be visually simple and unobtrusive. As described in SoC No. 38, an Urban Design and Landscape Plan would be developed in consultation with RailCorp, the Strategies and Land Release Branch, Blacktown City Council, other relevant agencies and the community that address the principles of Urban Design and Landscaping as documented in Chapter 9.1 of the Environmental Assessment.

The Urban Design and Landscape Plan would be developed during detailed design and would include measures to manage the potential visual impacts associated with the Schofields pedestrian footbridge. These measures would be developed in conjunction with the revitalisation plan for the existing Schofields Station site, and would be designed so as to not preclude the Strategies and Land Release Branch's future plans for the revitalisation of the Schofields village centre.

An indicative landscape plan for the Schofields pedestrian footbridge and decommissioned station site is provided in Figure 5-2. While this indicative plan is still in a preliminary planning phase, it is expected to incorporate the following:

- Footbridge design and tree plantings would consider the site aspect, shadowing and the pattern of sun movement to minimise the overshadowing of adjacent land uses.
- The use of reflective finishes would be avoided, where possible.
- Soft landscaping with indigenous species would be adopted to screen/soften the visual impacts associated with built structures and to rehabilitate the vacant station site. Plantings would be located so as to permit passive surveillance of the area from the adjacent shops and residential area and to not preclude pedestrian movements between the footbridge and the shared user path along Railway Terrace.
- Landscaping used for the Project would be consistent with RailCorp's (2006) *Revegetation Treatments for RailCorp Lands — Design Guidance and Specification* in consultation with Blacktown City Council.
- Clear coat 'anti-graffiti' paint would be considered for use on walls and other built structures with a solid concrete finish. Guidance on anti-graffiti treatments and maintenance considerations would be provided by guidelines such as *Development Near Rail Corridors And Busy Roads – Interim Guideline* (DoP 2008).
- Lighting would be specifically designed in accordance with *AS 4282-1997 Control of Obtrusive Effects of Outdoor Lighting* to reduce light spill to nearby residents, whilst still meeting public safety requirements in maintaining visibility.
- The Urban Design and Landscape Plan would adopt the principles of CPTED and would permit passive surveillance of the area from the adjacent shops and residential area.

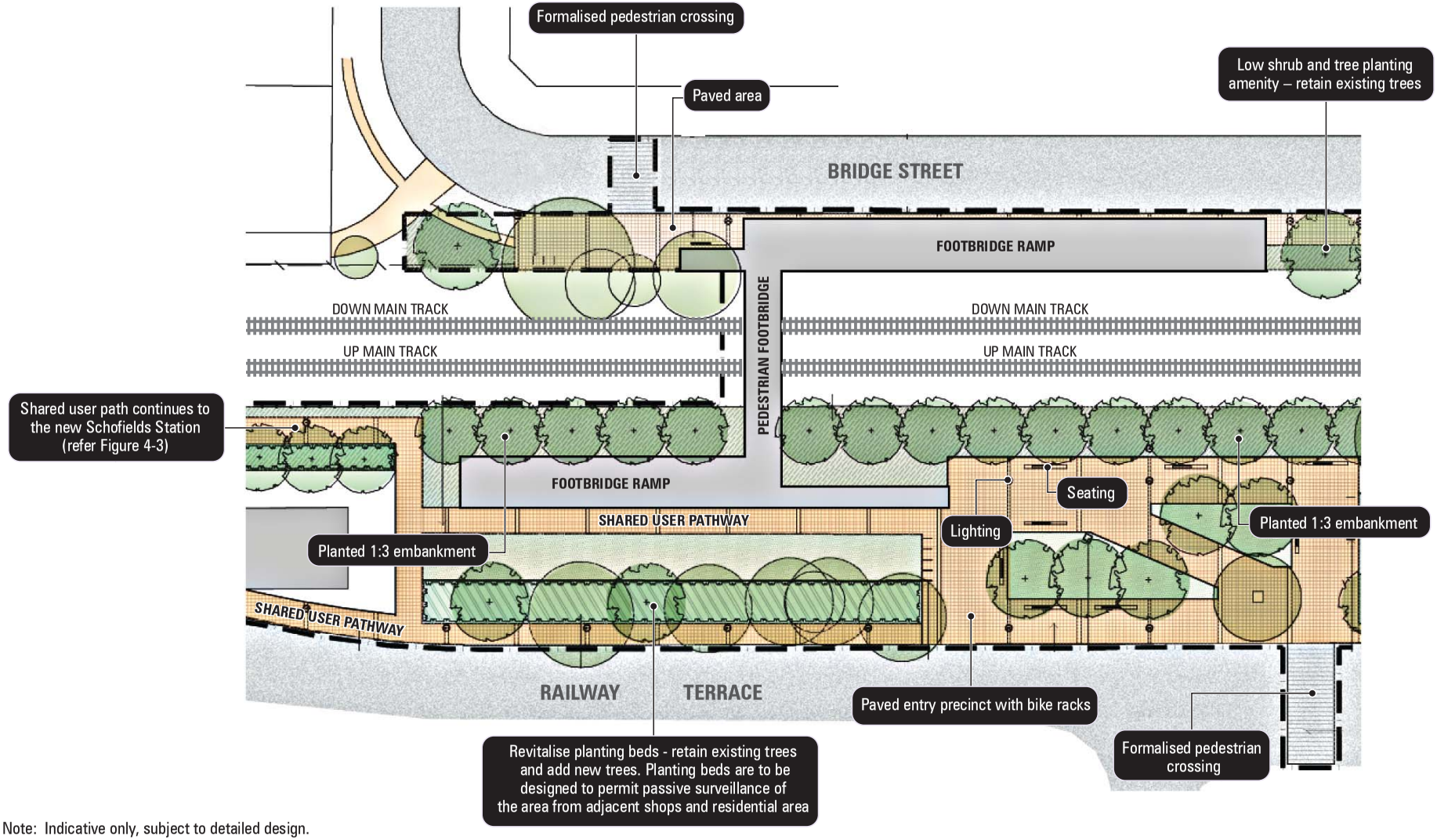
Summary of impacts from the proposed modification to the Schofields pedestrian footbridge

A summary of the impacts associated with the proposed modification to the Schofields pedestrian footbridge, relative to those documented in the Environmental Assessment, is provided in Table 5-1.

Table 5-1 Summary of the impacts associated with the proposed Schofields pedestrian footbridge modification, relative to the impacts documented in the Environmental Assessment

Details/impacts	Proposed in Environmental Assessment	Revised location
Approximate total ramp length	345 metres	245 metres
Approximate distance from existing Schofields level crossing	45 metres north	50 metres south
Height to footbridge floor from track level	8 metres	8 metres
Number of Bridge Street properties with views of footbridge	3-4 residential properties	5-6 residential properties
Visual sensitivity of receiving area	Moderate	Moderate
Visual impact of the footbridge	High	High
Number of trees required to be cleared	11	17
Approximate number of commuter car parking spaces required to be removed whilst car park in operation	0	25*

* Note: Any loss of commuter car parking prior to the commissioning of the new station would be offset at a ratio of at least one to one to overcome the impacts to commuter car parking availability at this location. The impact to these parking spaces will be irrelevant once the new Schofields Station is commissioned as this carpark will be closed to allow for the revitalisation of the existing Schofields Station site once this station is decommissioned.



Note: Indicative only, subject to detailed design.

Figure 5-2 **Indicative landscaping plan for Schofields pedestrian footbridge**

5.1.2 Utility corridor

The 3 metre wide utility corridor, as described in Section 6.2.6 of the Environmental Assessment, has been amended in response to the following feedback received from project stakeholders (including utility providers) during the public exhibition of the Environmental Assessment:

- Sydney Water Corporation (Sydney Water) advised that it requires a 5 metre utility corridor for its assets instead of a 3 metre corridor as proposed in the Environmental Assessment (on the eastern side of the corridor directly north of Quakers Hill Parkway, Quakers Hill). This would result in the widening of the easement on the eastern side of the rail corridor by 2 metres over an approximate length of 370 metres, totalling an additional 740 m^2 of land, much of which is vegetated (refer Figure 5-3).
- Nirimba Educational Precinct (TAFE NSW) and TIDC/Richmond Line Alliance assessed the original proposal to relocate the sewer main north along the western side of the rail corridor and concluded that a more optimal and maintainable solution involved relocating the sewer south to connect into the Sydney Water main located adjacent to Quakers Hill Parkway, off Nirimba Drive. This would result in a reduction in the length of the originally proposed easement by approximately 1,200 metres with a corresponding reduction in area of 3,600 m^2. Of the 1,200 metre reduction in easement, approximately 700 metres is vegetated (2,100 m^2), which would no longer be required to be cleared. The connection point for the sewer main would also require the installation of a simple sewer vent structure.

The abovementioned modifications to the proposed utility corridor are shown in Figure 5-3. An assessment of the impacts likely to be associated with the proposed modification to the utility corridor is provided in the following sections. A summary of these impacts, relative to the impacts documented in the Environmental Assessment, is provided in Table 5-3.

Land use and property

Construction impacts

Widening the 3 metre wide utility corridor on the eastern side of the rail corridor would require the acquisition of an additional 740 m^2 (0.074 hectares) of land currently owned by Blacktown City Council (i.e. a total land acquisition requirement of 0.54 hectares of Council land for the entire Project). This land is zoned as follows under the Blacktown Local Environmental Plan 1988 (Blacktown LEP):

- Zone 5(a)(Special Uses – General Zone)(Council Purposes)
- Zone 5(a)(Special Uses – General Zone)(Drainage)
- Zone 6(a)(Special Uses – Public Recreation Zone).

As described in Section 2.3.1 of the Environmental Assessment, the establishment of the utility corridor on this land would be permissible with consent under the Blacktown LEP; however the State Environmental Planning Policy (Infrastructure) 2007 has the effect that the Project is permissible without consent.

Shortening the length of the 3 metre wide utility corridor on the western side of the rail corridor from 1,800 metres to 600 metres would avoid the acquisition of 0.98 hectares of land currently owned by the Department of Defence. The revised Project design would require the acquisition of 2.9 hectares of land from Department of Defence (original property acquisition requirement proposed in the Environmental Assessment was 3.2 hectares).

Management of impacts

TIDC would continue to consult with Blacktown City Council and the Department of Defence during the development of the detailed design. Upon finalisation of the detailed design, TIDC would advise Blacktown City Council and the Department of Defence of land acquisition requirements for the Project.

Flora and fauna

Construction impacts

Widening the 3 metre wide utility corridor on the eastern side of the rail corridor would result in the clearing of an additional 0.03 hectares of Alluvial Woodlands (resulting in a total of 0.08 hectares being cleared). The total vegetation clearance required for the establishment of the utility corridor on the eastern side of the rail corridor would be 0.09 hectares, comprising 0.08 hectares of Alluvial Woodlands and 0.01 hectares of Shale Plains Woodland. The proposed area of vegetation clearing is shown in Figure 5-3.

Alluvial Woodland occurs exclusively in association with drainage lines (NSW National Parks and Wildlife Service 2002a). Alluvial Woodland is a diverse vegetation community that can be dominated by a range of different species depending on the adjacent vegetation community (NSW National Parks and Wildlife Service 2002a). Due to the species composition, with dominance of eucalypts, this community within the site is consistent with the Endangered ecological community of River-Flat Eucalypt Forest on Coastal Floodplains (DECC 2007b), which is listed as Endangered under the TSC Act.

Shale Plains Woodland is a widely distributed community on the Cumberland Plain, occurring predominantly on soils derived from Wianamatta Shale and is a form of Cumberland Plain Woodland (NSW Scientific Committee 2008). Cumberland Plain Woodland is currently listed as Endangered under the EPBC Act and the TSC Act; however, there are preliminary determinations to list this community as Critically Endangered under both the TSC Act and the EPBC Act (Department of the Environment, Water, Heritage and the Arts 2008; NSW Scientific Committee 2008). These proposed changes in listings under the TSC and EPBC Acts are yet to be determined.

The vegetation that is proposed to be cleared for the establishment of the utility corridor is located in an area that is not accredited with biodiversity certification under the Growth Centres SEPP or within the area defined as the NWGC.

Shortening the length of the 3 metre wide utility corridor on the western side of the rail corridor from 1,800 metres to 600 metres would avoid the clearing of 0.08 hectares of Alluvial Woodland and 0.19 hectares of Shale Plains Woodland.

The total revised vegetation clearing requirement for Stages 1 and 2 of the Quakers Hill to Vineyard Duplication is shown by vegetation community in Table 5-2. As shown in Table 5-2, it is expected that the proposed modification of the utility corridor would result in an approximate reduction in vegetation clearing of 6%.

Table 5-2 Revised potential loss of vegetation

Vegetation community	TSC Act[1]	EPBC Act[2]	Approximate area required to be cleared		
			Environmental Assessment[5]	Revised[6]	Reduction as % change
River-flat Eucalypt Forest on Coastal Floodplains	E	–	1.47 ha	1.39 ha	–5.7%
Cumberland Plain Woodland	E[3]	E[3]	1.34 ha	1.15 ha	–14.2%
Shale Gravel Transition Forest	E	–	1.71 ha*	1.71 ha*	0%
Derived Grassland (previously shale gravel transition forest)	–	–	0.08 ha	0.08 ha	0%
Total	**–**	**–**	**4.60 ha**	**4.33 ha**	**–5.9%**

Notes

1: Listed as Endangered (E) under the TSC Act.

2: Listed as Endangered (E) under the EPBC Act.

3: On the 21 November 2008, the Scientific Committee, established under the TSC Act, made a preliminary determination to propose to list the Cumberland Plain Woodland in the Sydney Basin Bioregion as a Critically Endangered ecological community under the TSC Act. This preliminary determination was on public exhibition until 23 January 2009; a final determination has yet to be made by the Scientific Committee.

4: On the 1 October 2008, the Threatened Species Scientific Committee, established under the EPBC Act, nominated Cumberland Plain Woodland on the Finalised Priority Assessment List. This preliminary determination proposes to list this Endangered ecological community as critically endangered under the EPBC Act. This proposed change in listing under the Act is yet to be determined.

5: Approximate area required to be cleared, as stated in the *Quakers Hill to Vineyard Duplication Environmental Assessment.*

6: Approximate area required to be cleared, based on the revised Project design, as documented in Chapter 5 of this report.

* includes 0.44 hectares for phase 1 of the new Vineyard Station car park and 0.53 hectares for phase 2

Management of impacts

As stated in SoC No. 33, 'A vegetation replacement package will be developed for the 0.09 hectares of native vegetation that is located outside the NWGC and the biodiversity certified area (comprising 0.08 hectares of Alluvial Woodlands and 0.01 hectares of Shale Plains Woodland). This package would be developed with consideration to offsets prescribed for non-certified areas under the Biodiversity Certification in consultation with the Department of Planning and the DECC.'

The vegetation replacement package would be developed in consultation with DECC, DoP and Blacktown City Council, and in consideration with the *Biodiversity Certification Order* in relation to the Growth Centres SEPP (DECC 2007c). At a minimum, the vegetation replacement package for the project would be based on the implementation of 100% vegetation replacement or landscaping requirements which may reflect:

a. direct vegetation replacement by adding to, purchasing or covenanting of land at a ratio of 1:1, OR

b. enhancement of habitat (e.g. revegetation of areas) at a ratio of 1:1, OR

c. financial contribution to biodiversity outcomes, OR

d. a combination of the above.

It should be noted, however, that no project-specific offsets are proposed for native vegetation clearing that is proposed within the NWGC biodiversity certified area as assessments of significance have concluded that the project would not have a significant impact on threatened species or Endangered ecological communities. Notwithstanding this, biodiversity certification has considered the NWGC as a whole and the cumulative impacts have been assessed and offsets have been calculated on a regional basis through planning mechanisms. As such, the impacts are considered at a larger scale to this Project and take into consideration the cumulative impacts of projects within the region. This is discussed further in Section 5.1.1.

Indigenous heritage

Construction impacts

Widening the 3 metre wide utility corridor on the eastern side of the rail corridor would result in an impact to an additional 2 metre strip of one PAD area, identified as Q3 in the Environmental Assessment (refer to Figure 5-3). It should be noted, however, that the proposed widening of the utility corridor would not impact on the full extent of this PAD area.

Shortening the length of the 3 metre wide utility corridor on the western side of the rail corridor from 1,800 metres to 600 metres would avoid the impact to a 3 metre strip of four PAD areas, identified as Q2, Q4, QVP and S1 in the Environmental Assessment (refer to Figure 5-3). These PAD areas would still be partially impacted, however, due to the widening of the rail corridor to accommodate the duplicated track.

Management of impacts

Indigenous heritage impacts associated with the modification to the utility corridor are expected to be manageable through the application of the mitigation measures identified in Section 8.3.3 of the Environmental Assessment. No further mitigation measures are proposed for the management of Indigenous heritage as a result of the modifications to the utility corridor.

Summary of impacts from the proposed modifications to the utility corridor

A summary of the impacts associated with the proposed modifications to the utility corridor, relative to those documented in the Environmental Assessment, is provided in Table 5-3.

Table 5-3 Summary of the impacts associated with the proposed utility corridor modification, relative to the impacts documented in the Environmental Assessment

Details/impacts	Impact stated in Environmental Assessment	Revised location
Total land acquisition – Blacktown City Council	0.47 hectares[1]	0.54 hectares[1]
Total land acquisition – Department of Defence	3.2 hectares[1]	2.9 hectares[1]
Total vegetation clearance	4.60 ha	4.33 ha
Total vegetation requiring offset and/or vegetation replacement	0 hectares	0.09 hectares
Indigenous heritage	Partial impact to PAD Q2, Q4, QVP and S1	Additional impact to PAD Q3, however a reduction in partial impact to PAD Q2, Q4, QVP and S1

Notes: 1: Area quoted is the total land acquisition requirement for the entire Project

2: As stated in SoC no. 33, 'A vegetation replacement package will be developed for the 0.09 hectares of native vegetation that is located outside the NWGC and the biodiversity certified area (comprising 0.08 hectares of Alluvial Woodlands and 0.01 hectares of Shale Plains Woodland). This package would be developed with consideration to offsets prescribed for non-certified areas under the Biodiversity Certification in consultation with the Department of Planning and DECC.'

Figure 5-3a **Proposed modifications to the utility corridor and Biodiversity/Indigenous heritage constraints**

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

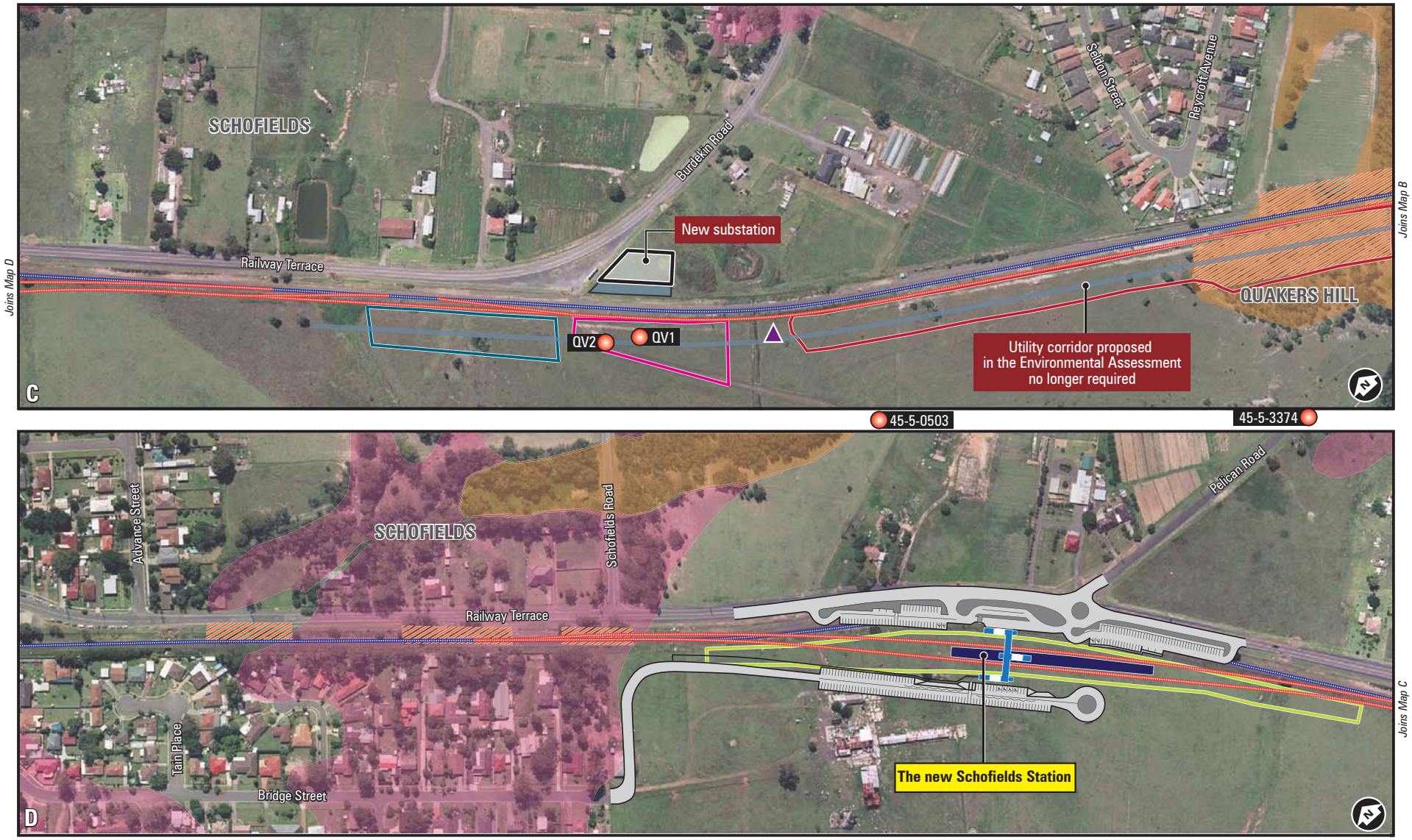


Figure 5-2b **Proposed modifications to the utility corridor and Biodiversity/Indigenous heritage constraints**

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

5.1.3 Quakers Hill footbridge

The proposed replacement of the Quakers Hill pedestrian level crossing with a footbridge, as described in Section 6.2.2 of the Environmental Assessment, would not be delivered as part of this Project. This facility was originally proposed to improve pedestrian safety following increases in train service frequency once the new RailCorp timetable is introduced (refer Section 5.2.1). Since the exhibition of the Environmental Assessment, RailCorp has advised TIDC that it has accelerated plans for an Easy Access Upgrade of Quakers Hill Station, which would consist of a new station concourse, three new lifts and a new platform building containing booking office, staff facilities and a family accessible toilet and incorporate easy access across the rail line.

As the Easy Access Upgrade would incorporate a pedestrian footbridge at Quakers Hill Station, it was determined that the Quakers Hill footbridge proposed as part of the Quakers Hill to Vineyard Duplication is no longer required. The objective of maintaining disabled access across the rail corridor at Quakers Hill will be achieved by the completion of RailCorp's Easy Access Upgrade of Quakers Hill Station. This project will provide lift and footbridge access across the line.

It is anticipated that the Easy Access Upgrade would be completed prior to the commissioning of Stage 1 of the Quakers Hill to Vineyard Duplication. Construction of the Easy Access Upgrade is currently scheduled to commence in 2010, with completion expected towards the end of 2011, which would be in line with the scheduled completion of Stage 1 of the Quakers Hill to Vineyard Duplication.

Impact of not delivering the Quakers Hill pedestrian footbridge

It is anticipated that not proceeding with the delivery of the Quakers Hill footbridge, as proposed in the Environmental Assessment, would change the walking distance and time to travel across the rail corridor. Pedestrians walking between Lalor and Douglas roads would be required to walk further to cross the rail corridor, which may be perceived as inconvenient by some pedestrians. As the Easy Access Upgrade is currently in a preliminary planning phase, it is not possible to accurately determine the expected increase in walking distance; however, RailCorp has indicated that the new concourse at Quakers Hill Station is likely to be located north of its current location. As a worst-case scenario, it is estimated that the increase in walking distance could be in the order of 375 metres (measured from the ends of Lalor and Douglas roads and based on the use of the current concourse at Quakers Hill Station).

It is not expected that the permanent removal of the level crossing would result in a significant impact to the east-west connectivity across the rail corridor at Quakers Hill. In addition it is expected that, by removing the need for pedestrians to enter the rail corridor, pedestrian safety would be improved.

No other impacts are expected to occur as a result of not proceeding with the delivery of the Quakers Hill footbridge.

Management of impacts

In the event that the Quakers Hill Station Easy Access Upgrade is not completed before the commissioning of Stage 1 of the Quakers Hill to Vineyard Duplication, access across the rail line would be maintained via an interim access arrangement. This could comprise the use of the existing level crossing, located to the north of Quakers Hill Station, and the slowing of trains on the approach to the level crossing. If an interim access arrangement is required, TIDC would develop this in consultation with RailCorp to ensure accessibility across the rail corridor is maintained. TIDC would decommission the existing level crossing upon the completion of RailCorp's Easy Access Upgrade at Quakers Hill Station.

5.1.4 Schofields Substation

During the exhibition of the Environmental Assessment, the Strategies and Land Release Branch made a submission to indicate that the proposed location of the Schofields Substation (i.e. at the intersection of Railway Terrace and Burdekin Road) may impact on the design, location and cost of the Burdekin Road overpass, as well as land availability for trunk infrastructure south of Burdekin Road (refer to Appendix D for further details on this submission).

TIDC and the Richmond Line Alliance are currently engaged in ongoing discussions with the Strategies and Land Release Branch to resolve any perceived issues. The preliminary investigation indicates that the potential conflict between the Schofields Substation and Burdekin Road are minor and can be resolved during the detailed design. The conflict may require the location of the substation to move slightly east of that proposed in the Environmental Assessment (likely to be in the order of 3 metres). The exact location of the substation would be determined during the detailed design and in consultation with the Strategies and Land Release Branch, RailCorp and the RTA. Should the location of the substation be required to be substantially modified, TIDC would undertake a revised assessment for the new substation location. TIDC would also consult with the landowner to advise of any modified land acquisition requirements for the Project.

5.2 Operational changes

5.2.1 Train timetable and services

Timetable proposed for 2009

As described in Section 8.4.5 of the Environmental Assessment, RailCorp are planning to introduce a new timetable on 11 October 2009. This new timetable is required to integrate the new Epping to Chatswood Rail Link and other recently completed Rail Clearways Program projects. The proposed timetable will see additional peak hour services, 6-car trains increased to 8-car trains on more services across Sydney in order to provide extra capacity, as well as additional off-peak services added to the late morning period on the Western, Northern, North Shore and Southern lines. Proposed improvements for services on the Richmond Branch Line include:

- A new morning peak service will operate from Quakers Hill to the North Shore via the central business district (CBD).

- Two services from Quakers Hill to the City, which currently terminate at Central in the morning peak, will now extend to the North Shore via the CBD.
- The hourly City to Riverstone service will now extend to Richmond, providing two services an hour during the weekday off-peak.
- A new semi-fast afternoon peak service will operate to Quakers Hill from the CBD.
- Some additional movements may be required (empty trains) between Quakers Hill and Vineyard in order to position trains for the peak periods.

Timetable proposed for 2011

Upon the commissioning of the new Schofields Station, the current terminating train services at Quakers Hill would be relocated to the new Schofields Station. The timetable that will be introduced after the commissioning of the new Schofields Station will determine whether extra train services will be commencing from the new Schofields Station. The terminus at the new Schofields Station would have capacity to accommodate additional train services.

As described in Section 6.4.1 of the Environmental Assessment, it is anticipated that when Stage 1 of the Project is operational in 2011, the Richmond Branch Line would have capacity to support up to six trains per hour starting from the new Schofields Station, and two trains starting from Richmond.

5.2.2 Station names

The new Schofields and Vineyard stations would retain the name of the existing stations (i.e. Schofields and Vineyard stations). Refer to Section 4.2.10 for further discussion on the naming of the new Schofields and Vineyard stations.

5.3 Changes to construction methodology

5.3.1 Construction compounds

The location of the main construction compound for the Project, as described in Chapter 10 of the Environmental Assessment (i.e. the location of the new Schofields Station) has been amended to be located at the Meatworks. As such, the Meatworks site compound would become the main compound during both Stages of the Project. Section 10.3.10 of the Environmental Assessment originally proposed that the Meatworks compound would be used in Stage 2 only. The Meatworks would cater for approximately 60 staff plus direct and sub-contractor workforce, totalling 200 workers during the peak construction works. As the Meatworks site was proposed as the main Project site compound/office for Stage 2 in the Environmental Assessment, there would be no increase in its proposed size/scale, rather its use would be initiated earlier (for both Stage 1 and 2 instead of just Stage 2).

As per Chapter 10 of the Environmental Assessment, another smaller compound is proposed to be established at Quakers Hill during the construction of Stage 1 of the Project (identified in Section 10.3.1 of the Environmental Assessment as Compound 1 – Footbridge East). This compound was to be used to service the eastern rail construction works and would cater for up to 20 people. The compound would not be required to construct the Quakers Hill footbridge as this facility is no longer proposed as part of this Project (refer Section 5.1.3).

No other changes to specific compounds are proposed for Stage 1 works; however, other smaller scale workforce amenities may be required in other locations (such as toilets and crib sheds), as identified as construction compounds in the Environmental Assessment.

The proposed locations for the site compounds, including stockpile sites and laydown areas, are shown in Figure 5-4.

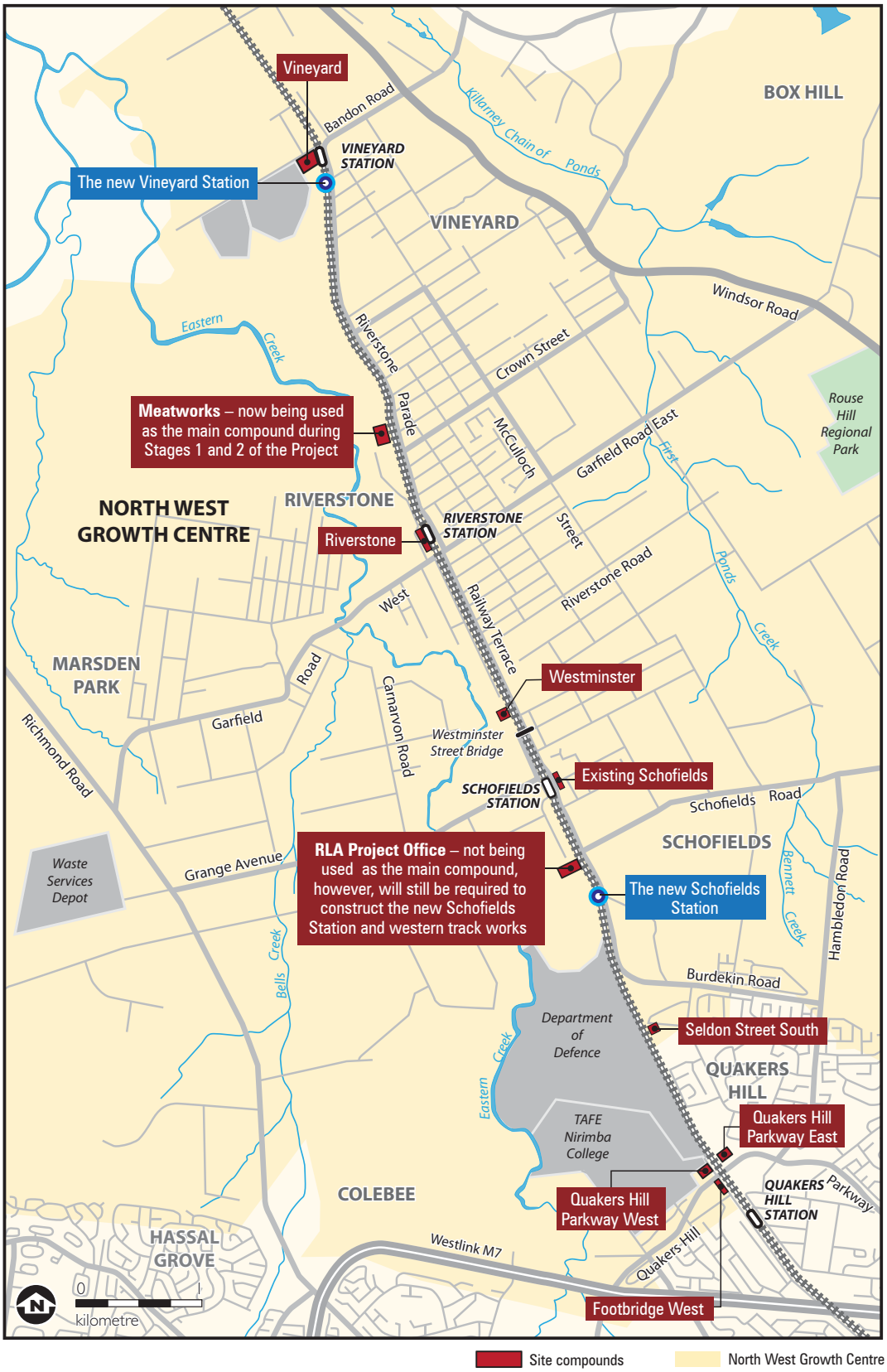


Figure 5-4 **Proposed construction compounds for the Project**