

# **Submission on Riverstone East Draft Precinct Plan on behalf of property owner – 77 Tallawong Road, Rouse Hill**



Prepared by Urban City Planning

16 September 2015

Reference Job 150432

## INTRODUCTION

This submission is made on behalf of the owners of 77 Tallawong Road, Rouse Hill (subject land) in response to the Riverstone East Draft Precinct Plan, located within the North West Growth Centre.

## SUBMISSION OBJECTIVES

This submission seeks to:

- Review the Indicative Layout Plan for the Precinct with a particular focus on the proposed open space framework.
- Assess the proposed open space framework for the Precinct against the open space planning principles adopted for the Precinct.
- Identify the strengths and weaknesses of the proposed open space framework.
- Identify potential alternative sites for open space, based on best practice open space planning principles and considering the physical constraints within the Precinct.
- Evaluate potential alternative sites and provide recommendations for amending the proposed open space framework for the Precinct.
- Assess the need for an 'acoustic buffer' from the North West Rail Link Rapid Transit Facility (stabling yards)
- Outline the benefits of a residential zoning on the subject land, particularly given its location within 800m from the future Cudgegong Road Railway Station.

## LOCATION AND DESCRIPTION OF SUBJECT LAND

The subject land is at 77 Tallawong Road, Rouse Hill and is located within Stage 1 of the Riverstone East Precinct (refer to **Figure 1**). The subject land is approximately 2ha in area.

The subject land has an elevation of approximately 50m at its frontage and approximately 40m at its rear. The average slope is 1:29 across the length of the site.

The subject land is rectangular in shape. The frontage to Tallawong Road is approximately 70m and the depth is approximately 290m. The subject land currently contains a single storey dwelling and outbuildings. It is largely cleared with trees located along a first order creek that traverses the land and drains to First Ponds Creek.



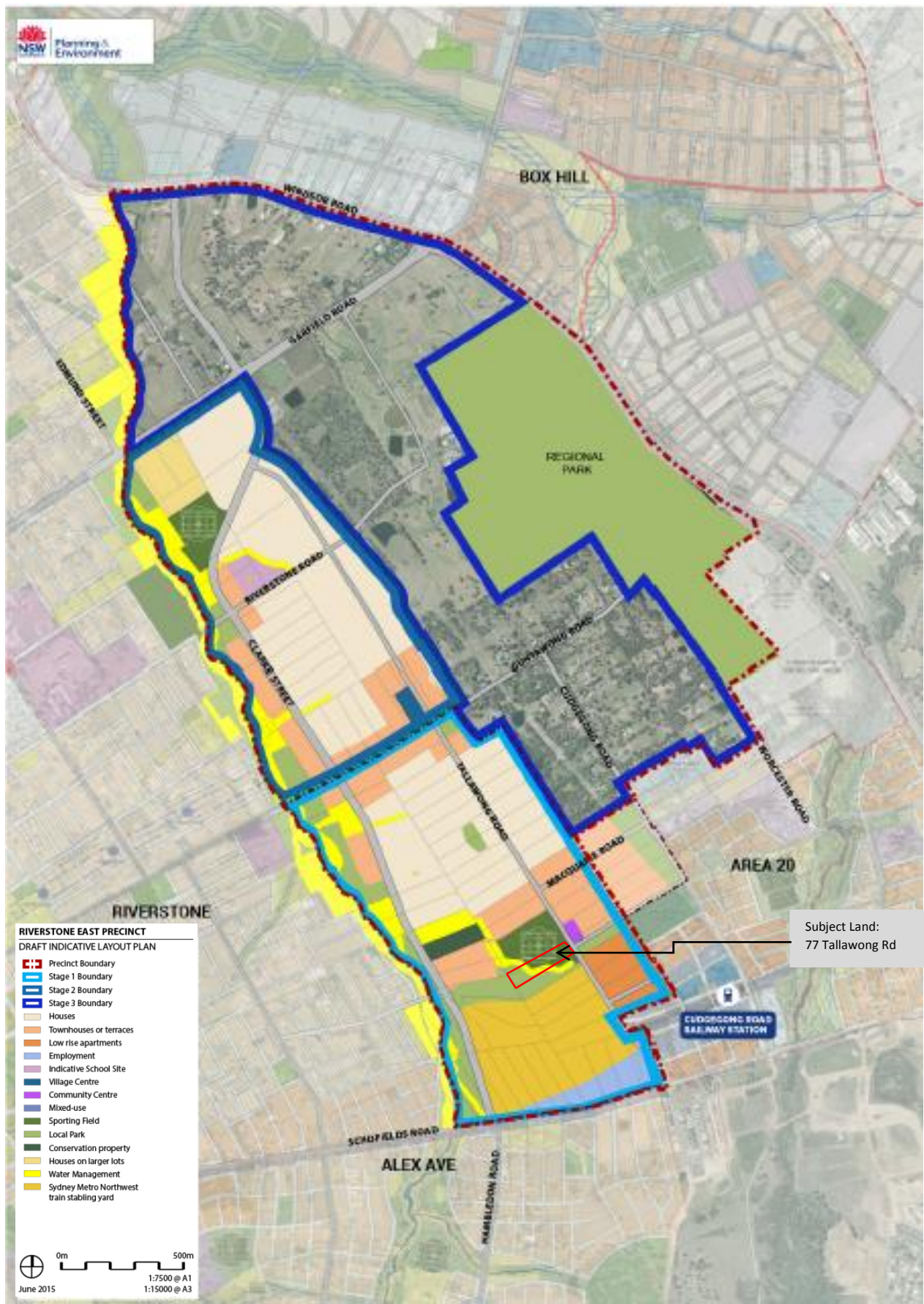


FIGURE 1 Location of subject land

## PLANNING CONTEXT

### Riverstone East Precinct

This precinct is illustrated in **Figure 1** and is planned to deliver 5,800 dwelling (15,900 people). It comprises 3 stages. Stages 1 and 2 are currently on public exhibition. A draft working plan for Stage 3 has also been released for community feedback by the Department of Planning and Environment (DP&E). 1,800 (5,100 people) dwellings will be delivered in Stage 1.

### Area 20 Precinct

The DP&E also proposes amendments to Area 20 following the extension of the North West Rail Link to the stabling yards on Schofields Road and a new station at Cudgegong Road. Increases in density in Area 20 followed to support the new railway station on Cudgegong Road. Residential density has increased from 2,500 to 4,000 dwellings (6,400 to 12,760).

As a result of the residential density increase, the DP&E has identified a shortfall of open space provision in the precinct. This has been on the basis of the Growth Centre Development Code (GCDC) requirements for the quantum of open space and Blacktown City Council's (BCC) requirements for sports fields provision.

The GCDC requires a minimum of 2.83 hectares of open space per 1,000 people. BCC requires a minimum of one sports field for every 1,850 people. Based on the anticipated Area 20 population of 12,760 people, a minimum of 31.1ha of open space and of 6.9 fields would be required. The Indicative Layout Plan for Area 20 includes 3 sports fields, representing a shortfall of 3-4 sport fields. The DP&E has identified the opportunity to address this shortfall through provision of additional open space in Riverstone East and in proximity to Area 20.

### North West Rail Link Rapid Transit Facility (stabling yards)

The North West Rail Link Rapid Transit Facility (stabling yards) will provide a train stabling and maintenance facility for the North West Rail Link. The stabling yards will be located on the north west corner of Tallawong Road and Schofields Road as illustrated in **Figure 2**. The facility will have capacity for 20 automated, metro trains, providing stabling for up to 45 trains and maintenance facilities for 76 trains. Trains would be stored in the stabling facility outside peak periods and between the last service and the first service the next day. Track and crossovers would connect the eastern end of the stabling yard with the main running lines near Cudgegong Road Station. The stabling area will operate 24 hours per day, seven days a week.



**FIGURE 2** Location of North West Rail Link Rapid Transit Facility (stabling yards)

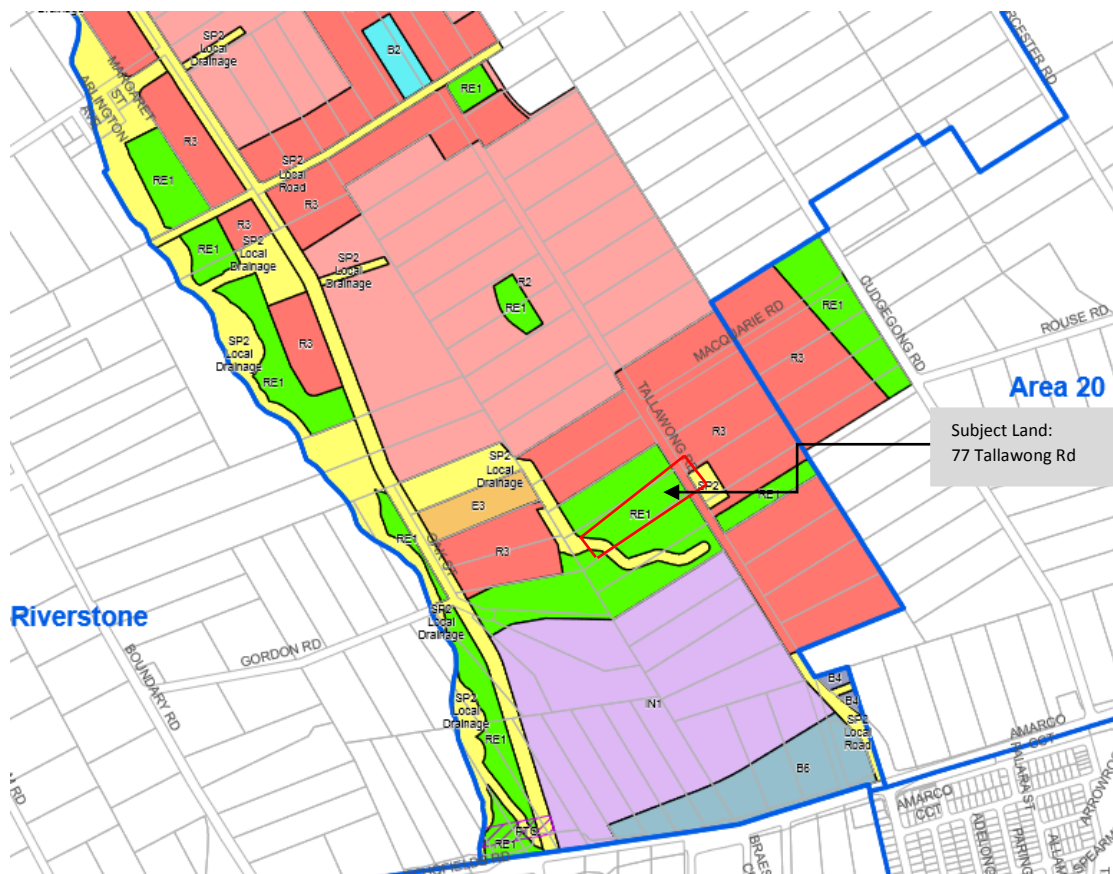


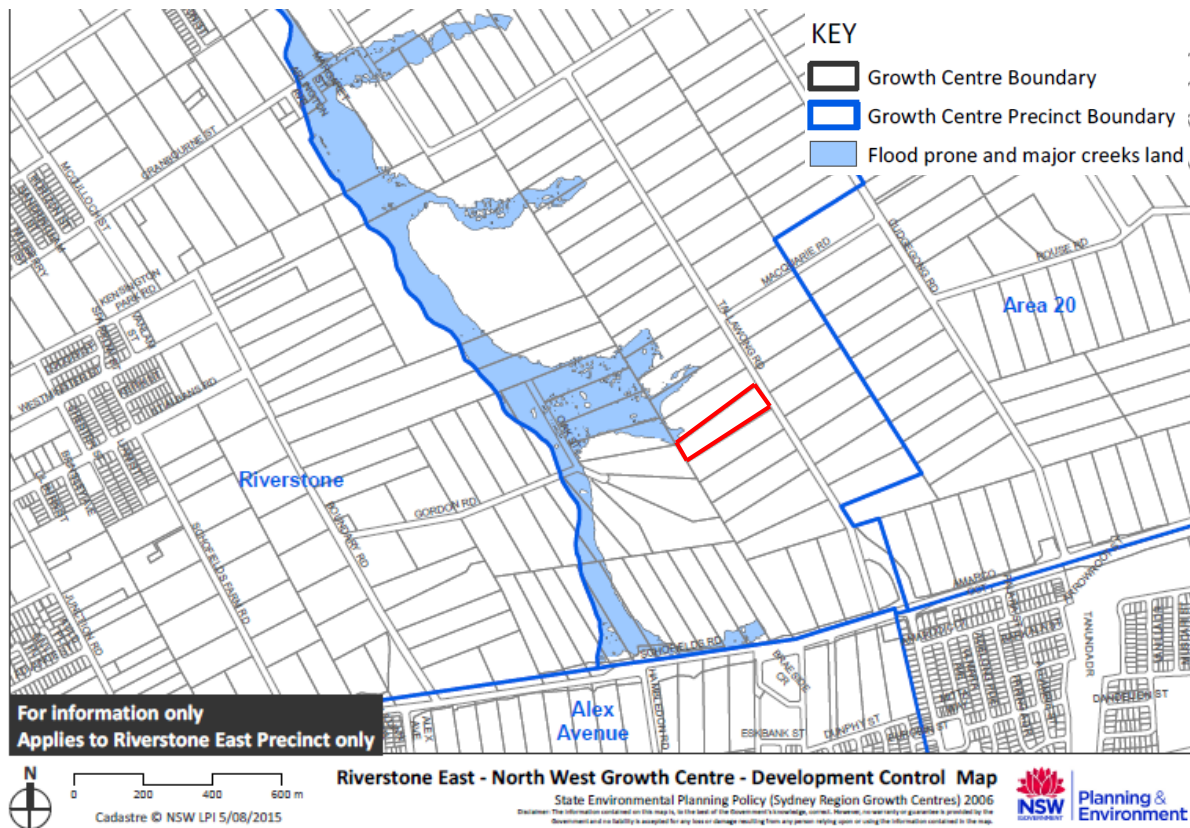
## DRAFT INDICATIVE LAYOUT PLAN

The draft Indicative Layout Plan (ILP) currently on exhibition seeks the following planning outcomes for the subject land and its surrounds:

- The majority of the subject land to be rezoned RE1 Public Recreation as illustrated in **Figure 3**.
- A small portion of the subject land to be rezoned SP2 Local Drainage as illustrated in **Figure 3**.
- Notably the proposed RE1 Public Recreation zone also applies to numbers 87, 83 and 67 Tallawong Road to accommodate a double playing field fronting Tallawong Road.
- Medium density residential development consisting of townhouses, terraces or low-rise apartments are proposed to surrounding the open space area, taking advantage of the relative proximity to Cudgong Road Railway Station. Opposite the park, a community centre is proposed to be located on the eastern side of Tallawong Road.
- The proposed building height and dwellings per hectare maps would not apply to the subject land.
- The land is not flood prone or contains major creeks as illustrated in the *Development Control Map* at **Figure 4**.
- The flood cycle management strategies proposed in the Water Cycle Management Report prepared by Mott MacDonald illustrates the first order creek that traverses the land and drains to First Ponds Creek (refer to **Figure 5**) and will also be shown on the *Riparian Protection Area Map* at **Figure 6**.
- The rear is identified as containing an 'Existing Native Vegetation Area' as shown in the *Native Vegetation Protection Map* at **Figure 7**.

**Figure 3** Proposed Land Zoning Map





**FIGURE 4** Development Control Map



**FIGURE 5** Post Development Flood Level – 1 in 500 year flood





FIGURE 6 Riparian Protection Area Map



FIGURE 7 Native Vegetation Protection Map

## PROPOSED OPEN SPACE FRAMEWORK

The basis for the design of the proposed open space framework is provided in the *Social Infrastructure Assessment. Riverstone East Precinct* report (SIAR), prepared by Elton Consulting dated 24 April 2015. The SIAR outlines the open space and other social infrastructure requirements of the precinct, based on the anticipated future population. A review of the report identifies the principles and objectives for the design of the open space system. The following is a list of the key principles for open space planning from the SIAR.

### ***Integration and Co-location***

- Integrate public open space into the urban structure.
- Provide an interconnected network of open spaces.
- Co-locate recreation opportunities with other community and commercial services to maximise the accessibility and convenience of social, cultural and community facilities and services to form a focal point.

### ***Multi-use***

- Facilitate efficient use of resources by maximising opportunities for joint, shared or multiple-use of open space.
- Create opportunities for the optimal use of land and environmental resources:
  - Integrate stormwater management and water sensitive urban design with networked open space.
  - Retain existing stands of remnant vegetation and associate them with passive recreational facilities.
  - Enable land to be used for open space or recreation purposes where this is consistent with the protection of natural and cultural heritage values.

### ***Access and Equity of Access***

- Locate open space within the centres and neighbourhoods and avoid pressure to existing open space systems in surrounding areas.

- Ensure equity of provision across the LGA and ease of access for all members of the community to both active and passive recreation:
- Local parks should be located within 400-500m walking distance of most residents.
- Local sports parks should be located within 1km of most residents.
- Create access and links between bushland, natural area reserves, parks and waterways.

### ***Timely Delivery***

- Facilitate the timely provision of community facilities and services.

### ***Quality and Quantity***

- Facilitate the provision of public open space of an appropriate quality and quantity to meet the needs of future communities.
- Provide a diverse mix of open spaces designed to cater for a range of uses and activities.
- Provide sportsgrounds within a hierarchy, consistent with the aim of developing Blacktown as the sporting capital of Western Sydney.

### ***Safety and Security***

- Provide public open space that is pleasant, safe and usable both during daytime and at night.
- Enhance safety by maximising surveillance.
- Provide good, but unobtrusive, access.

## ASSESSMENT OF DRAFT INDICATIVE LAYOUT PLAN AGAINST OPEN SPACE PLANNING PRINCIPLES

In order to determine the suitability of the open space framework proposed in the Riverstone East ILP, the proposed framework has been assessed against the open space planning principles outlined in the SIAR by Clouston Associates (Open Space Planning Report, September 2015). This assessment has



highlighted a number of benefits, as well as short-comings of the proposed open space framework for the Riverstone East Precinct.

### Benefits of the Proposed Open Space Framework

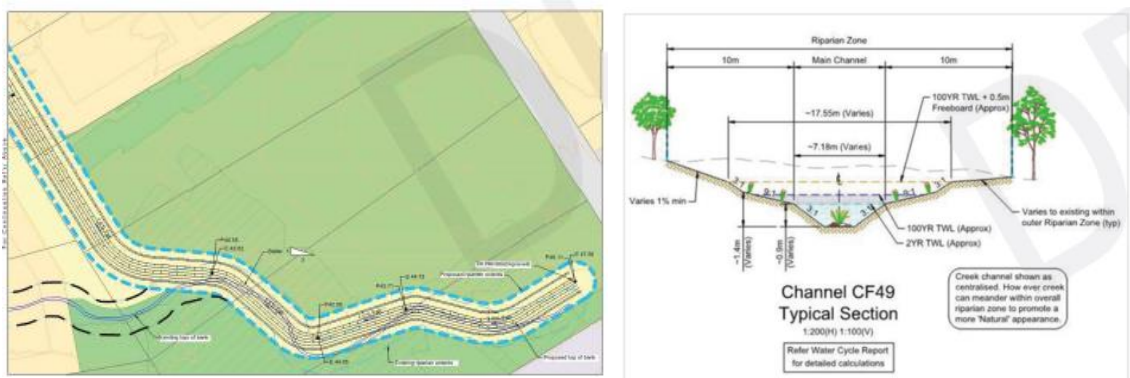
The ILP proposed for Stage 1 of the Riverstone East Precinct reflects the above open space planning principles as follows:

1. Proposed open space areas along First Ponds Creek are inter-connected.
2. The proposed open space system largely follows First Ponds Creek and its southern tributary in the Precinct.
3. The open space network provides continuous green (and potential pedestrian-cycle) links to adjoining suburbs and release areas including the Alex Avenue Precinct and Riverstone.
4. The open space network delivers the appropriate quantum of open space.
5. While much of the proposed open space network is located at the edges of the Precinct, open space is generally provided within the accepted 400m distance from most homes. (Note: actual walking distances may vary depending on the final street layout.)
6. Proposed open space integrates multiple uses including active and passive recreation, stormwater and riparian corridor management and native vegetation protection.
7. Much of the proposed open space system fronts onto the public road system, making it easily accessible.

### Shortcomings of the Proposed Open Space Framework

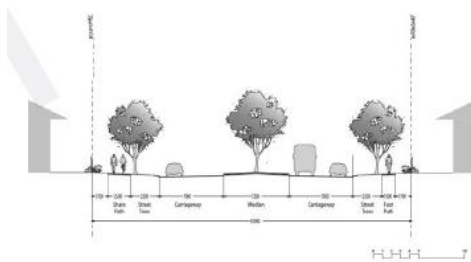
The following is a summary of areas in which the ILP proposed open space network could be improved when measured and assessed against the open space planning principles outlined in the SIAR:

1. The proposed location of the open space link between Oak Street and Tallawong Road and adjoining the stabling yards facility results in poor integration with the surrounding urban structure.
2. The proposed re-construction and channelisation of the southern tributary as Channel CF49 offers limited aesthetic and recreation benefit to the adjoining open space. The proposed channel profile including steep embankment slopes and channel depth have the potential to create a safety hazard for the public who will use the park facilities. - refer **Figure 8**.

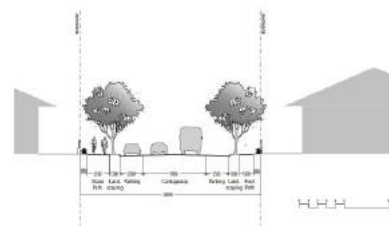


**FIGURE 8** Proposed creek reconstruction showing design profile

3. Risk management measures to be installed and implemented such as fencing may result in poor integration with adjoining open space, reducing the potential multi-use benefits such as would be achieved with a more natural watercourse.
4. The open space network between Oak Street and Cudgegong Road does not provide a suitable link to Second Ponds Creek and the Area 20 Town Centre.
5. The majority of open space proposed is concentrated along the edges of the Precinct, and peripheral relative to residential areas. The majority of residents would be required to cross major roads to access open space including the sub-arterial Clarke Street and the local collector Tallawong Road. With a width of 35m and 20m respectively, these roads would provide a major barrier to pedestrian movement and result in potential safety issues for the future residents - refer **Figures 9 and 10**.



**FIGURE 9** Cross section of proposed Clarke Street



**FIGURE 10** Cross section of proposed Tallawong Road

6. The peripheral location of much of the proposed open space limits the potential user catchment and reduces passive surveillance with potential flow-on effects on safety and security of the future residents.
7. There is limited diversity of public open space, with the vast majority of open space associated with riparian corridors. Conversely, much of the open space is linear in character, limiting its flexibility and ability to accommodate different uses.
8. There is no major open space associated with the Village Centre and higher density precinct along Guntawong Road.
9. The major open space provided between Oak Street and Tallawong Road in the southern part of the Precinct has no access road along its southern edge, reducing the potential for access and passive surveillance to occur which will lead to potential implications for safety and security in this part of the park.
10. The location of the major open space and local sports fields adjoining the stabling yards facility reduces the potential catchment of the park. Better land use and recreation planning outcomes would be achieved if the park were surrounded by a predominantly residential catchment rather than an industrial development.
11. The stabling yard facility will be substantially elevated above the parklands (refer to **Figure 11**). The only building along the interface between the two land uses will be a substation. By nature of its use, this building will generate limited activity. The building is substantially set back from the site boundary. Together with the significant level change between the stabling yards and the proposed open space, little passive surveillance of the open space will be achieved. This would result in the park feeling unsafe and failing to attract users, thereby falling short of realising its recreational potential. Equally, open space with poor passive surveillance and amenity has the potential to attract undesirable behaviour.

## Summary

While the open space network proposed in the draft ILP demonstrates a degree of consistency with the adopted open space planning principles, there are also a number of areas where the network fails or could be further improved to meet the open space planning principles.



**FIGURE 11** Stabling Yards – artist’s impression showing interface to proposed open space

## **ALTERNATE OPEN SPACE LOCATIONS**

The criteria for the selection of alternative sites for proposed open space would consist of the open space planning principles identified in the SIAR as discussed above, as well as a number of other relevant criteria such as physical suitability and site constraints.

An alternative open space network would need to deliver a similar open space system that achieves an equal or improved quantity, multi-use, level of connectedness and shape suitable for the development of active recreation and sports facilities. Based on these criteria, the assessment of the ILP has identified a number of additional opportunities for the proposed open space system to perform better and meet the planning principles.

The opportunities are as follows:

1. Provide significant open space in locations easily accessed from residential areas.
2. Locate open space to maximise the residential population within the 400m walking catchment.
3. Locate open space to eliminate the need to cross major roads, to maximise safety and ease of access for future residents. This is consistent with the planning principles of providing play spaces that are safe and convenient, to assist childhood development.
4. Locate open space to maximise passive surveillance from surrounding residential and other suitable land uses.
5. Integrate facilities for broader community use in the design of the major local open space. These include the potential to include a multi-use community room in the design of any club house or change rooms associated with the sports fields. This would enable activities or events to be held in or spill over into the parklands.
6. Realise greater integration with other community infrastructure such as community centres and services offered by the Village Centre on Guntawong Road.
7. Provide a larger open space area in proximity to the high density residential areas in the Guntawong Road Village Centre.
8. Integrate or co-locate a major park with the proposed public school adjoining the Precinct on Guntawong Road, in the Riverstone Precinct. This would enable shared use of recreation facilities consistent with the planning principles.



## **Physical Site Selection Criteria**

There are a number of physical constraints which must be considered when selecting alternative sites for open space. In particular relocation of the proposed double sports fields requires careful site selection. The following factors will need to be considered:

### ***Topography***

DP&E has advised that in the selection of sites for sports fields, steepness of the site has been a key factor. The slope of the site will need to be limited to ensure a level playing field can be created. The site proposed for the sports fields in the ILP has an average slope of approximately 1:30. Alternative sites should therefore be of a similar or flatter slope.

### ***Flooding***

Open space areas will need to be essentially flood free. Flood prone land is not considered acceptable as public open space by BCC.

### ***Size***

Consistent with BCC's standards, a minimum area of 4.5 hectares is required to accommodate a double sports field and ancillary infrastructure such as parking.

### ***Access***

The site should have at least two street frontages to maximise access.

### ***Integration with Natural Systems***

Integration with natural systems such as the drainage system or protection of native vegetation is a desirable outcome consistent with multi-use objectives.

### ***Equity of Open Space Distribution***

Equity of access to open space is a key open space planning requirement. Individual open space areas in the network should be distributed to maximise safe and equitable access for the whole community.

This is particularly important for sportsgrounds. BCC has identified that there is a high demand for sport, as well as an anticipated growth in participation in physical activity. Equity in provision across the municipality is therefore an important consideration, to provide good access to all residents both within and beyond the Precinct.

### ***Proximity to Other Community Infrastructure***

Integration of open space with other community infrastructure is desirable and consistent with multi-use objectives. It is noted that the current location of the community centre falls short of realising this objective. While it is located opposite the proposed open space, it is separated from the park by a major road, eliminating the potential for activities to spill over into the park.

It is further noted that the SIAR does not support the proposed location of the community centre on Tallawong Road. It identifies it as inconsistent with both BCC's own location criteria, as well as with best practice location criteria. The SIAR recommends that a more suitable location would be within the Area 20 Town Centre.

### ***Delivery and Funding***

The SIAR has identified that existing Section 94 Contribution Plans will have limited capacity to fund the open space, in particular recreation infrastructure required within the open space.

Selection of sites for open space that are currently in government ownership will have the potential to reduce the open space acquisition cost, making more funds available to embellish open space areas within the network to a high standard consistent with the identified community needs.

## **Site Analysis**

The site analysis prepared by Clouston Associates (Open Space Planning Report, September 2015) identifies sites that meet the physical site selection criteria, as outlined below.

### ***Topography***

Based on the existing topography of Stage 1 of the Precinct, the most suitable sites would be sloping at 1 in 30 or flatter. Areas with an average gradient of 1 in 30 or flatter are generally located along First Ponds Creek, as well as along existing drainage lines and local high points in the topography. Refer to **Figure 12**.

### ***Suitably large areas***

Based on the existing subdivision pattern, approximately three lots would be required to realise a minimum 4.5 hectare large park. Given that the road layout on the ILP is not fixed, the layout of the majority of Stage 1 would be able to be adjusted to accommodate a suitably sized field.

### ***Integration with Natural Systems***

Areas adjoining either or both riparian and drainage corridors or native vegetation remnants with environmental or conservation values are suitable for achieving integration or multi-use.

**Figure 13** highlights those parts of Stage 1 identified as riparian protection areas. They are based on the Office of Water stream classification system. For the lower order streams it requires 20m measured from the top of bank.

**Figure 14** shows native vegetation remnants identified as having moderate to high conservation value (note: area shapes have been simplified). There are a large number of such remnants in the Precinct, offering considerable flexibility in terms of co-location with open space.

**Figure 15** illustrates the extent of flooding post development, based on the Water Cycle Management Plan.

### ***Distribution***

The analysis reviews the distribution of sports fields as shown on the ILP, as well as those already planned for in adjoining precincts, namely Riverstone, Alex Avenue and Area 20. Inclusion of adjoining precincts in the analysis provides an overview of the degree of equity of open space distribution not just within the precinct, but within the context of the surrounding municipality.

As discussed above, Area 20 has been identified as having a shortfall in open space in general, and of sports fields in particular. It was further identified that precinct planning for Riverstone East represents an opportunity to address this shortfall.

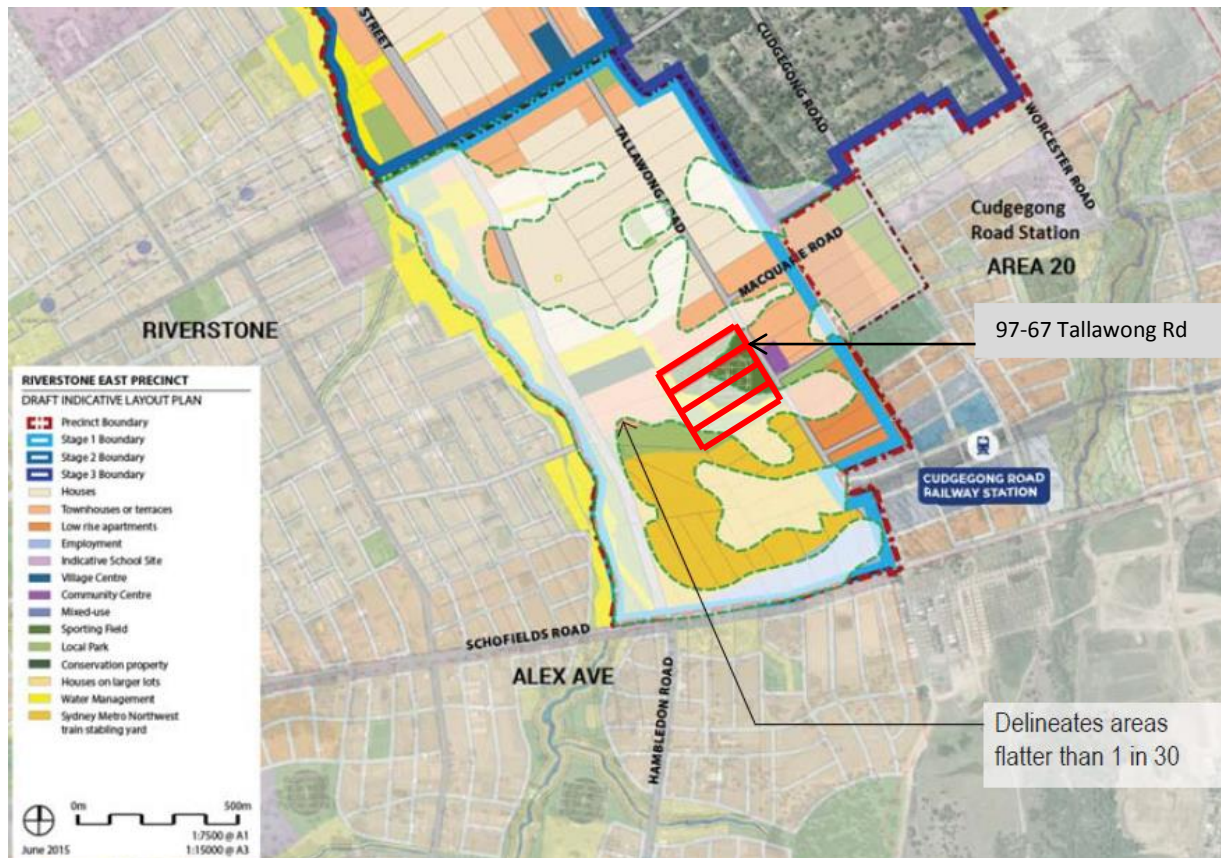
However, the analysis of distribution of sports fields indicates that the vast majority of residents in Area 20 are located within 1km of the sports fields that will be provided between Rouse Road and Second Ponds Creek. Refer to **Figure 16**. Note: for the purposes of developing an alternative open space framework the open space proposed on the subject land has not been included in the distribution mapping.

The analysis has however identified a significant gap in sports fields provision in the eastern part of the Riverstone Precinct. In this area residents are located considerably further than the recommended 1km from local active open space. This represents a major gap in access to sports fields. The Riverstone East Precinct represents an opportunity to address this and restore equity of access to sports fields.

### ***Proximity to Other Community Infrastructure***

Based on best practice location criteria, the current location of the community centre as shown on the ILP is not supported. The SIAR identifies the most suitable location for the community centre in Area 20.

If the community centre were to be relocated, the analysis shows that opportunities for integration of open space with community infrastructure in the Riverstone Precinct exist near the Guntawong Road Village Centre, or in proximity to nominated school sites.



**FIGURE 12** Slope Analysis



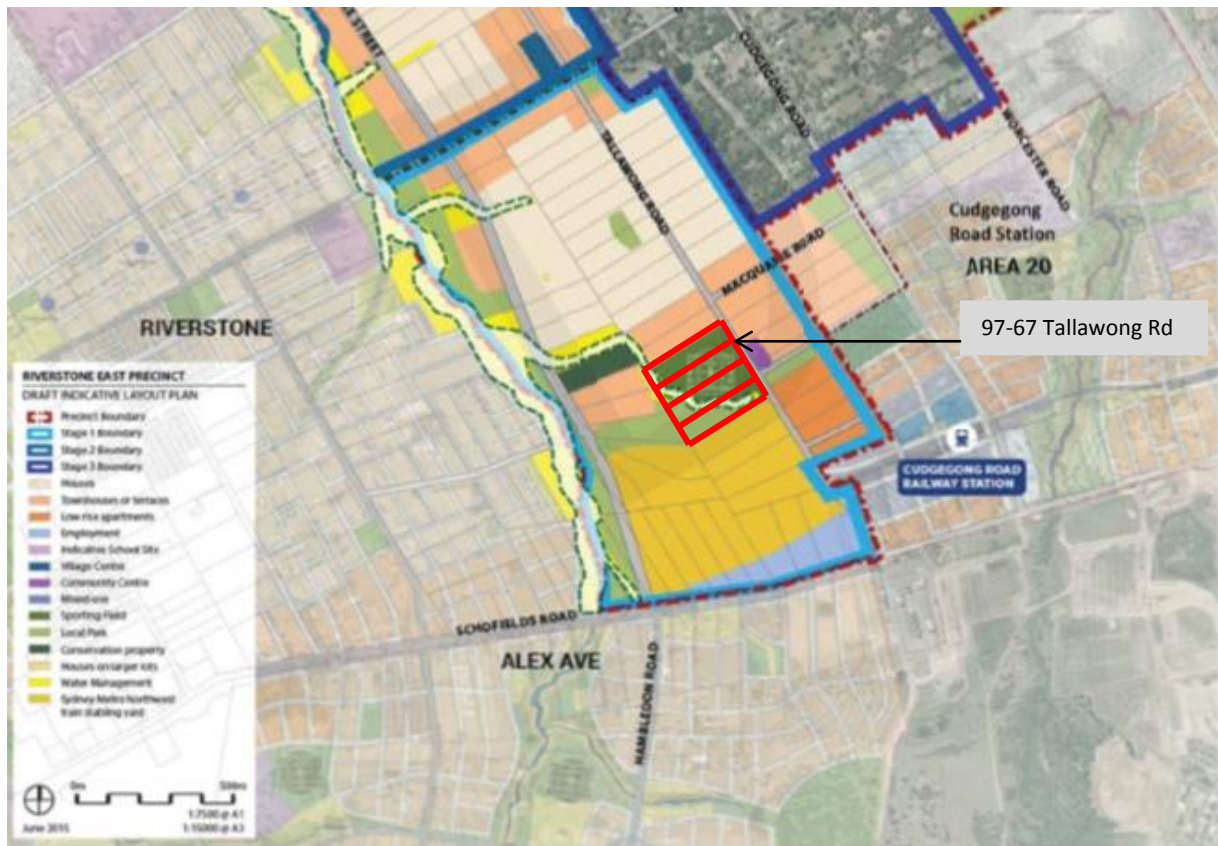


FIGURE 13 Riparian protection areas, showing potential integration with natural systems

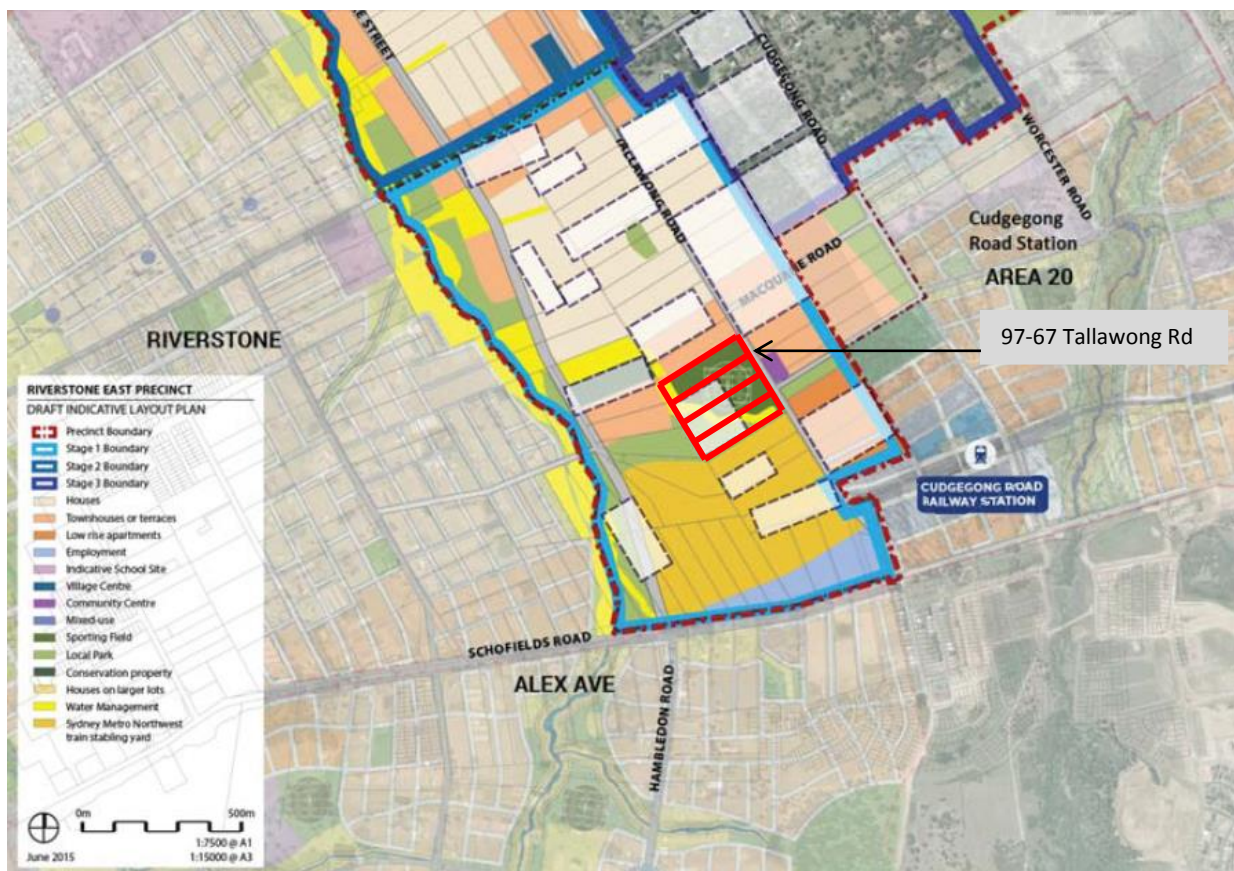
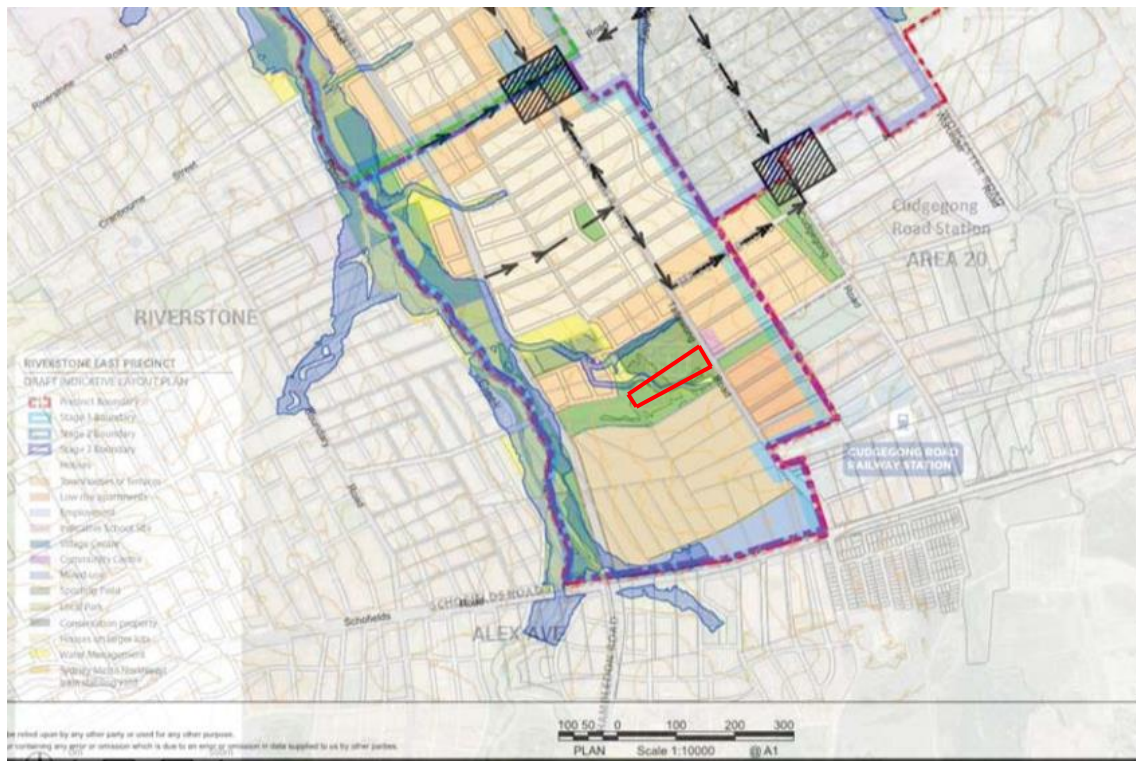
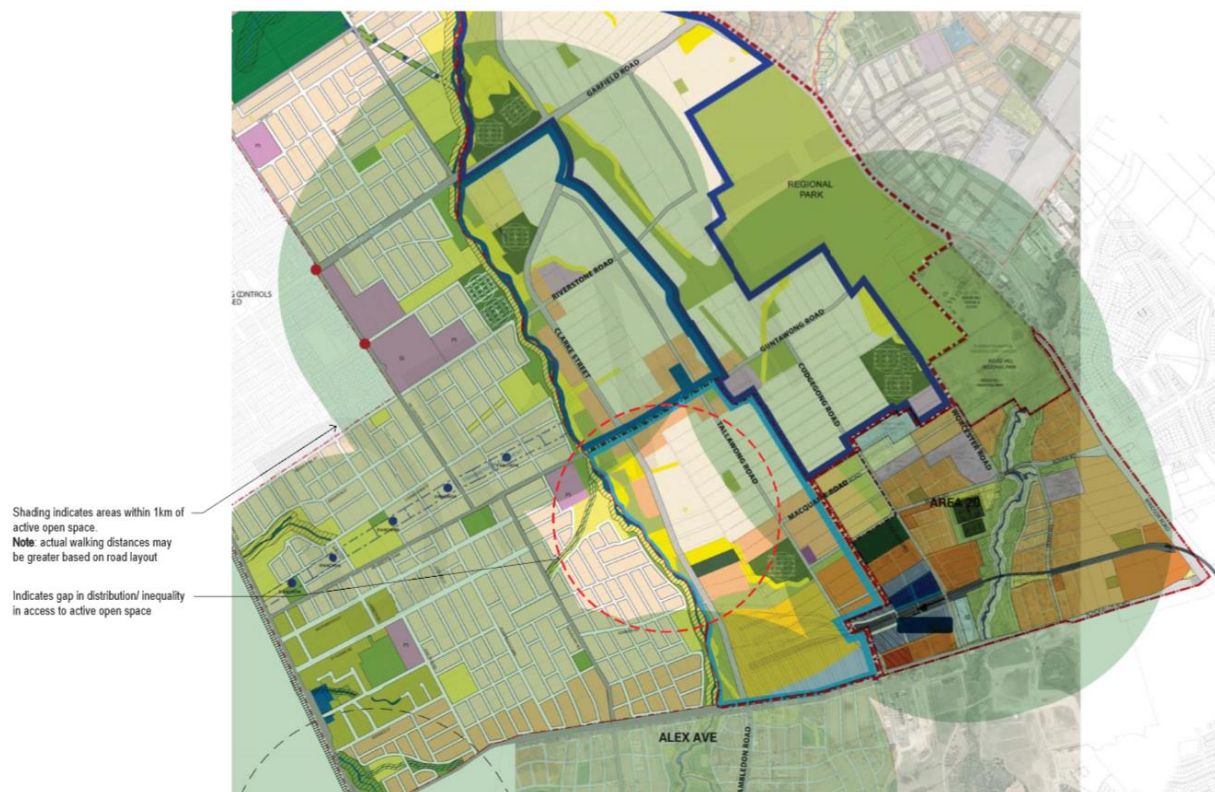


FIGURE 14 Map illustrating areas of high to moderate ecological value





**FIGURE 15** Flood Map – post-development extents of flooding

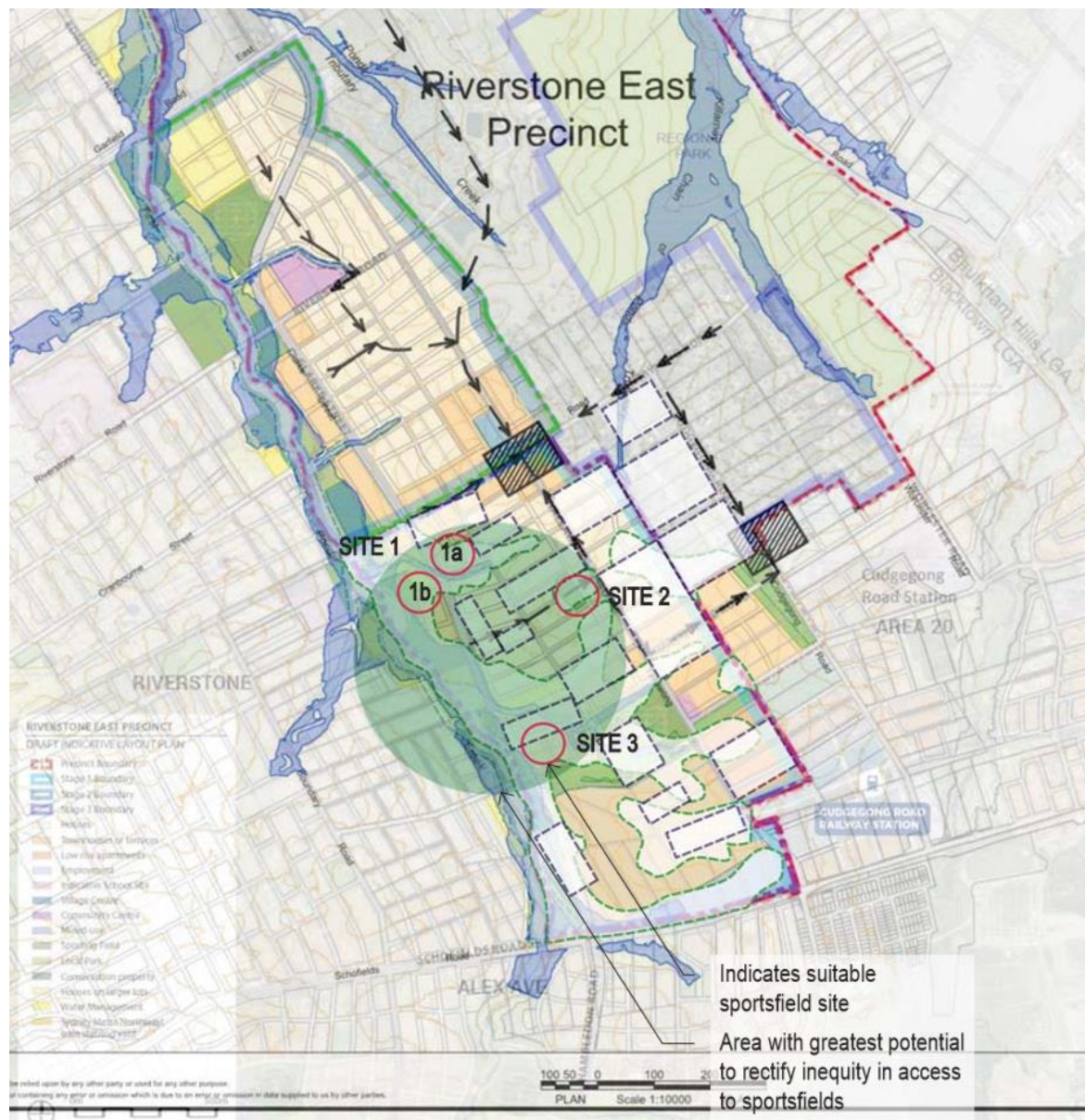


**FIGURE 16** Map illustrating areas within 1km of active open space (in green)



## ALTERNATE OPEN SPACE SITES

A composite map overlay of the analysis maps (prepared by Clouston Associates, 2015) identifies a number of potential alternative sites for active open space- refer to **Figure 17**. The potential alternative sites have been highlighted because they meet several of the site selection criteria discussed above, including open space planning principles and physical site selection criteria. They also have the potential to compensate for the gap in sports fields provision in the Riverstone Precinct.

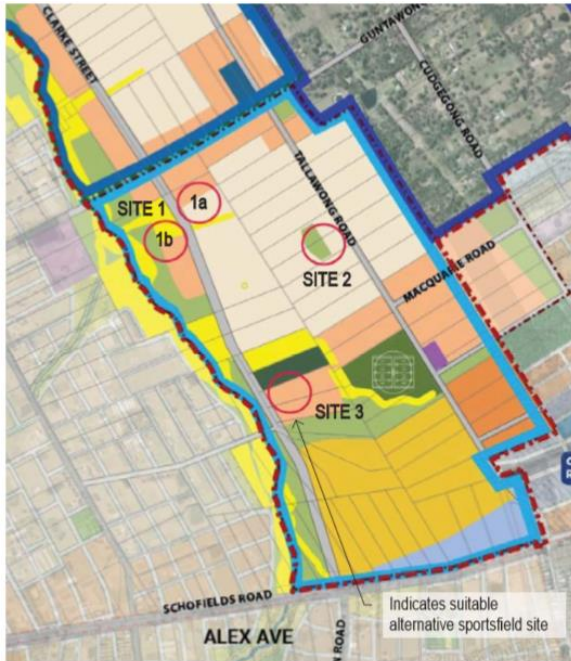


**FIGURE 17** Composite constraints map showing potential sites for sports fields

All potential sites are all located within the Stage 1 release area of the Riverstone East, in order to maintain the quantum and timing of open space delivered as part of Stage 1. **Figure 18** shows the location of the alternative sites overlaid on the ILP.

The following provides an overview of the identified potential alternative sites, as well as of their respective benefits.





**FIGURE 18** Alternative sites for sports fields overlaid with Indicative Layout Plan

### Site 1

Site 1 is located on government owned land in Guntawong Road, near the corner with Clarke Street.

Site 1a and 1b

### Benefits

- Two potential sports field locations have been identified within this area
- government owned land – this means eliminating or reducing open space acquisition costs, making the limited section 94 contribution funds available to embellish open space areas
- gentle topography with an average fall of less than 1 in 30
- passive surveillance maximised with no large industrial structure nearby, like the stabling yards
- addresses significant gap in sports fields provision in the eastern part of the Riverstone Precinct
- provides open space in close proximity to the Village Centre and high density residential development
- co-location with riparian corridors and stormwater management system/ drainage system
- locates open space in areas of moderate to high archaeological potential refer to **Figure 19**

Site 1a – additional benefits

- offers the opportunity for integration of open space with remnants of moderate to high conservation value
- located between Tallawong Road and Clarke Street, making it easily and safely accessible from residential neighbourhoods

Site 1b – additional benefits

- may hold potential for shared use with the public school on the opposite side of First Ponds Creek, in the Riverstone East Precinct

### Site 2

Site 2 is located at 131 and 135 Tallawong Road, in the centre of Stage 1.

### Benefits

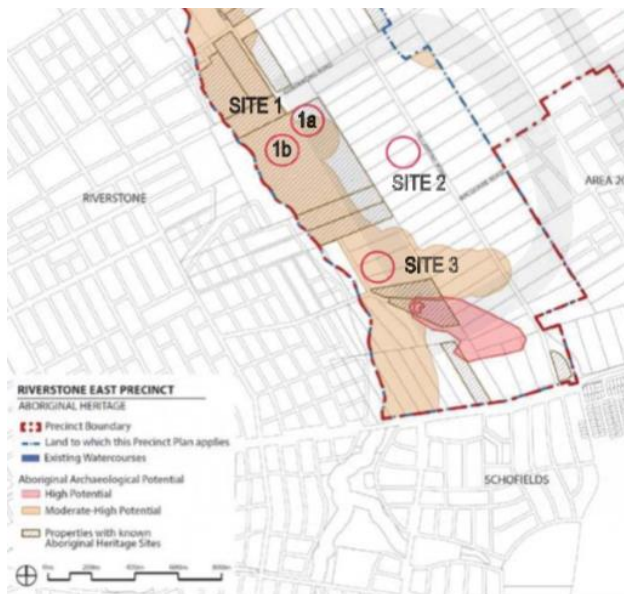
- would enlarge open space already planned for in the ILP to create a more significant open space with a wide range of local recreation facilities and infrastructure
- gentle topography with an average fall of less than 1 in 30
- opportunity to integrate with remnants of moderate to high conservation value
- centrally located in the residential precinct, given maximum access
- located between Tallawong Road and Clarke Street, making it easily and safely accessible from residential neighbourhoods
- adds variety to the open space system by providing a ridge top park - a park/ landscape typology not currently provided for in the ILP

### Site 3

Site 3 is located at 14-28 Oak Street

### Benefits

- gentle topography with an average fall of less than 1 in 30
- opportunity to integrate with remnants of moderate to high conservation value
- co-location with riparian corridors and stormwater management system/ drainage system
- not flood affected as a result of the local basin works on the other side of First Ponds Road
- located between Tallawong Road and Clarke Street, making it easily and safely accessible from residential neighbourhoods



**FIGURE 19** Location of alternative sites relative to identified archaeological potential

## BIODIVERSITY AND RIPARIAN CORRIDORS ASSESSMENT

The Biodiversity and Riparian Corridors Assessment prepared by Ecological Australia dated 17 April 2015 identifies that the first order creek that traverses the subject land (system F) is within “a more urbanised and agricultural area and hence disturbed sub-catchment, impacted heavily by past broad scale native vegetation removal and establishment of exotic species and modified drainage regimes” (page 30). It continues to state that it is in a degraded condition as it has been severely modified (pages 30 and 34). The report concludes that “the conservation and recovery priorities for most streams is considered to be low, particularly those that are located within more urbanised and modified landscapes (System B, C, D, E and F)” (page 38).

The flood cycle management strategies proposed in the Water Cycle Management Report prepared by Mott MacDonald April 2015 illustrates the first order creek that traverses the land and drains to First Ponds Creek (refer to **Figure 5**).

## ACOUSTIC INVESTIGATIONS OF THE STABLING YARDS

The following two reports were examined:

1. *North West Rail Link Rapid Transit Rail Facility – Noise Assessment* prepared by SLR Consulting Australia
2. *Riverstone East Precinct Noise and Odour Assessment* prepared by Renzo Tonin and Associates

The stabling yards are a fixed facility and noise impacts are assessed in accordance with the *NSW Industrial Noise Policy*. The Renzo Tonin and Associates report identifies that where conflicts cannot be overcome through reconfiguration of land use, other noise mitigation measures may be considered during the detailed planning stages of the specific development, such as lot configuration and physical noise controls.

The subject land is a further distance to the stabling yards in comparison to the proposed low rise apartments to the east of the stabling yards. From an acoustic perspective, if the low rise apartments to the east of the stabling yards satisfy the *NSW Industrial Noise Policy* for residential purposes, the subject land would also comply as it is located further away (resulting in noise attenuation) and is not reliant on providing an ‘acoustic buffer zone’. The subject land is suitable for residential purposes from an acoustic perspective.

## PROXIMITY TO FUTURE CUDGEGONG ROAD RAILWAY STATION AND INTERFACE WITH STABLING YARDS

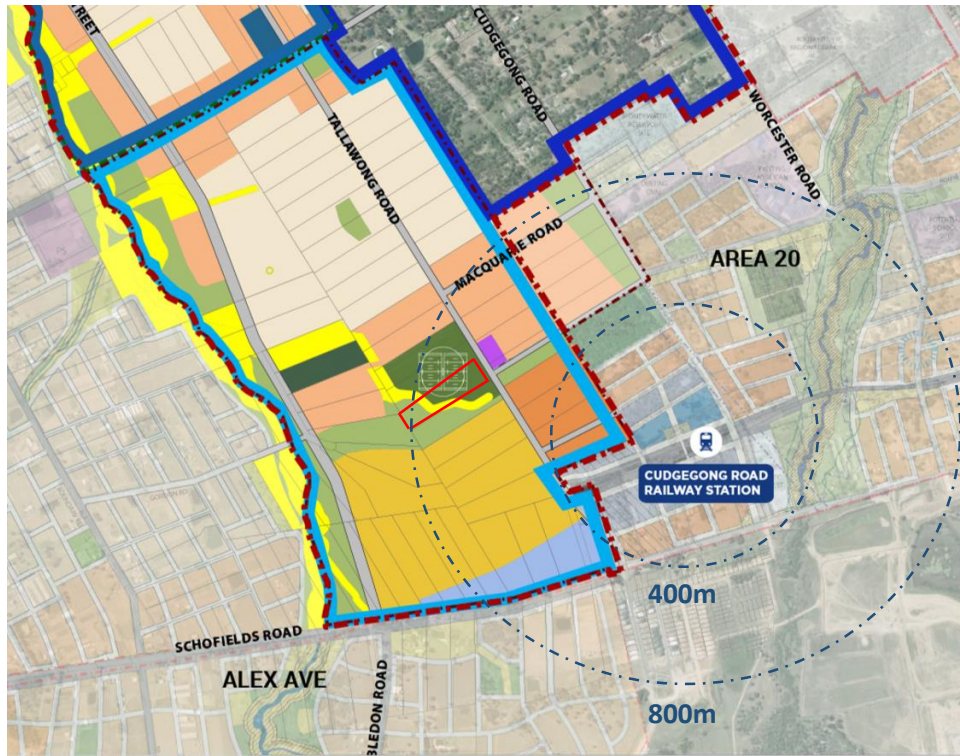
**Figure 20** illustrates that the subject land is within 800m of the future Cudgegong Road Railway Station and is therefore strategically suitable for medium density residential. The amount of high and medium density dwellings should be maximised within 800m of the railway station to concentrate the future population around the railway station. The subject land’s location is prime land for a R3 Medium Density Residential zone.

The stabling yard facility is substantially elevated above the parklands (refer to **Figure 11**). The only building along the interface between the two land uses will be a substation. By nature of its use, this building will generate limited activity. The building is substantially set back from the site boundary. Together with the significant level change between the stabling yards and the proposed open space, little passive surveillance of the open space will be achieved. This will result in the park feeling unsafe and failing to attract users, thereby falling short of realising its recreational potential.



A better planning approach for the subject land would be to accommodate low rise apartments. This approach would:

1. provide a land use interface that would remove passive surveillance concerns,
2. provide a built form outcome where 3-4 storey apartments would counterbalance the elevated platform created for the stabling yards facility, and
3. maximise use of prime land within 800m of the future Cudgegong Railway Station.



**FIGURE 20** Subject land in proximity to future Cudgegong Road Railway Station

## CONCLUSION

The current proposed location of the open space on 77 Tallawong Road is not considered to be suitable as the location does not meet the planning principles for open space as discussed in this submission.

This analysis of the open space undertaken of the area has revealed that there are a number of alternate sites that would physically be able to accommodate sports fields, as well as perform equally or better against open space planning principles, compared to the location of sports fields proposed by the ILP.

They would further be able to address a gap in the distribution in sports fields which would result in residents in the adjoining Riverstone Precinct having to travel significantly further than the recommended 1km to access a local sports field.

Together with the sports fields planned for Stage 3 of the Riverstone East Precinct, all identified alternative sites would ensure that an appropriate quantum of sports fields would be provided to meet the active recreation needs of residents in the Precinct, as well as of residents in the adjoining Area 20 (Cudgegong Road) Precinct. All residents would have access to sports fields within the recommended maximum travel distance.

The proposed alternative sites are more centrally located relative to where the majority of residents will live. This is important as it ensures safe and easy access, in particular for children. It would also achieve a higher degree of integration of open space with surrounding urban areas, as is important for maximum use and safety through passive surveillance.

This is the case in particular for Sites 1 and 2 that are more centrally located relative to residential areas. With its proximity to the stabling yards, Site 3 is located towards the edges of residential areas, limiting the number of residents within its 1km catchment.

Based on the range of potential benefits associated with the identified alternative sites, Site 1 is considered to be the strongest performing option. It offers a range of benefits in terms of its physical characteristics, is consistent with open space planning principles and offers the additional benefit of already being held in government ownership. This may reduce land acquisition costs and ensure open space is available to new residents as the Precinct is developed.

The analysis has shown that a R3 Medium Density Residential zone (permitting low rise apartments) is considered to be more appropriate to replace the proposed RE1 Public Recreation zone on the subject land and that Site 1 (refer to **Figure 18**) offers a strong performing alternative site for sports fields.