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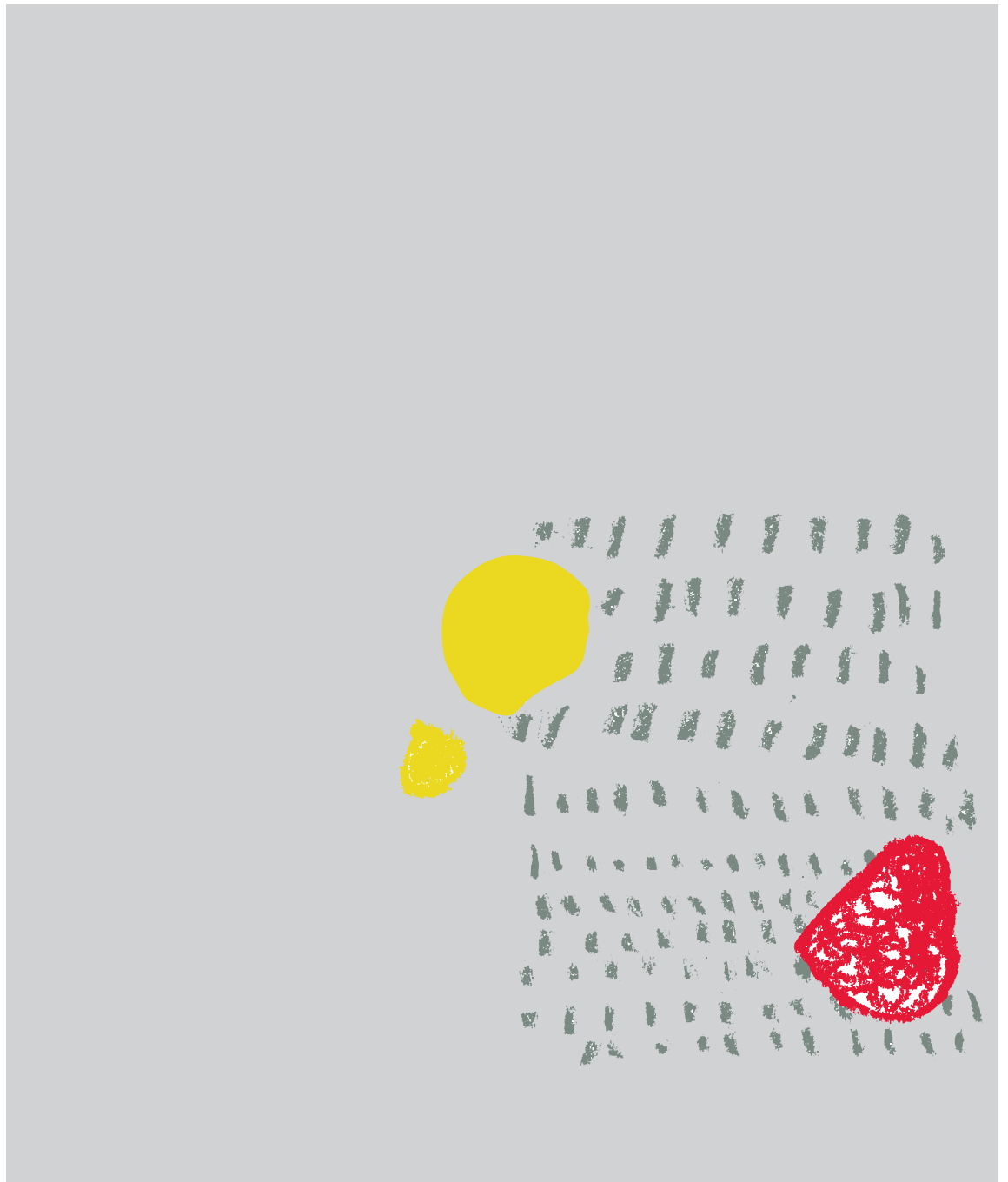
JMD design

Pondicherry

Landscape
& Visual
Assessment

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JMD design



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Executive Summary

JMDdesign have been engaged by Greenfields Development Company No. 2 (GDC2) to undertake a Landscape and Visual Assessment for the future residential development of Pondicherry.

The proposed Pondicherry Precinct Development, is located to the east of the newly upgraded The Northern Road, south of the South Creek West Land Release Area and north of Oran Park.

The site is located in South Western Sydney, and is one of 14 precincts included in the South West Growth Area (SWGA). The SWGA is divided into 14 precincts that are progressively being released for planning and rezoning to accommodate increased population growth in Sydney.

The Pondicherry Precinct will consist of approximately 2,700 dwellings with supporting educational and recreational facilities. The rezoning of Pondicherry will allow the precinct to be developed in accordance with the direction of the Growth Centres Commission.

This report has been structured in five phases. The first section of the report is a review of the existing site and a contextual analysis of the landscape features of the Pondicherry site and surrounds. The second section of the report provides an outline of the landscape character of the site and its surrounds and establishes the landscape character zones within Pondicherry. The third section of the study investigates the visual catchment of the Pondicherry site and establishes the main views to and from the Pondicherry site to establish areas of visual sensitivity. The fourth section of the study is a bringing together of the landscape character and the visual sensitivity of the proposed development within the context of the proposed and existing development surrounding Pondicherry in the form of a landscape and visual assessment. The landscape and visual assessment is done by way of reviewing what the visual effect and visual sensitivity of the proposed development will have from the identified view points resulting in the visual impact. The final section of the report provides a review of the outcomes of the study, opportunities and constraints for development in the Pondicherry site and recommendations for mitigation of the effect of proposed development on the landscape and visual effect of the Pondicherry site within the context of future development in the SWGA.

It is expected that the residential development of Pondicherry will achieve density, open space and tree canopy targets set by the NSW Government for the South West Growth Sector.

The development of Pondicherry should also be viewed in the context of the significant RMS road

upgrade works to The Northern Road and future residential developments of adjacent sites in Maryland and Lowes Creek Areas and across the broader South West Growth Sector.

Generally the landscape and visual impact of proposed development of the Pondicherry site is considered to be LOW from ten of the fourteen locations surveyed. This is generally due to the landform of the Pondicherry site being located mainly in a low lying broad valley adjacent to the vegetated corridor of South Creek. Other factors contributing to the LOW impact rating include the surrounding residential developments of Oran Park, Arcadian Hills in Cobbity and the Gregory Hills residential development. It is expected that the proposed low to medium density residential development of Pondicherry will be seen as a continuation of these developments.

It is anticipated that the development will have a LOW - MODERATE visual impact from those few public areas immediately adjacent the Pondicherry site such as from The Northern Road or Ron's Creek Open Space in Oran Park or those nearby elevated areas that look across and down on to the Pondicherry site such as Maryland. These areas represent four out of fourteen viewpoints studied.

The recent road upgrade works on The Northern Road has had a significant effect on the landscape and visual impact of the area. It is also understood that the Maryland property is the subject of a residential housing development proposal which will possibly have a more immediate effect on the outlook from the Maryland homestead than Pondicherry.

Recommendations and suggestions to ameliorate the proposed residential development of Pondicherry from those affected areas include:

- Review and augment RMS edge planting to The Northern Road.
- Consider establishing an integrated buffer planting and acoustic attenuation strategy between Pondicherry and The Northern Road to address visual and acoustic issues from the upgraded Northern Road.
- Landscape treatment of The Northern Road edge should also consider views to and from Maryland.
- Planting and Landscape Strategies are recommended to reduce the effects of continuous roof lines in the north west sector of the site when viewed from Maryland.
- Streetscape and open space designs should feature large scale evergreen native species along

- north south aligned roads and ridgelines.
- The design of open space areas in the north west sector of Pondicherry should interpret views to Maryland.
 - Opportunities to increase tree planting and canopy cover within front yards of lots should be investigated.
 - The retention of the lakes will be a major landscape and recreation feature of Pondicherry. Water quality control is imperative.
 - A complementing landscape treatment should be provided to the areas surrounding the lakes, that allows permeable views into the water bodies and promotes passive surveillance.

Introduction

JMD design have been commissioned by Greenfields Development Company 2 to prepare a Landscape and Visual Assessment for an extension of the Oran Park Precinct, known as Pondicherry.

This subject area, called 'Pondicherry' being Part Lot E DP438732, Part Lot A DP420694, Part Lot F DP420694, Part Lot B DP420694, Part Lot 1 DP623190, Part Lot C DP391340, Part Lot 2 DP1066801 and Part Lot 9093 DP1225752 in Camden Local Government Area.

Pondicherry is owned by Leppington Pastoral Company Pty Limited, with development rights of Pondicherry being granted to Greenfields Development Company 2.

The purpose of this report is to map existing landscape, visual and scenic qualities of the site and surrounding areas within the context of the proposed and existing development surrounding Pondicherry and the future development within SWGA.

The report will also provide a landscape and visual site analysis and recommendations that will inform the residential planning and development process of the Pondicherry site.



Context

Pondicherry is located in the rural outskirts of Sydney and within the rapidly developing South West Priority Growth Area. The site is an irregular shaped piece of land and is approximately 210 hectares roughly 2000 metres wide by 1800 metres long with a major undulating ridge line extending from the south west corner of the site to the northern end of the site.

Camden is located 8.5km to the south west and Campbelltown City Centre is located 10.6 km to the south east. The Western Sydney Aerotropolis is located approximately 10km to the north and Leppington Railway Station is approximately 7km to the north east of the Precinct. Immediately surrounding the site to the north and west are a series of large scale rural holdings. One of these holdings under consideration for State Heritage Listing is ‘Maryland’ located approximately 1.3km to the north west of the site. To the east is South Creek which is bordered on the east side with a series of smaller, finegrain rural holdings. To the south of the site is Oran Park Town.

The new residential development of Oran Park Town is located directly to the south of the site. Pondicherry is being considered as an extension of Oran Park Town. Other nearby residential developments include ‘Arcadian Hills’ on The Northern Road to the west.

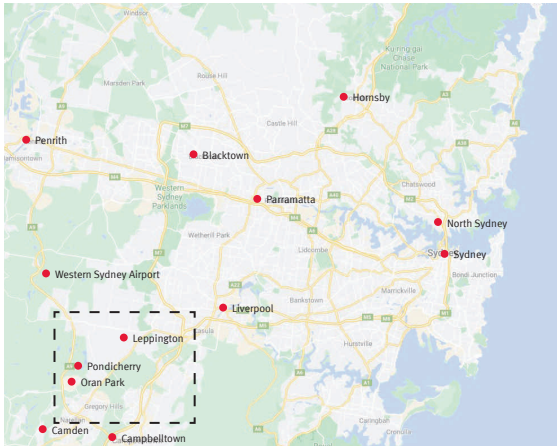


Figure 1. Sydney Location Map | Not To Scale
(Source: Google Maps 2021)

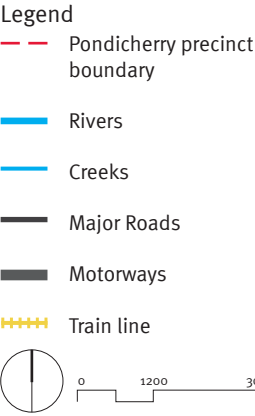


Figure 2. Site Location Map | 1:120,000 @ A4
(Nearmaps 2020)

Climate

The climate at Camden consists of mild to warm summers with a mean maximum of 29.6 degrees celsius in January and mean minimum of 15.2 degrees celsius in December.

Winters are mild with a mean maximum of 19.1 degrees celsius in August and mean minimum of 2.9 degrees celsius in July.

The annual mean rainfall is 793.3mm with the driest months being May to September with monthly rainfall of about 66mm and the highest rainfall occurring in February of about 100mm. (Bureau of Meteorology 2017)

Zoning

Pondicherry is currently zoned Primary Production RU1 and the riparian corridors are zoned E2 Environmental Conservation under the Camden Local Environmental Plan 2010.

Currently large land holdings occupy the site which are used for agricultural purposes for active grazing and dairying.

Adjoining Land

The Oran Park precinct lies to the south of Pondicherry and is part of the Sydney Regional Growth Centres. Oran Park Town is a major development which includes a mixture of zoning including a local centre, low to medium residential, environmental living and general industrial. Land to the immediate west and north of Pondicherry is zoned RU1 Primary Production. Whilst land immediately east of South Creek is zoned RU4, Rural Small Holdings.

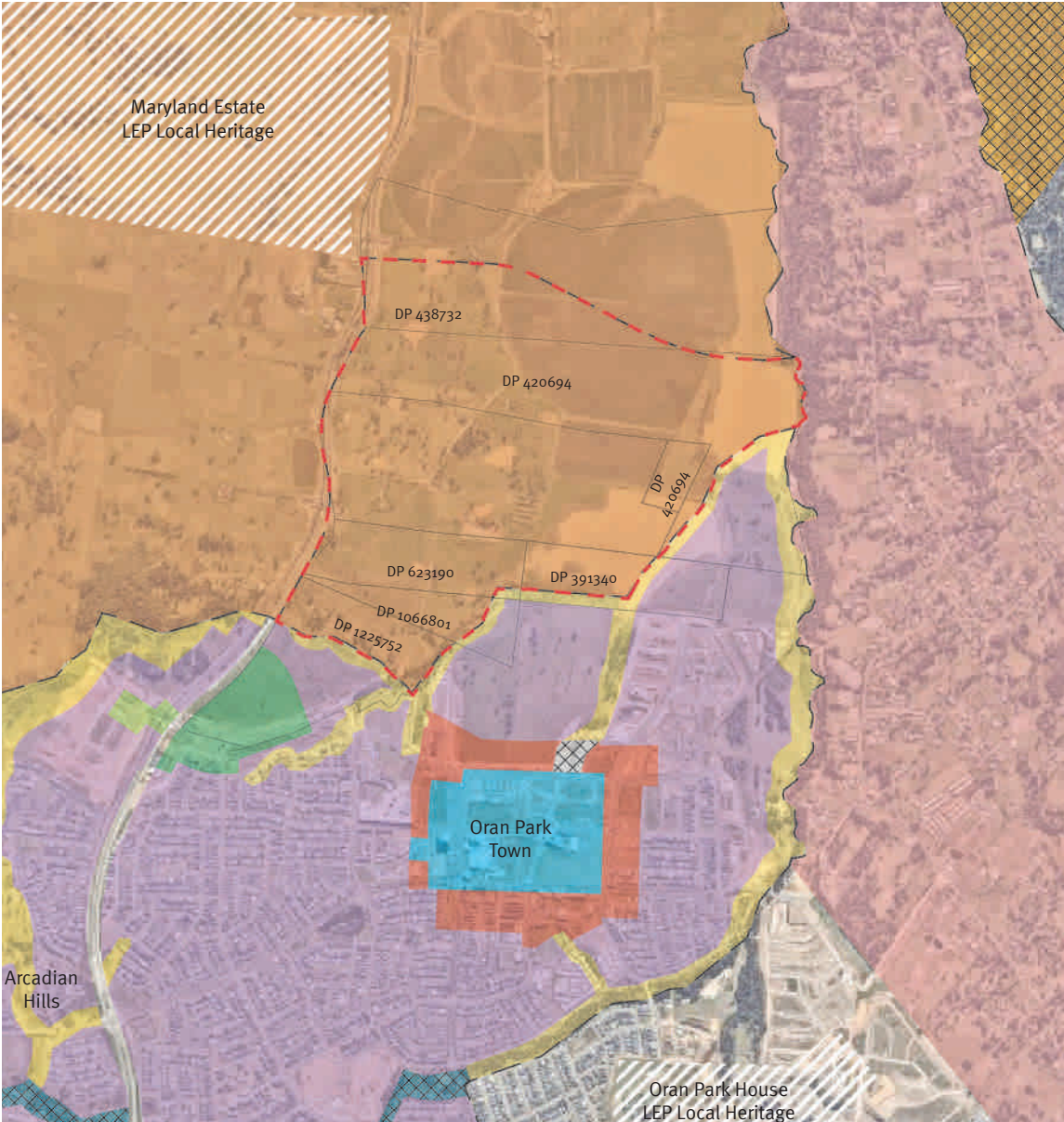
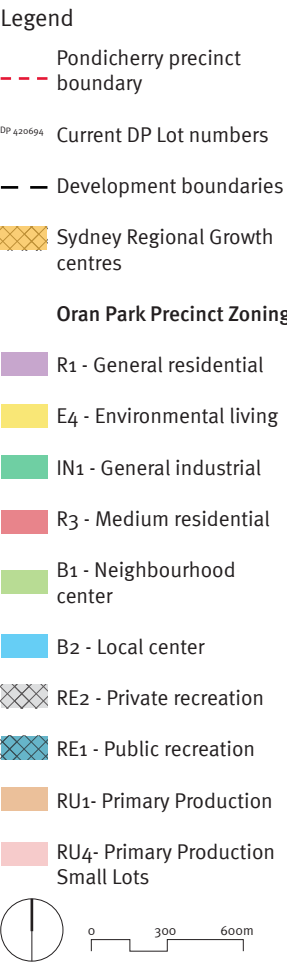


Figure 3. Context Plan | Scale 1:30,000 @ A4 (Nearmaps 2020, Camden Local Environmental Plan 2010, John M. Daly & Associates Surveyors 2017)

Topography

Pondicherry is dominated by an undulating ridgeline that runs south-west to north-east along the centre of the site. Heights along the ridgeline vary from 116.0m AHD in the south-west corner down to 84.0m AHD on the northern boundary. The lowest point on the site is located in the north-east corner of South Creek at approximately 70.0m AHD.

Pondicherry has a predominantly south eastern aspect overlooking the various farm dams and the riparian corridor of South Creek.

Badgelly Hill, 196.0m AHD, is the highest point in the area and is located approximately 1.2km south of Pondicherry. The Scenic Hills are also viewed to the east of the site and are located approximately 4km east of Pondicherry.

The ridgeline landform of Pondicherry is nestled between the adjacent ridgelines of the Scenic Hills to the east and the ridgeline to the west.

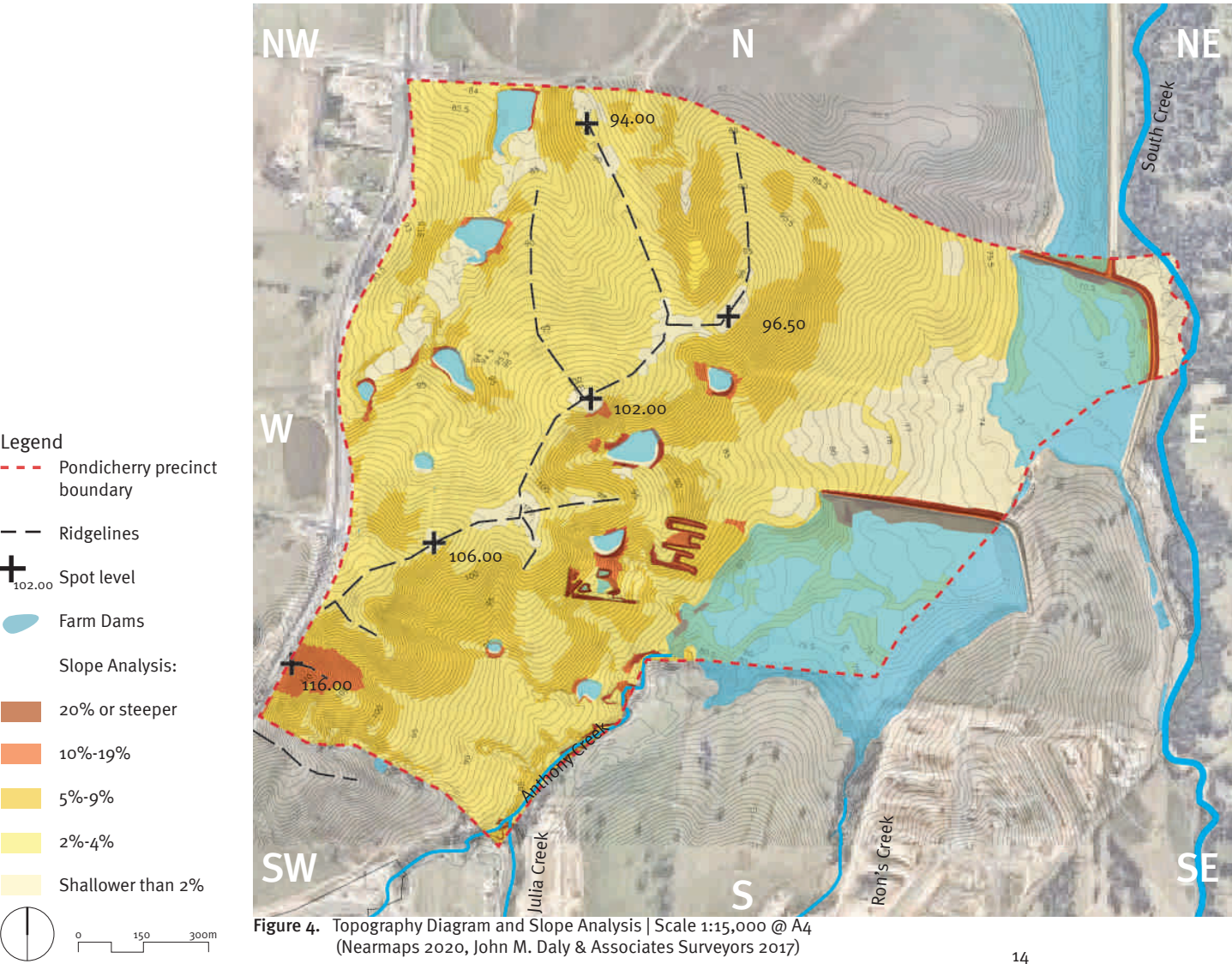


Figure 4. Topography Diagram and Slope Analysis | Scale 1:15,000 @ A4 (Nearmaps 2020, John M. Daly & Associates Surveyors 2017)

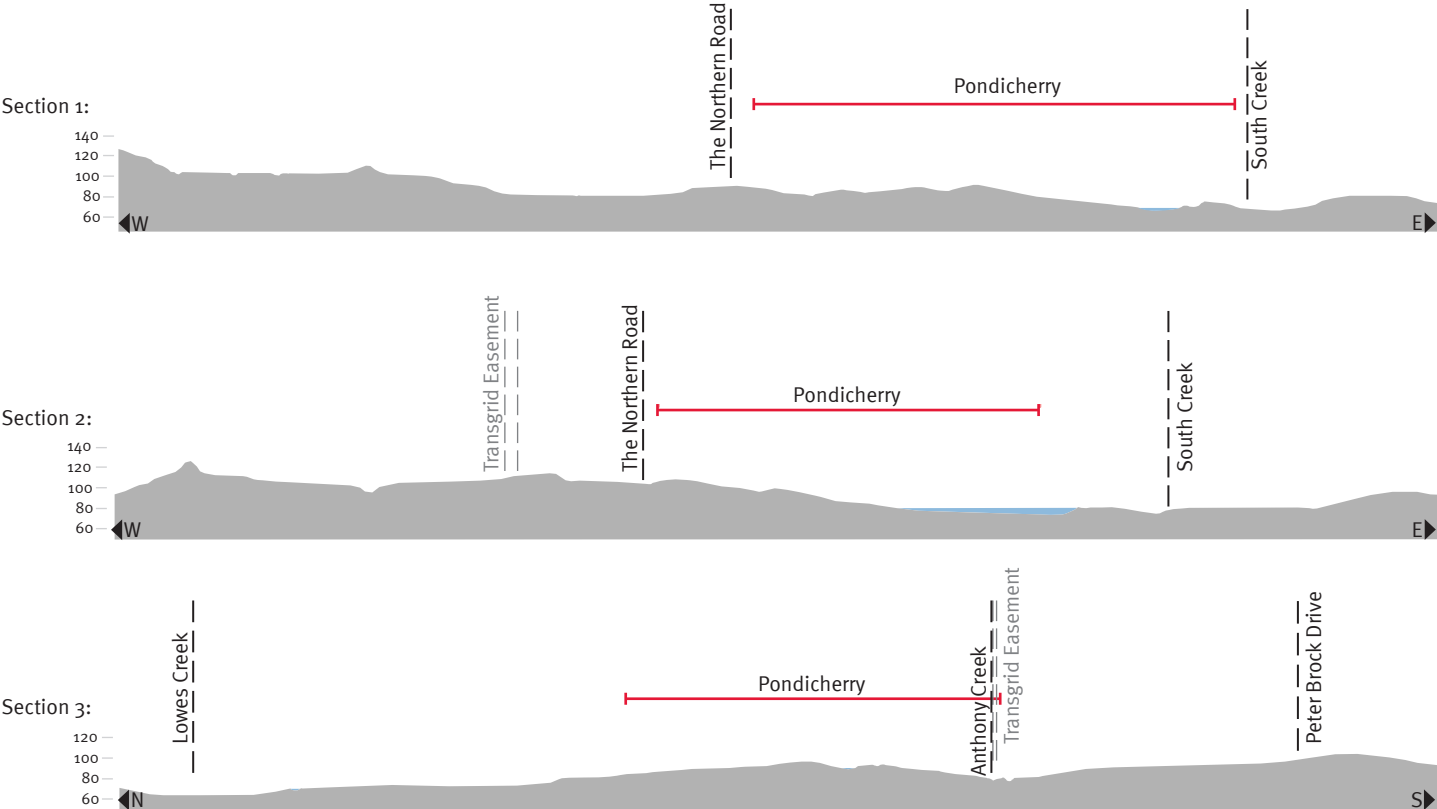


Figure 5. Topographical Cross Sections |
Horizontal Scale 1:30,000 @ A4
Vertical Scale 1:7,500 @ A4 (1:4 vertical exaggeration)

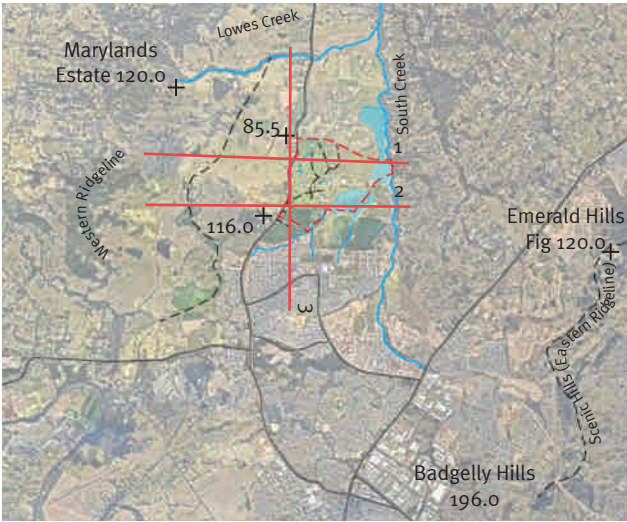


Figure 6. Cross Section Context Map | NTS

Hydrology

Pondicherry features a main undulating ridgeline which runs from the south west corner of the site to the northern side of the site. There are two main catchments with the site:

- Catchment to the east and south east drains to the various farm dams, Anthony Creek, Julia Creek and South Creek;
- Catchment to the north west of the site draining to a tributary of Lowes Creek.

South Creek provides the eastern boundary of Pondicherry and is classified as Stream Order 4 according to the Strahler stream classification system.

There are a number of farm dams of various sizes within Pondicherry which are currently used for dairy cow farming and irrigation. The two major dams also act as detention purposes for the Oran Park Town development to the south. These two dams are located on-line on Anthony Creek.

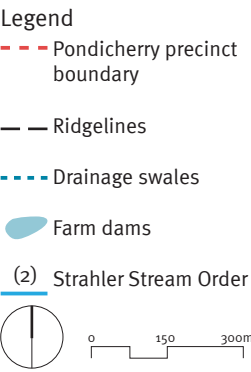


Figure 7. Hydrology | Scale 1:15,000 @ A4
(Nearmaps 2020, John M. Daly Surveyors 2017)

Geology

The geology of Pondicherry is formed by the Liverpool subgroup of the Wianamatta Group which contains some shale and weak sandstone beds. (Wollongong Geological Series 1966).

Soils

The soils of Pondicherry are dominated by Blacktown Group (Bt) with some small areas of South Creek (Sc) occurring in the lower sloping sections of the site.

Soils of the Blacktown Group result in gently undulating hills with slopes of usually less than 5%. Soils are shallow to moderately deep to less than 1.0m deep and are hard setting, moderately reactive highly plastic subsoil with low soil fertility and poor soil drainage.

Soils of South Creek are found on drainage depressions with slopes of 5-20%. Soils are very deep layered sediments over bedrock or relict soils and have a high soil erosion hazard with frequent flooding.

(Wollongong – Port Hacking Soil Landscape Series 1990, Penrith Soil Landscape Series 1990).

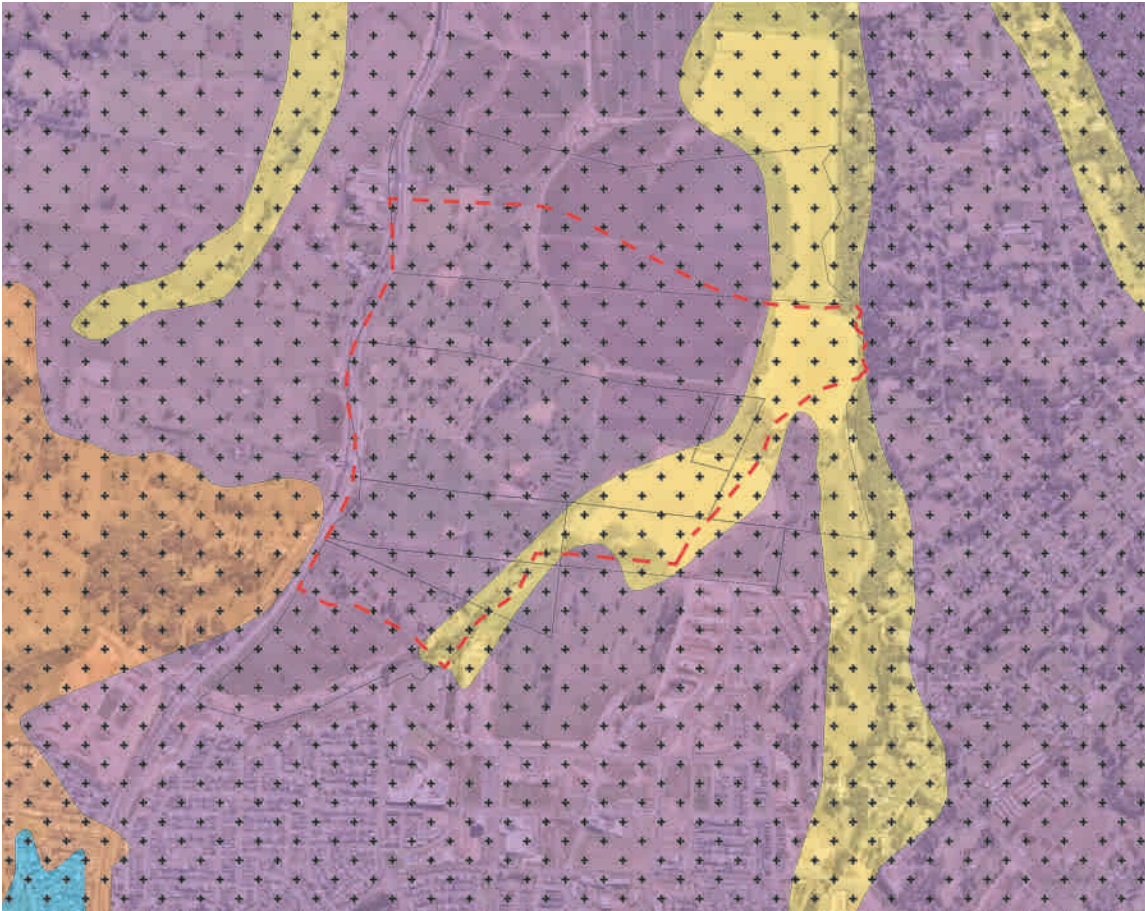
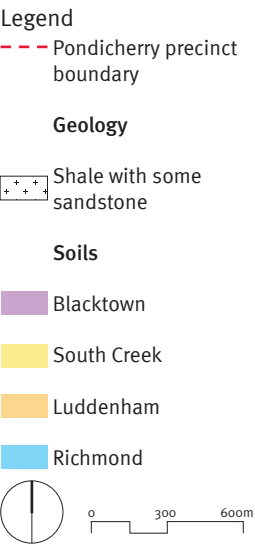


Figure 8. Geology & Soils Diagram | Scale 1:30,000 @ A4
(Wollongong Geological Series 1966, John M. Daly & Associates 2017, Penrith Soil Landscape Series 1990, Nearmaps 2020)

Ecology

Flora

Most of the land within the subject site is biodiversity certified under the Threatened Species Conservation Act 1995 and the Biodiversity Certification Order for the Growth Centers.

Native vegetation at Pondicherry consists of scattered remnant and regrowth eucalypts of vegetation communities of the Cumberland Plain Woodland (CPW) and River Flat Eucalypt Forest (RFEF).

The Cumberland Plain Woodland was registered in poor condition by Ecological Australia where *‘patches had been significantly thinned, and the mid and ground-storeys were generally completely absent due to historical clearing, intense high pressure cropping and extensive long-term cattle grazing’*.

CPW is considered a critically endangered ecological community under the Biodiversity Conservation Act 2016 and the Environmental Protection and Biodiversity Conservation Act 1999.

Key CPW tree species noted at Pondicherry include:

- *Eucalyptus moluccana* (Grey Box)
- *Eucalyptus tereticornis* (Forest Red Gum)
- *Eucalyptus crebra* (Narrow-leaved Ironbark)
- *Eucalyptus fibrosa* (Broad-leaved Ironbark)

River Flat Eucalypt Forest was registered in a moderate condition by Ecological Australia and is an endangered ecological community under the Biodiversity Conservation Act 2016. Key RFEF tree species noted at Pondicherry include:

- *Casuarina glauca* (Swamp Oak)
- *Eucalyptus tereticornis* (Forest Red Gum)
- *Eucalyptus amplifolia* (Cabbage Gum)

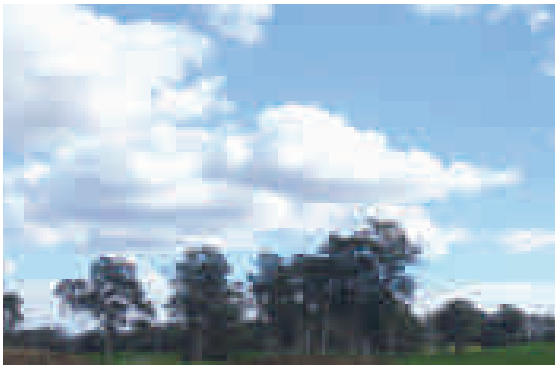


Figure 9. Cumberland Plain Woodland



Figure 10. River Flat Eucalypt Forest

Ecology

Fauna

Numerous native bird species were noted by Ecological Australia, although none were noted as threatened. There are several hollow bearing trees which currently provide habitat for birds and bats.

Ecological Australia noted a migratory wading bird named the Sharp-tailed Sandpiper was observed at Pondicherry. There are several hollow-bearing trees which are likely to provide habitat for several bats including the Greater Broad-nosed Bat, Southern Myotis and Eastern Freetail Bat.

Bushfire

Preliminary advice was provided by Ecological Australia to identify bushfire hazards. Bushfire prone land is located along the perimeter of the Pondicherry site being South Creek, Anthony Creek and along The Northern Road. ELA advised Asset Protection Zones need to be considered with future revegetation.

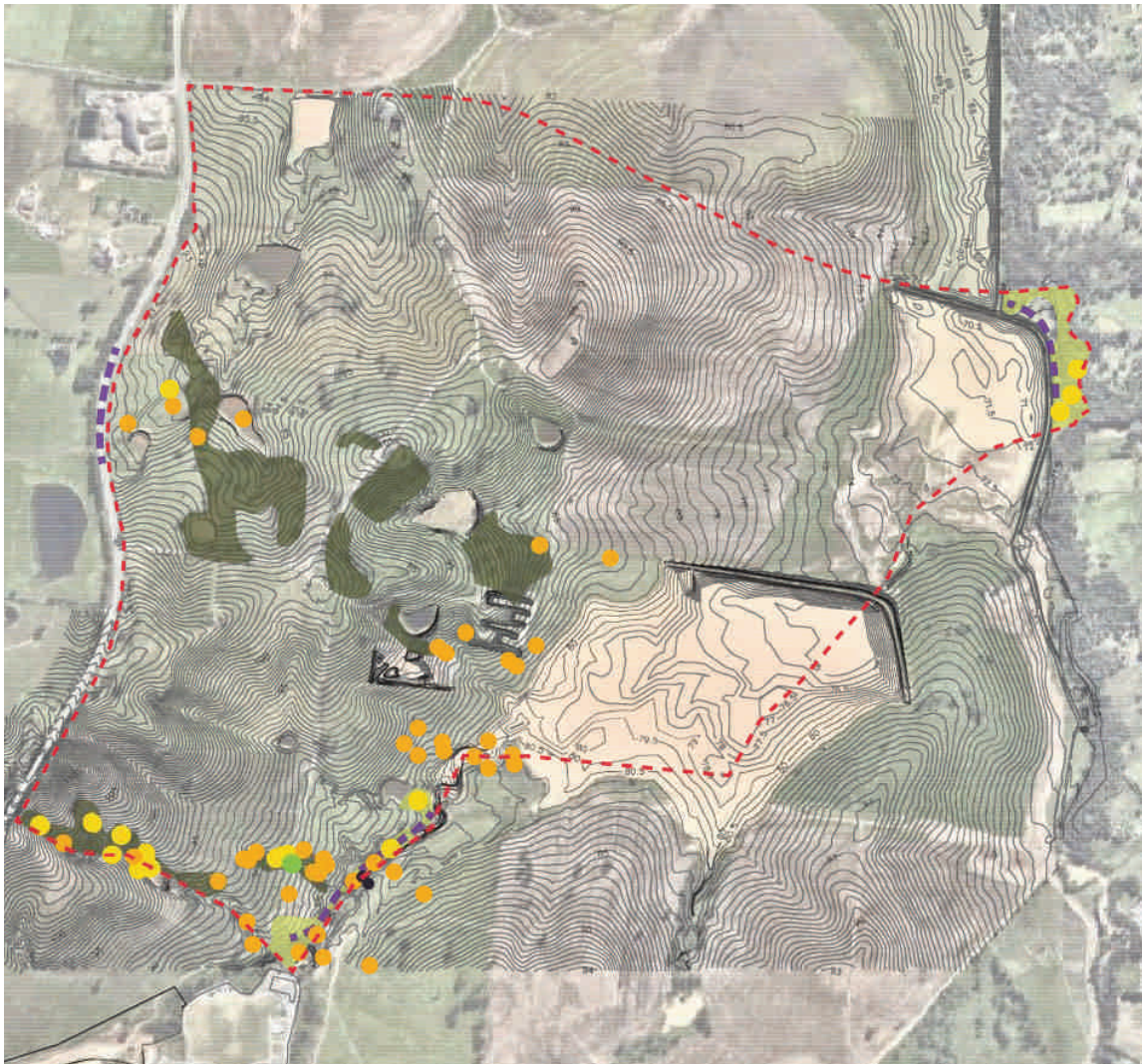
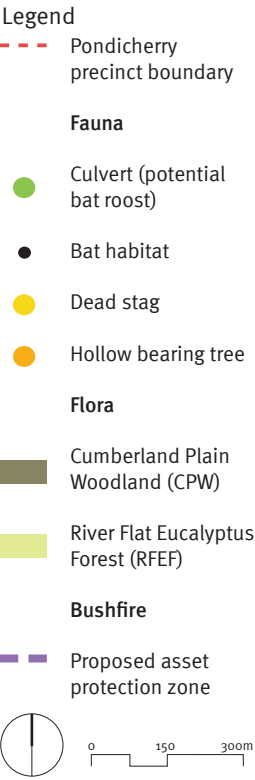


Figure 11. Ecology | Scale 1:15,000 @ A4
(ELA Ecological Analysis 2020, ELA Bushfire Constraints 2017, Nearmaps 2017)

Heritage



Figure 12. Historic retained fenceline aligned along early grant boundary

Indigenous

The Gundungurra people settled in the Camden area prior to European settlement. Nearby areas were also settled by the Tharawal, Dharug and Wodiwodi people. There was limited contact between Aboriginal people and European settlers prior to 1810.

Non-indigenous

There have been historical colonial estates occupying Pondicherry including Maryland, Netherbyres and Nonnorah. GML Heritage state it is unlikely there is anything beyond ephemeral historical archaeological remains. There have been limited pastoral and agricultural activities since 1816 to the present time.

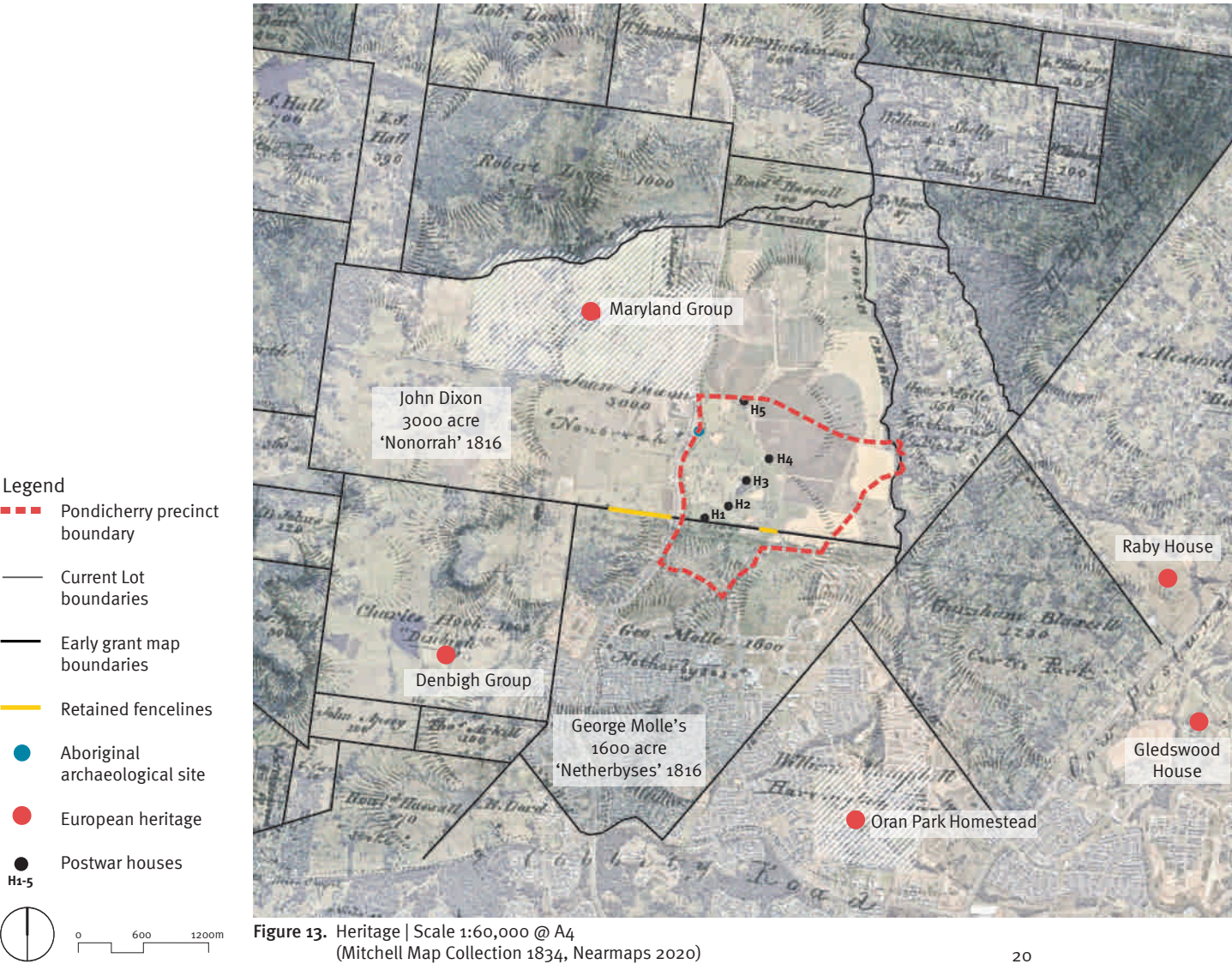


Figure 13. Heritage | Scale 1:60,000 @ A4
(Mitchell Map Collection 1834, Nearmaps 2020)

Heritage



Figure 14. Maryland House



Figure 15. View of Pondicherry from Maryland



Figure 16. Oran Park House
(Office of Environment and Heritage 2007)



Figure 17. Denbigh
(Office of Environment and Heritage 2003)

Maryland

The dominant European heritage element in the immediate area is Maryland. This estate is located approximately 1.3km north west of Pondicherry and is currently under consideration for State Heritage Listing. Dating from the mid-19th century Maryland is a rural estate located on a prominent hilltop overlooking the subject site. Its location provided an important visual reference point in the local area, also enhanced by the numerous plantings of Araucaria pines.

‘Maryland is State significant as an intact example of a major surviving mid-19th century rural estate, - the core of the original 1815 grant of 300 acres - within the Cumberland Plain which continues as a working dairy farm. It occupies a prominent hilltop location forming an important reference point in the local area, further emphasised by the conspicuous old Araucarian pine plantings - and gate lodges along the Northern Road. The homestead and associated buildings, gardens and plantings have characteristics of the Summit Model of homestead siting within an intact rural landscape setting fundamental to its interpretation. The traditional rural landscape character and its setting is largely uncompromised.’ (Office of Environment and Heritage 2002)

‘Changing the character of the subject site from rural to suburban will potentially impact Maryland. This does not preclude the subdivision and development of the subject site, but consideration should be given to how these parts of the subject site are developed, and controls that may be applied which will mitigate any impact of the proposed development on Maryland.’ (GML 2017)

Oran Park House

Oran Park House is located 2.1km south of Pondicherry and has State Heritage Significance. Situated on a natural high point in a rural context the house has undergone several significant modifications over time since the mid-19th century. Oran Park House consists of the main house, gardens, paddocks, silos and driveways.

Denbigh

Denbigh is a state heritage listed early rural farm complex consisting of early farm buildings, a homestead and associated plantings. The estate is considered ‘exceptional cultural significance for its historical, aesthetic, social and technical values’ (Office of Environment and Heritage 2003).

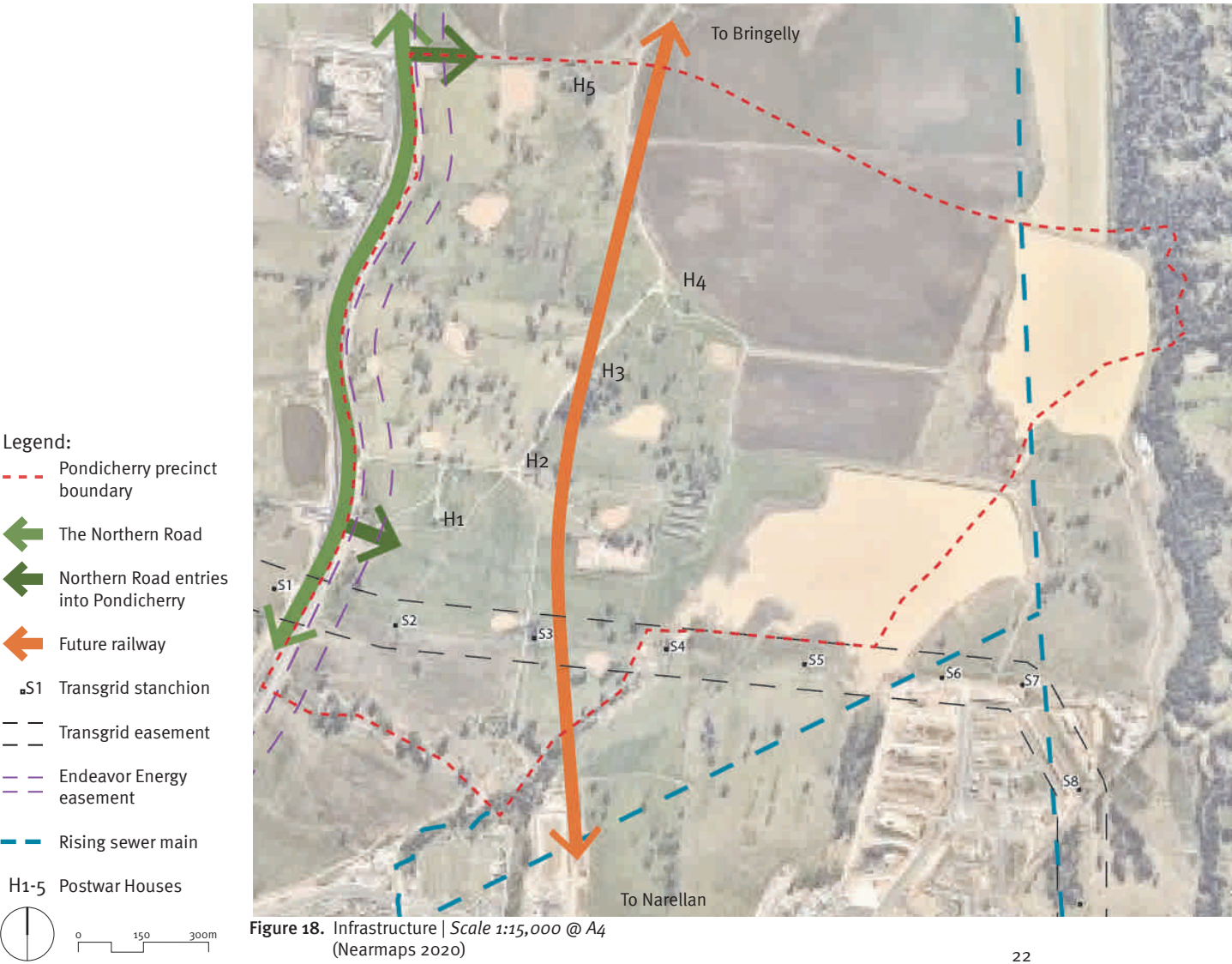
Pondicherry has numerous services affecting future planning and use of Pondicherry including:

The Northern Road

The Northern Road has recently been upgraded into a four lane road. Two major intersections have been built on The Northern Road to provide access to Pondicherry. It is expected that sound attenuation fencing will be part of the Northern Road Upgrade. Considerations should be given to dense screen planting along the Northern Road to reduce the impact of roads and fencing.

Transgrid Easement

A 330kV Transgrid powerline traverses the southern end of Pondicherry. This powerline has a 60m wide easement with two stanchions located within the site. There are various restrictions as to landuse that may occur within the easement.



Infrastructure

Refer Appendices for details of permissible uses of land within the easement.

Endevour Energy Easement

A 132kV Powerline easement runs parallel to The Northern Road along the western boundary of the Pondicherry site. There are various restrictions as to landuse that may occur within the easement.
Refer Appendices for details of permissible uses of land within the easement.

Gas

A Dial Before You Dig Search was conducted and no gas lines are located with Pondicherry precinct boundary.

Water

A Sydney Water rising water main traverses Pondicherry to the east of the site running from the north to the south.

Railway

There are plans for the future extension of the South West Rail Link connecting from Leppington to Campbelltown. This railway connection is proposed to run through the centre of Pondicherry from the north to the south. The rail line is proposed to be located in a cutting through Pondicherry linking to underground in Oran Park Town.

Stormwater

The lakes located in the south east and north east corner of the site are an important stormwater management asset for both Oran Park and future development in Pondicherry. The lakes will fulfill vital stormwater detention, water quality and recreation roles in the future development of Pondicherry.

Major Industrial/
Agricultural
Features

The current landuse of Pondicherry is fenced paddocks for the purpose of agriculture and dairy farming. The paddocks are generally cleared and grass covered with a range of pasture grasses and cropping. A pallette chipping facility operates in Pondicherry and there are large circular farm irrigators used for crop production.

Vehicle, Cyclist
& Pedestrian
Movements

There are existing shareway connections for pedestrians and cyclists from Oran Park Town to the south. Future shareway connections will need to be considered for connections along South Creek to the east and The Northern Road to the west.



Landscape Character Zones

Landscape character is a description of the combination of built, landscape, environmental and heritage elements that contribute to an area that create individual sense of place. Landscape character zones are areas that have similar landscape character. Landscape character zones are identified to enable the site to be more easily managed and read.

Some of the landscape character zones evident in Pondicherry include:

- Large scale irrigated agricultural fields and crop irrigators
- Houses (H1 - H5)
- Reservoir and floodplain
- Riparian corridor
- Infrastructure

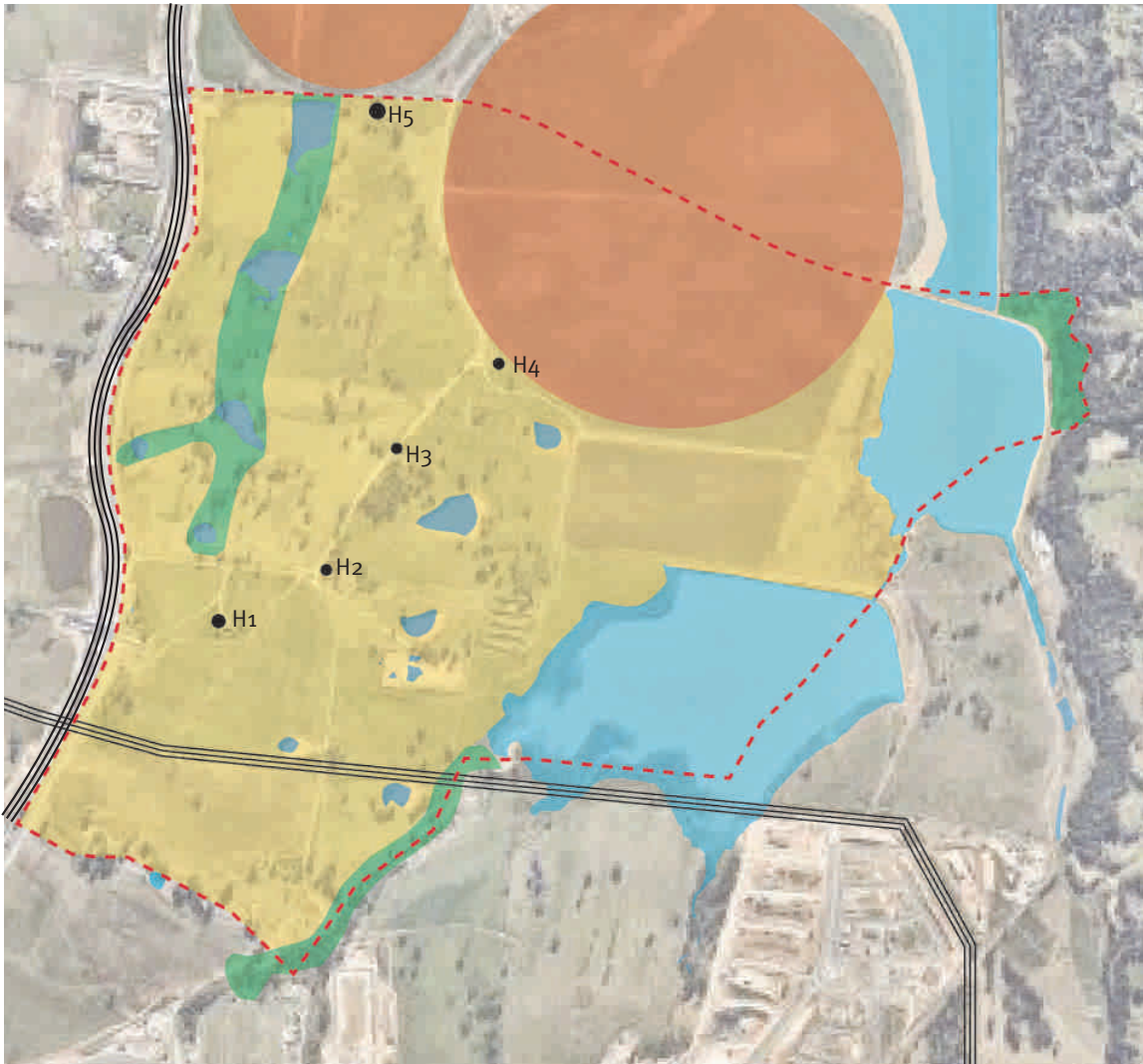
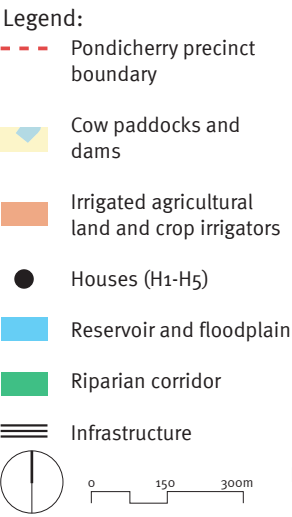


Figure 19. Character Zones | Scale 1:15,000 @ A4 (Nearmaps 2020)

Landscape Character Zones



Figure 20. Paddocks



Figure 21. Irrigated agricultural land and crop irrigators

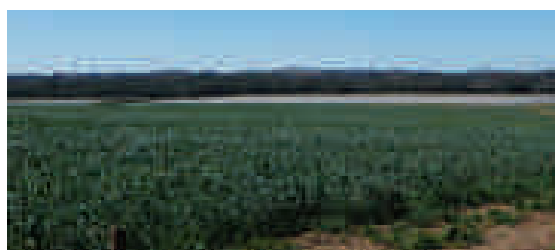


Figure 22. Reservoir and floodplains



Figure 23. Homes



Figure 24. Riparian Corridors

Paddocks

Pondicherry features a gently undulating topography divided by rural fencing and dotted with farm dams primarily used for dairy cows. A mix of Eucalyptus tree canopies, are sparsely scattered through the landscape.

Irrigated agricultural land and crop irrigators

Various crop irrigators are featured across the northern edges of Pondicherry, with an enormous large round irrigator dominating the north-eastern undulating landform.

Reservoir and floodplains

Large dams for irrigation water storage are located along the eastern boundary of the site. These dams fluctuate significantly in size.

Homes

Five inter-war period farmhouses occupy Pondicherry, each painted in a pastel colour.

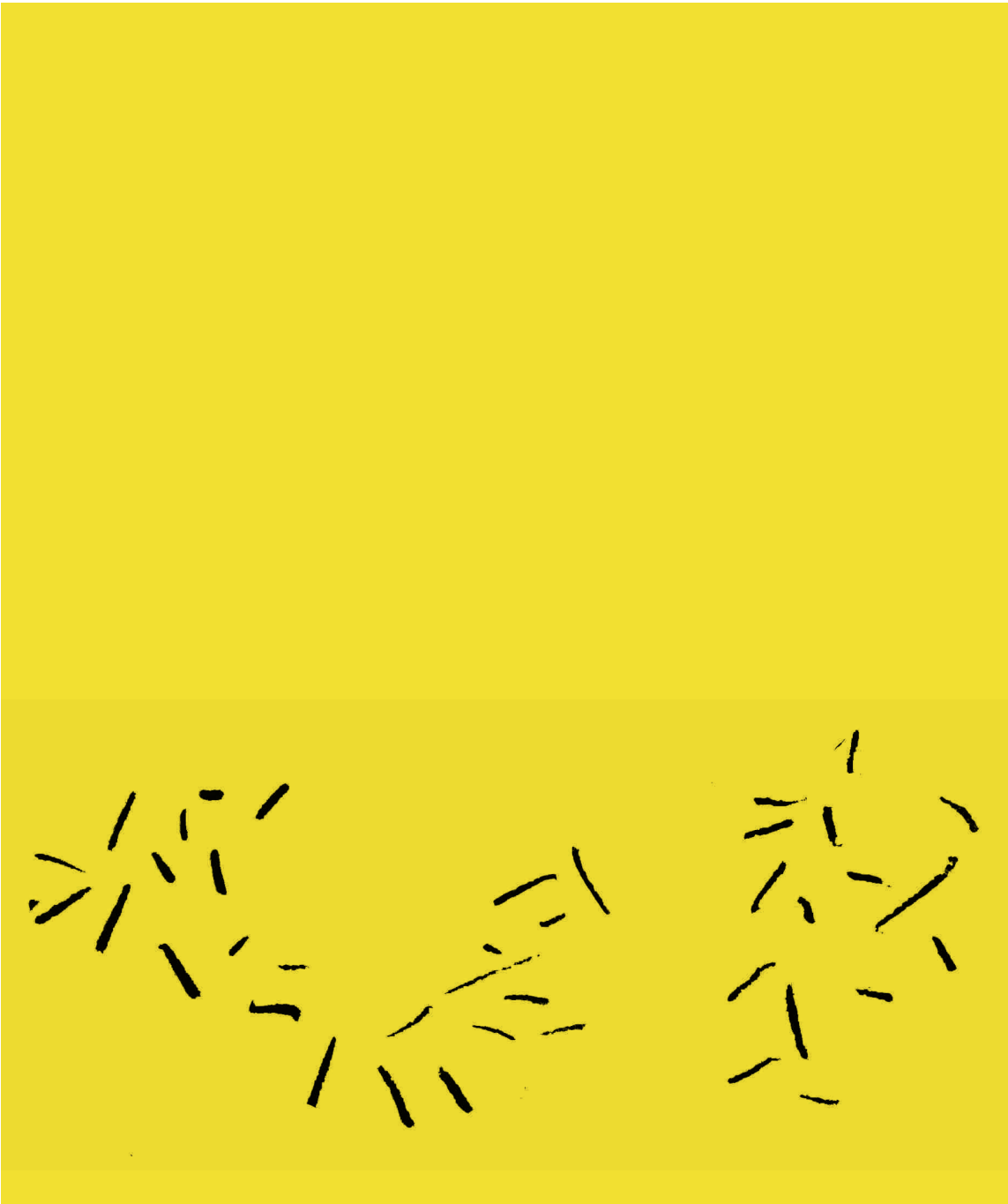
Riparian corridors

The vegetated riparian corridors of South Creek, Anthony Creek and to a lesser extent the tributary of Lowes Creek, provide a distinct character to the eastern and southern edges of Pondicherry. Vegetation communities of the River Flat Eucalypt Forest occupy the creekline.

Vegetation also occupies the drainage lines of Lowes Creek tributary but the vegetation is in poorer condition due to agricultural uses.

Infrastructure

The Transgrid electricity easement dominates the landscape where it runs through the southern end of Pondicherry from the east to the west. It is a visually dominating element with the 35m high stanchions and a wide cleared easement. The upgrade of the Northern Road is also a significant piece of infrastructure.



Methodology

This section of the report concentrates on the visual survey of Pondicherry and an analysis of:

- Key external viewpoints observed looking onto Pondicherry from adjoining areas; and
- Key viewpoints observed from Pondicherry.

A topographic map was used to identify public area landmark locations (i.e. elevated open space areas, public roads and prominent residential or heritage areas) as being prominent in the landscape.

- View points to Pondicherry were identified by driving throughout the surrounding suburbs to ascertain if Pondicherry could be identified; and
- View points from Pondicherry were identified by driving throughout the site to ascertain if the prominent landmarks could be seen.

Photograph points were identified and photos both single frame and panoramic were taken. A total of 14 viewpoints were studied. Landmarks and public sites were identified and located on plan to determine location and extent of view cone.

Each viewpoint photo was analysed and visible areas of the site and surrounds were noted on a topographic map of Pondicherry and surrounds.

Each of the topographic plans were overlayed to determine the most visible areas of the site. The most visible areas being those areas viewed from most viewpoints.

The visual catchment of Pondicherry is mostly defined by the topography, existing vegetation and urban development including The Northern Road and Oran Park Town.

Key Views From
Adjoining Areas

Key external viewpoints observed to Pondicherry from adjoining areas.

All viewpoints external to Pondicherry were chosen for the clarity of view from these points viewing back towards the site. Views to Pondicherry that were obscured or screened by existing landform, vegetation or built elements were not investigated.

Views are numbered 1-14, named, approximate elevation and approximate distance to sited area.

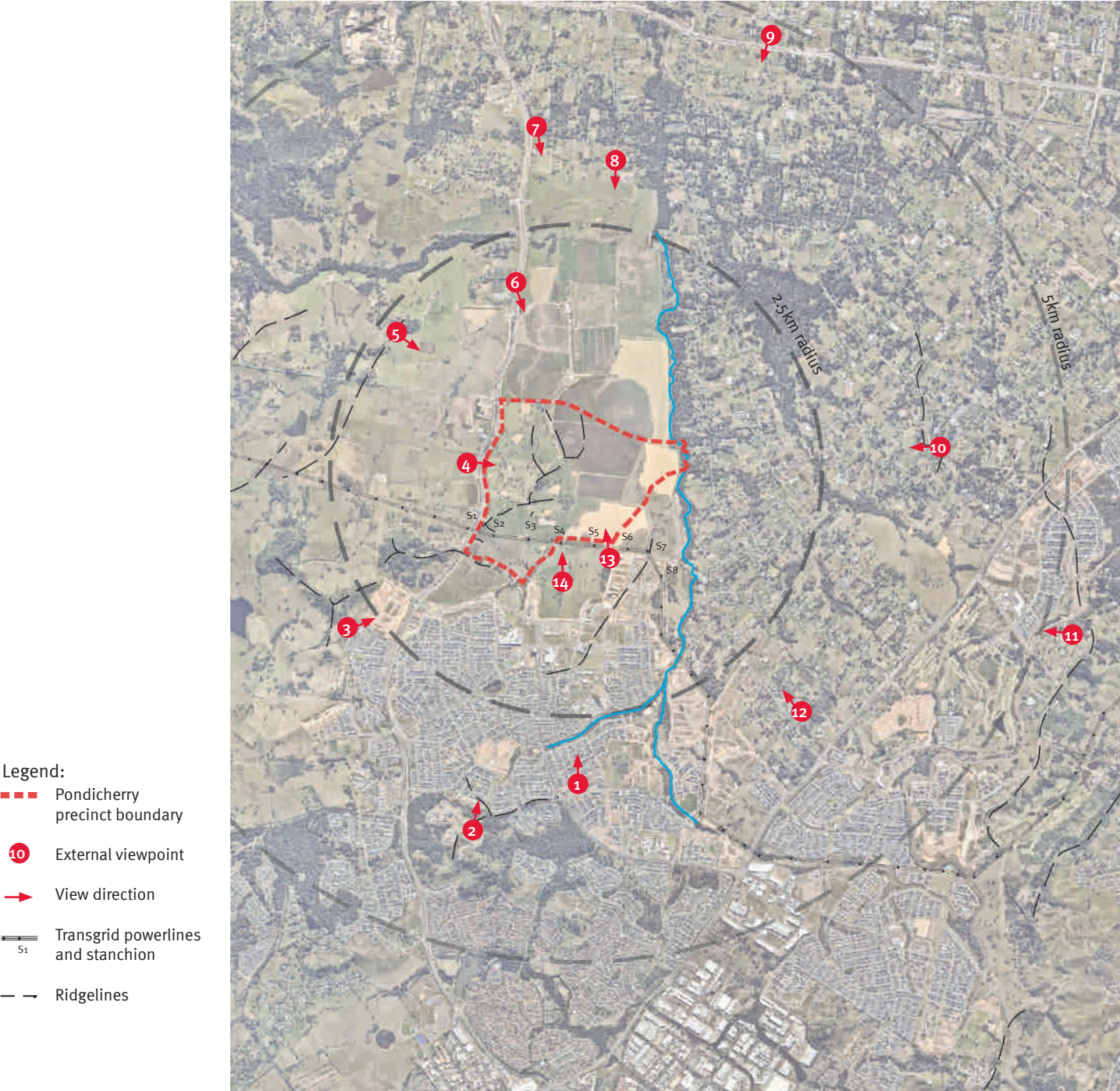


Figure 25. External Viewpoint Diagram | Scale 1:60,000 @ A4
(Nearmaps 2020, John M. Daly & Associates 2017)

Key Views From Adjoining Areas

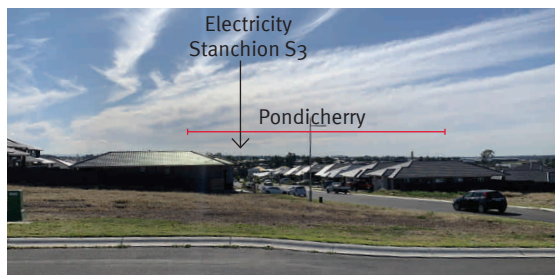


Figure 26. View 1 from Oran Park Town



Figure 27. View 2 from Harrington Park Crear Hill



Figure 28. View 3 from Arcadian Hills



Figure 29. View 4 from the Northern Road at Marylands Link Road 2 Intersection

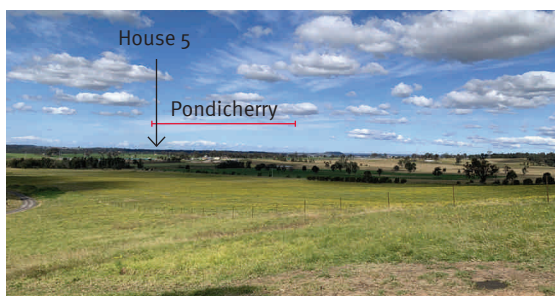


Figure 30. View 5 from ridge of Marylands Estate

1 Oran Park Town: 121.0m AHD, 2200m distance

Viewpoint 1 is taken from a high point in Oran Park Town on the corner of Oran Park Drive and Dan Cleary Drive. This location provides views of the south of Pondicherry to the prominent electricity stanchions.

2 Harrington Park Crear Hill: 148.0m AHD, 2700m distance

Viewpoint 2 is taken from a high point in Harrington Park being an open space area known as Crear Hill. This location provides views of the south of Pondicherry to the prominent electricity stanchions.

3 Arcadian Hills: 110.0m AHD, 1850m distance

Viewpoint 6 is taken from an unnamed open space area in the residential estate of Arcadian Hills where the south west corner of Pondicherry is viewed as well as the prominent electricity stanchions.

4 The Northern Road: 95.0m AHD, 20m distance

Viewpoint 4 is taken from The Northern Road adjacent to Hi-Quality Group at Marylands Link Road 2 Intersection, looking south east. This location provides views to the main Pondicherry NE to SW ridgeline and the north western area of Pondicherry.

5 Maryland: 120.0m AHD, 1275m distance

Viewpoint 5 is taken from a high points in the adjacent Maryland Estate. These viewpoints provide a wide panorama of the north western edge of Pondicherry. Pondicherry cannot be viewed from Maryland house as the immediate surrounding to the homestead is heavily screened with existing vegetation.

View 5 from Maryland

Key Views From Adjoining Areas

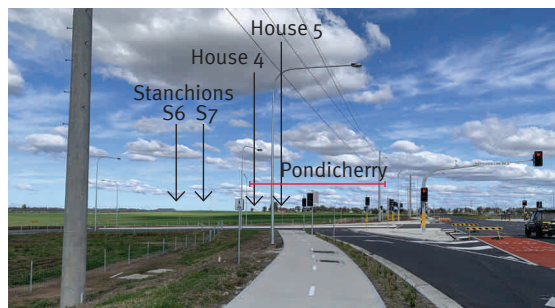


Figure 31. View 6 from Marylands Link Road 3

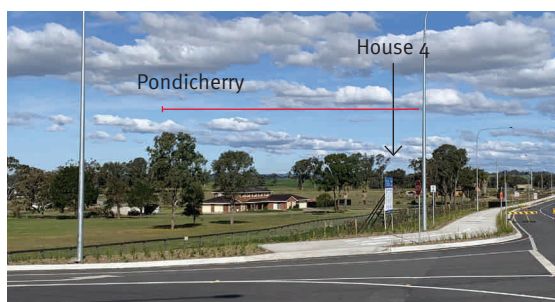


Figure 32. View 7

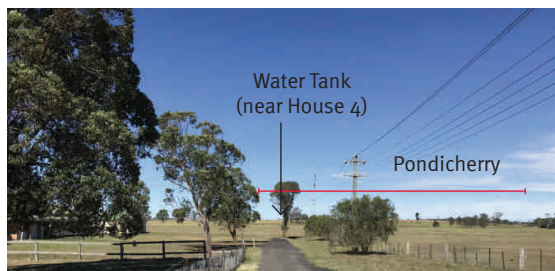


Figure 33. View 8



Figure 34. View 9

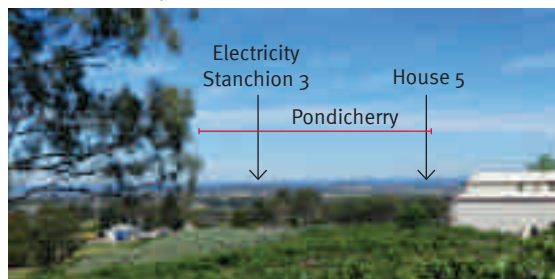


Figure 35. View 10 from 139 George Road Leppington

6 The Northern Road: 80.0m AHD, 1000m distance

Viewpoint 6 is taken from the Marylands Link Road 3 on The Northern Road and opposite Maryland Gatehouse. The north western area of Pondicherry can be clearly viewed, however only the stanchions are viewed from the rest of Pondicherry.

7 Bringelly: 55.0m AHD, 3276m distance, 2750m distance

Viewpoint 7 is taken from the corner of Carrington Road and The Northern Road Bringelly. Distant views of Pondicherry can be viewed between the trees including House 5.

8 Bringelly: 65.0m AHD, 2950m distance

Viewpoint 8 is taken from the end of Jersey Road Bringelly. Partial views of the northern area of Pondicherry can be glimpsed from Jersey Road including the watertank near House 5.

9 Rossmore: 80.0m AHD, 4650m distance

Viewpoint 8 is taken from 140 Bringelly Road, Rossmore. There are very limited views of Pondicherry due to the low lying viewpoint and vegetation along South Creek.

10 Leppington: 120.0m AHD, 2650m distance

Viewpoint 9 is taken from 39 Alma Road Leppington where there are partial views into the eastern edge of Pondicherry.

Key Views From
Adjoining Areas

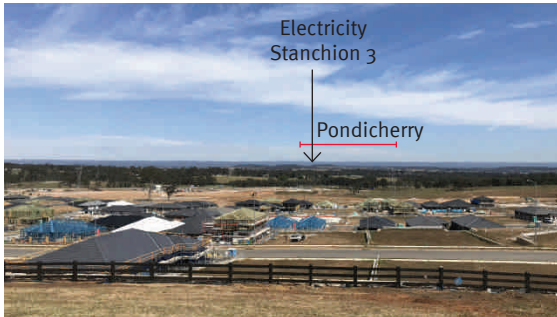


Figure 36. View 11 from Emerald Hill Fig

- 11 ‘Emerald Hills’ Fig Tree: 130.0m AHD, 4250m distance**
- Viewpoint 7 is taken from an open space on a high hilltop within Emerald Hills residential estate which features a mature fig tree. This location provides a wide panoramic view of Pondicherry. The fig tree is a significant landmark in the area and is also seen from the other direction from Pondicherry.



Figure 37. View 12 from Catherine Fields

- 12 Catherine Fields: 110.0m AHD, 2400m distance**
- Viewpoint 8 is taken from Springfield Road in Catherine Fields. Its high elevation above South Creek riparian corridor enables views into the northern end of Pondicherry.

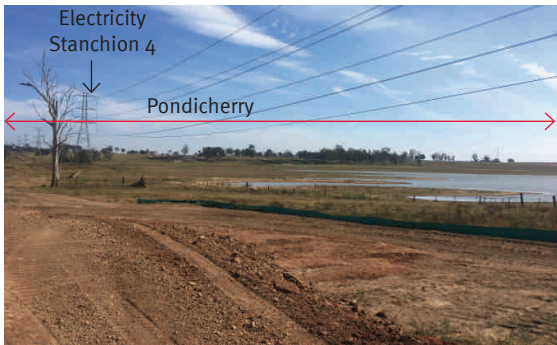


Figure 38. View 13 from Oran Park

- 13 Oran Park: 81.0m AHD, 130m distance**
- Viewpoint 13 is taken from the north of Oran Park at the northern end of Ron’s Creek. This location provides panoramic views of the south of Pondicherry as well as impending views of the electricity stanchions.

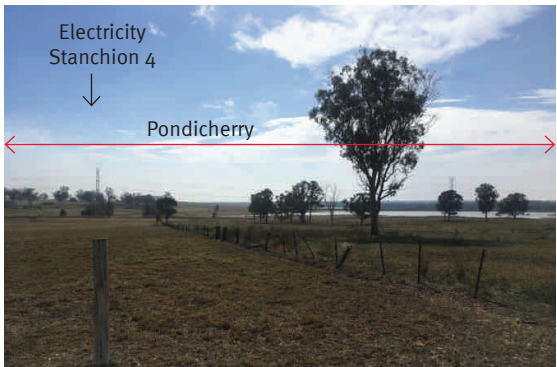
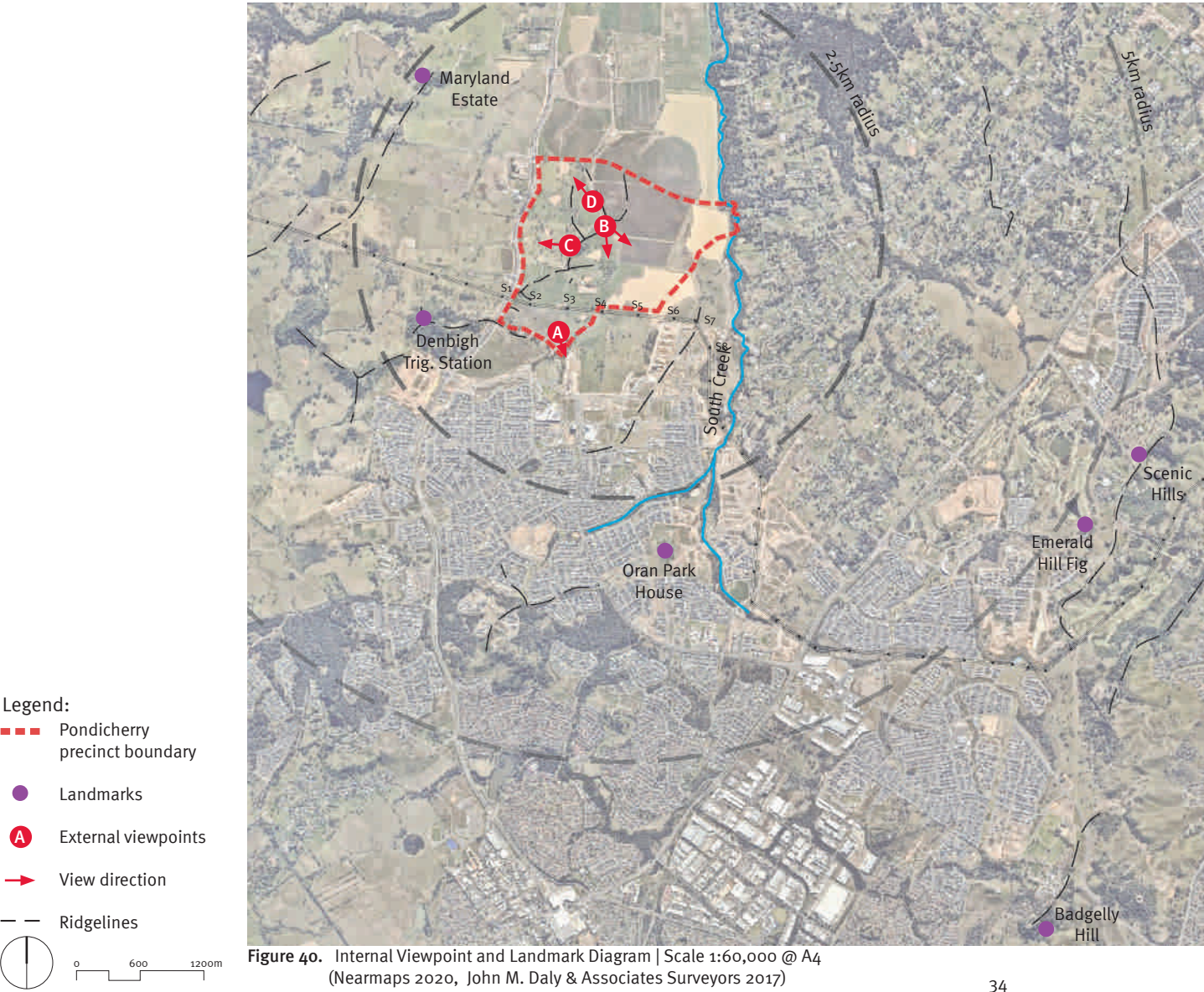


Figure 39. View 14 from Oran Park

- 14 Oran Park: 96.0m AHD, 350m distance**
- Viewpoint 14 is taken from a future open space in Tranche 26 of Oran Park. This elevated view will provide view corridors between future housing to Pondicherry including the electricity stanchions.

Key Views from Pondicherry

All viewpoints observed from Pondicherry were chosen for their clarity of view to key landmarks. Views that were obscured or screened with landforms, vegetation or built elements were not investigated.



Key Views from Pondicherry

Key views to the north

The visual catchment to the north of Pondicherry features vegetated rural agricultural land holdings in the foreground, with distant views along the South Creek Valley to the undulating landforms to the north.

Key views to the east

The visual catchment to the east of Pondicherry is dominated by the riparian vegetation of South Creek and a prominent ridgeline known as the ‘Scenic Hills’ in the distance.

- The riparian corridor of South Creek in the foreground provides screening between Pondicherry and the existing suburb of Catherine Fields to the east. The dense vegetation primarily consists of Eucalyptus and Casuarina species
- The ridgeline of the existing rural residential suburb of Catherine Fields is viewed in the mid-ground from Pondicherry. Further east is the prominent Scenic Hills ridgeline. The ‘Emerald Hills’ Fig Tree is a key landmark in this landscape located on a prominent ridgeline of the Scenic Hills and can be seen from Pondicherry.

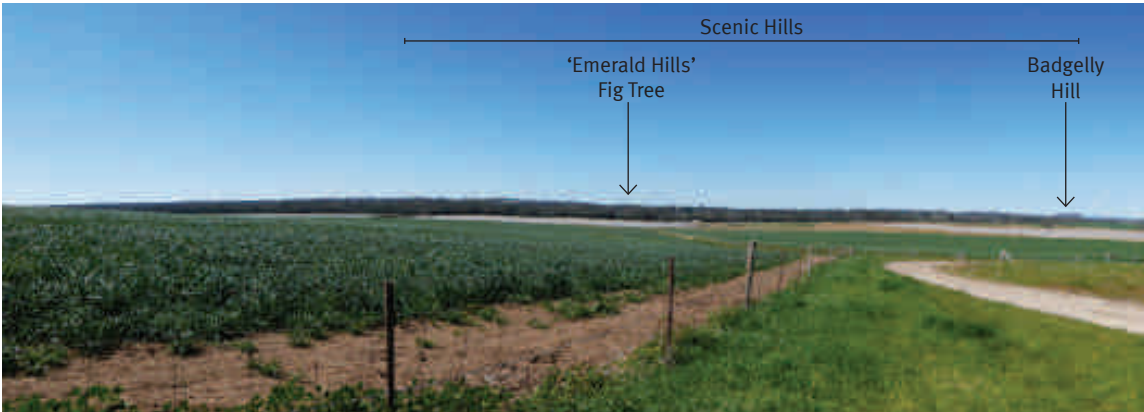


Figure 41. Panoramic views to the east

Key Views from
Pondicherry

Key views to the south

The visual catchment to the south is primarily defined by the development of Oran Park Town, in the midground, with the riparian corridor of Anthony Creek, the Pondicherry lake system and paddocks in the foreground. Glimpses of Oran Park House and prominent hills can be seen in the background of views from selected high points in Pondicherry.

- A** Viewpoint A (refer Figure 42) from Pondicherry shows the riparian corridor of Anthony Creek which is a tributary of South Creek. This riparian corridor is sparsely vegetated with mostly regrowth Eucalyptus and Casuarina species, however it also features some mature remnant Eucalypts.
- B** Viewpoint B (refer Figure 43) from Pondicherry shows glimpses of more elevated elements of Oran Park House, such as water towers and roofs. This can be seen over the top of the new development of Oran Park Town. Oran Park House is situated at 100.0m AHD the defining point is the elevated water tanks above the homestead.
- B** Viewpoint B (refer Figure 44) from Pondicherry is dominated by pastures and the lakes in the foreground, the Electricity Stations and development of Oran Park in the midground. Badgelly Hill is a prominent feature on the horizon.



Figure 42. Viewpoint A of Anthony Creek Riparian Corridor



Figure 43. Viewpoint B - Magnified glimpses of Oran Park House from Pondicherry

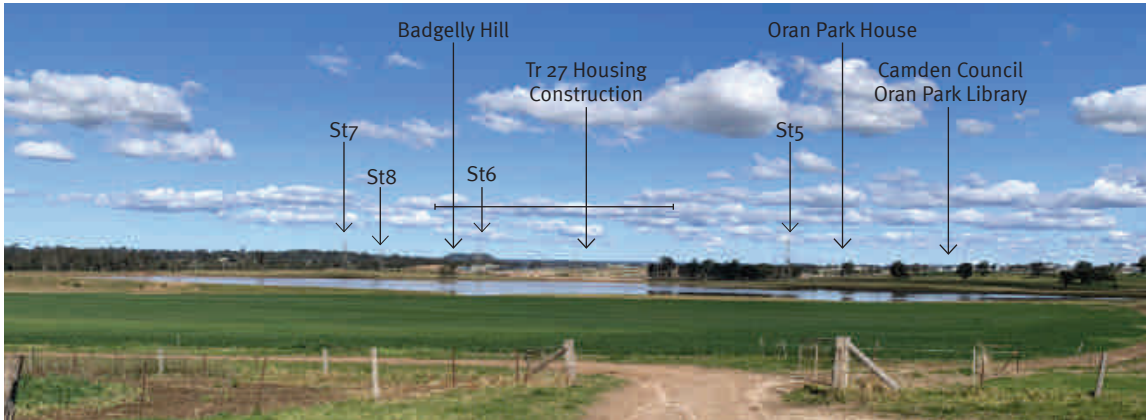


Figure 44. Viewpoint B - Panoramic views to the south

Key Views from Pondicherry

Key views to the west

The visual catchment to the west is defined by The Northern Road in the foreground, however the medium to long views feature a series of vegetated ridgelines including Maryland and The Blue Mountains in the distance.

- Viewpoint C (refer Figure 45) from Pondicherry shows a series of vegetated ridgelines along the western edge. Most of these ridgelines are currently zoned as large private rural land holdings and provide a rural backdrop to the view corridor.
- Viewpoint D (refer Figure 46) from Pondicherry shows The Maryland Estate in clear view. The Maryland residence itself is not visible, however the silhouette of established Araucarias are clearly viewed along the skyline.



Figure 45. View C towards Denbigh Trig. Station and vegetated ridgelines from Pondicherry



Figure 46. View D Panoramic views to the west



Landscape and Visual Assessment

The landscape and visual assessment is done by way of reviewing what the visual effect and visual sensitivity of the proposed development will have from the identified view points resulting in the visual impact.

The visual effect is the result of the perceived visual and landscape character changes that will occur brought about by the proposed development.

A high visual effect would occur if there is a strong visual contrast between the current and proposed uses.

A moderate visual effect would occur if there a blending of the development with the existing landscape

A low visual effect would occur if the proposal integrates seamlessly with the current landscape or recedes into the landscape.

The visual sensitivity is the result of how well the development sits in, complements the landscape character and is sympathetic to the existing landscape character. The visual sensitivity also includes consideration of the following aspects:

- distance of the viewpoint from the development,
- the length of time the view is evident,
- frequency and quantity of viewers affected,
- types of viewers (motorists driving past quickly or open space users overlooking the development)

The visual impact is a measure of the potential visual effect of the development on the viewer. The level of impact on the viewer also includes aspects such as distance to viewpoint, length of view, frequency of view and contrast of view.

The table below expresses the correlation between visual effect and visual sensitivity in the form of resultant visual impact.

		Visual Effect Levels		
		HIGH	MODERATE	LOW
Visual Sensitivity Levels	HIGH	High	High	Moderate
	MODERATE	High	Moderate	Low
	LOW	Moderate	Low	Low

Landscape and Visual Assessment

It is expected that the residential development of Pondicherry will achieve density, open space and tree canopy targets set by the NSW Government for the South West Growth Sector.

The landscape and visual impact of the development of Pondicherry must be viewed in the context of the significant RMS road upgrade works to The Northern Road and future residential developments of adjacent sites in Oran Park, Maryland and Lowes Creek Areas and across the broader South West Sector.

No.	Vantage Point	Visual Effect	Visual Sensitivity	Visual Impact	Recommendations
1	Dan Cleary Drive	LOW due to the existing development of Oran Park Town, the ridge lines, tree canopy and vegetation between Dan Cleary Drive and Pondicherry.	LOW – views to the site are distant and short duration	LOW – views to Pondicherry are distant, short term and are obscured by the Oran Park Town development in the foreground	Development should be in accordance with Camden Council DCP 2019. Streetscape and open space designs should feature large scale evergreen native species along ridgelines.
2	Crear Hill, Harrington Park	LOW due to the existing development of Oran Park Town, the ridge lines, tree canopy and vegetation between Dan Cleary Drive and Pondicherry.	LOW – views to the site are distant and the housing of Pondicherry will appear as a continuation of current Oran Park Town Development.	LOW – views to Pondicherry are distant and are obscured by the Oran Park Town development in the foreground	Development should be in accordance with Camden Council DCP 2019. Streetscape and open space designs should feature large scale evergreen native species along ridgelines.
3	Arcadian Hills Residential Development	LOW due to the existing development of Oran Park Town, the ridge lines, tree canopy and vegetation between Oran Park and Pondicherry.	LOW – views to the site are distant and short duration	LOW – views to Pondicherry are distant, short term and are obscured by the Arcadian Hills and Oran Park development in the foreground	Development should be in accordance with Camden Council DCP 2019. Streetscape and open space designs should feature large scale evergreen native species along ridgelines.

No.	Vantage Point	Visual Effect	Visual Sensitivity	Visual Impact	Recommendations
4	The Northern Road, Marylands Link Road 2	HIGH. The new development of Pondicherry will contrast markedly with the existing rural context.	LOW. Views of the Pondicherry development from The Northern Road are very prominent, however in context with future development in the SWGA, the visual sensitivity will be LOW. The Northern Road has recently been upgraded and widened with significant vegetation clearance along its length exposing the Pondicherry site. Motorists views to the site are short term and the view field will change. RMS have undertaken minor revegetation works along the corridor.	MODERATE. The residential development of Pondicherry will have a MODERATE visual impact	Review and augment RMS edge planting to The Northern Road. Consider establishing an integrated buffer planting and acoustic fencing strip between Pondicherry and the Northern Road to address visual and acoustic issues from an upgraded Northern Road.
5	Maryland Estate	MODERATE. The new development of Pondicherry must be viewed in context with the upgrade of The Northern Road and future development of Maryland Estate for housing.	LOW. The new development of Pondicherry must be viewed in context with the upgrade of The Northern Road and future development of Maryland Estate.	LOW. The new development of Pondicherry will be seen as a continuation of the development of Maryland Estate.	Development should be in accordance with Camden Council DCP 2019. Streetscape and open space designs should feature large scale evergreen native species along north south aligned roads and ridgelines. The design of open space areas in the north west sector of Pondicherry should interpret views to Maryland.

No.	Vantage Point	Visual Effect	Visual Sensitivity	Visual Impact	Recommendations
6	The Northern Road, Marylands Link Road 3	HIGH. The new development of Pondicherry and upgrade of The Northern Road will contrast markedly with the existing rural outlook from Marylands Link Road 3.	LOW. Views of the Pondicherry development from The Northern Road are very prominent, however in context with future development in the SWGA, the visual sensitivity will be LOW. The Northern Road has recently been upgraded and widened with significant vegetation clearance along its length exposing the Pondicherry site. Motorists views to the site are short term and the view field will change. RMS have undertaken minor revegetation works along the corridor.	MODERATE. The new development of Pondicherry will have MODERATE visual impact in context.	Development should be in accordance with Camden Council DCP 2019. Streetscape and open space designs should feature large scale evergreen native species along north south aligned roads and ridgelines. The design of open space areas in the north west sector of Pondicherry should interpret views to Maryland.
7	Cnr The Northern Road/Carrington Road	LOW. The current rural landscape of Pondicherry forms a backdrop to the rural Lots along Carrington Road. Due to the existing tree canopy, rural housing and future revegetation of Lowes Creek Riparian Corridor views to Pondicherry will be limited.	LOW. The current rural landscape backdrop of Pondicherry will be replaced by the revegetation of the Lowes Creek Riparian Corridor. Views are distant and duration is short	LOW The development of Pondicherry will have minimal impact from Carrington Road once the Lowes Creek Riparian Corridor is established.	Development should be in accordance with Camden Council DCP 2019. Streetscape and open space designs should feature large scale evergreen native species along ridgelines
8	End Jersey Road	LOW. Due to the existing tree canopy, rural housing and future revegetation of Lowes Creek Riparian Corridor views to Pondicherry will be limited	LOW. The current rural landscape backdrop of Pondicherry will be replaced by the revegetation of the Lowes Creek Riparian Corridor. Views are distant and duration is short	LOW The development of Pondicherry will have minimal impact from Carrington Road once the Lowes Creek Riparian Corridor is established	Development should be in accordance with Camden Council DCP 2019. Streetscape and open space designs should feature large scale evergreen native species along ridgelines

No.	Vantage Point	Visual Effect	Visual Sensitivity	Visual Impact	Recommendations
9	Bringelly Road, Rossmore	LOW Limited distant views of Pondicherry are available only from elevated parts of Bringelly Road. Vegetation along South Creek forms a considerable screen to Pondicherry	LOW Limited distant views short term views of Pondicherry are available due to existing South Creek vegetation. Views are distant and duration is short	LOW The development of Pondicherry will have minimal impact on views from Bringelly Road due to the dense South Creek vegetation	Development should be in accordance with Camden Council DCP 2019. Streetscape and open space designs should feature large scale evergreen native species along ridgelines
10	Leppington	LOW Limited distant views of elevated parts of Pondicherry are available only from elevated parts of Leppington. Vegetation along South Creek forms a considerable screen to lower areas of the Pondicherry property. Distant views to the Blue Mountains will be maintained.	LOW Limited distant views of elevated parts of Pondicherry are available only from elevated parts of Leppington.	LOW The development of Pondicherry will have minimal impact on views from Leppington Road due to the dense South Creek vegetation Distant views to the Blue Mountains will be maintained.	Development should be in accordance with Camden Council DCP 2019. Streetscape and open space designs should feature large scale evergreen native species along ridgelines. Protect and augment existing vegetation along the South Creek Riparian Corridor
11	Emerald Hills	LOW Foreground views are dominated by the residential development of Emerald Hills. Limited distant views of higher parts of Pondicherry are available only from elevated parts of Emerald Hills. Vegetation along South Creek forms a considerable screen to Pondicherry	LOW Limited distant views of higher parts of Pondicherry are available only from elevated parts of Emerald Hills.	LOW The development of Pondicherry will have minimal impact on views from Emerald Hills Distant views to the Blue Mountains will be maintained.	Development should be in accordance with Camden Council DCP 2019. Streetscape and open space designs should feature large scale evergreen native species along ridgelines. Protect and augment existing vegetation along the South Creek Riparian Corridor

No.	Vantage Point	Visual Effect	Visual Sensitivity	Visual Impact	Recommendations
12	Catherine Fields	LOW Limited distant views of elevated parts of Pondicherry are available only from higher parts of Catherine Fields. Vegetation along South Creek forms a considerable screen to Pondicherry.	LOW Limited distant views of higher parts of Pondicherry are available only from elevated parts of Catherine Fields.	LOW The development of Pondicherry will have minimal impact on views from Catherine Fields. Distant views to the Blue Mountains will be maintained.	Development should be in accordance with Camden Council DCP 2019. Streetscape and open space designs should feature large scale evergreen native species along ridgelines. Protect and augment existing vegetation along the South Creek Riparian Corridor.
13	Ron's Creek	MODERATE. The view from the north end of Ron's Creek to Pondicherry is very contained by the landform of Pondicherry. The dominant element of this view are the irrigation lakes which will be replaced by the proposed lakes central to the new Pondicherry development. This view will be compromised by the Ausgrid Easement.	MODERATE. The new development of Pondicherry including the lakes will formalise the existing view.	MODERATE. The new development of Pondicherry including the lakes will formalise the existing view.	Development should be in accordance with Camden Council DCP 2019. A strong landscape treatment is required to blend the residential development with the Open Space surrounding the lake system. Water quality control and management is imperative to ensure discolouration of water due to dispersive soils and algal blooms are minimised.
14	Future Open Space (Tr 26)	LOW. The foreground view from the Tranche 26 open space will look over future residential development in Oran Park. The new lakes and development of Pondicherry will appear in the mid ground and will blend with the Oran Park Development. The electricity stanchions of the Ausgrid Easement will dominate the skyline.	LOW. The new development of Pondicherry will appear visually as a continuation of the Oran Park development. The future approved Oran Park development will appear in the foreground and the Electricity Stanchions will dominate the skyline.	LOW. The new development of Pondicherry will appear as a continuation of the Oran Park development.	Development should be in accordance with Camden Council DCP 2019. Streetscape and open space designs should feature large scale evergreen native species along ridgelines.



Summary of Findings

The findings of the existing context analysis, landscape character and visual assessment are combined to provide opportunities and constraints for the future development of Pondicherry.

There are significant areas within Pondicherry that could be successfully developed which feature the following characteristics:

- Gently sloping land;
- Lightly vegetated;
- Located away from riparian corridors;
- Located outside of service easements.

Other areas of Pondicherry are more constrained whether by asset protection zones, electricity easements, the proposed future railway and riparian corridors. Careful consideration needs to be undertaken in and around these areas to reduce the visual impacts of these elements.

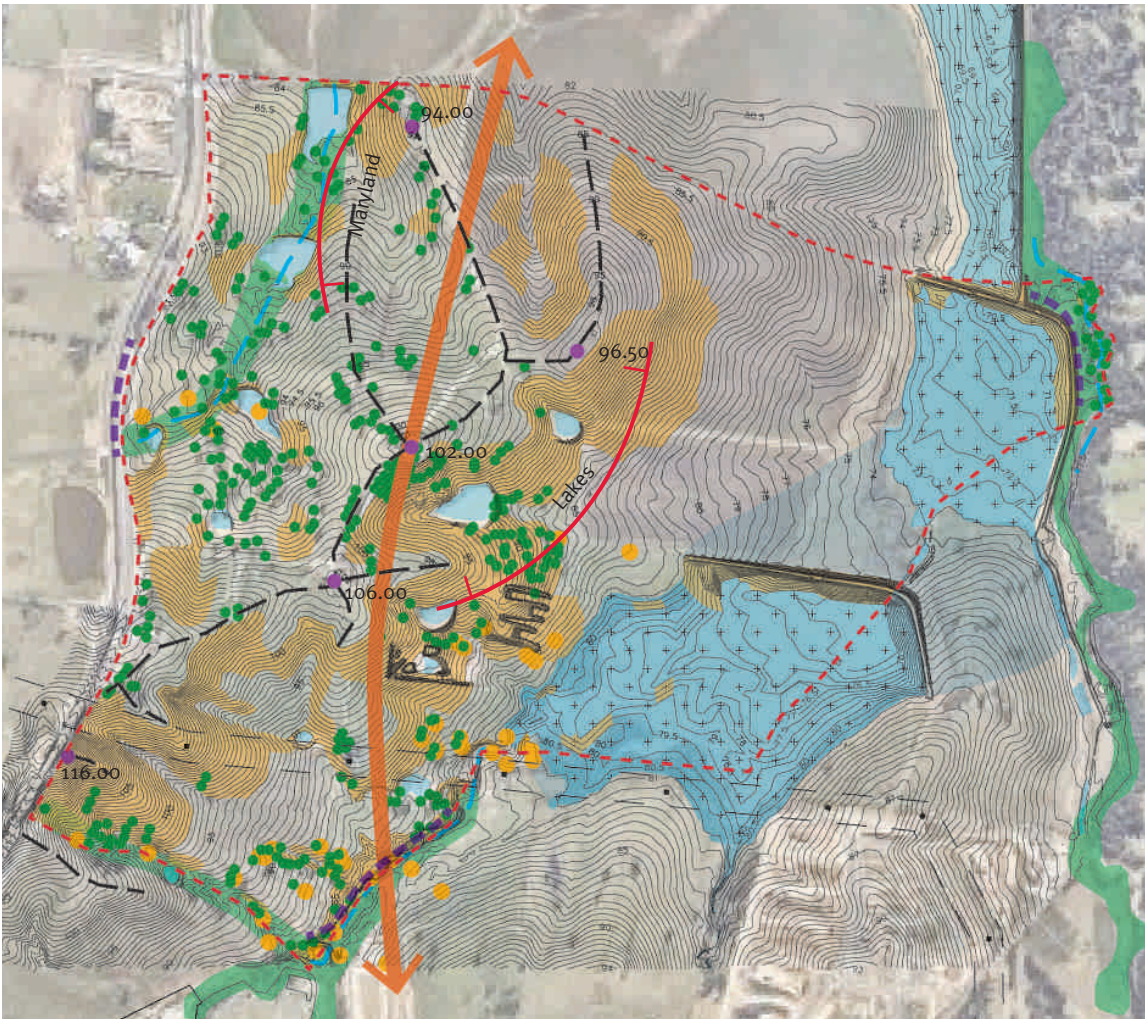
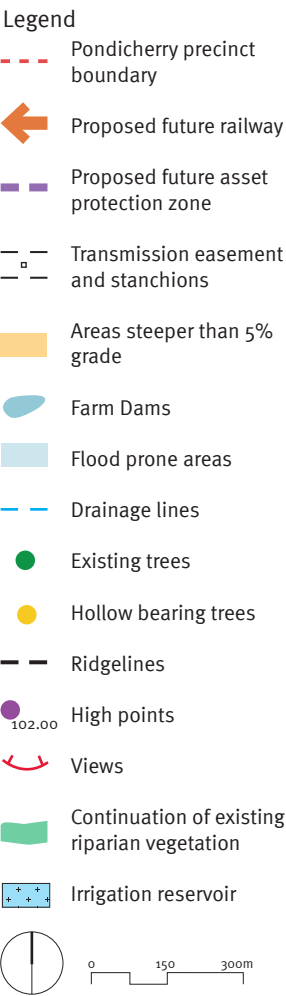


Figure 47. Summary of findings | Scale 1:15,000 @ A4 (Nearmaps 2020)

- Legend
- Pondicherry precinct boundary
 - Ridgelines
 - High points
 - Proposed future railway
 - Transmission easement and stanchions
 - Visually sensitive area from Maryland
 - Screening to The Northern Road
 - Continuation of existing riparian vegetation
 - Large evergreen trees to ridgelines
 - Opportunity for green/open space linkages
 - Interpret 1816 property boundary between Nonorrah and Netherbyes

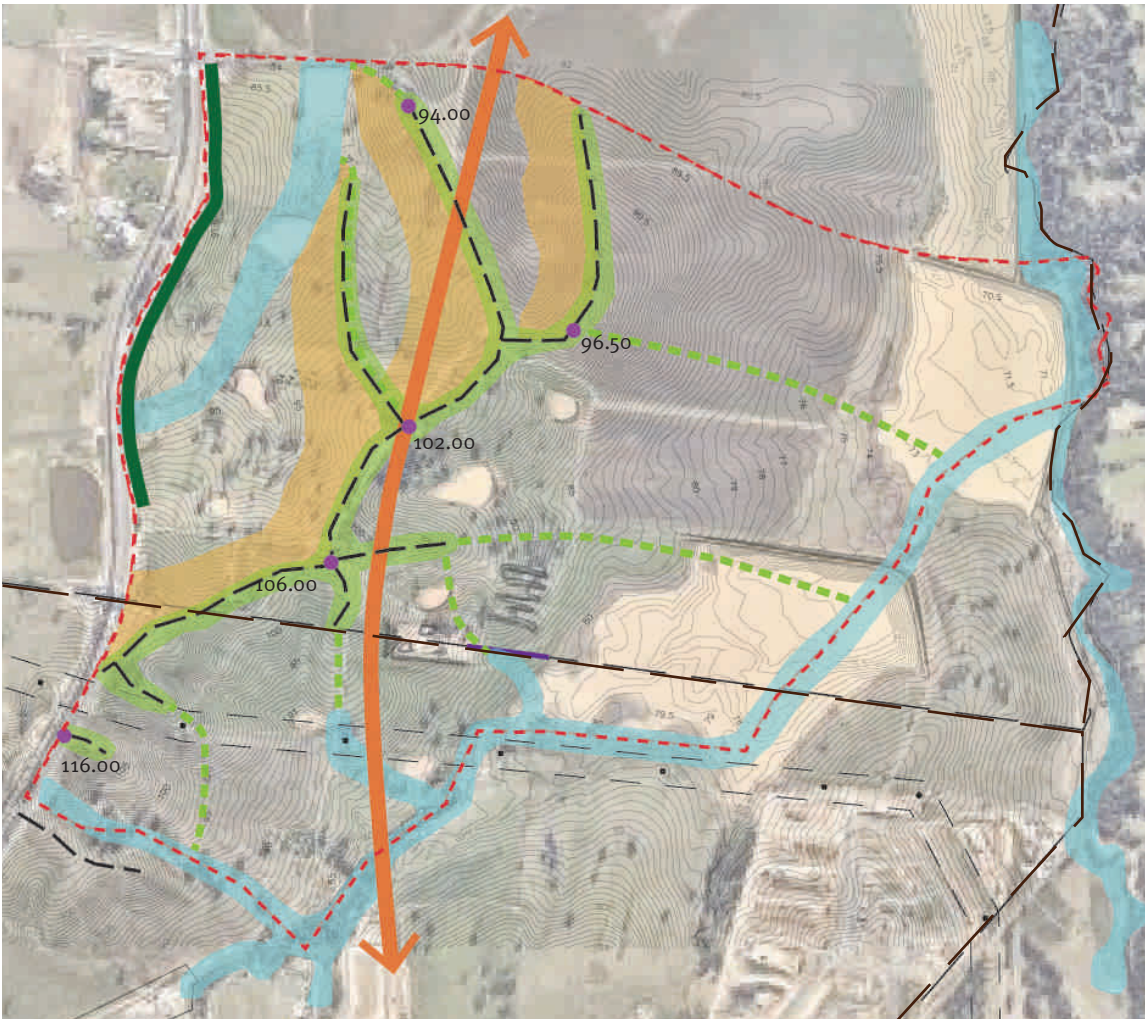
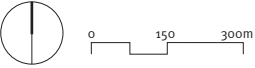


Figure 48. Opportunities and Constraints | Scale 1:15,000 @ A4
(Nearmaps 2020)

Landscape Mitigation Strategies

It is anticipated that development of the Pondicherry site will be a continuation of the development style and densities seen in Oran Park Town.

Lot sizes are likely to be as follows:

Low density residential typically:

- Lot area 300 - 600m²
- Lot sizes 10x30, 12x30, 15x30, 18x30, 20x30m
- 1-2 stories high

Medium density townhouses and attached dwellings typically:

- Lot area 200 - 300m²
- Lot sizes 7x30, 10x30m
- 2-6 stories high

To maximise the landscape character and visual quality of Pondicherry the following recommendations should be considered:

- Work with the gently undulating existing landform and topography to maintain the gentle grades of Pondicherry and surrounds without the need for excessive earthworks and benching;
- Provide opportunities at ridge line and hill tops for planting of canopy tree and significant trees to ensure ridge lines have a treed appearance;
- Locate open space areas along ridge top and high points to provide vantage points and views to surrounding point of interest such as Maryland, Badgelly Hill and Oran Park house;
- Investigate opportunities to provide interpretative information, maps and view corridors to significant sites and vistas for future residents to better appreciate the early history of their local area;
- Incorporate screen planting, buffer planting and mounding using locally native species where space allows along The Northern Road to screen views to and from Pondicherry;
- Restore, extend and enhance existing riparian corridors;
- Interpretation of names of places and people with historical significance to Pondicherry;
- Develop a street tree planting strategy that responds to the various landscape character zones and topography;
- Encourage tree planting in front yard of lots to complement street trees and increase tree canopy throughout Pondicherry.

To minimise the development implications on the existing landscape the recommendations are as

follows:

- Consider edge treatments to:
 - Infrastructure: rail corridor, transmission easement, plant The Northern Road with vegetated visual screening;
 - Riparian Corridors: Anthony Creek, South Creek and the area to the north west of the site.
- Carefully develop along ridgelines providing opportunity for evergreen tree lined streets and open space areas;
- Provide green connections between open space areas and riparian corridors with the use of tree lined streets and shareway connections for pedestrians and cyclists;
- Locate open spaces which are clearly visible from vantage points for internal and external views;
- Maintain natural drainage systems with riparian corridors and provide green connections for fauna habitats;
- Maximise opportunity to retain existing significant mature trees from Cumberland Plain Woodland community for fauna habitat and retain existing scale of mature trees to the site;
- Undertake development in accordance with Camden Council DCP 2019;
- Extend major road, shareway and open space connections from the existing Oran Park Development into Pondicherry.

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Appendices

Transgrid Easement Guide

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Endeavour Energy Guide

Refer <https://www.endeavourenergy.com.au/wps/portal/ee/!ut/p/a1/>