

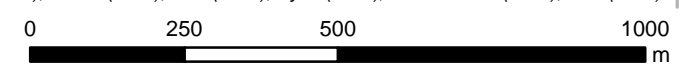


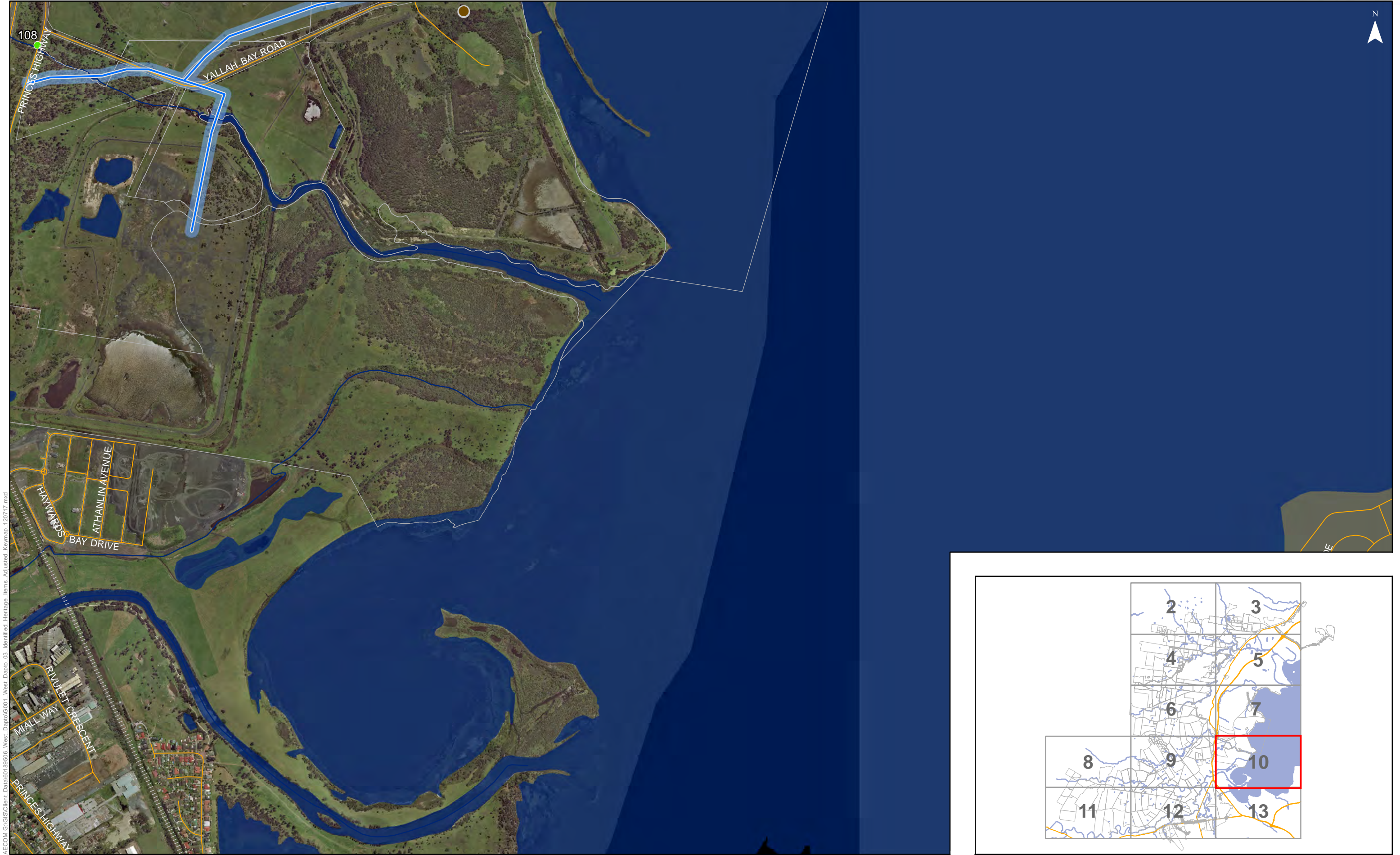
AECOM G:\GIS\Client_Data\60189506_West_Dapto\G001_West_Dapto_03_Identified_Heritage_Items_Adjusted_Keymap_120717.mxd

- | | | |
|-----------------------------------|-------------------|-----------------------------|
| — Water pipeline | — Road | Impact on site |
| — Wastewater pipeline | — Railway | ● Direct impact |
| — Water pipeline 25 m buffer | — Waterway | ● Potential impact |
| — Wastewater pipeline 25 m buffer | — Reservoir | ● Potential indirect impact |
| | ● Pumping station | ● No impact |

WEST DAPTO RELEASE AREA
IDENTIFIED HERITAGE ITEMS IN RELATION TO THE PROPOSED WATER AND WASTEWATER SERVICES

Source: LPMA (2011), AMBS (2010), HLA (2006), Hynd (2005), Navin Officer (2004), HLA (2004)

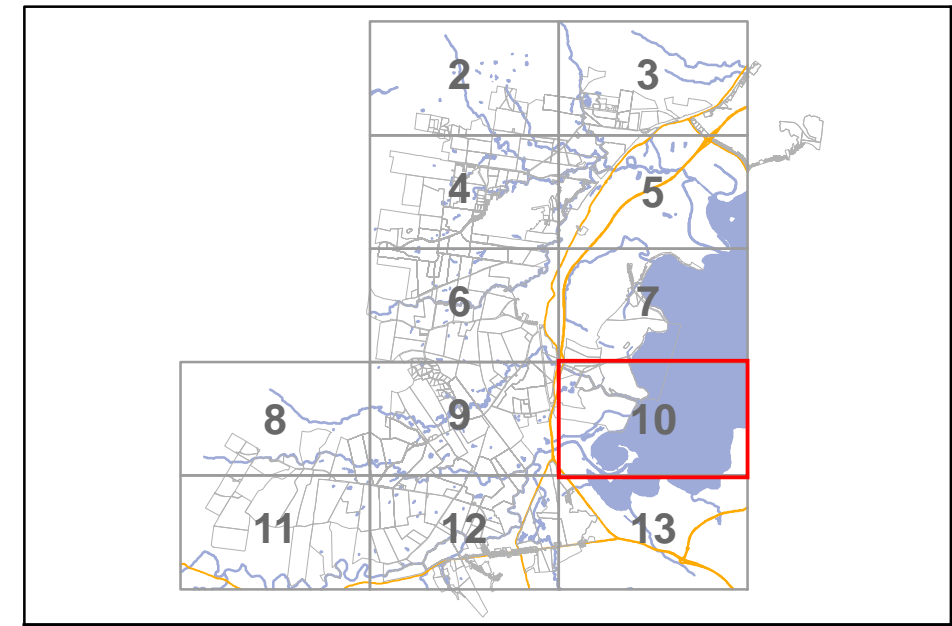
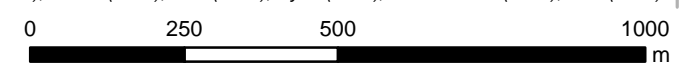


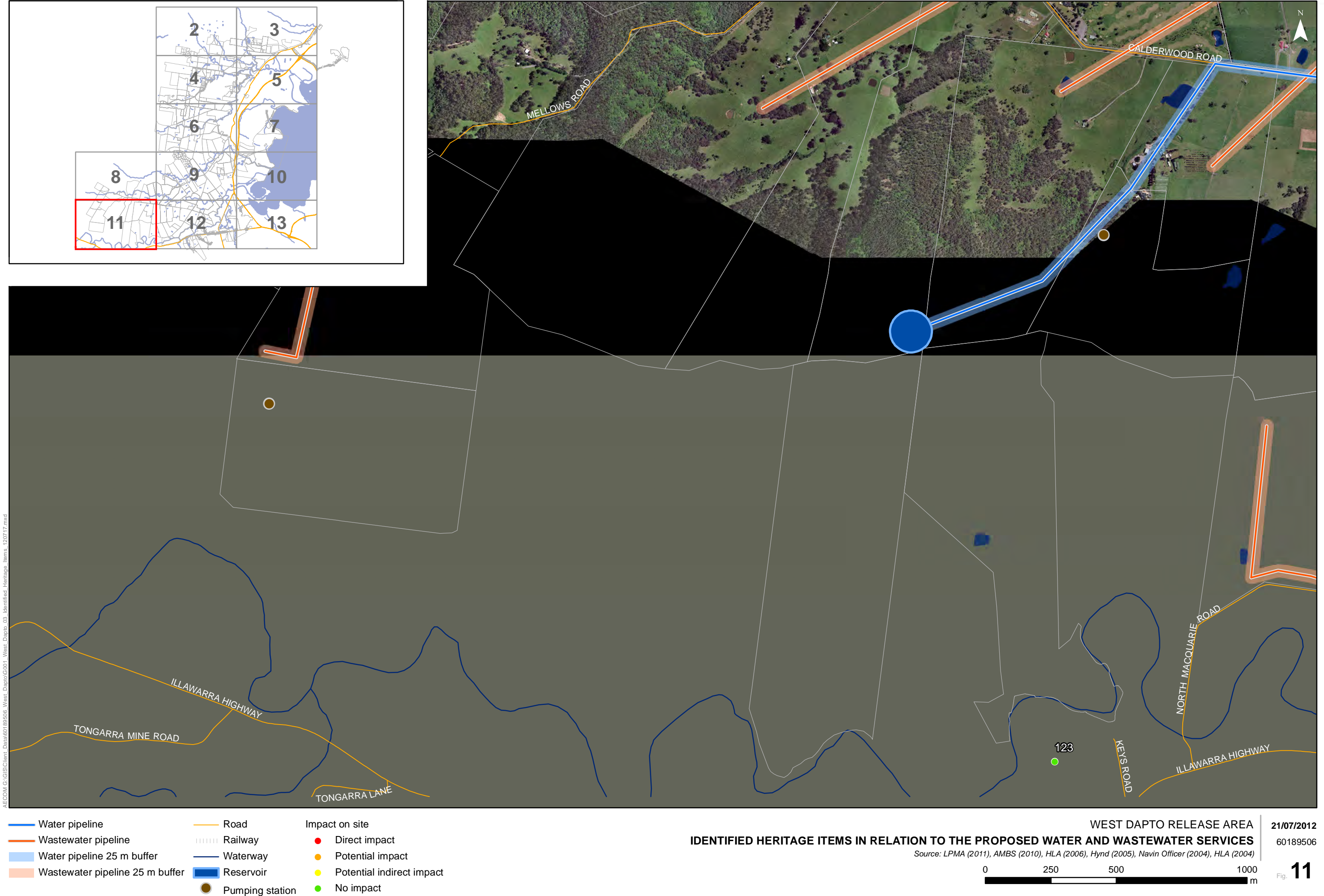


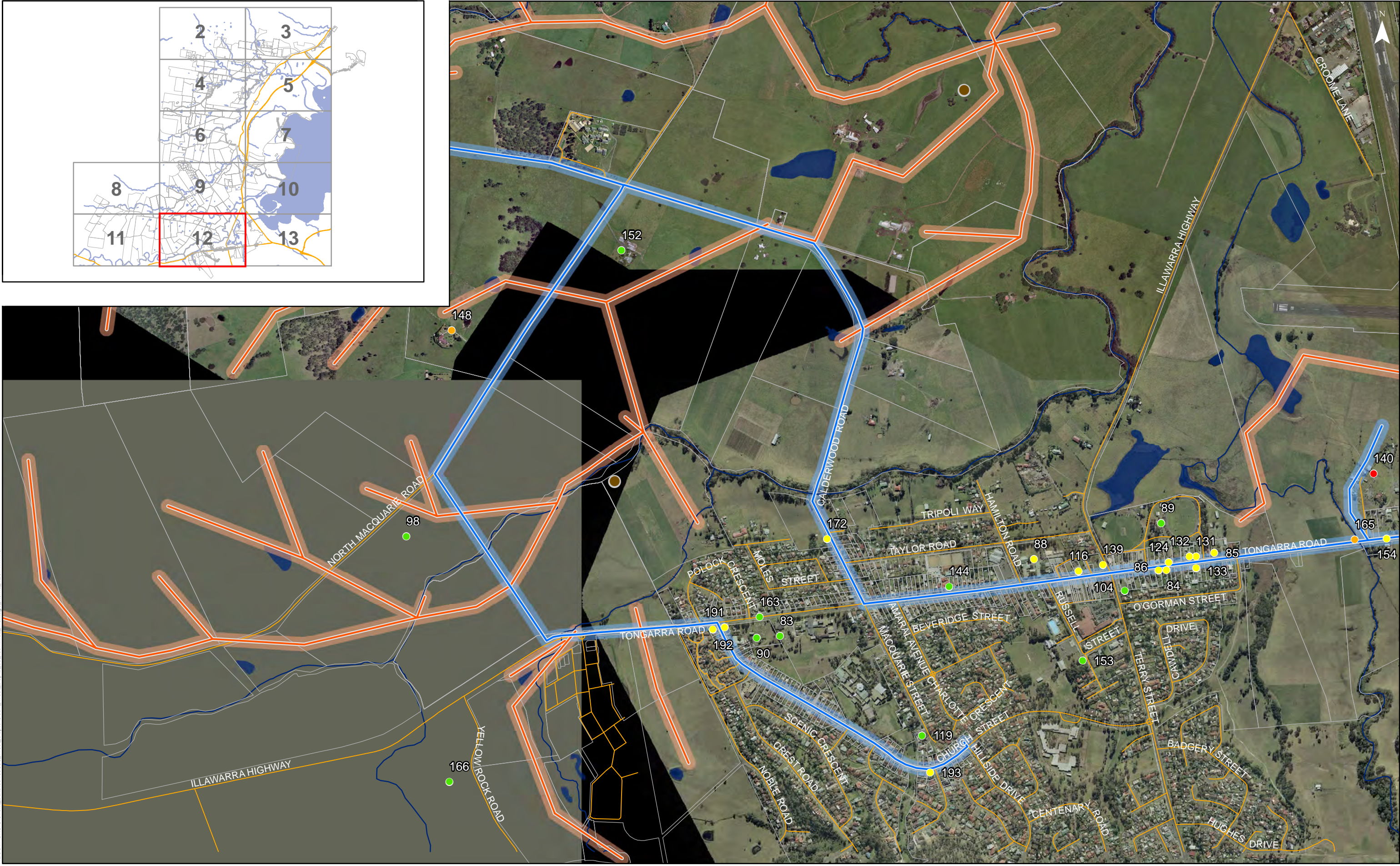
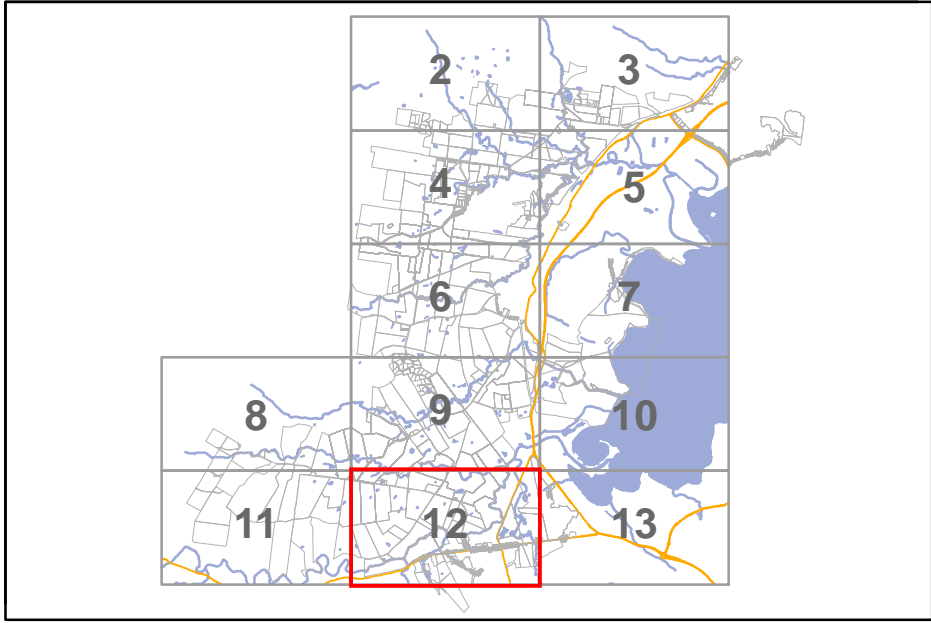
AECOM G:\GIS\Client_Data\60189506_West_Dapto\G001_West_Dapto_03_Identified_Heritage_Items_Adjusted_Keymap_120717.mxd

- | | | |
|---------------------------------|-----------------|---------------------------|
| Water pipeline | Road | Impact on site |
| Wastewater pipeline | Railway | Direct impact |
| Water pipeline 25 m buffer | Waterway | Potential impact |
| Wastewater pipeline 25 m buffer | Reservoir | Potential indirect impact |
| | Pumping station | No impact |

WEST DAPTO RELEASE AREA
IDENTIFIED HERITAGE ITEMS IN RELATION TO THE PROPOSED WATER AND WASTEWATER SERVICES
Source: LPMA (2011), AMBS (2010), HLA (2006), Hynd (2005), Navin Officer (2004), HLA (2004)

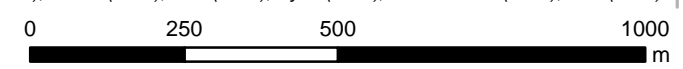


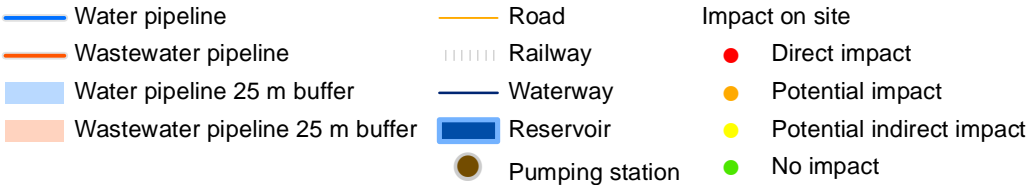
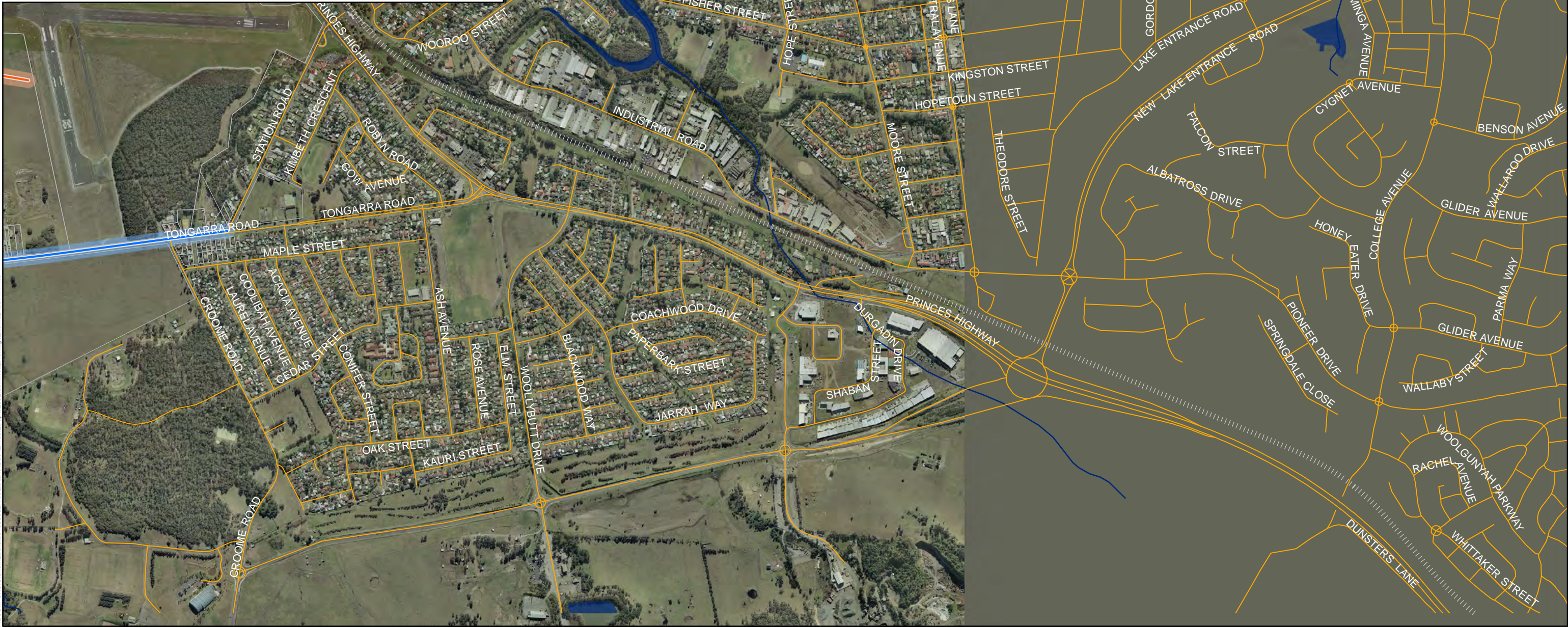
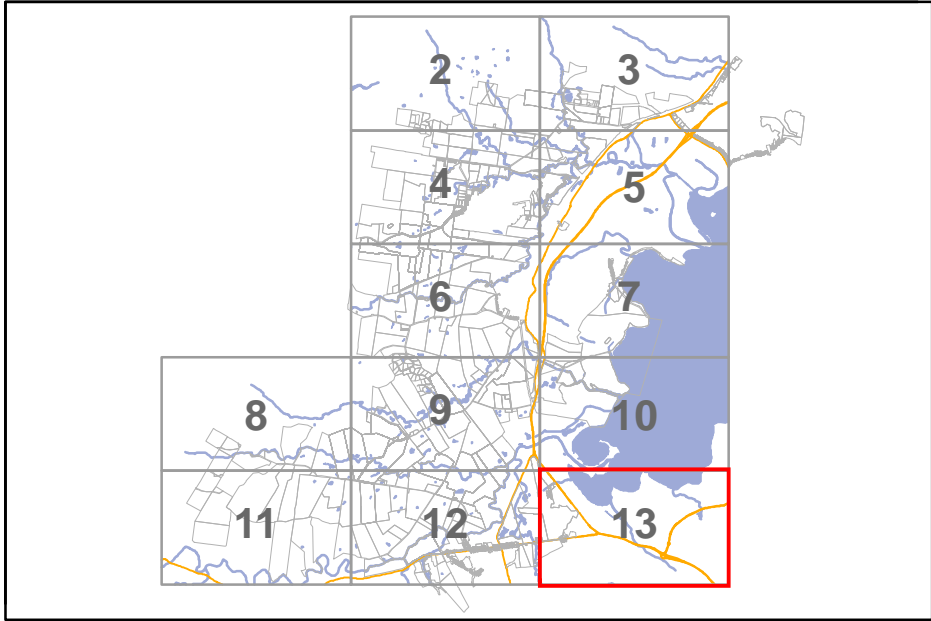




- | | | |
|---------------------------------|-----------------|---------------------------|
| Water pipeline | Road | Impact on site |
| Wastewater pipeline | Railway | Direct impact |
| Water pipeline 25 m buffer | Waterway | Potential impact |
| Wastewater pipeline 25 m buffer | Reservoir | Potential indirect impact |
| | Pumping station | No impact |

WEST DAPTO RELEASE AREA
IDENTIFIED HERITAGE ITEMS IN RELATION TO THE PROPOSED WATER AND WASTEWATER SERVICES
Source: LPMA (2011), AMBS (2010), HLA (2006), Hynd (2005), Navin Officer (2004), HLA (2004)





5 Description, Significance Assessment, Impacts and Recommendations

5.1 Introduction

During the Updated Desktop assessment a list of previously identified sites was compiled and the proximity of the sites to the proposed pipelines was assessed. The final list identified 195 sites in the Concept Approval Area. Those sites that were determined to not be impacted by the project were not assessed during the field survey (120) and have not been included below. A complete list of sites, with a brief description and history, where available, is provided in Appendix 1

The following sections provide a description and brief history of the items surveyed to enable an assessment of the item's significance. The description and history followed by an assessment of significance, using Heritage Branch guidelines, as outlined in Section 4.5. It outlines pipeline routes in relation to the identified heritage items, the potential impacts of the construction on the items and provides management recommendations to ameliorate or mitigate these potential impacts.

The following surveyed items are set out in numerical order, based on the site numbers assigned by HLA and followed and expanded by this current report. The site numbers are provided in a bracket after the site name.

The field survey undertaken by AMBS (2010) revisited sites identified by HLA (2005), however, in several cases, the sites were mistaken and a nearby item recorded. This created a number of extraneous records, some with no heritage significance. In these instances, in an attempt to avoid further confusion the original HLA recording has been given the suffix "a" and the AMBS recording the suffix "b". The management recommendations are summarised in Appendix 1

The project has been divided into two phases: the Project Approval Area and the Remaining Concept Approval Area, as discussed in Section 1.1. As construction within the Project Approval Area is anticipated to commence shortly after approval is granted, the recommendations for the Project Approval Area are more specific. Those for the remaining Concept Approval Area are broader and may require refining during detailed design. Sites identified within the Project Approval Area are addressed in Section 5.2, while those in the remaining Concept Approval Area are covered in Section 5.3.

The impact of the proposed pipelines on a site was divided into four categories. In Appendix 1 these impacts are denoted by a symbol and have the following definition

- No impact ●
- Indirect impact – where the item was unlikely to be removed as a result of construction but could potentially be impacted by vibration during construction ■
- Potential Impact – where the exact route of the pipeline would determine if the item was to be directly impacted ◆
- Direct Impact – where the current alignment will have an impact on an item or an element of its significance ▲

Area	Direct Impact	Potential Impact	Indirect Impact	No Impact
Project Approval Area	2, 18, 24b, 30, 50, 171, 188	17a, 17b, 20, 21, 22a, 22b, 23, 26, 27, 36a, 36b, 39, 40, 47, 48, 49, 55, 56, 59, 64, 76, 182, 183, 184, 185, 186, 187, 189	10, 11	19, 24a, 32, 38, 190, 195
Remaining Concept Approval Area	140, 180	61a, 61b, 62, 63, 66, 67, 68, 72, 73, 139, 148, 154, 165, 172, 191, 192, 193	84, 85, 86, 88, 116, 124, 131, 132, 133	65, 69, 138, 141, 144

Table 2 Summary of site impacts.

Note: for site names and relevant map numbers refer to Appendix 1.

The impacts are summarised in Table 2 and outlined in Figures 14 to 25. Within the Project Approval Area direct impacts are anticipated to seven items:

- Kembla Grange Settler's Cemetery (2) – the Cemetery is listed on the 1990 Wollongong LEP. It is recommended that further work be undertaken to determine the likelihood of graves occurring outside the current cemetery boundary
- Brisbane Grove (18) – the house is listed on the 1990 Wollongong LEP. It is recommended that impacts be avoided by rerouting the pipeline. If this is not practicable it is recommended that archival recording be undertaken prior to demolition
- Modern House and Farm (24b) – the House and Farm are not listed on a heritage schedule and are not considered to be of heritage value and no mitigation measures are required
- Barlyn Dairy (30) – is not listed, although the adjacent Barlyn Garden is listed on the 1990 Wollongong LEP. It is recommended that impacts be avoided by rerouting the pipeline. If this is not practicable it is recommended that archival recording be undertaken prior to demolition
- Avondale (50) – Avondale has previously been assessed as being of State significance. It is recommended that impacts be avoided
- Tramway (171) – The tramway is listed on the 1990 Wollongong LEP, it is recommended that a research design is developed to determine whether archaeological investigation is likely to yield information not available elsewhere
- Coral Tree Avenue (188) – the Avenue is not listed on a heritage schedule and is not considered to be of heritage value and no mitigation measures are required

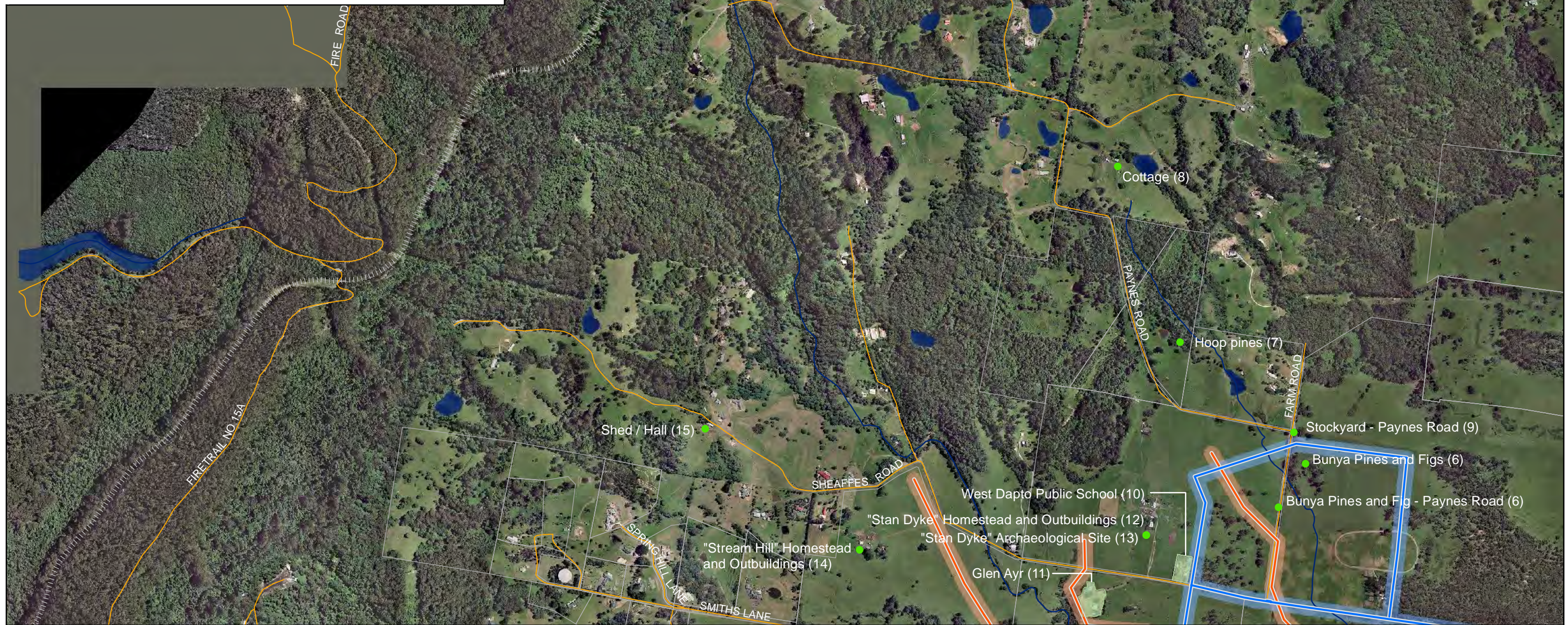
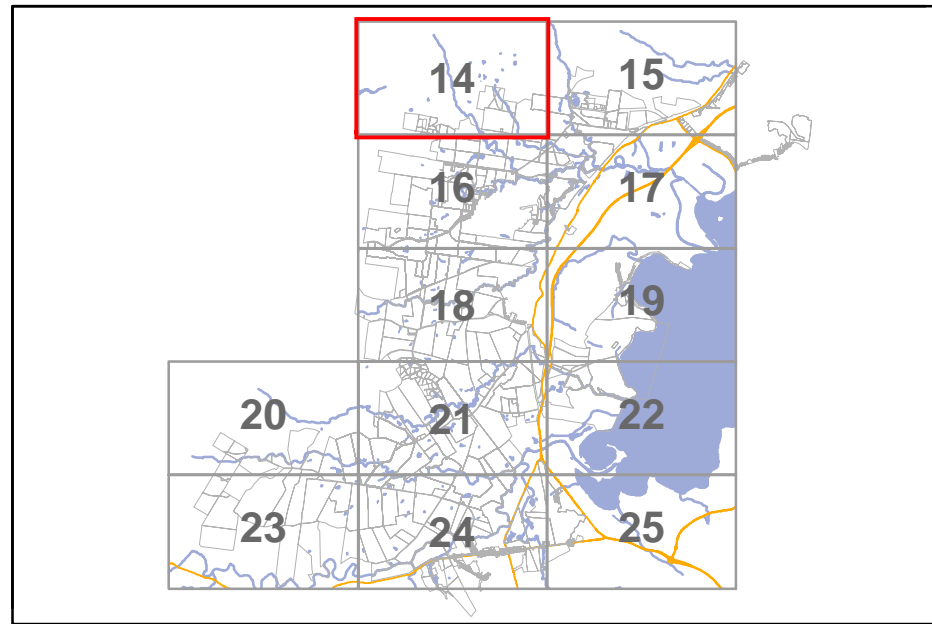
There are the potential impacts to a further 28 items, depending upon the exact location of the pipelines within the 50 m corridors. Indirect impacts (vibration during construction) are possible to two items and five items would not be impacted.

In the remaining Concept Approval Area direct impacts are anticipated to two items:

- Mark's Villa (140) – the Villa is listed on Shellharbour LEP. It is recommended that the impacts to Mark's Villa be avoided or that archival recording be undertaken prior to demolition and archaeological monitoring undertaken during construction
- Yallah Brush (180) – the Brush is listed on the 1990 Wollongong LEP. It is recommended that an ecologist be consulted to determine the extent of the impacts, as its significance is as remnant bush land.

There are 17 items that may be impacted by the proposed pipelines, depending upon the exact location of the corridors. Nine items may be indirectly impacted through vibration during construction and five items would not be impacted.

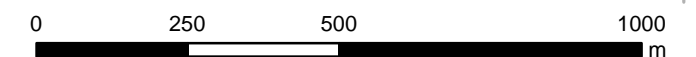
In summary, a total of 195 sites were identified by previous studies and the field survey undertaken for this project, 50 outside the study area, 82 in the Project Approval Area and 63 within the Remaining Concept Approval Area. Of these there are 37 items that have been identified as being directly, indirectly or potentially impacted by the concept within the Project Approval Area. Within the remaining Concept Approval Area there are 28 items that may be directly, indirectly or potentially impacted. The significance assessment for this project confirmed that Avondale (50) and Marshall Mount House (64) are of State significance and should be nominated to the State Heritage Register by the relevant body. No other recommendations regarding the listing of items are made.



- Water pipeline
- Wastewater pipeline
- Water pipeline 25 m buffer
- Wastewater pipeline 25 m buffer
- Road
- Railway
- Waterway
- Reservoir
- Pumping station

- | Project Approval Area | | Concept Approval Area | |
|---|-------------------|------------------------------------|-------------------|
| ● | Site | ● | Site |
| — | Revised curtilage | — | Revised curtilage |

WEST DAPTO RELEASE AREA
REVISED CURTILAGES IN RELATION TO THE PROPOSED WATER AND WASTEWATER SERVICES
 Source: LPMA (2011)



24/07/2012
 60189506



WEST DAPTO RELEASE AREA
REVISED CURTILAGES IN RELATION TO THE PROPOSED WATER AND WASTEWATER SERVICES
 Source: LPMA (2011)



24/07/2012

60189506