



## **Site Compatibility Certificate Request**

**26-56 Manor Road, Harrington**

**Prepared for Bayline Developments**

**November 2017**



**Project: 16229**

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# 1. PRELIMINARY

## 1.1 Introduction

Coastplan Group Pty Ltd has been commissioned to prepare this request for a compatibility certificate for the subject land in accordance with the requirements of *State Environmental Planning Policy (Seniors Living) 2004* (SEPP Seniors Living) as amended. The land is identified as Lot 2 DP 1219123, Lot 4 DP 1219124 and Lot 6 DP 1217806, 26-56 Manor Road, Harrington. The site is located at the juncture of Manor Road and Harrington Road, at the western edge of the Harrington township.

The issue of a compatibility certificate will enable the lodgement of a development application with MidCoast Council in accordance with the requirements of SEPP Seniors Living.

This report provides:

- an analysis of the site and surrounding area;
- a description of the preliminary proposals for the land;
- a review of the Site Compatibility Issues provided in Part 1A of Chapter 3 of SEPP Seniors Living; and
- a review of key issues within SEPP Seniors Living.

## 1.2 Information Reviewed

This report has been prepared using applicable legislation, codes and policies of the time. A site inspection has also been undertaken to review the likely constraints and hazards affecting the land.

The assessment has also involved review of specialist reports analysing the land as part of the previous rezoning and rural residential subdivision approval for the land. The information reviewed in relation to the site and its constraints include:

- Ecological Impact Assessment - Darkheart Eco-Consultancy (April 2014);
- Geotechnical Investigations – Douglas and Partners (June 2013);
- Bushfire Assessment – Australian Bushfire Assessment Consultants (May 2014);
- Flood Advice – WBM (Feb 2005);

- Water Sensitive Design Strategy – Lidbury Summers and Whiteman (Feb 2014); and
- Stormwater Management Plan – ADW Johnson (Dec 2015).

Specialist assessment of flood impacts of the proposal has also been prepared for the land. A copy of this advice is provided in Appendix B.

This information has been reviewed and is used in discussion of key issues for the proposal.

## **2. SITE & SURROUNDING AREA DESCRIPTION**

### **2.1 Site Details**

The following data is provided in relation to the site:

**Table 2.1: Site details**

<b>Title Description</b>	Lot 2 DP 1219123 Lot 4 DP 1219124 Lot 6 DP 1217806
<b>Property Address</b>	26 Manor Road, Harrington 48 Manor Road Harrington 56 Manor Road Harrington
<b>Site Area</b>	22.7 hectares
<b>Zoning – Greater Taree LEP 2010</b>	R5 – Large Lot Residential E2 – Environmental Conservation

The subject site is located at the western edge of the Harrington township. The area in its regional context is shown in Figure 1 below.

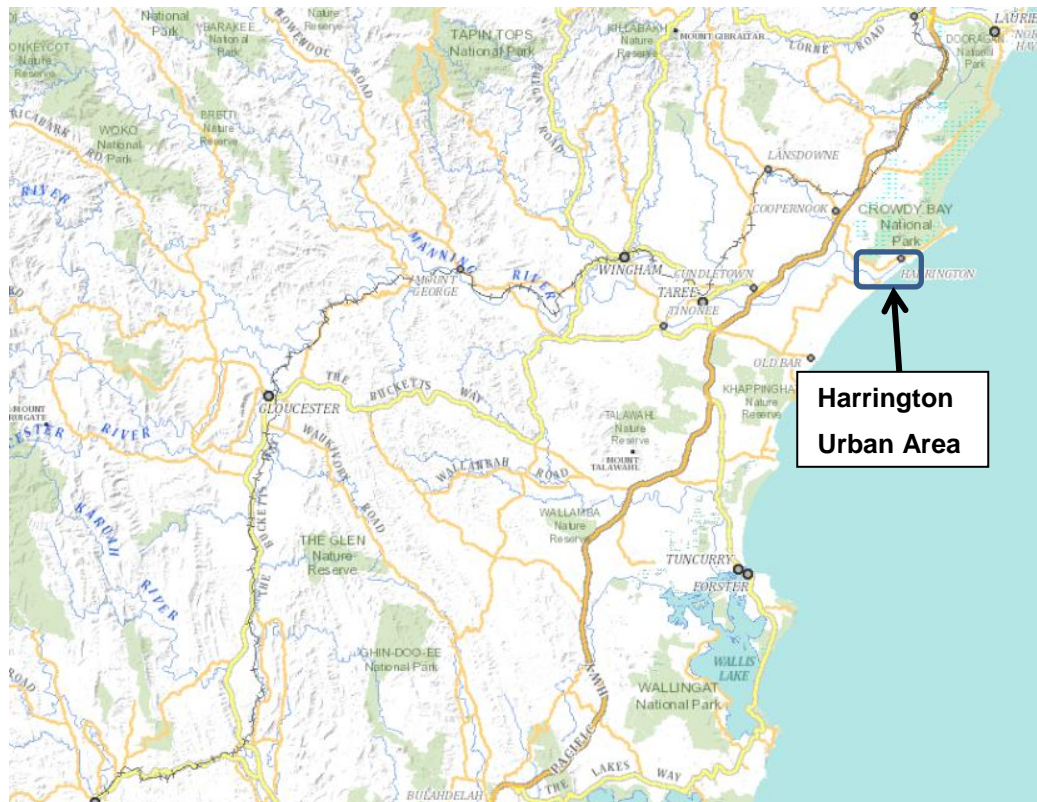


Figure 1 – Location of site in regional context [Source: Source: LPMA SIX Viewer]

The site is located on the southern side of Manor Road at the intersection with Harrington Road. The site is located adjoining the existing residential zoned area of the Harrington Waters estate. The site and surrounding area is depicted in Figures 2 and 3 below.

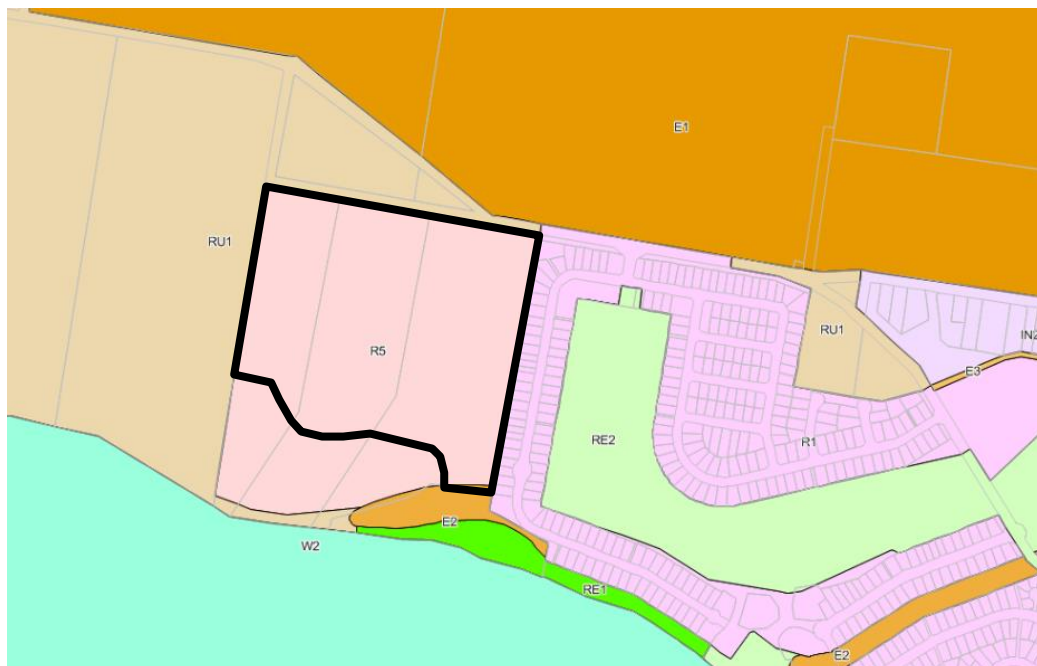


Figure 2 - Site Locality Plan (Zoning) [Source: [www.legislation.nsw.gov.au](http://www.legislation.nsw.gov.au)]



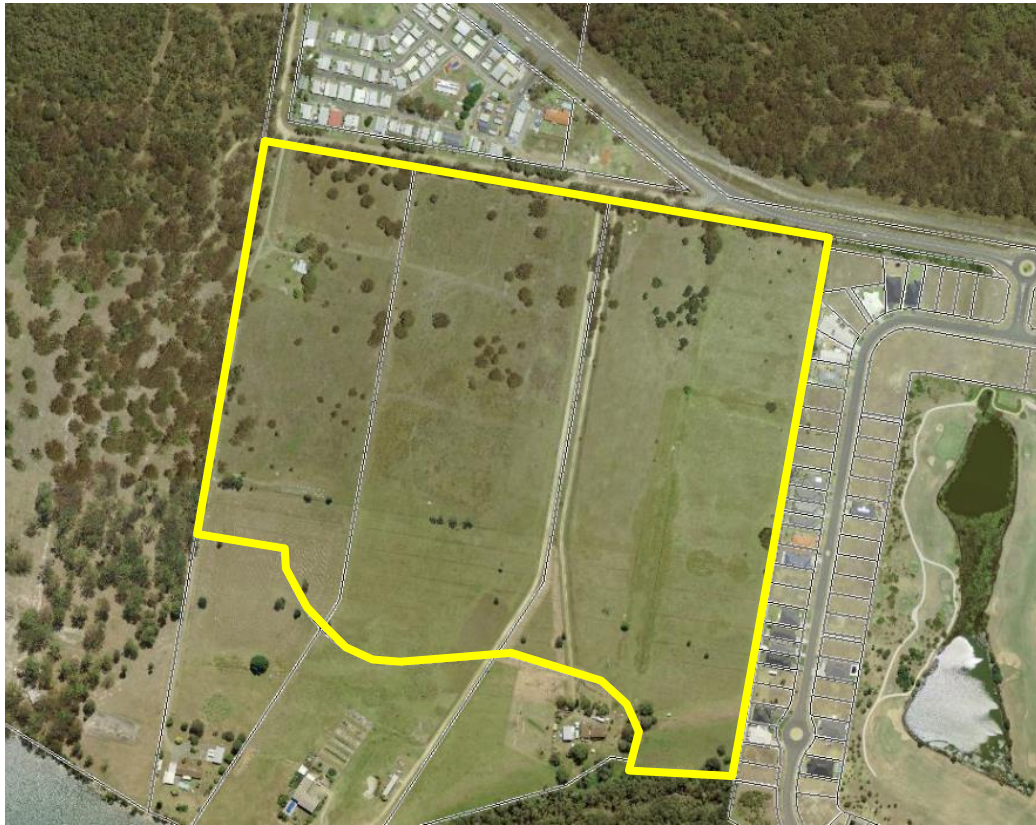


Figure 3 - Site Locality Plan (Satellite)

[Source: LPMA SIX Viewer]



Manor Road





**View over site from Manor Road**



**View over site from Harrington Waters Estate**

## 2.2 Topography

The topography of the land is generally described as flat. The levels over the land vary from approximately 2.3 – 2.7m AHD.



There are no watercourses over the land, however, there is a small area of lower lying wetland/swamp located south east of the site, along the Manning River foreshore. This area has been contained within a reserve which was created when the land was subdivided to create the current allotments.

## 2.3 Vegetation

Vegetation cover on the land has been modified as a result of past agricultural activities and rural residential occupation of the land. The vegetation over the site is dominated pasture areas that have been managed for low intensity grazing purposes.

An ecological assessment of the land was carried out in 2014 by Darkheart Eco-Consultancy examining the subdivision approved over the land. This assessment identified two (2) vegetation communities over the subject land as follows:

- Pastoral Woodland – Comprising few remnant trees amongst improved pasture dominated by exotic pasture species and weeds.
- Roadside Dry Schlerophyll Forest – Comprised of a narrow band of remnant eucalypt trees along the Manor Road frontage of the site.

The previous ecological assessment for the land recognised that the development areas were *low value vegetation with generally low habitat values*. The retention of the road side Dry Schlerophyll Forest vegetation along the Manor Road frontage of the site was also proposed in the previous proposal, with the subdivision located over the Pastoral Woodland areas.

## 2.4 Geology/Soils

The soils were examined in a geotechnical assessment by Douglas and Partners in 2013. The assessment found that the soils over the site were generally comprised of silty sand topsoils overlying sand and clayey sands. Groundwater was observed at depths of approximately 1.3 – 1.5 metres below the natural surface.

The land is identified as Class 3, on the Acid Sulfate Soils Planning Maps. Acid Sulfate Soils screening was undertaken as part of the previous geotechnical assessment for the land. This assessment found that potential Acid Sulfate Soils exist over the majority of the site at depths of 1 metre or more below the surface.

## 2.5 Services

The site and surrounding area is provided with services typical of an urban area.

Reticulated water and sewer are available to the land and are provided by MidCoast Water. Electricity and telecommunications are also available in the area.

In terms of retail and support services, the following services would be available to the residents:

- Shops, banking facilities and other retail/commercial services are available in the surrounding area, with a local shopping centre located at the Harrington Water Shopping Village. Higher order retail premises also exist at Taree.
- Recreation and community facilities are available throughout the Harrington area, including a golf course, tennis courts, public reserves, and beaches. Community facilities are available in the area, including the bowling club, surf club (Crowdy Head), community centre, library and church halls.
- Health and well-being services are also available throughout these areas, with a medical centre located at the Harrington Waters Shopping Village which includes five (5) consulting doctors and pathology services. There is also another consulting GP in the township. The services of medical specialists are also available in Taree and the area is served by several home nursing care services. There are also public and private hospital facilities in Taree.

## 2.6 Access

The subject site is located approximately 1.3km from the Harrington Shopping Centre and approximately 3.5km from the shops located in High Street Harrington. The site is connected to these areas by public roads, with Harrington Road being the main access into Harrington.

The subject site is located approximately 200 metres (via public roadways) south of the existing bus stop located in Harrington Road. This bus stop is serviced by Route 320 operating between Taree and Harrington which runs in each direction three (3) times a day Monday-Friday.

The proponent has been in contact with the bus company who has agreed that the bus could run through the village, and the proposed layout will facilitate a bus route via the main circuit road through the retirement village.

In addition, the village will provide a mini bus service connecting with Harrington and Taree, as well as on occasions for special trips and functions organised for the residents.

## 2.7 Surrounding Locality

The surrounding area is developed with a variety of residential developments and tourism uses.

The subject site adjoins land to the east that is zoned *R1 – General Residential*, which is a zone primarily for urban uses and which has been subdivided and developed with low density housing as part of the Harrington Waters residential estate. The subject land is therefore land to which *State Environmental Planning Policy (Housing for Seniors or People with a Disability) 2004* applies.

Land to the west is zoned *RU1 Primary Production* and is utilised for low intensity agricultural uses and rural occupation.

Land to the north is partly zoned *E1 National Parks and Nature Reserves* which is on the opposite side of Harrington Road in the Crowdy Bay National Park. Other land to the north is zoned *RU1 Primary Production* and is developed with a caravan park which provides long term sites for permanent occupation as well as short term sites for tourism use.



Lands to the south are primarily zoned *R5 Large Lot Residential* with areas of land zoned *RU1 Primary Production*, *E2 Environmental Conservation* and *RE1 Public Recreation* along the foreshore areas. The three (3) private lots adjoining to the south are utilised for rural living purposes.

## 2.8 Site Hazards

### 2.8.1 Bushfire

The subject site is identified as bushfire prone land on the mapping held by MidCoast Council. An extract of the mapping is provided below. As can be seen, the bushfire prone areas mapped are limited to buffer areas to Category 1 vegetation along the western and northern boundaries of the site, and in the south eastern corner of the site.

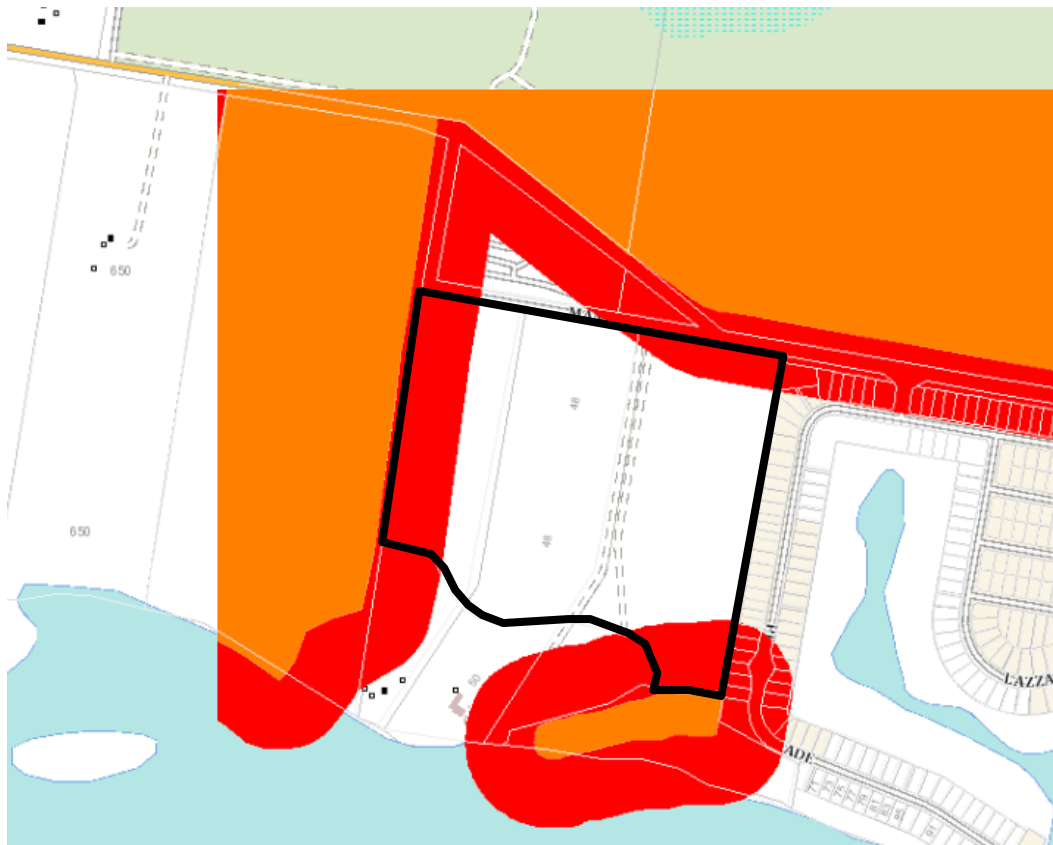


Figure 4 – Bushfire Prone Lands Map of site

[Source: MCC Exponare]

### 2.8.2 Flooding

The land is identified as within the flood planning area under *Greater Taree Local Environmental Plan 2010*. The Manning was subject to a recent flood study undertaken by BMT-WBM for MidCoast Council known as the *Review and*

*Update Manning River Flood Study.* The Flood Impact Assessment for the proposed (contained in Appendix B) was also prepared by BMT WBM. The Flood Assessment has identified the following flood levels for the land:

- 1% AEP event (1:100 ARI) – 2.6m AHD
- 0.5% AEP event (1:200 ARI) – 2.6m AHD
- 0.2% AEP event (1:500 ARI) – 3.0m AHD
- 1% AEP event (1:100 ARI) 2100 climate change allowance – 3.1m AHD

The peak velocities across the subject land in flood events are low and are typically less than 0.2 metres per second.

### 3. DESCRIPTION OF SENIORS LIVING PROPOSAL

The proposed development involves a new Retirement Village development on the subject land.

The proposed Retirement Village provides 293 dwellings comprised of a variety of single storey detached villas. The seniors housing is for 'serviced self-care housing' and will provide extensive recreation and support services including:

- Management services for the coordination of services to the residents.
- A Care Manager (registered Nurse) responsible for the coordination and provision of care to residents.
- Onsite manager for 24 hour support and response to emergency calls and alarms, including resident distress alarms within each dwelling.
- Home delivered meals provided through the on-site kitchen or outside contractors at the choice of the resident.
- Personal hygiene management and personal care.
- Assistance with housework.
- Maintenance of yards and gardens.
- Doctors and other health specialists consulting room.
- Ancillary commercial use to serve residents
- Lifestyle and wellness activity programs and facilities.
- Dining area.
- Barbecue facilities.
- Storage facilities.
- Caravan parking.

The proposal will also involve subdivision of the lots under a community title scheme which will create separate titles for the dwellings which will be managed under the *Retirement Villages Act 1999*.

The development proposal has concentrated all building, infrastructure and Asset Protection Zones within the area identified as Vegetation Community 1 – Derived Grassland with Scattered Trees. The other two (2) vegetation communities, which are more significant, are fully retained and not impacted by the proposed building, infrastructure or Asset Protection Zones.

A preliminary concept plan of the proposal has been prepared by EJE Architects. A copy of this concept plan is provided in Appendix A.

### 3.1 Support Facilities

The clubhouse will provide a base for the management of the village, as well as a main centre for the provision of key services. In this regard the clubhouse would provide:

- Management services for the coordination of services to the residents.
- A Care Manager (registered Nurse) responsible for the coordination and provision of care to residents.
- Onsite manager for 24 hour support and response to emergency calls and alarms, including resident distress alarms within each dwelling.
- Home delivered meals provided through the onsite kitchen or outside contractors at the choice of the resident.
- Nursing services provided by staff.
- Personal Hygiene Management and personal care.
- Assistance with housework.
- Maintenance of yards and gardens.
- Doctors and other health specialists consulting room.
- Lifestyle and wellness activity programs and facilities.



## 3.2 Recreation Facilities

The village provides a wide range of recreational opportunities for the residents, including:

- Tennis Courts
- Bowling Greens
- Pools
- Men's Shed
- Extensive parkland network
- Barbecue shelters and other embellishment of parklands
- Pedestrian/Cycleway connections

## 3.3 Ancillary Commercial facilities

Given the size of the village, it has been proposed to provide some small scale commercial uses for the retirement village to serve the residents. The concept plan includes 8 small tenancies which will provide small scale retail and service facilities for the day to day need of the residents. Such facilities would include:

- Medical Consulting rooms
- Dispensary/Pharmacy
- Personal care services (hairdresser beautician etc.)
- Small neighborhood shop selling daily needs (bread, milk newspaper)
- Specialist elderly retail (mobility equipment etc.)
- Café/coffee shop

## 3.4 Storage Facilities

The proposal includes small storage sheds and caravan parking which can be used by the residents for storage of their personal belongs, as well as caravans and RVs.

## 3.5 Parking and Access

Parking for the villas is provided by private garages with parking spaces for each dwelling. Visitor parking is also available throughout, including parking at the main clubhouse and other facilities throughout the village.

The road system is a grid pattern providing for high accessibility throughout the village and will include a shared pedestrian/cycleway which will be suitable for mobility scooters etc, as well as pedestrians and cyclists.

The site will be connected to Manor Road via two (2) new intersections located approximately 200 metres apart and connecting a loop road along the western edge of the property with central connection through the centre of the proposed retirement village back to Manor Road. No access is proposed to Harrington Road.

The proposal includes connection via a proposed public road to the three (3) rural residential properties immediately south of the site, consistent with the rights of access for those properties and allowing for access and servicing for development of those lots.

### 3.6 Bushfire Controls

The subject land is partly mapped as bushfire prone land, with the key area of threat being vegetation located on adjoining private lands to the west and within a public reserve to the south east. The main threat is from the vegetation to the west, whilst the vegetation to the east is of lesser threat due to its wetland composition and small area (approximately 1.5 hectares). The layout of the development has been based on providing Asset Protection Areas from these areas, within existing pastoral areas.

The road system includes a large circulating road through the development which can provide access for bushfire fighting vehicles. The main access road acts as a perimeter road separating the proposed housing from the main threat to the west. The large park to the south east includes a large parking area and roundabout providing excellent access to the park and provides an accessible defensible space to the vegetation in the foreshore reserve.

The proposed development will include the provision of reticulated water services and would include a ring main with hydrants to provide fire-fighting water supply.

The development application will be 'integrated' and a Bushfire Safety Authority will need to be obtained as part of the development consent process.

### 3.7 Flooding Controls

The development area will be filled to a level of 3.2m AHD so as to be 100mm above the 1% AEP (including 2100 climate change allowance) flood planning level. Floor levels will be provided with a 500mm free board above the design flood level, consistent with Council's DCP.

The assessment includes a 7.5 metre side low path along the eastern boundary. In reality the drainage of the site will provide other flow paths to facilitate drainage etc, however, these have not been included in the analysis as they are subject to detailed design.

The effects of this proposed filling have been examined by BMT WBM in the *Flood Impact Assessment* contained in appendix B. The Assessment has concluded that:

*The impacts of the proposed development were presented in terms of relative change from the existing peak flood level, as presented in Figure 4-2 and Figure 4-3 and summarised in Table 4-1. The impacts are relatively minor, given that they are limited to flood event magnitudes above the 0.5% AEP, are less than 100 mm and are relatively localised in extent.*

The assessment shows that the minor flood level increases will occur over large rural properties, other than the impact to Lot 1 DP 34304 which currently contains a caravan park. The impacts to the park are considered to be minor given that the impacts are only experienced under the 2100 climate change allowance event and the park will undergo significant change in that time which would include requirements for floor levels to be 500mm above the design flood applicable at the time, and well above any minor increase in level that would occur as a result of this proposal.

## 4. STRATEGIC JUSTIFICATION

The Hunter Strategy which applies to the MidCoast area does not identify the land for future urban uses, with the land having recently been rezoned for rural residential purposes. The strategy recognises the ageing population in the area



and the need for supply of suitable housing to meet the housing needs of seniors. The strategy also recognises the benefits that aged care in the area will provide to local economies. The proposal is consistent with the strategy and provides housing suitable for aged persons, and provides economic benefits in the area, increasing employment opportunities in aged care services.

The former Greater Taree City Council also prepared a development strategy for the Harrington area, known as the *Harrington Development Strategy 1998*, which identified the older population trend in Harrington and the need for self-care housing for seniors as well as aged care facilities. Plans have been progressing for a nursing home in the area, however, there has not been any significant supply of retirement village homes created over the time period. The strategy identified urban growth at the Harrington Waters Estate which has now been developed up to the boundary of the subject land. Many vacant lots still exist in the estate and are being gradually taken up by the market.

## **5. PRE-LODGEMENT CONSULTATION**

The proponent has consulted with MidCoast Council staff in relation to the concept in several meetings, including a meeting with the Development Assessment Panel on 30 May 2017. In these meetings the following matters were discussed:

- General indications of support for the concept, recognising the demand in the area.
- Council supported the concept for community title subdivision of the village, but was concerned about potential conflict with minimum lot sizes within the LEP.
- It was noted that an 8.5 metre height of building control affects the land if apartments are to be considered.
- Noted that the land is mapped as class 3 Acid Sulfate Soils.
- Need for development to transition from residential to rural.
- Need to retain trees along the Manor Road frontage. Proposed 10 metre buffer was noted as beneficial.
- Access to Harrington Road is a concern and a single access road connection to Manor Road is encouraged.
- The land is subject to flooding and Council encourages the whole site to be filled to the 1% AEP (2100) flood level of 3.05 metres. This will

require a maximum 800mm fill at the lowest point and impacts to surrounding flood behaviour will need to be examined.

- Waste Management will need to be discussed and determined.
- Land is mapped as Bushfire Prone land and will require an integrated approval.

## 5.1 Clause 24 of SEPP Seniors Living –

### Requirements for Site Compatibility Certificates

Clause 24 of SEPP Seniors Living provides that a site compatibility certificate is required for certain developments before Council can approve a development application for that development. Subclause (1)(a)(i) provides that a site compatibility certificate is required where the site is land that adjoins land zoned primarily for urban purposes. The proposed development is proposed on land which adjoins land zoned primarily for urban purposes.

## 5.2 Clause 25 of SEPP Seniors Living – Applications for Site Compatibility Certificates

Clause 25 of SEPP Seniors Living provides the application requirements and the matters considered in determining whether to issue a site compatibility certificate.

### 5.2.1 Consultation with Council

Subclause 25(5)(a) provides that the Director General shall provide the local Council with a copy of the application and consider any comments the Council may have in determining whether a site compatibility certificate should be issued. As discussed above, consultation with Council has occurred.

Relevant to the matters raised, by Council, the following is observed:

- The provisions of Clause 21 of the SEPP provide that development for the purposes of seniors housing may be subdivided. These provisions override constraints under the LEP and the attached legal advice in Appendix C confirms that subdivision of the land as proposed could be undertaken on this basis.

- Following review of the proposal, and local market conditions, the proposed concept plan does not include apartments, and residential development is limited to single storey villas.
- Previous geotechnical investigations over the land identified that Potential Acid Sulfate Soils do exist over the site at depths of greater than 1 metre below the surface. Whilst there would be some disturbance of soils below this depth for services (sewer etc) there would be minimal disturbance for buildings etc on high level footings. An Acid Sulfate Soils Management Plan would need to be developed for the site, and a liming rate of 2.5-20kg of lime per tonne of soil has been identified.
- The proposal includes a 5 metre landscape buffer between development and the Harrington Water Estate. To the west, the area is comprised primarily of open space areas used for recreation, with some buildings. The resulting development form is similar in scale and structure to a rural residential outcome.
- A wide buffer has been proposed along the frontage to Harrington Road which will provide for the retention of existing trees in this area, as well as supplemental planting to further enhance landscape and ecological values.
- Site access has been modified to provide access only from Manor Road.
- The proposal includes filling to provide flood free areas for dwellings and the impacts of filling on flood behaviour have been examined in Appendix B.
- Waste Management Strategies will be developed for lodgement with the development application.
- Bushfire Management issues have been discussed within this application.

### **5.2.2 Natural Environment (Values, Resources and Hazards)**

#### **Bushfire**

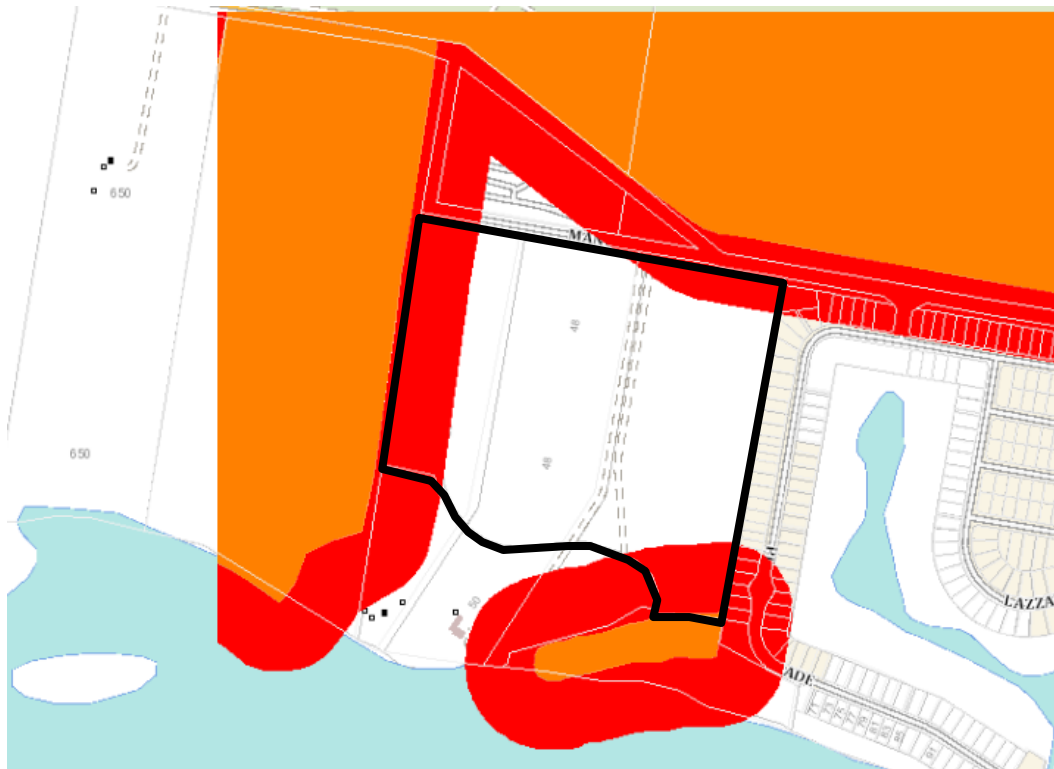
As discussed, the subject site is primarily comprised of cleared grassland areas which have been created as a result of past clearing and agricultural use. The development has been located clear of significant vegetation communities or significant habitats for native flora and fauna. The band of native vegetation along Manor Road has been contained within a wide buffer area to enable its retention.



The proposed layout maintains a wide buffer from the E2 zones and native vegetation located in that area at the southern extent of the site.

The land does not contain any items of environmental heritage and an AHIMS Search for the site has not identified any Aboriginal Sites or Places on the land or adjoining areas. The site has been significantly disturbed from past activities and development would not occur over likely sensitive areas such as foreshore areas etc.

The subject land is identified as bushfire prone land on the maps held by Council. The following extract from the bushfire maps shows the subject site.



**Figure 5 – Bushfire Prone Land Map**

As can be seen, parts of the subject land are mapped as buffer areas (100 metres) to Category 1 vegetation, with the main area of the site not mapped as bushfire prone. The vegetation which creates the bushfire threats in the area is the Forest and woodland vegetation on adjoining land to the west of the site, and forested wetland vegetation located in public reserve to the south east of the site. The extent of development over the land has been largely

influenced by this constraint. The development has been setback from the existing vegetation so that an Asset Protection Zone can be provided consistent with the requirements of *Planning for Bush Fire Protection 2006*. Access and services are also to be provided consistent with these guidelines. In this regard the provisions of *Planning for Bush Fire Protection 2006* would require:

- An Asset Protection Zone for Special Fire Protection Purposes of 60 metres to the west is required under Table A2.6 of *Planning for Bush Fire Protection 2006*. This would increase to 67 metres under the provisions of draft *Planning for Bushfire Protection 2017*.
- An Asset Protection Zone for Special Fire Protection Purposes of 50 metres to the south east is required under Table A2.6 of *Planning for Bush Fire Protection 2006*. This would increase to 67 metres under the provisions of draft *Planning for Bushfire Protection 2017*.
- Roads provided include a perimeter road to the threat, and can be constructed to meet the requirements of the guidelines.
- Water supply to the retirement village will include hydrants for fire-fighting purposes.

The proposed layout can provide for the required Asset Protection Zones and access/services to meet the Rural Fire Service Guidelines.

### **Flooding**

The subject land is primarily flood free under the current 1% AEP flood event, but is impacted by the 1% AEP event when allowances for climate change to year 2100 are included.

To address flooding for the proposed development, it is proposed to fill the site to a level of 3.2m AHD which is 100mm above the 1% AEP flood level with climate change allowance to year 2100. The development area can therefore be considered flood free for events up to the 1% AEP, including under the adopted climate change scenarios.

The floor levels of buildings will be constructed at a level of 3.6m AHD to provide 500mm freeboard, consistent with the controls contained within the Council's DCP.

## **6. FUTURE USES OF THE LAND**

The subject land has been zoned for rural residential development and is subject to a consent which provides for the creation of 46 rural residential allotments having areas of 4,000m<sup>2</sup> or more. Both the proposed seniors housing development and the rural residential subdivision provide for residential use of the land. There is an identified need for seniors housing in the Harrington area, and whilst there may also be demand for rural residential development, the proposal will provide for greater population and more efficient servicing costs and is considered to provide a more sustainable planning outcome for the area than a rural residential development on the land would.

## **7. SERVICES AND INFRASTRUCTURE**

Development on the land will have access to all essential urban services. The proposed seniors housing will also be connected to these services which will be augmented as necessary to provide capacity.

In terms of the services required under Clause 26 of SEPP Seniors Living, the following is noted:

- Shops, banking facilities and other retail/commercial services are available in the surrounding area, with a local shopping centre located at the Harrington Water Shopping Village. Higher order retail premises also exist at Taree.
- The proposed consent includes some onsite services and facilities, providing heightened access to retail and services necessary for day to day living.
- Recreation and community facilities are available throughout the Harrington area, including a golf course, tennis courts, public reserves, and beaches. Community facilities are available in the area, including the bowling club, surf club (Crowdy Head), community centre, library and church halls.
- Health and well-being services are also available throughout these areas, with a medical centre located at the Harrington Waters Shopping Village which includes five (5) consulting doctors and pathology services. There is also another consulting GP in the township. The services of medical specialists are also available in Taree and the area is served by

several home nursing care services. There are also public and private hospital facilities in Taree. The provision of medical consulting services on-site will also allow direct supply of medical services at the village to residents.

The subject site is located approximately 1.3km from the Harrington Shopping Centre and approximately 3.5km from the shops located in High Street Harrington. The site is connected to these areas by public roads, with Harrington Road being the main access into Harrington.

The subject site is located approximately 200 metres (via public roadways) south of the existing bus stop located in Harrington Road. This bus stop is serviced by Route 320 operating between Taree and Harrington which runs in each direction three (3) times a day Monday-Friday.

The proponent has been in contact with the bus company who has agreed that the bus could run through the village, and the proposed layout will facilitate a bus route via the main circuit road through the retirement village.

In addition, the village will provide a mini bus service connecting with Harrington and Taree, as well as on occasions for special trips and functions organised for the residents.

## **8. CONTEXT AND SETTING OF DEVELOPMENT**

### **IN THE AREA**

The subject site is an urban fringe area adjacent to low density residential development

The proposal provides primarily single storey buildings which will be consistent with the predominantly one (1) and two (2) storey developments existing in the locality. Community recreation and buildings may be two storey (subject to consent of Council) and are located in a large open space away from established development and with no impact on the existing established context of the residential areas. The effect is that the development is consistent with the established character.

The proposed development maintains large setbacks with lawn and gardens to allow softer integration with adjoining residential and rural uses and there are significant areas of open space retained in the western and southern parts of the site, where separation from bushfire prone vegetation is required.

The proposal will respect the established and developing character of the area. As can be seen in the aerial perspectives provided in appendix A.

## **9. NATIVE VEGETATION CLEARING**

The following provides information consistent with the assessments required for the Site Compatibility Certificate in accordance with the Guideline *Consideration of Native vegetation under the Seniors Housing SEPP for Vegetation Assessment (2009)*.

### **Section 1 - Do the Guidelines apply to the Site?**

#### **Question A - Is the land excluded under Schedule 1 of the Native Vegetation Act?**

The subject land is located within the MidCoast Council LGA (formerly Greater Taree City Council LGA) and the lot is currently zoned as R5 Large Lot Residential. As such, the Native Vegetation Act applies to the site.

#### **Question B - Does the proposed development retain all native vegetation on the site?**

The proposed development occurs entirely within the area which has been identified as the vegetation classification *Pastoral woodland* by the previous ecological assessments for the land. The majority of the area is comprised of open grassland areas which are dominated by weeds and exotic pasture species, but includes a handful of remanent native trees, saplings and introduced ornamental species. The remanent native trees would constitute native vegetation under the Native Vegetation Act 2003. The removal of the vegetation over this area was approved under the Development Application for subdivision of the land.

The proposal retains the majority of the *Roadside Dry Schlerophyll Forest* comprised of a narrow band of remnant eucalypt trees along the Manor Road

frontage of the site. There would be a small area of this community removed where it extends into Lot 6 DP 1217806.

Question C - Is the type of proposed vegetation clearing excluded from the Native Vegetation Act, exempt from approval or otherwise permitted under that act?

The type of vegetation to be cleared is primarily groundcovers dominated by introduced grass species and are therefore excluded from the Native Vegetation Act. Much of the regrowth on the land has established since 2001 and could be removed as non-protected regrowth.

Whilst many of the remanent trees in the *Pastoral Woodland* community may be able to be removed as a result of routine agricultural maintenance activities (where located near roads and boundaries etc), there are individual trees which would not be able to be removed under those provisions.

The area of *Roadside Dry Schlerophyll Forest* to be removed is located adjacent to boundaries and existing access roads and could be removed under routine maintenance agricultural activities. Almost all of this community could be removed under routine agricultural maintenance activities, however, it is proposed to retain the majority of the vegetation along the Manor Road frontage.

## **Section 2 – Vegetation information required for SCC Applications**

Question A – Is any native vegetation to be cleared?

Native vegetation to be cleared is limited to isolated trees and clumps of trees located over the site as shown in Figure 6.



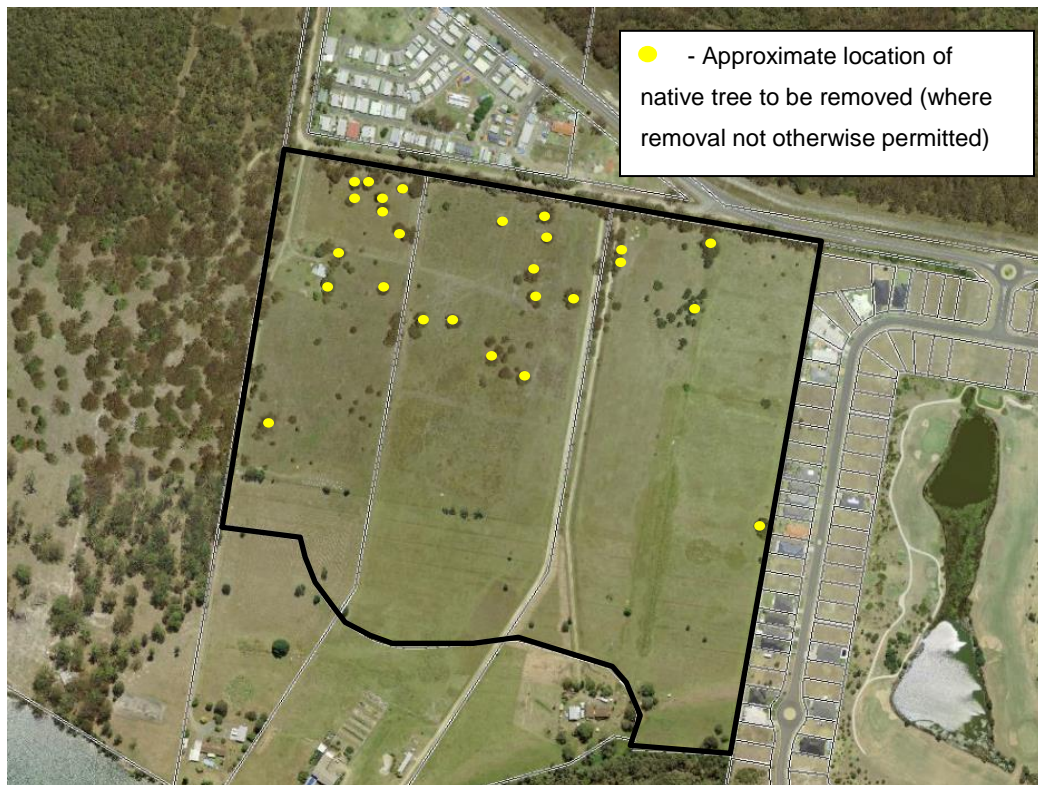


Figure 6 – Removal of trees protected by Native Vegetation Act.

**Question B – What native vegetation types are found on the site and what are their values?**

Vegetation on the site has been categorised into two (2) vegetation communities as detailed in the previous ecological assessment. These communities are:

- *Pastoral Woodland* – Comprising few remnant trees amongst improved pasture dominated by exotic pasture species and weeds.
- *Roadside Dry Schlerophyll Forest* – Comprised of a narrow band of remnant eucalypt trees along the Manor Road frontage of the site.

The extent of these two (2) communities over the land is provided in the following extract from the ecological assessment:

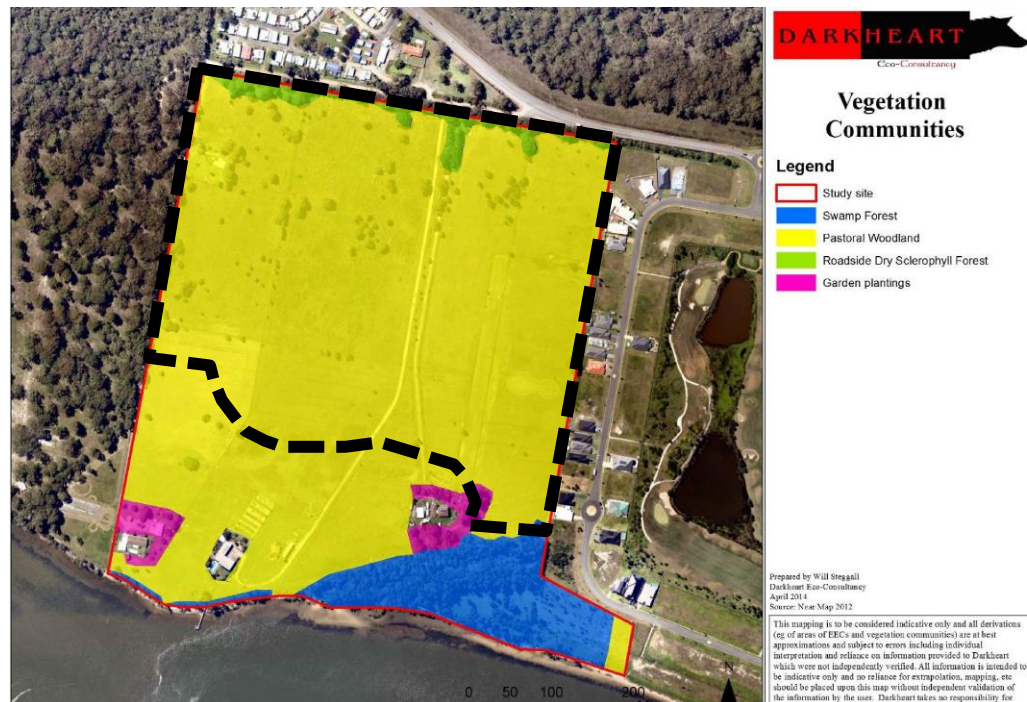


Figure 7 – Vegetation Communities

The following extract provides the description of the communities from the previous ecological assessment:

**Pastoral Woodland**

**Distribution:** This community dominates the majority of the site with a total of 28.5ha.

**Structure and Floristic Composition:**

**(a) Canopy:**

**Structure and Species:** Consists of a handful of remnant trees, saplings and planted ornamentals (eg figs) scattered over the pastoral sections of the study site. Most of the trees are Scribbly Gums 5-20m high, with trunk DBH 10-50cm.

**(c) Shrub layer**

**Structure and Species:** A patchy shrub layer of *Leptospermum* spp, *Melaleuca sieberi*, *Melaleuca thymifolia*, *Epacris* sp. and juvenile Broad-Leaved Paperbark (*Melaleuca quinquenervia*) occur over the northern half of Lots 1 and 2. On Lot 31, scattered White Banksia (*B. integrifolia*) occur, and about a third of the access road is lined with young Broad-Leaved Paperbark and Scribbly Gums 1-3m high.

**(d) Ground-layer**

**Structure and Species:** Varies with location, but overall a mix of weeds, pasture and native species ie Rye, Shivery Grass (*Briza minor*), Whisky Grass (*Andropogon virginicus*), Bladey Grass (*Imperata cylindrica*), Carpet Grass, Kikuyu, Buffalo Grass (*Stenotaphrum secundatum*), Fireweed, *Lomandra longifolia*, Kangaroo Grass (*Themeda australis*), *Hydrocotyle bonariensis* and *Diuris alba*.

**Comments:** Some regrowth has occurred in this community since the 2001 survey however most has been maintained via slashing and grazing which has benefited the spread of exotic pasture grasses.

**Roadside Dry Sclerophyll Forest**

**Distribution:** This linear community occurs along the roadside verge of Manor Road and extends onto the site in a few places.

**Structure and Floristic Composition:**

**(a) Canopy:**

**Structure and Species:** Dominated by 20-25m tall Scribbly Gum (*Eucalyptus signata*) and Broad-Leaved Paperbark. Trunk diameter ranges from 0.2-1m (most 20-60cm).

**(b) Understorey/Shrub layer:**

**Structure and Species:** Poorly defined. Mostly consists of Broad-Leaved Paperbarks, Black Oaks (*Allocasuarina littoralis*), *Acacia binervata*, *Persoonia levis* 3-8m high, and *Dillwynia retorta*, Wallum Bottlebrush (*Callistemon pachyphyllus*), *Melaleuca sieberi* and Prickly Moses (*Acacia ulicifolia*) 0.5-1m high.

**(c) Ground-layer**

**Structure and Species:** Generally well-developed, consisting of Bladey Grass, Kangaroo Grass, Bracken Fern (*Pteridium esculentum*) and *Lomandra longifolia*, mixed with common roadside weeds and forbs eg Catsear, Lambs Tongue.

**(e) Lianas, climbers, scramblers, etc:**

**Structure and Species:** Uncommon, consisting mainly of Scrambling Lily and *Hardenbergia violacea*.

**Comments:** This community consists essentially of regrowth with a few larger trees throughout.

In terms of the values of the vegetation to be removed as provided in the guidelines, the following is observed:

Landscape Position

The vegetation to be removed is not located along any waterway or riparian area. The vegetation is not located on any steep slopes and is not required to prevent erosion etc.

Landscape Value

The vegetation within the site is somewhat isolated from other vegetation in the area and only consists of a few remnant trees located in a pastoral paddock. Large native vegetation communities exist to the west and north of the site and are located in private land and within Crowdy Bay National Park. No clearing of

the vegetation in adjoining private lands has been proposed and the vegetation in the adjacent National Park is afforded the highest possible protection.

There is also a small area of swamp forest located to the south of the site which was dedicated to Council for conservation purposes when the subdivision of the land occurred.

The ecological assessment for the land did not identify the land as any part of a Regional, Sub Regional or Local corridor. There are no linkages over the site between large areas of native habitats.

**Question C – What is the conservation significance of the native vegetation on the site?**

The conservation significance of the vegetation on the site is summarised below:

- The vegetation within the site is not analogous with any endangered ecological community.
- The vegetation does not include any threatened plant species.
- As described in the vegetation community descriptions and the aerial photographs, native overstorey is limited to less than 25% foliage cover and the ground cover is comprised of less than 50% indigenous species. As such, the vegetation is in low condition and there are no biodiversity values that could persist for long time periods.

The proposed vegetation removal associated with the proposal does not impact on any significant landscape or conservation values and is unlikely to impact significantly on the environment or the conservation and management of native vegetation in the area. It is relevant that the removal of this vegetation has already been approved as part of the development consent for subdivision and filling which already exists over the land.

## **10. CONCLUSION**

The application seeks a site compatibility certificate for land identified as Lot 6 DP 12178062, Lot 4 DP 1219124 and Lot 2 DP 1219123, 26-56 Manor

Road Harrington. The land is zoned R5 Large Lot Residential and adjoins land zoned R1 - General Residential to the east in Harrington Waters Estate.

Consultation has been undertaken with Council and the proposal was generally supported.

The site is a primarily cleared area of land that has been significantly disturbed through rural and residential occupation of the land. The land exists as cleared grassland with scattered trees. The development has been designed so that all buildings, infrastructure and Asset Protection Zones are contained within the site.

The land is subject to bushfire and flooding hazards, however, these can be addressed in accordance with the guidelines of Council and the NSW Rural Fire Service.

The proposed development has access to facilities and services to support residents in accordance with the requirements of SEPP Seniors Living. These facilities are provided nearby in Harrington and there is a bus stop located approximately 200 metres north of the site on Harrington Road which connects with the facilities in Harrington, as well as providing access to the higher order facilities in Taree. The proponent has held discussions with the local bus company and the village will be designed to cater for buses to provide service within the site. In addition, the village will provide a private bus in accordance with the requirements of the SEPP. The village provides a high level of support for the seniors housing, including nursing care, personal care, meals, assistance with housework, and on-site management services, exceeding the minimum requirements of the SEPP for this form of housing.

## **Appendix A - Concept Site Plan**





# Harrington Manor – Manor Road Harrington NSW 2427

project no. 11843 Nov 2017 Rev B



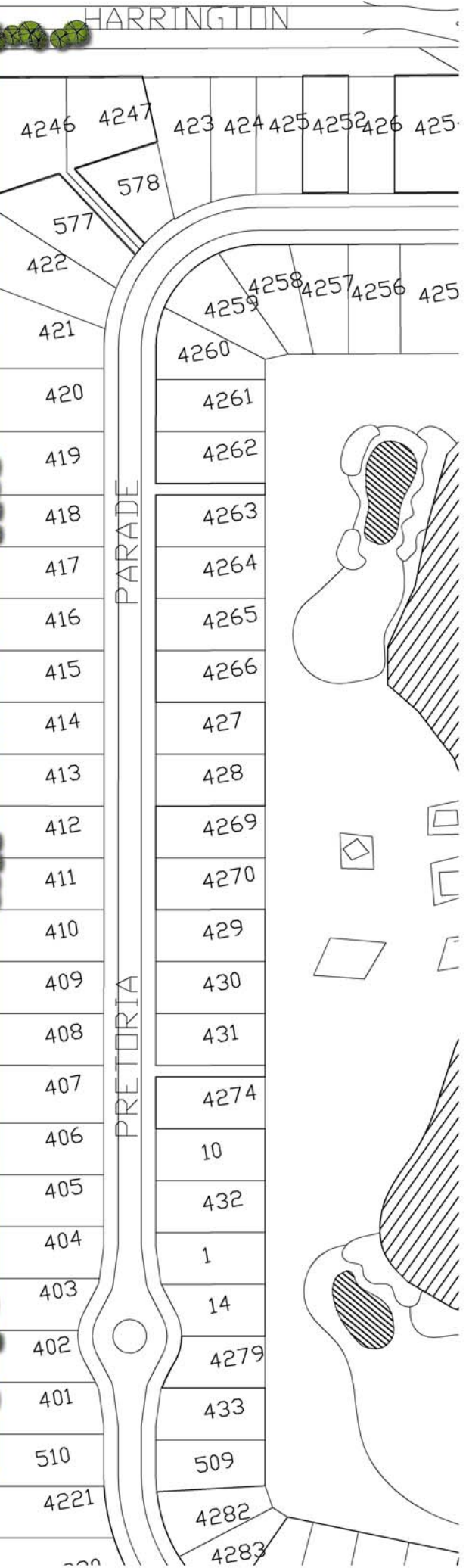






# SITE MASTER PLAN

SINGLE RESIDENTIAL LOTS - 293  
TOTAL - 293

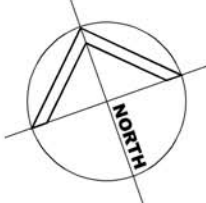


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REV	DATE	COMMENTS
A	10/05/17	ISSUE TO CLIENT FOR REVIEW
B	02/06/17	ISSUE TO CLIENT FOR REVIEW
C	05/06/17	ISSUE TO CLIENT FOR REVIEW
D	20/10/17	ISSUE TO CLIENT FOR REVIEW
E	30/10/17	ISSUE FOR SITE COMPATIBILITY CERTIFICATE



PROJECT: HARRINGTON MANOR

CLIENT: BAYLINE DEVELOPMENTS

SITE:

DRAWING: SITE MASTER PLAN

WORK IN FIGURED DIMENSIONS IN PREFERENCE TO SCALE. CHECK DIMENSIONS AND LEVELS ON SITE PRIOR TO THE ORDERING OF MATERIALS OR THE COMPLETION OF WORKSHOP DRAWINGS. IF IN DOUBT ASK. REPORT ALL ERRORS AND OMISSIONS.

DRAWN: **BH** DATE: **OCT. 2017** SCALES: **1:1000**

PROJECT No: **11843** PHASE: **SK** DRAWING No: **A100** REV: **E**





## **Appendix B – Flood Impact Assessment**



# Manor Estate Harrington Flood Impact Assessment

Reference: R.N20874.001.02.docx  
Date: November 2017  
Final Report



# Manor Estate Harrington Flood Impact Assessment

Prepared for: Bayline Investments Pty Ltd

Prepared by: BMT WBM Pty Ltd (Member of the BMT group of companies)

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## Document Control Sheet

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	<b>Title:</b>	Manor Estate Harrington Flood Impact Assessment
	<b>Project Manager:</b>	Daniel Williams
	<b>Author:</b>	Daniel Williams
	<b>Client:</b>	Bayline Investments Pty Ltd
	<b>Client Contact:</b>	Danny Bayly
	<b>Client Reference:</b>	
<p><b>Synopsis:</b> Flood Impact Assessment for the proposed Manor Estate development at Harrington. This report details the model development, establishment of existing flood conditions and the assessment of flood impacts associated with the proposed development.</p>		

### REVISION/CHECKING HISTORY

Revision Number	Date	Checked by	Issued by
0	4/09/17	DXW	DXW
1	7/09/17	DXW	DXW
2	10/11/17	DXW	DXW

### DISTRIBUTION

Destination	Revision										
	0	1	2	3	4	5	6	7	8	9	10
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BMT WBM File	e	e	e								
BMT WBM Library											

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# 1 Introduction

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## 1.1 Background

Bayline Investments is currently in the process of planning a potential residential development for a site at Manor Road, Harrington, which is located within the Manning River estuary. BMT WBM has been engaged by Bayline Investments to assist in undertaking a flood impact assessment for the proposed development.

The Review and Update of the Manning River Flood Study was completed by BMT WBM for Greater Taree City Council (subsequently amalgamated into Midcoast Council) in April 2016 and currently forms the basis for floodplain risk management and flood planning by Council in the Manning River estuary.

## 1.2 Study Area

The study site is situated within the Manning River estuary and is adjacent to the Manning River, just upstream of Harrington, as shown in Figure 1-1. The upstream catchment area at this location is over 8000 km<sup>2</sup>.

Downstream of Taree, the Manning River splits into two arms and enters the ocean at two locations; Harrington and Farquhar Inlet, which is located just north of the Old Bar township. Both entrances are dynamic. Farquhar Inlet can become severely restricted and is known to have closed on many occasions historically. The entrance at Harrington is a permanently open but can become significantly shoaled, particularly in periods between large floods.

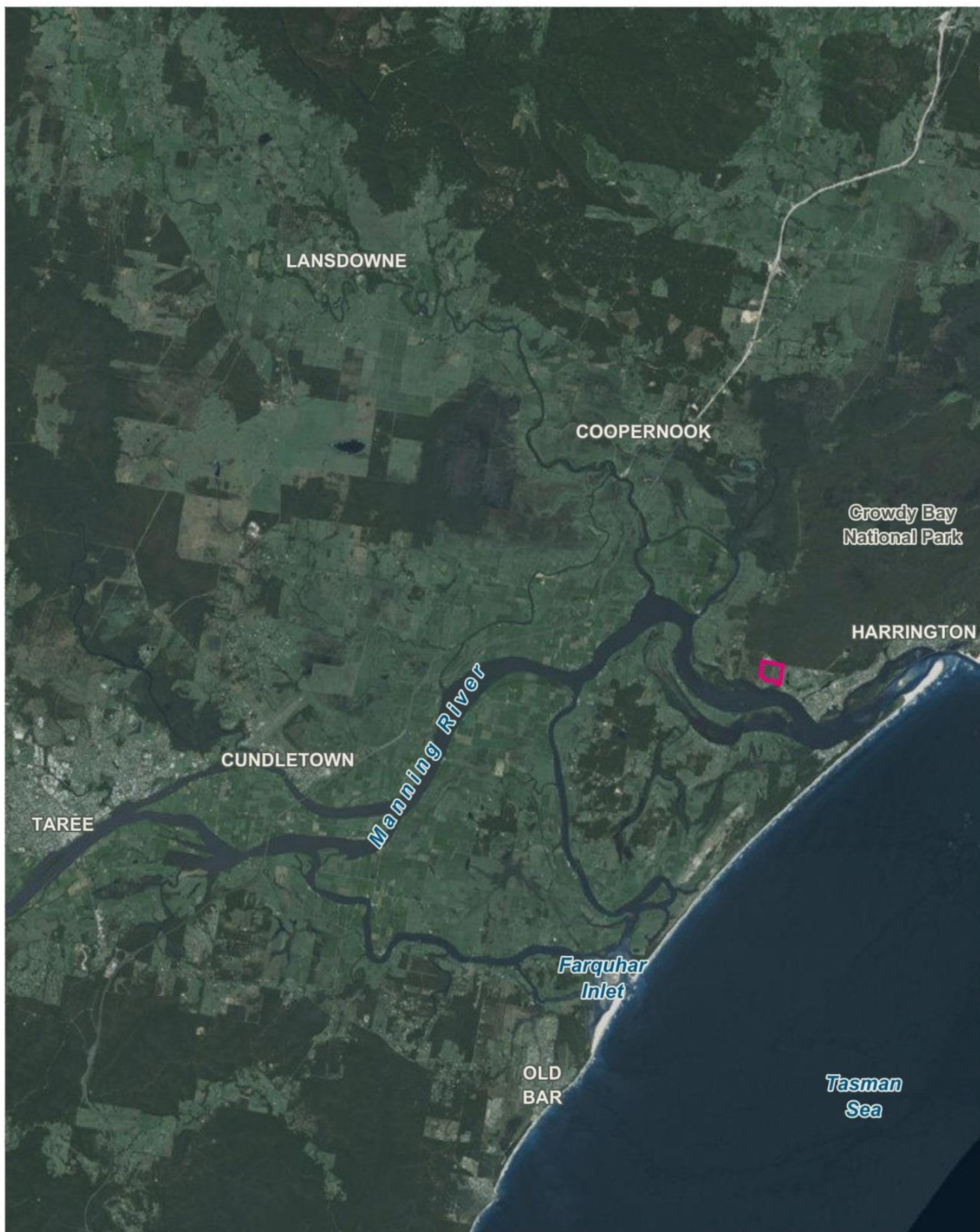
The Great Dividing Range forms the upper limit of the Manning River catchment, where elevations of around 1200 m AHD are typical. The Barrington Tops, located in the south-west of the catchment, peaks at just below 1600 m AHD. The Manning River spills onto a vast, low-lying floodplain (elevated to less than 2m AHD) area downstream of Taree.

Land use within the catchment largely consists of forested areas or pastureland and other cultivated areas. There is little urban development within the catchment.

## 1.3 Report Purpose

This report documents the flood impact assessment in relation to the proposed Manor Estate development. The flooding assessment includes consideration of the following:

- existing design flood conditions (to be used as the baseline for impact assessment);
- the current plans for the development concept;
- design flood simulations for a range of return period events; and
- estimation of pre- and post- design flood conditions and the impacts of the proposed development.



Title:  
**Study Locality**

Figure:  
**1-1**

Rev:  
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Approx. Scale



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## 2 Model Development

---

### 2.1 Model Background

The Review and Update of the Manning River Flood Study was completed by BMT WBM for Council in 2016 and currently forms the basis for floodplain risk management and flood planning by Council in the study catchment.

The TUFLOW model developed by BMT WBM for the Manning River was utilised in this assessment. However, due to the detailed nature of local hydraulic controls and the required model representation of the proposed works, the TUFLOW model was reviewed and further developed specifically for this assessment.

### 2.2 Model Development

A number of model development tasks were undertaken in order to update the existing Manning River TUFLOW model, including:

- improved representation of Crowdy Bay National Park ground surface elevations
- improved definition of the Harrington Road crest elevations
- addition of a 1D model domain to enable the representation of flow between Manor Estate and Harrington Waters

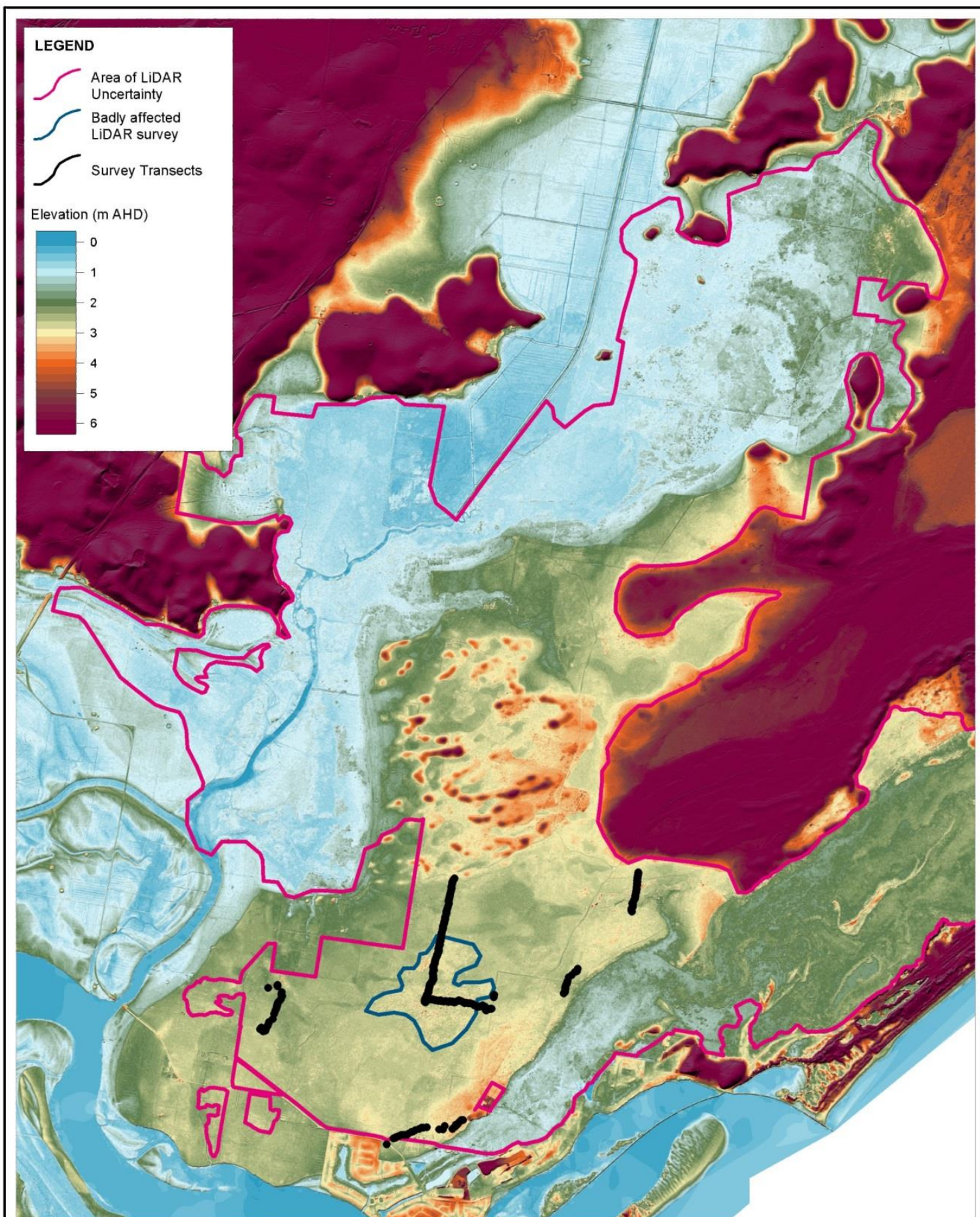
The principal model development task was the improved representation of the ground surface elevations within Crowdy Bay National Park. The Flood Study model was developed using the LPI LiDAR survey data for the representation of the floodplain topography. Whilst this data generally provides a good representation of the broader floodplain, it can suffer from a loss of accuracy in areas of dense wetland vegetation commonly found in estuarine environments. The algorithms employed to filter out vegetative cover struggle to perform effectively in such areas and remnant vegetation influences can clearly be seen in the elevation data.

Initial model results showed that for the largest simulated flood events the Manning River breaks its banks upstream at Mamboo Island, with water then flowing in a generally south-easterly direction through both Crowdy Bay National Park and the Manor Estate site. However, a disproportionately high proportion of this flood flow was traversing the Manor Estate site, rather than flowing eastwards through the National Park. This was identified as a potential issue for the flood impact assessment and Bayline Investments sought to acquire some topographic ground survey to validate the LiDAR elevations in the known areas of uncertainty.

Figure 2-1 presents the LiDAR Elevation Digital Elevation Model (DEM) for the Crowdy Bay National Park area. An area of uncertainty was identified, where it was known that the vegetation was impacting the elevation data. This can be observed through the rough “speckled” nature of the DEM. One area just to the north of Harrington was identified as being particularly badly affected by vegetation.

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Title:  
**LiDAR Elevations and Ground Survey Locations**

Figure:  
**2-1**

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Approx. Scale



## Model Development

The ground survey data was provided to BMT WBM by Bayline Investments and was assessed against the LiDAR DEM elevations. Firstly the LiDAR DEM was “smoothed” to remove the local variation within the vegetation “noise”. The resultant elevations were then compared to those captured by the ground survey and it was found that on average the LiDAR elevations were 412 mm too high. The smoothed DEM was therefore lowered by 412 mm and applied to the TUFLOW model within the affected areas.

Analysis of the LiDAR against the ground survey data within the badly affected area found that on average the LiDAR elevations were 575 mm too high. The model elevations were therefore lowered by a further 163 mm in this location.

In addition to the modification of the LiDAR elevations, further topographic changes were made to the TUFLOW model along Harrington Road, with the road crest being enforced as a 3D breakline based on data in both the LiDAR DEM and site survey for Manor Estate.

Finally, it was necessary to add 1D functionality to the TUFLOW model, in order to represent flows between Harrington Waters and the proposed Manor Estate. The proposed easement between the fill pads is some 7.5 m wide. As the TUFLOW 2D domain is at a 20 m resolution, flows between the two sites cannot be represented accurately without the inclusion of 1D model elements.

The above model developments did not significantly alter the overall regional flood behaviour, with only minor changes to the simulated peak flood levels. However, they do have a significant impact for the Manor Estate flood impact assessment, as they result in reduced flood flows traversing the site.



## 3 Existing Conditions and Constraints

---

### 3.1 Existing Conditions

The establishment of existing design flood conditions provides for description of the:

- general flood behaviour throughout the study area
- existing flooding conditions based on design flood events
- constraints and limitations to potential works with respect to flooding regimes.

Design flood modelling results are shown for the 1% AEP, 0.5% AEP, 0.2% AEP and 1% AEP climate change flood events in Appendix A, and are used as a baseline for the assessment of the proposed works in Section 4. The 1% AEP future climate change scenario adopted by Council considers the present day 0.5% AEP flood flow condition (representing around a 10% increase in design rainfall) and a 0.98 m increase in sea level (representing an estimated 2100 condition).

The mainstream flooding at the study site is driven principally from floodplain flows from Cattai Creek flowing in an easterly direction through Crowdy Bay National Park and then spilling across Harrington Road – flowing in a southerly direction and returning to the Manning River. This flood flow path is not active during the present day 1% AEP event and is relatively minor at the 0.5% AEP event. However, for the modelled 0.2% AEP and the 1% AEP climate change events the flood flow path becomes more significant.

Modelled peak flood levels in the vicinity of the site are around:

- 2.6 m AHD for the 1% AEP event
- 2.6 m AHD for the 0.5% AEP event
- 3.0 m AHD for the 0.2% AEP event
- 3.1 m AHD for the 1% AEP climate change event.

Modelled peak velocities are typically less than 0.2 m/s across the floodplain in the vicinity of the site and between 2 m/s to 3 m/s within the Manning River channel.

### 3.2 Flooding Constraints

The proposed works have the potential to impact on the existing flooding regime for the 0.2% AEP and 1% AEP climate change events, with the introduction of fill material potentially increasing local peak flood levels as floodplain flows are locally redistributed. The required level of the proposed fill pad and finished floor levels will also need to satisfy Council's requirements for the proposed development type.

## 4 Assessment of Proposed Development

### 4.1 Details of Proposed Works

The proposed development is a new seniors living complex, for which the client provided BMT WBM with masterplan drawings. In terms of potential hydraulic controls to be considered within the flood impact assessment the proposed development essentially comprises:

- a raised fill pad on which the development will be constructed
- a 7.5 m wide clearway between the proposed fill pad and the retaining wall of the adjacent Harrington Waters site.

These details (as presented in Figure 4-1) have been incorporated into the TUFLOW model by raising elevations within the fill pad above the flood levels. The clearway is beyond the resolution afforded by the 2D model domain and so has been represented as a 1D channel structure (7.5 m wide), enabling flow to be conveyed from the floodplain area to the north (via the 15 m buffer from Manor Road) through to the Manning River.

### 4.2 Assessment of Flood Impacts

The impact of the proposed development is effectively negligible for the 1% AEP and 0.5% AEP events, due to the absence of significant floodplain conveyance across the site. However, for the 0.2% AEP and 1% AEP climate change events the introduction of the proposed fill pad to the floodplain results in a localised redistribution of flood flows and some level of increase in modelled peak flood levels, as presented in Figure 4-2 and Figure 4-3 respectively.

The impact to modelled peak flood levels on neighbouring lots is summarised in Table 4-1.

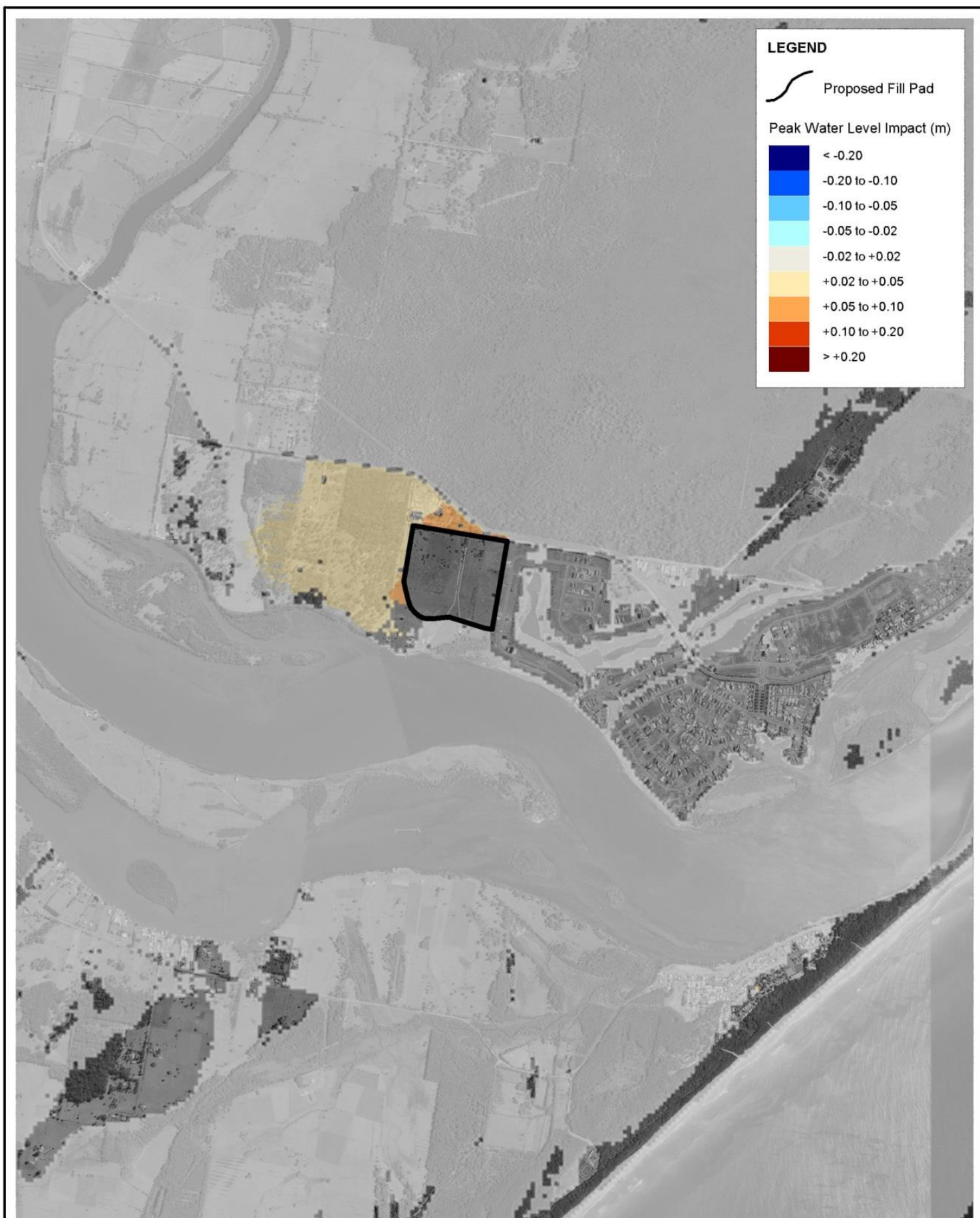
**Table 4-1 Summary of Modelled Peak Flood Level Impacts**

Lot	0.2% AEP Event	1% AEP 2100 Event
Lot 1 DP34304	40 mm – 90 mm	30 mm – 90 mm
Lot 1 DP1219123	30 mm – 60 mm	0 mm – 30 mm
Lot 1 DP34303	30 mm – 40 mm	0 mm – 30 mm
Lot 4 DP706110	20 mm – 30 mm	0 mm – 30 mm
Lot 3 DP706110	0 mm – 20 mm	0 mm – 15 mm









Title:  
**0.2% AEP Modelled Peak Flood Level Impacts**

Figure:  
**4-2**

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**A**

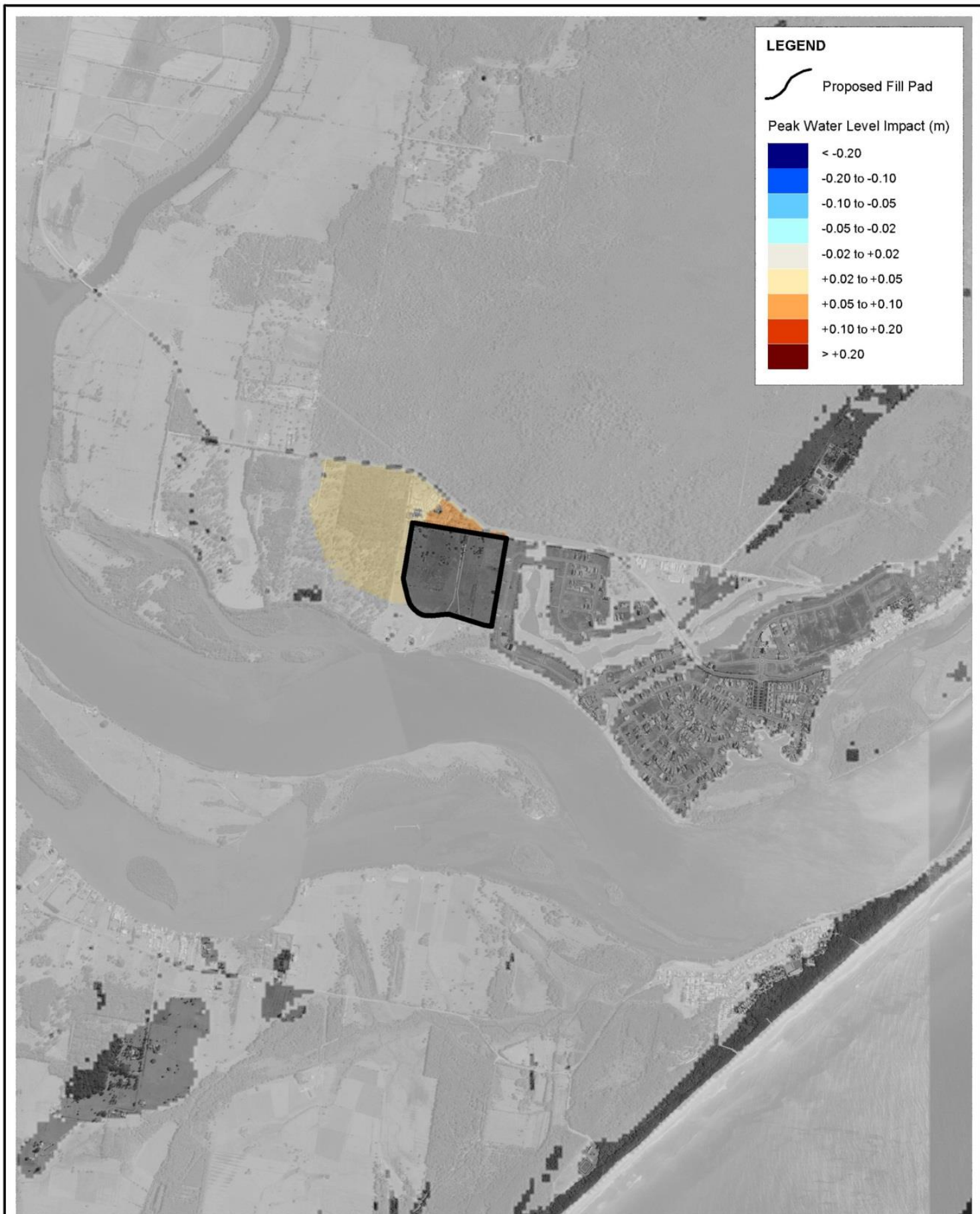
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Title:  
**1% AEP 2100 Modelled Peak Flood Level Impacts**

Figure:  
**4-3**

Rev:  
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**Conclusion**

## 5 Conclusion

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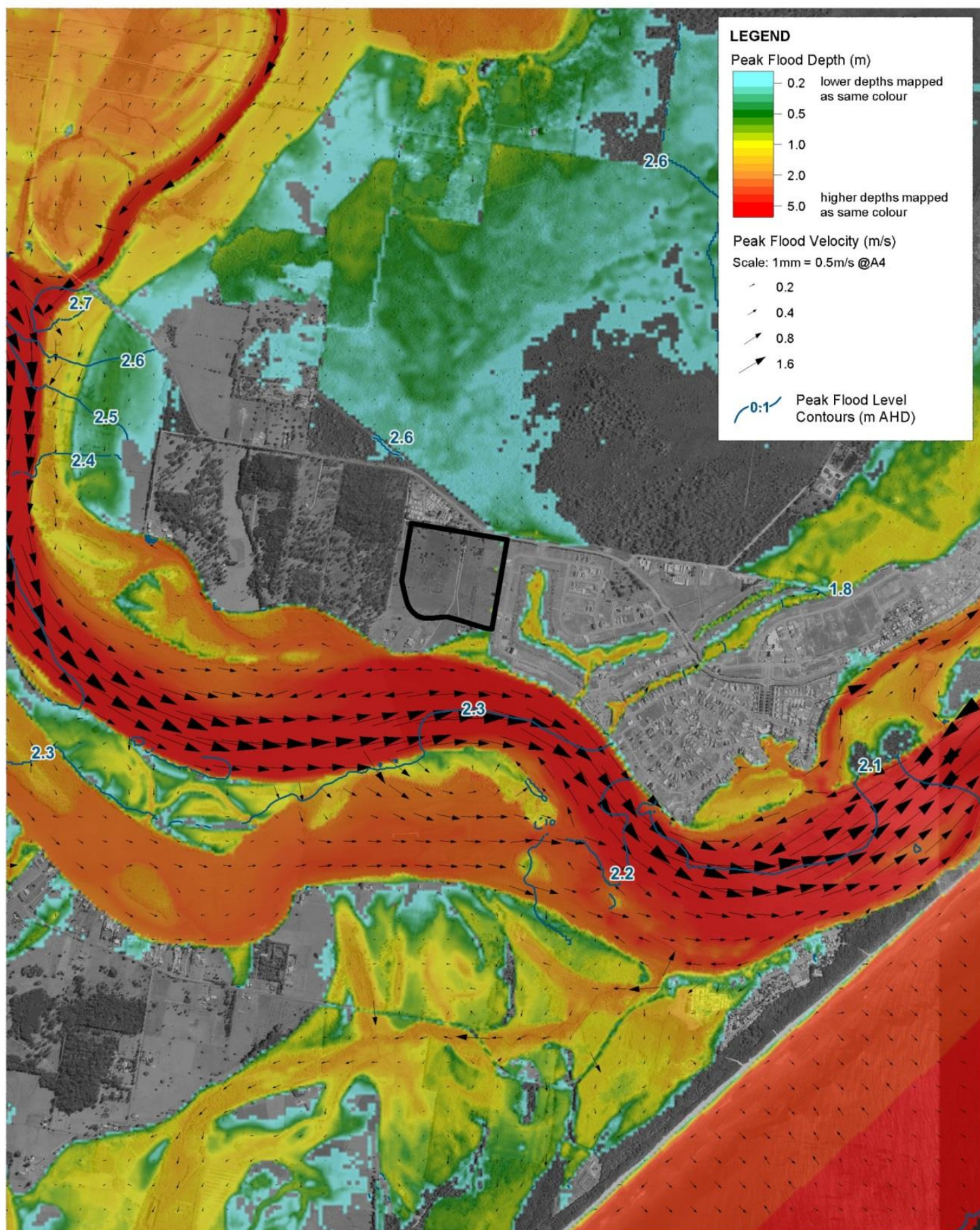
This Flood Impact Assessment has included the refinement of an existing TUFLOW hydraulic model developed by BMT WBM for the Manning River Flood Study (2016). The refined model has then been used to define existing flood conditions for a range of flood magnitudes and form a baseline with which to assess potential flood impacts associated with the proposed development.

The modelled flood impacts associated with the proposed works are essentially negligible for events up to and including the 0.5% AEP, with some minor flood level impacts modelled at the 0.2% AEP and 1% AEP climate change events.

The existing design flood conditions for a range of flood event magnitudes are presented in Appendix A through a flood mapping series, incorporating peak flood extents, levels, depth and velocity distribution. The impacts of the proposed development were presented in terms of relative change from the existing peak flood level, as presented in Figure 4-2 and Figure 4-3 and summarised in Table 4-1. The impacts are relatively minor, given that they are limited to flood event magnitudes above the 0.5% AEP, are less than 100 mm and are relatively localised in extent.

## Appendix A Existing Design Flood Mapping





Title:  
**1% AEP Modelled Peak Flood Conditions**

Figure:  
**A-1**

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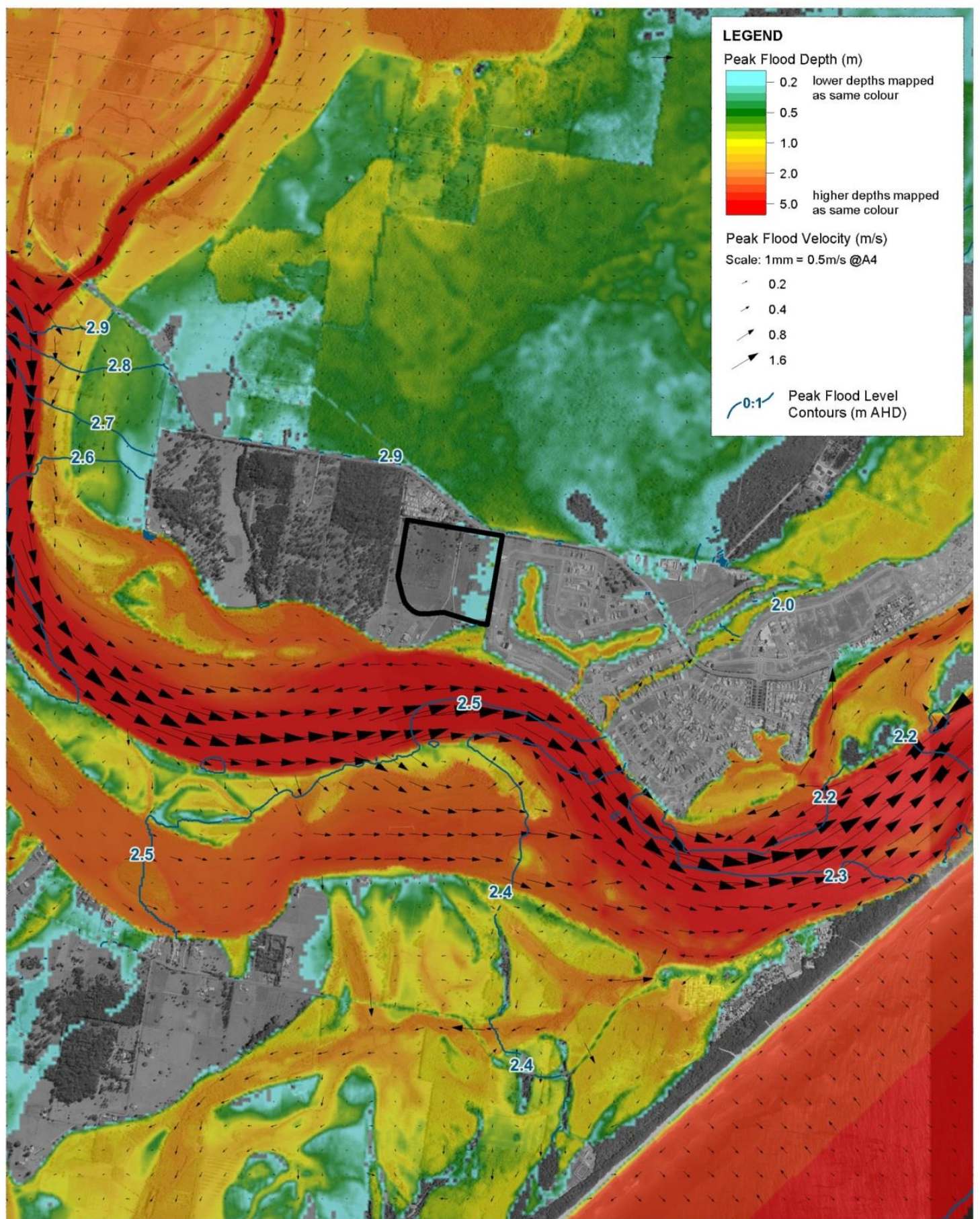


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Title:  
**0.5% AEP Modelled Peak Flood Conditions**

Figure:  
**A-2**

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**A**

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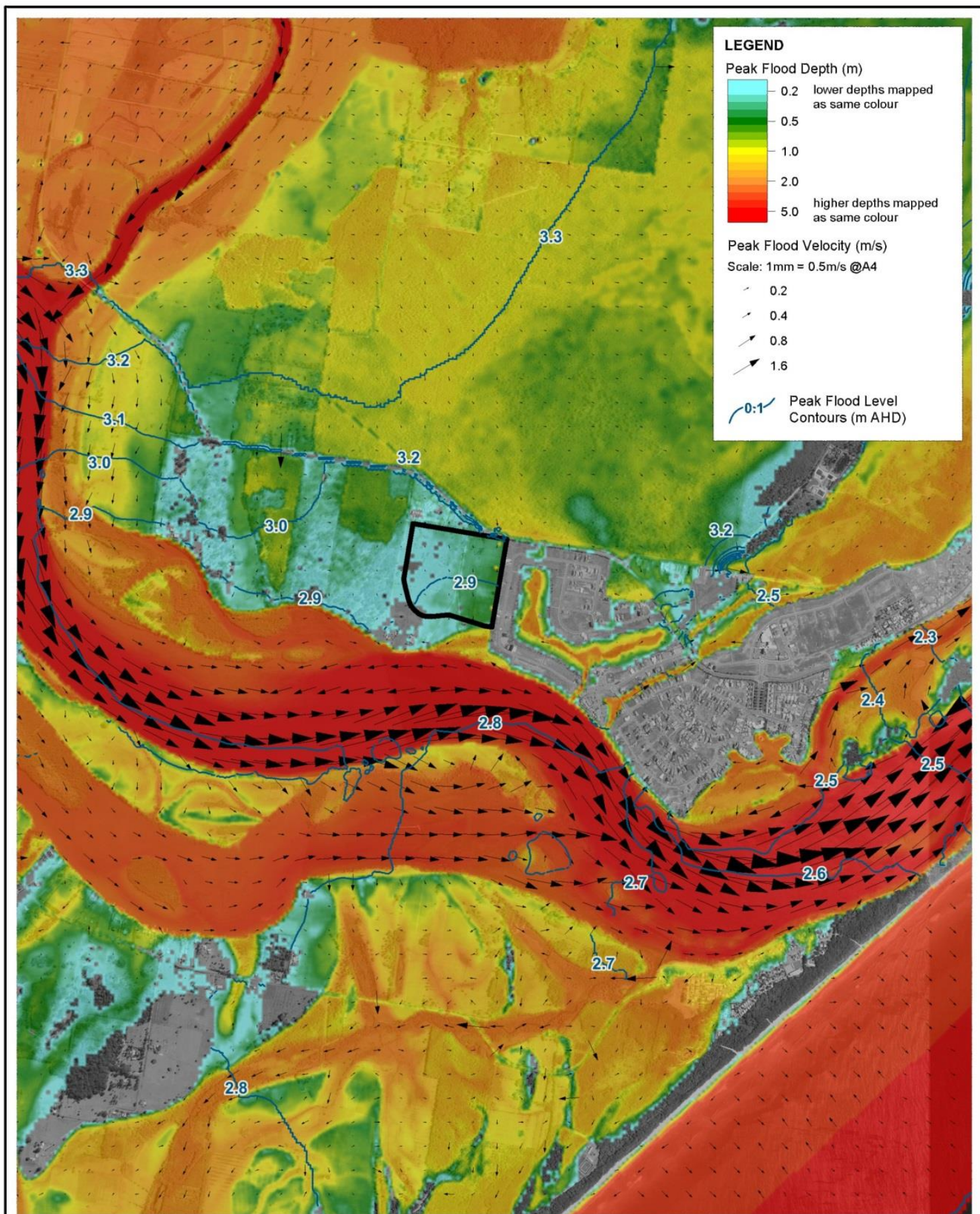


0 0.5 1km  
Approx. Scale



Filepath : K:\N20874\_Manor\_Estate\_FIA\MapInfo\Workspaces\0.5%AEP\_Results.WOR





Title:  
**0.2% AEP Modelled Peak Flood Conditions**

Figure:  
**A-3**

Rev:  
**A**

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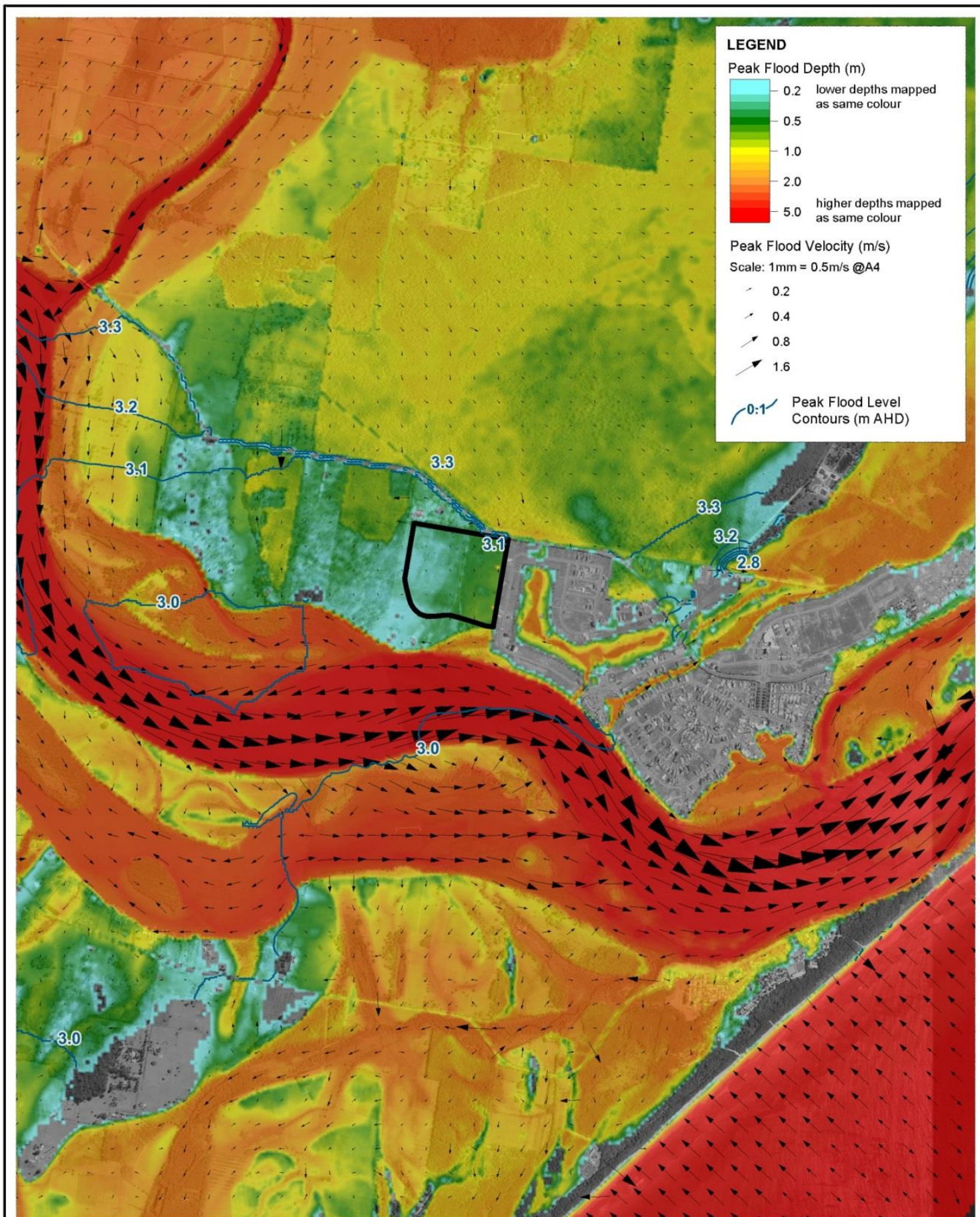


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Approx. Scale



Filepath : K:\N20874\_Manor\_Estate\_FIA\MapInfo\Workspaces\0.2%AEP\_Results.WOR





Title:  
**1% AEP 2100 Modelled Peak Flood Conditions**

Figure:  
**A-4**

Rev:  
**A**

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0 0.5 1km  
Approx. Scale



Filepath : K:\N20874\_Manor\_Estate\_FIA\MapInfo\Workspaces\1%AEP\_2100\_Results.WOR



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