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Site Compatibility Certificate Application for 68 Bed Residential Aged Care Facility Lot 1 DP735097 and Lot 10 DP31128 Sienna Grange, 28-34 John Oxley Drive Port Macquarie

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### Disclaimer

This report was prepared in accordance with the scope of works set out in the contract between King & Campbell Pty Ltd and the Client. To the best of King & Campbell Pty Ltd's knowledge, the proposal presented herein accurately reflects the Client's intentions when the report was printed. However, it is recognised that conditions of approval at time of consent, post development application modification of the proposals design, and the influence of unanticipated future events may modify the outcomes described in this report.

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## Section 1 Introduction

#### 1.1 Introduction

This report has been prepared for and on behalf of Australian Unity Pty Ltd for the purposes of seeking Site Compatibility Certification for a 68 bed Residential Aged Care Facility on part Lot 1 DP735097 and Lot 10 DP31128 located at 28-34 John Oxley Drive, Port Macquarie. The site was granted a 68 bed licence as a part of the 2014 Aged Care Approvals Round (ACAR).

Lot 1 DP735097 currently contains the Sienna Grange residential retirement village and adjoining Lot 10 DP31128 contains a single storey residential dwelling. Sienna Grange was granted consent pursuant to the provisions of *State Environmental Planning Policy No. 5 – Housing for Older People or People with a Disability* under DA2003/0533 (as modified) to contain 71 self-care units (48 self-care units have been completed to date).

The subject site is located on land zoned RU1 Primary Production and adjoins land zoned B5 Business Development which was recently granted to contain a retailing of bulky goods development (DA2015/600, issued 10 December 2015). The subject site is also adjacent land zoned B2 Local Centre containing a Coles Supermarket and numerous specialty stores which include a Medical Centre (GP, Physiotherapy and dental), bank, bookstore, hair and beauty salon, butcher, bakery, café, take-away outlet and liquor store).

A Site Compatibility Certificate is considered necessary for the proposal due to the fact that Seniors Housing is not permissible within the RU1 Primary Production zoning applying to the subject site and due to the fact that the subject land adjoins land zoned primarily for urban purposes, that being B5 Business Development (north) and B2 Local Centre (east).

Accordingly, this report provides information necessary for the Department to assess and determine the proposal in accordance with the Site Compatibility Certification guidelines and application form, including:

- A description of the subject site and surrounding locality;
- A description of the proposed Residential Aged Care Facility;
- An examination of relevant planning legislation including local and regional strategies;
- Description of the discussions undertaken with Council;
- Statement addressing the SEPP Site Compatibility Criteria; and,

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• Conclusion.

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## Section 2 Site Context

#### 2.1 The Site

The subject site consists of Lot 1 DP735097, which contains the Sienna Grange Residential Village, and adjoining Lot 10 DP31128 which contains a single storey dwelling.

The subject site is detailed in the site analysis plans included as Exhibits 1 and 2.

### 2.2 Existing Site Features

The Sienna Grange Residential Village (Lot 1) was approved on the 12 January 2004 under Development Consent No. 2003/0533 (as modified) pursuant to the provisions of *State Environmental Planning Policy No. 5 – Housing for Older People or People with a Disability* (SEPP No.5). Sienna Grange was granted to contain 71 Self Care Units containing a total of 148 bedrooms and 87 on-site parking spaces.

At present, a total of 48 self-care units have been constructed on-site as well as the communal facilities including club house. Four (4) of the constructed self-care units (units 11, 13, 15 and 17 as detailed in Appendix D) will require removal to accommodate the proposed RACF. Four (4) of the DA2003/0533 approved self-care units (units 12, 14, 16 and 18 as detailed in Appendix D) will also not be constructed resulting in the site containing a total of 63 self-care units.

Lot 10 (34 John Oxley Drive) adjoins the southern boundary of that part of Lot 1 fronting John Oxley Drive. Lot 10 currently contains a single storey dwelling with a 23.8 metre road frontage and 2,023.4m² site area. A copy of the Deposited Plans relating to the site are contained within Appendix E.

The subject site (both lots) are entirely zoned RU1 Primary Production under the provisions of the *Port Macquarie-Hastings Local Environmental Plan 2011 (PM-H LEP)*. A copy of the PM-H LEP zoning map is included as Appendix A.

### 2.3 The Location of the Subject Site

The subject site is located approximately 4km south-west of the Port Macquarie CBD in an area locally referred to as Innes Lake.

The site is located on the western side of John Oxley Drive adjacent the intersection of Kingfisher Road and John Oxley Drive and the following land uses are located on land surrounding:

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### North

To the north of the site exists a vacant allotment zoned B5 Business Development (Lot 12 DP1088869). This site has recently (10 December 2015) been granted development consent to contain a large format retailing of bulky goods development (DA2015/600) containing 20,279m² floor area and 523 parking spaces. No works have commenced to date on this approval.

The Port Macquarie Base Hospital and associated medical precinct (Highfields Circuit) is located approximately 400 metres north of the site and is accessible off Wrights Road. The medical precinct contains specialist and general medical practitioners as well as university campuses and accommodation.

### <u>East</u>

The land adjoining to the east of the subject site predominately consists of large lot residential land which runs along Kingfisher Road to the Port Macquarie waste transfer station.

The Grace Church and Lake Innes Village shopping centre are located directly east of the site. The Lake Innes Village includes a 3,500m² Coles Supermarket and numerous specialty stores which include a Medical Centre (GP, Physiotherapy and dental), bank, bookstore, hair and beauty salon, butcher, bakery, café, take-away outlet and liquor store.

Charles Sturt University is located on land adjoining the Lake Innes Village shopping centre and is accessible from Ellis Parade (via Major Innes Road).

Two (2) bus stops are also located directly east of the subject site on either side of the John Oxley Drive (refer Exhibit 1).

### South

Land to the south of the site includes large lot residential with some commercial business scattered in between including a mechanic and smash repair centre, accountant, trailer manufacturer and landscape supplies.

### West

Land to the west of the site (Lot 10 DP1088869) is vacant, managed land which has previously been utilised for agricultural purposes (cattle grazing). A small portion of this site is currently utilised for the purposes of landscape supplies.

The newly aligned Oxley Highway is located west of the site and connects Port Macquarie to the growing residential area known as Thrumster and ultimately the Pacific Highway.

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### 2.4 Access to Services & Facilities

### **Public Transport**

The subject site is located approximately 4km south-west of the Port Macquarie CBD in an area locally referred to as Innes Lake. Innes Lake is well serviced by public transport, particularly buses due to the presence of the large residential areas to the south west as well as St. Columba Anglican School and Columba Cottage Day Care (catering for children 6 months to Year 12) and the recently opened Charles Sturt University (Ellis Parade).

A bus stop is located adjacent the site on both the eastern and western sides of John Oxley Drive.

The Port Macquarie Base Hospital is located 400 metres north of the site (Wrights Road) and numerous medical services including general practitioners are located within the adjoining medical precinct located within Highfields Circuit. The University of New South Wales regional medical training campus is also located within this precinct and is serviced by regular public transport (bus).

### Accessibility

Directly east of the subject site exists the Lake Innes Village shopping centre (approximately 250 metres to the supermarket entrance). The Lake Innes Village includes a Coles Supermarket and numerous specialty stores which include a Medical Centre (GP, Physiotherapy and dental), bank, bookstore, hair and beauty salon, butcher, bakery, café, take-away outlet and liquor store.

Pedestrian access to the adjacent Lake Innes Village requires crossing of John Oxley Drive which is currently a two (2) lane road and contains limited pedestrian accessibility (no formal pedestrian crossing).

Council are currently investigating options to widen John Oxley Drive and this includes signalisation of the intersection of John Oxley Drive and Kingfisher Road. Completion of this road upgrade work is considered likely to improve accessibility to the Lake Innes Village and surrounding facilities.

### 2.5 Agricultural Capability of the Site

The subject site is entirely zoned RU1 Primary Production. The subject site however, contains urban development in the form of the Sienna Grange residential village (67 approved self-care units) as well as an existing single storey dwelling house.

The combined land area of Lot 1 and Lot 10 at 3.8ha is also not considered to be of a size capable of sustaining a viable agricultural or rural land use.

The adjoining vacant land to the west which has previously been utilised

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for rural purposes has recently been subdivided by the new Oxley Highway alignment and has not been used for any rural or agricultural purposes for some time.

The John Oxley Drive Structure Plan (Section 4.1.3) identifies the subject site and adjoining lots to the south as suitable for future residential development (subject to planning proposals). The adjoining Lot to the north, Lot 12 DP1088869, is zoned B5 Business Development and has been granted consent to contain a large floorplate retailing of bulky goods development under DA2015/600.

The further development of the subject site for the purposes of containing a RACF is therefore not considered likely to detrimentally affect the agricultural capability of the site or surrounding lands.

### 2.6 Native Vegetation

The subject site is predominately clear of native vegetation and contains managed gardens constructed as a part of the residential village. Lot 10 currently contains two (2) trees within the rear yard adjacent the existing residential village's communal club house. These isolated trees are proposed to be removed due to their proximity to likely future roads and services associated with the proposed RACF.

The removal of these two (2) trees is not considered likely to detrimentally impact any vegetation corridor as the trees are isolated from any adjoining vegetated areas and located within an existing urban area.

### 2.7 Zoning

The subject site (both lots) are entirely zoned RU1 Primary Production under the provisions of the *Port Macquarie-Hastings Local Environmental Plan 2011 (PM-H LEP)*. A copy of the PM-H LEP zoning map is included within Appendix A.

The objectives of the RU1 Primary Production zone are described below:

- To encourage sustainable primary industry production by maintaining and enhancing the natural resource base.
- To encourage diversity in primary industry enterprises and systems appropriate for the area.
- To minimise the fragmentation and alienation of resource lands.
- To minimise conflict between land uses within this zone and land uses within adjoining zones.

A copy of the PM-H LEP 2011's RU1 Primary Production Land Use Table is included within Appendix B.

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### 2.8 Bushfire Prone Land

The subject site is mapped as being within the bushfire buffer zone and is therefore identified as bushfire prone land. The bushfire prone vegetation affecting the site is located in the John Oxley Drive road reserve north of Kingfisher Road (refer to Figure 3.2a) opposite the subject site.

Preliminary bushfire advice has been completed by *Building Certification and Environmental Services (BCES)* and a copy of their assessment is included in full within Appendix F.

BCES state that a 30 metre wide Asset Protection Zone (APZ) is required as a minimum to the vegetation on the eastern side of Kingfisher Road. BCES state that this APZ could be achieved by '...utilising the existing formed pavement area of the John Oxley Drive Road reserve in addition to an appropriate building setback from the eastern property setback of the subject site' (refer to Figure 2.8 below).

The preliminary concept design included within Appendix C is considered to comply with the BCES recommendation and preliminary APZ concept plan, as extracted below.

It is also noted that the predominant bushfire prone vegetation occurs within the John Oxley Drive Road reserve. The western portion of this vegetated road reserve was granted consent for removal as a part of the road widening associated with the retailing of bulky goods development granted upon Lot 12 DP1088869 under DA2015/600. This clearing work was granted in a manner consistent with the Council's current conceptual John Oxley Drive upgrade plans. The removal of the western-most portion of the vegetation is considered likely to improve the bushfire threat to the subject site by expanding the distance between the proposed RACF and the vegetation.

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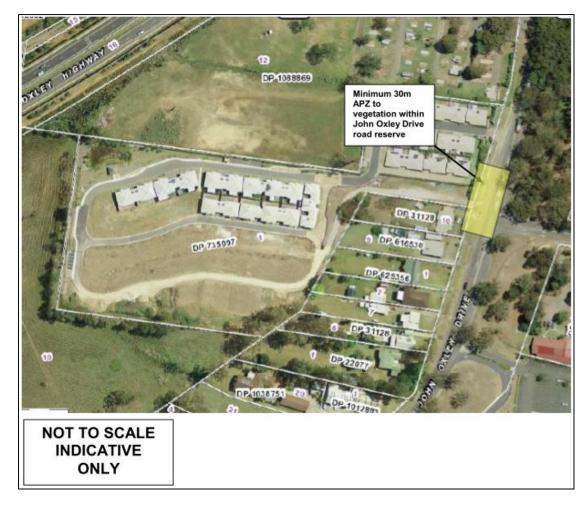


Figure 2.8: (above) The preliminary APZ concept plan excerpt from Appendix 2 of the BCES Preliminary bushfire hazard assessment (Appendix F).

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#Notes

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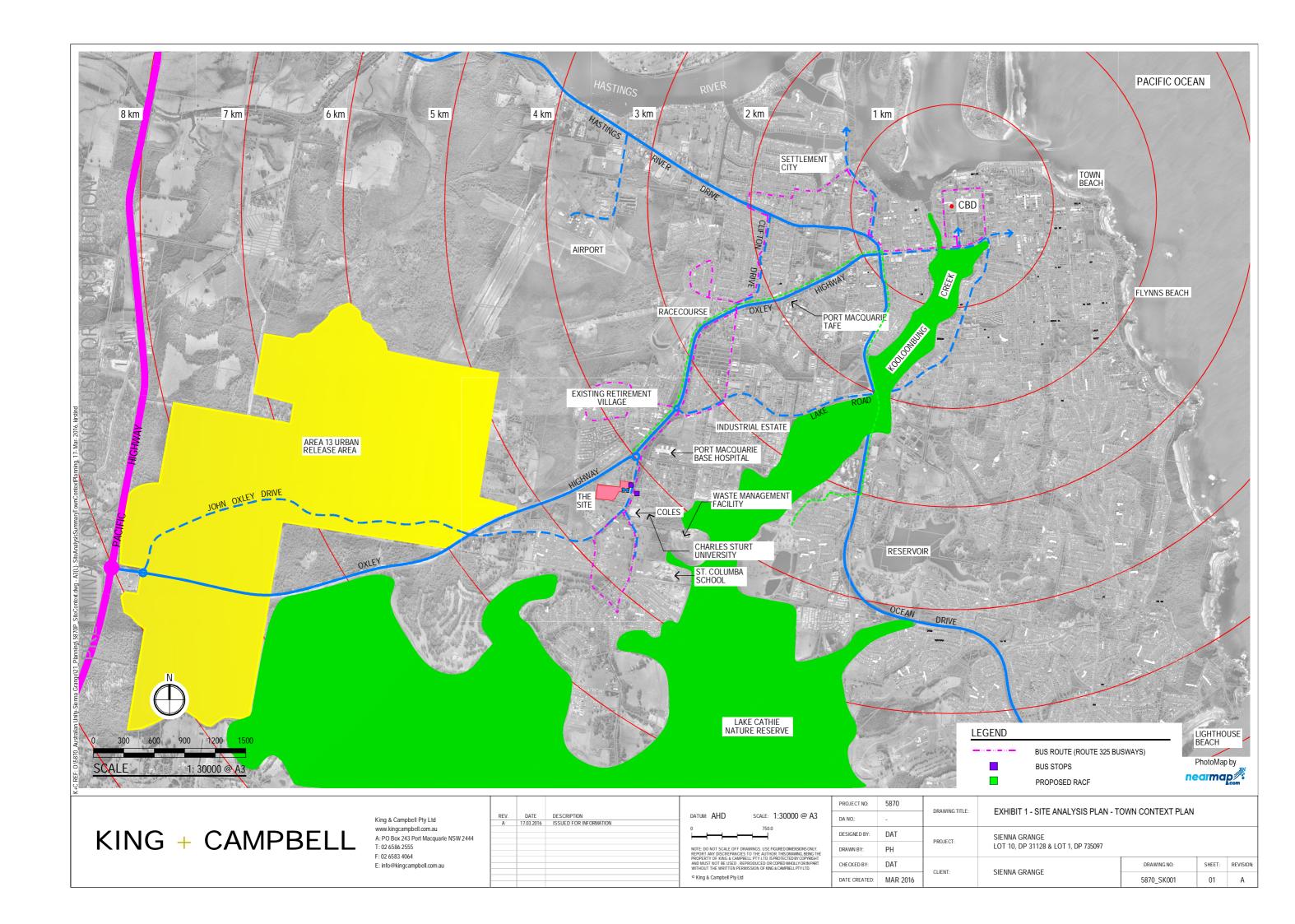
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P1: LOOKING NORTH ALONG JOHN OXLEY DRIVE AT THE EXISTING SITE ENTRY AND BUS STOPS.



P4: LOOKING SOUTH EAST FROM THE SUBJECT SITE TO THE INTERSECTION OF JOHN OXLEY DRIVE AND KINGFISHER ROAD.



P7: LOOKING NORTH ALONG JOHN OXLEY DRIVE TO THE EXISTING SIENNA GRANGE ENTRY.



P2: LOOKING SOUTH ALONG JOHN OXLEY DRIVE AT THE ROUNDABOUT INTERSECTION WITH MAJOR INNES ROAD AND ACCESS TO THE LAKE INNES SHOPPING VILLAGE (FOREGROUND).



P5: LOOKING NORTH-WEST AT ADJOINING LOT 12 DP 1088869 (SITE APPROVED TO CONTAIN A LARGE FORMAT RETAILING OF BULKY GOODS DEVELOPMENT.)



P8: LOOKING WEST AT THE EXISTING SIENNA GRANGE CONSTRUCTION ACCESS AND APPROXIMATE RACF LOCATION.



P3: LOOKING SOUTH EAST AT THE LAKE INNES SHOPPING VILLAGE AND EXISTING BUS STOP FROM THE EXISTING CONSTRUCTION SITE ACCESS.



P6: THE EXISTING SIENNA GRANGE SITE ACCESS FROM JOHN OXLEY DRIVE. THIS ACCESS IS PROPOSED TO BE MAINTAINED.



P9: LOOKING WEST ALONG KINGFISHER ROAD TO THE INTERSECTION WITH JOHN OXLEY DRIVE. SIENNA GRANGE AND THE PROPOSED RACF SITE ARE LOCATED CENTRE FRAME.

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EXHIBHT 3 - PHOTOGRAPHIC PLATE

SIENNA GRANGE LOT 10, DP 31128 & LOT 1, DP 735097

SIENNA GRANGE

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#Notes **A3** 

## Section 3

### The Proposed Residential Aged Care Facility

### 3.1 The Proposed Residential Aged Care Facility

The proposal seeks consent for a 68 bed residential care facility (RACF) including the following features:

### Basement (RL 4m AHD)

- Car park containing 26 parking spaces (7 visitor and 18 staff and 1 ambulance space), turn-a-round bay and central access lobby. The basement also contains the option to provide an additional 8 car spaces);
- General laundry, bin store and maintenance rooms;
- Commercial kitchen; and
- Staff amenities.

### Ground Floor (RL 7m AHD)

- Central front entry with covered drop-off;
- Café for visitors and patrons;
- Four (4) separate living areas containing 8-9 rooms each (total 34 rooms);
- Secure landscape atrium (outdoor areas) directly accessible off the two (2) separate internal activity areas;
- Central access corridor to all features including:
  - Reception and administration;
  - Lobby;
  - Kitchen;
  - Adjoining dining areas which can be combined into a singular large dining area;
  - Activity areas; and
  - Staff utility areas.

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### First Floor (RL 11m AHD)

- Four (4) separate living areas containing 8-9 rooms each (total 34 rooms);
- Central access corridor to all features including:
  - Day respite centre;
  - Therapy;
  - Landscape atrium;
  - Kitchen;
  - Adjoining dining areas which can be combined into a singular large dining area; and
  - Staff utility areas.

All bedrooms are proposed to contain a single bed with ensuite.

The proposal also seeks to carry out a boundary adjustment resulting in the existing Sienna Grange retirement village and RACF being wholly contained on separate allotments. Ultimately, Lot 10 is proposed to expand from 2,023.4m² to contain a total area of approximately 5,250m², leaving lot 1 with a reduced area of approximately 3.3ha, down from 3.6ha.

### 3.2 Site Description

The subject site consists of Lot 1 DP735097, which contains the Sienna Grange Residential Village, and adjoining Lot 10 DP31128 which contains a single storey dwelling.

The subject site is currently irregular in shape consisting of two (2) large areas combined by a narrow (approximately 16 metre wide) handle.

The combined land area of the subject site is 38,053.4m² (Lot 1 contains 36,030m² and Lot 10 contains 2,023.4m²). The RACF is proposed to occur upon the south-eastern corner of the site with no changes to the existing self-care units located upon the western portion of the site.

The site is entirely zoned RU1 Primary Production and is identified as containing the following constraints:

### Bushfire

Comments relating to the bushfire prone nature of the land are included within Section 2.8 and the preliminary Bushfire Hazard Assessment contained within Appendix F.

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That part of the subject site identified as bushfire prone land is detailed in Figure 3.2a.

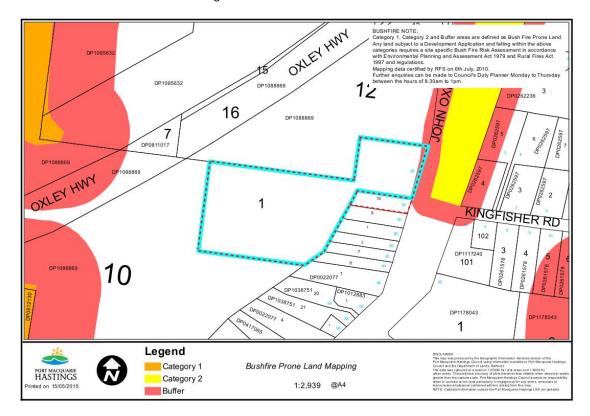


Figure 3.2a: The predominant bushfire threat affecting the subject site is located to the east of the subject site within the eastern portion of the John Oxley Drive road reserve. Note that the predominant bushfire prone vegetation affecting the site is located within the John Oxley Drive Road reserve. The western portion of this vegetated road reserve was granted consent to be cleared for road widening purposes as a part of the retailing of bulky goods development granted on Lot 12 DP1088869 under DA2015/600

### **Flooding**

The subject site is identified as flood prone land subject to the 1 in 100 year flood event (1%) which is identified as RL3.38m AHD (Australian Height Datum) and detailed in Figure 3.2b below.

The Port Macquarie-Hastings Council Flood Policy (October 2015) identifies residential care facilities as 'critical facilities'. In accordance with the flood policy, critical facilities where possible, should be located on flood free land, or contain a minimum floor level at or above Flood Planning Level 4 (FPL4), that being the Probable Maximum Flood (PMF). The PMF level for the site is identified as RL6.6m AHD and is detailed in Figure 3.2b below.

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Figure 3.2b: (above) Excerpt from the Advisian Flood Constraints Assessment (Appendix H) detailing the flood extents in the vicinity of the proposed residential aged care facility.

Due to the flood prone nature of the land Advisian (Worley Parsons) have completed a *flood constraints assessment* and a copy of their report is included in full at Appendix H.

Using detailed flood modelling completed in 2006 and 2012 Advisian noted that the site is located along the fringes of a large flood storage area.

In consideration of the concept sketches included within Appendix C and the existing site topography Advisian note that the minimum floor levels required by Council's Flood Policy can be met, that being greater than RL6.6m AHD. Advisian state (page 4)

"... The requirement for all ancillary essential service areas to be at or above the PMF level is partly achieved based on the concept sketches. In that regard, the RACF is proposed to include kitchen and laundry facilities on the ground floor and first floor which would have a FFL of at least 6.6m AHD.

Additional kitchen and laundry facilities are however also proposed to be located within the basement, which is to be constructed with a FFL of 4.0m AHD. Although this does not directly comply with the

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minimum floor level requirements, it is our understanding that the requirement is concerned with ensuring the facility can continue to operate in times of flood. Given alternate facilities on the ground and first floors would be adequate if the basement facilities were temporarily closed we do not consider this to be a concern. This is further supported by the high flood immunity of the basement which has FFL that is over 0.26 metres above the peak 0.5% AEP flood level. Furthermore, the basement would be protected from inundation by the elevated access road which would only be overtopped once floodwaters reach 5.1m AHD; i.e., the peak 0.05% AEP flood level'.

Advisian also support the site egress options noting that evacuation can occur to the north-east through the existing Sienna Grange road network or south-east through the proposed site entry. Both of which are flood free during events up to and including the 0.2% AEP flood (i.e. the 500 year ARI flood).

The site is also considered to contain a 14 hour warning time for minor floods, 12 and 11.5 hours for moderate and major floods respectively. Advisian noted however, that '...if floodwaters reach the Major flood level at Wauchope (Railway Bridge), it does not necessarily mean that inundation will occur at the site. In fact, the Major flood level at Wauchope is approximately 3 metres lower than the corresponding 1% AEP flood level, which indicates that in most cases of the flood warning being triggered the need to evacuate or prepare the RACF for emergency operations would never eventuate'.

In light of the above Advisian concludes the following:

- a) The ground and first floors of the RACF will have flood-free evacuation available to John Oxley Drive. Flood-free access will be available for vehicles via the main access road. Alternate floor free access will be available by foot along much of the site frontage to John Oxley Drive.
- b) 'Shelter-in-Place' is considered to be the best option for the ground and first floors of the RACF during all flood events; i.e., evacuation is not required.
- c) There is potential for the basement to be inundated if flood levels at the site exceed 5.1m AHD; i.e., a 0.05% AEP flood. At least 6 hours warning time would be available to complete emergency response measures if a trigger level equal to the 1% AEP flood level at the Wauchope Railway Bridge is adopted.
- d) Emergency response measures will be required for the basement to reduce potential damages and to ensure ancillary services can be re-located temporarily to the facilities available on the ground or first floors.

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### 3.3 Building Envelope

The location of the proposed RACF on the subject site is detailed within the attached Site Analysis Plan (Exhibit 2) and the conceptual Architectural Plans (contained in Appendix C).

Four (4) of the constructed self-care units (units 11, 13, 15 and 17 as detailed in Appendix D) will require removal to accommodate the proposed RACF. Four (4) of the DA2003/0533 approved self-care units (units 12, 14, 16 and 18 as detailed in Appendix D) will also not be constructed resulting in the site containing a total of 63 self-care units.

The RACF itself is proposed to contain three (3) storeys and a maximum estimated building height of 12 metres. It is noted that the subject site is not identified as containing a maximum building height limit.

The adjoining site to the north (Lot 12 DP1088869) has been granted consent to contain a retailing of bulky goods development which included a building height of 18 metres.

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# Section 4 Strategic Justification

### 4.1 Local Strategies

The following local strategies apply to the subject site:

4.1.1 Port Macquarie-Hastings Urban Growth Management Strategy (2011-2031)

This Strategy, the UGMS, is the local response to the Mid North Coast Regional Strategy (Section 4.2.1) and is closely integrated with Council's Towards 2030 Community Strategic Plan. The UGMS provides Council's vision and provides a strategic planning framework for the residential and commercial (retail, tourism and industrial) growth of the Port Macquarie-Hastings Local Government Area (LGA) to 2031.

The UGMS includes the following key areas:

### Natural environment, resources and constraints

The PM-H LGA is considered a biologically diverse area containing a wide range of habitat types. The coastal portion of the LGA supports a koala population of State significance and as a result the effective integration of urban development in this natural environment is considered to represent significant challenge.

The subject site and proposed development is considered to be consistent with the provisions of this section of the UGMS due to the fact that it contains existing residential (urban) development and does not require the removal of any vegetation.

### Settlement Pattern

The UGMS recognises the existing natural constraints present in the LGA and encourages compact urban form in the long-term, concentrated in key linear growth forms, such as the Port Macquarie-Wauchope road corridor, which includes John Oxley Drive and the Oxley Highway (the subject site is located between these two roads).

The future development of the John Oxley Drive precinct, post Oxley Highway re-alignment, was recognised within the UGMS due to its strategic position between the identified growth areas of Thrumster and Wauchope (the John Oxley Drive Structure Plan, Section 4.1.3, identifies the site and immediately adjoining land to the south as suitable for residential development, refer Figure 4.1.3).

The subject site adjoins land identified within the UGMS as suitable for the purposes of containing retailing of bulky goods. This adjoining site has since received development consent for this purpose however, no

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work has commenced on-site.

The subject site and proposed development is considered to be consistent with the provisions of this section of the UGMS due to the fact that the site is located within the existing urban footprint and is within the Port Macquarie to Wauchope growth corridor thereby strengthening the recommended linear growth pattern.

### Economic development and employment

One of the key aims of the UGMS is the promotion of economic development and employment within the LGA. The UGMS therefore identifies a number of key economic initiatives which are considered to strategically target the desired growth.

None of these initiatives include aged care or residential housing. It is however, considered that the provision of residential aged care housing within the existing urban footprint of the LGA is consistent with the UGMS' intention to provide a linear development pattern, accommodate the housing needs of its ageing population as well as reduce the burden on infrastructure and emergency services.

The proposal will generate employment throughout the planning and construction phase of the development as well as an estimated 35 ongoing part to full-time positions;

### **Housing**

The UGMS recognises that the Port Macquarie-Hastings local government area (LGA) includes an increasingly ageing population with the area having a high proportion of people aged 65 and over (22.3%) in comparison to the Australian population (13.5%). As a response the UGMS also recognises the demand for a greater range of housing types (including those catering for the ageing population) as well as age related payments and services.

The subject site and proposed development is considered to be consistent with the provisions of this section of the UGMS due to the fact that it will provide housing for the ageing population in a manner which strengthens the existing urban hierarchy as well as promoting an efficient use of infrastructure and transport systems.

In this regard, it is noted that the subject site is located along the main settlement corridor, approximately 400 metres from the Port Macquarie Base Hospital and is located adjacent the Lake Innes shopping village (Coles, medical, bank). The proposal is therefore considered consistent with the provisions of this section of the UGMS.

#### Infrastructure

To ensure the efficient use of infrastructure this section of the UGMS reinforces the linear growth form (settlement pattern) to ensure that the growth of the LGA can be serviced by the relevant infrastructure,

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including public transport, without undue delay and cost.

The subject site and proposed development is considered to be consistent with the provisions of this section of the UGMS due to the fact that it is located within the Port Macquarie urban footprint along the Port Macquarie to Wauchope corridor.

The subject site is serviced by east and west bus routes and is serviced by existing infrastructure including reticulated water and sewer, electricity and telecommunications as well as being located in close proximity to the Port Macquarie Base Hospital and Lake Innes Shopping Village.

### 4.1.2 Towards 2030: Community Strategic Plan (2011)

This strategic plan was compiled by Council after extensive community engagement and details the community's overarching vision for the area with a particular focus on the community's aspirations for strategic objectives such as social, economic, environment and civic leadership.

The plan focuses on four (4) focus areas which include:

- 1. Planning and providing our infrastructure;
- 2. Helping our community prosper;
- 3. Looking after our people; and
- 4. Looking after our environment.

The plan contains no specific requirements or objectives for the subject site or proposed development.

### 4.1.3 John Oxley Drive Precinct Structure Plan (2012)

The subject site is located on the north-western side of John Oxley Drive and as a result falls within the north-east sub-precinct of the John Oxley Drive precinct. This area has developed incrementally over many years on the fringe of Port Macquarie. However, as a result of development pressures the precinct, which remains predominantly rural in nature, provides an opportunity for growth. This Structure Plan therefore provides a planning framework against which future land uses can be assessed and coordinated.

At the time of the Structure Plans publication the Sienna Grange retirement village (subject site) had only recently commenced construction and the Oxley Highway re-alignment had recently commenced.

The Structure Plan notes that the precinct is effected by flooding but, the mapping available does not take into account any impacts from the construction of the new Oxley Highway alignment. It is noted that the mapping applying to the subject site does not recognise the earthworks

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and associated construction works which have occurred on site as a part of the Sienna Grange retirement village.

The Structure Plan recognises the existing retirement village and it is considered that the further development of the site for the purposes of providing aged care is consistent with the provisions of the Structure Plan.

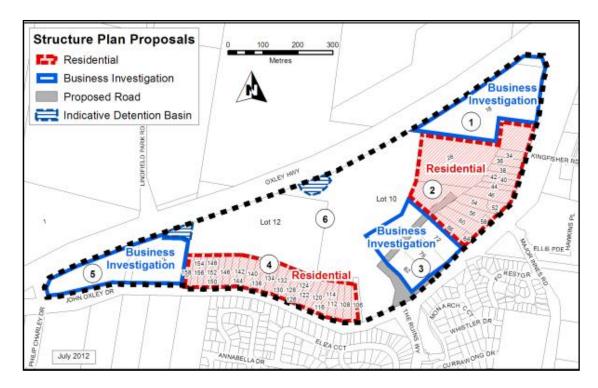


Figure 4.1.3: (above) Figure 6.2 excerpt from the John Oxley Drive Structure Plan identifying the potential locations for appropriate commercial and residential development, including the subject site.

### 4.2 Regional Strategies

The following regional strategies apply to the subject site and proposed development:

### 4.2.1 Mid North Coast Regional Strategy (2006-2031)

The Mid North Coast Regional Strategy (MNCRS) applies to eight (8) local government areas including Port Macquarie-Hastings. The MNCRS aims to ensure that adequate land is available and appropriately located to accommodate the projected housing and employment needs of the region's population over the next 25 years.

The strategy recognises that the region has been one of the faster growth regions of NSW anticipating a 1.1% growth rate over the next 25 years with a significant proportion of this arising from the coastal migration of the ageing population (median age increasing from 44 in

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2006 to 55 in 2031).

As a result of the above, the strategy notes that '...as the population of the region increases, it will also age and reflect changes in living patterns, particularly the decline in occupancy rates. The most significant implication of these ageing and housing trends will be that smaller households will form and a greater number of dwellings for single person and couple households will be needed'.

The proposed RACF is considered consistent with the strategies anticipated changes in living patterns as it will provide housing for the ageing population.

The strategy also outlines the regional challenges and covers the same issues as the UGMS (Section 4.1.1) including:

- Settlement and housing;
- Settlement character and design;
- Economic development and employment growth;
- Environment and natural resources;
- Natural hazards;
- Cultural heritage;
- Water and energy resources; and
- Regional transport.

Overall, it is considered that the proposed RACF is consistent with the aims and objectives of the MNCRS.

### 4.2.2 Mid North Coast Farmland Mapping Project (2009)

The Farmland Mapping Project aimed to identify and protect regionally significant farmland from urban and rural residential encroachment and land use conflict.

The Mapping Project identifies the subject site as 'other rural land' but does not recommend specific planning controls for other rural land beyond what currently exists. Given the subject site contains an existing retirement village it is considered that the proposed RACF is consistent with the Farmland Mapping Project.

### 4.2.3 Draft North Coast Regional Plan (2016)

The draft Regional Plan outlines a 20 year vision for the future of the North Coast, centring on a prosperous community, healthy environment and attractive lifestyle choices.

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The draft plan outlines goals for the region including:

- To protect the environment, as well as Aboriginal and historic heritage, and productive farmland;
- To provide great places to live in vibrant communities by offering housing choices in the three regional cities;
- To provide housing to meet the changing demographic needs of the North Coast's communities;
- To create a prosperous economy by focusing the provision of job opportunities in the growing sectors of health, education and tourism; and
- To improve transport connectivity and freight networks.

The subject site and proposed RACF is considered consistent with the draft plans goals for the following reasons:

- The subject site contains an existing retirement village (Sienna Grange) and is surrounded by urban development;
- Two (2) existing trees (native vegetation) will require removal as a part of the proposed development. These trees are located at the rear of Lot 10 and are considered isolated, surrounded by urban development, and are therefore considered unlikely to detrimentally impact any ecological habitat or environment:
- The subject site is not identified as containing any items of aboriginal or historic heritage and is not identified as productive farmland (refer to Section 4.2.2);
- The proposed RACF will provide additional housing choice for the ageing population of the Port Macquarie-Hastings LGA (refer to Section 4.1.1);
- The proposal will create employment opportunities through the planning and construction phases as well as an estimated 35 ongoing part or full-time positions during operation; and
- The subject site is located on an existing bus transport route and within close proximity to the Port Macquarie Base Hospital (400 metres), Lake Innes Shopping Village (<100 metres) as well as University, schools and open space.

#### 4.3 Public Interest

The proposal is considered to be in the best interests of the public for the following reasons:

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- Port Macquarie contains an ageing population (22.3% over 65 years of age) with the median age anticipated to increase from 44 in 2016 to 55 in 2031. In order for this demographic shift it is considered that an increase in the availability of housing for seniors or people with a disability will be required in the short to long-term;
- The subject site is located in close proximity to facilities including the Port Macquarie Base Hospital (approximately 400 metres), the Lake Innes Village Shopping Centre (approximately 100 metres, containing a supermarket, medical centre (including general practitioner, physiotherapy and dental), bank, book store, bakery, butcher and café);
- The subject site is serviced by public transport. Two (2) bus stops exist adjacent the site providing direct connections to the Port Macquarie central business district (approximately 4km east of the site); and
- The site is located within the existing urban footprint of Port Macquarie and is connected to the necessary physical infrastructure including water, sewer, electricity and telecommunications.

### 4.4 Adequacy of Services & Infrastructure

The subject site is connected to the following infrastructure:

- Sewer: a sewer rising main (100mm diameter) and 150mm diameter sewer line run along the eastern boundary of Lot 1 DP735097 (rear boundary of Lot 10 DP31128);
- Water: a 300mm diameter water main runs along the eastern boundary of the lots with water hydrants located in front (east) of Lot 10 DP31128; and
- Stormwater: Both Lots 1 and Lot 10 slope away from John Oxley Drive and it is considered likely that stormwater is currently disposed of on-site. Lot 1 contains a stormwater detention basin which services the Sienna Grange retirement village.
- Electricity and Telecommunications: Both Lots 1 and Lot 10 are connected to the electrical and telecommunication network. NBN cables are also identified underground within Lot 1.

No formal assessment of the capacity of the existing infrastructure has been undertaken. However, initial investigations regarding capacity and availability have been undertaken and it is considered that the site is suitable for the proposed RACF.

SURVEYING II ARCHITECTURE II PLANNING II CIVIL ENGINEERING II URBAN DESIGN

Site Compatibility Certificate Application 68 Bed Residential Aged Care Facility Sienna Grange, Port Macquarie

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# Section 5 Pre-Lodgement Consultation

During the preparation of this Site Compatibility Application correspondence was exchanged with Council in relation to the existing service provisions and the extent of flooding impacts on the site.

As a part of these preliminary discussions Council identified the Probable Maximum Flood (PMF) level for the site as well as the flooding characteristics of the subject land and surrounding locality. This information has been utilised to inform this application and the conceptual architectural plans contained within Appendix C.

SURVEYING II ARCHITECTURE II PLANNING II CIVIL ENGINEERING II URBAN DESIGN

# Section 6 Site Compatibility Criteria

### 6.1 Statement Addressing SEPP Site Compatibility Criteria

The SEPP Site Compatibility Criteria is addressed in the following table:

### Criteria Comment The natural environment (including The subject site contains an existing retirement village (Sienna Grange) known significant environmental approved to contain 71 self-care units. values, resources, or hazards) and the existing uses and approved uses The site is identified as being bushfire and flood prone land (refer to of land in the vicinity of the proposed Sections 2.8 and 3.2 respectively). The site contains some existing vegetation (trees) along the southern boundary which are proposed to development. remain. Two (2) trees will require removal from the rear (western) boundary of Lot 10 however, these trees are considered isolated due to their urban surroundings and therefore it is considered unlikely that their removal will have any detrimental impact on any flora, fauna or their environs. The land adjoining the site contains a mixture of small RU1 Primary Production lots to the south (approximately 2,000sqm each), R2 Low Density Residential allotments to the east (approximately 4,000sqm each) and a large site to the north zoned B5 Business Development. This site was granted consent under DA2015/600 (issued 10 December 2015) to contain a large floor plate retailing of bulky goods development. Work under this consent has yet to commence on-site. The subject site and lands west of John Oxley Drive are located within the John Oxley Drive precinct which is identified within the John Oxley Drive Precinct Structure Plan (2012) as residential land with business investigation areas adjoining to the north and south (refer Figure 4.1.3). It is therefore considered that the site and surrounding lands are supported by Council for future urban growth. The proposed development is not considered likely to have any detrimental The impact that the proposed development is likely to have on the impact on the existing and identified future land uses adjoining the site. uses that are likely to be the future The existing land uses directly adjoining the site are predominately single uses of the land in the vicinity of the storey residential dwellings (on small rural allotments) with some development. commercial development including supermarket and specialty stores occurring to the east. A Church is also located directly east of the site on the south-eastern corner of Kingfisher Road and John Oxley Drive. The proposal is not considered likely to detrimentally affect the residential neighbours due to the fact that it will be separated by the proposed access road. The access road is considered to provide a suitable step down to the existing residential development. Future land uses identified for the area includes an approved retailing of bulky goods development to the immediate north. Works associated with this recently issued consent (December 2015) have not commenced on

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site. It is however, noted that the portion of the development adjoining the subject sites northern boundary contains a two (2) storey height limit stepping up to three (3) storeys towards the centre of the adjoining site.

To the east of the site, behind the adjacent supermarket, exists the recently opened Charles Sturt University (Ellis Parade). The recently opened component (February 2016) forms Stage 1 of the University and is understood to be expanding on the adjoining vacant land to the south. Development associated with student accommodation has also been granted recently within Kingfisher Road. Works associated with this consent are understood to have commenced on site.

It is also noted that John Oxley Drive is proposed to be upgraded to four (4) lanes with Council undertaking the conceptual design phase late in 2015. This upgrade work identifies the signalisation of the intersection of Kingfisher Road and John Oxley Drive as well as the intersection of Major Innes Road and John Oxley Drive. Completion of the upgrade works in accordance with the Council's conceptual plans is considered to improve the subject sites access to the adjacent supermarket and specialty stores.

The services and infrastructure that are available to meet the demands arising from the development (particularly retail, community, medical and transport services having regard to the location and access requirements set out in Clause 26 of the SEPP) and any proposed financial arrangements for infrastructure provisions.

The subject site is located approximately 400 metres from the Port Macquarie Base Hospital and associated medical precinct within Highfields Circuit. This precinct includes numerous specialist and general medical practitioners as well as university training facilities.

The site is also located adjacent a Coles supermarket and associated specialty stores which include a Medical Centre (GP, Physiotherapy and dental), bank, bookstore, hair and beauty salon, butcher, bakery, café, take-away outlet and liquor store.

Access to these facilities requires the crossing of John Oxley Drive which currently does not contain any identified pedestrian crossing points. As mentioned above, the upgrade of John Oxley Drive, including the signalisation of the intersection of Kingfisher Road and John Oxley Drive will result in a dedicated pedestrian crossing point.

Two (2) bus stops are located directly adjoining the site on either side of John Oxley Drive providing direct access to Wauchope and the Port Macquarie central business district (approximately 4km).

In the case of applications in relation to land that is zoned open space or special uses – the impact that the proposed development is likely to have on the provision of land for open space or special uses in the vicinity of the development.

The subject site is zoned RU1 Primary Production.

If the development may involve the clearing of native vegetation that is subject to the requirements of Section 12 of the *Native Vegetation Act 2003* – the impact that the proposed development is likely to have on the conservation and management of native vegetation (NB: this criteria does not apply to land in urban local government areas or urban zones listed under Schedule 1 of the *Native Vegetation Act 2003*).

The proposal will require the removal of two (2) existing trees located at the rear of Lot 10. These trees are likely to be required to be removed as a result of service provisions. Consent for the proposed tree removal will be considered as a part of any future development application.

The existing trees are considered isolated and due to their location do not form part of any ecological corridor or wider habitat. In this regard, the subject site contains a single storey dwelling house and existing retirement village containing only managed gardens.

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### Land Zoning Map - Sheet LZN\_013D

B1 Neighbourhood Centre

B2 Local Centre

B3 Commercial Core

B4 Mixed Use

B5 Business Development

B7 Business Park

National Parks and Nature Reserves

E2 Environmental Conservation

E3 Environmental Management

E4 Environmental Living

IN1 General Industrial IN2 Light Industrial

IN3 Heavy Industrial

IN4 Working Waterfront R1 General Residential

R2 Low Density Residential

R3 Medium Density Residential

R4 High Density Residential

R5 Large Lot Residential

RE1 Public Recreation

RE2 Private Recreation RU1 Primary Production

RU2 Rural Landscape

RU3 Forestry

RU5 Village

RU6 Transition

SP1 Special Activities

SP2 Infrastructure

Tourist

W1 Natural Waterways

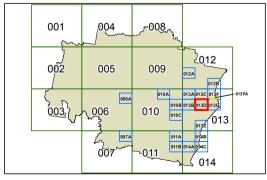
W2 Recreational Waterways

W3 Working Waterways

DM Deferred Matter

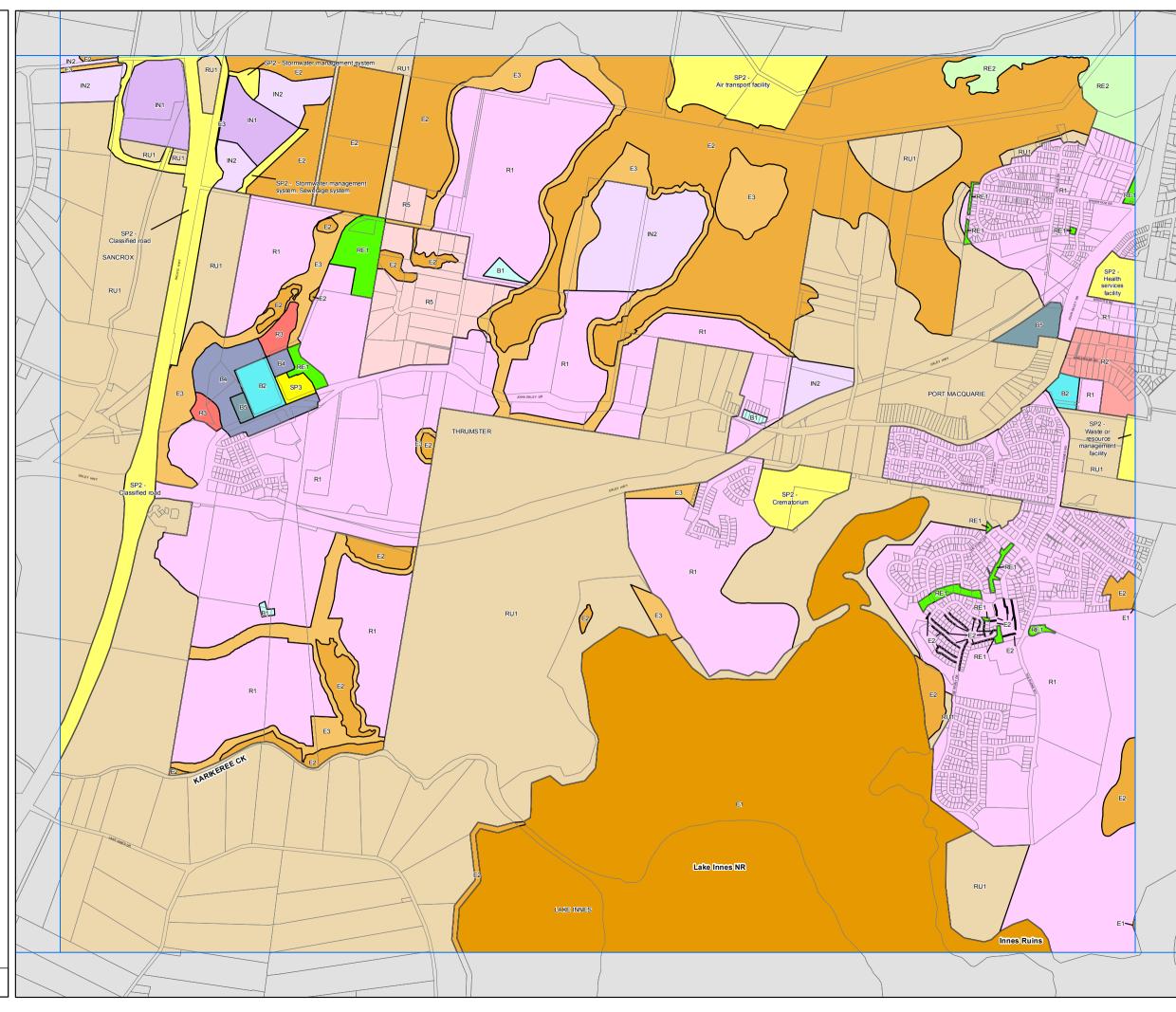
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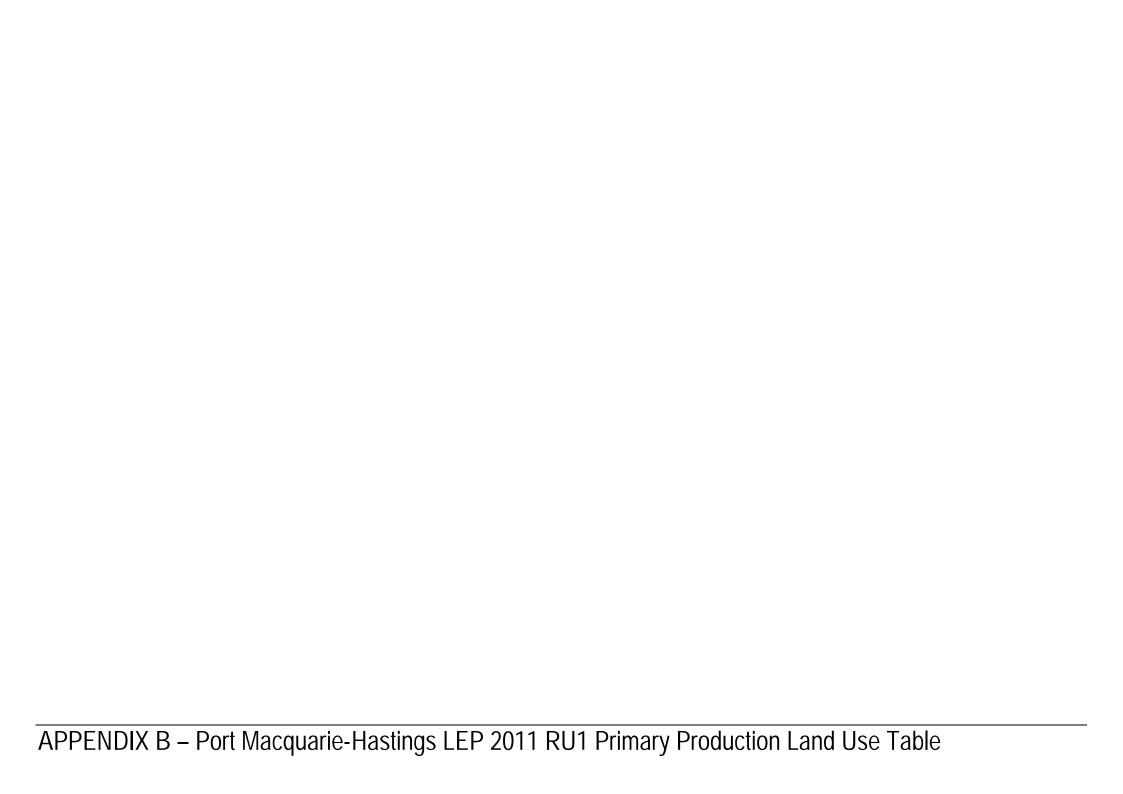
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16/03/2016 NSW Legislation



Whole title | Parent Act | Historical versions | Historical notes | Search title | Maps

### Port Macquarie-Hastings Local Environmental Plan 2011

Current version for 11 March 2016 to date (accessed 16 March 2016 at 15:03)
Land Use Table
Zone RU1

<< page >>

### **Zone RU1 Primary Production**

### 1 Objectives of zone

- To encourage sustainable primary industry production by maintaining and enhancing the natural resource base.
- To encourage diversity in primary industry enterprises and systems appropriate for the area.
- To minimise the fragmentation and alienation of resource lands.
- To minimise conflict between land uses within this zone and land uses within adjoining zones.

### 2 Permitted without consent

Extensive agriculture; Home occupations; Horticulture

### 3 Permitted with consent

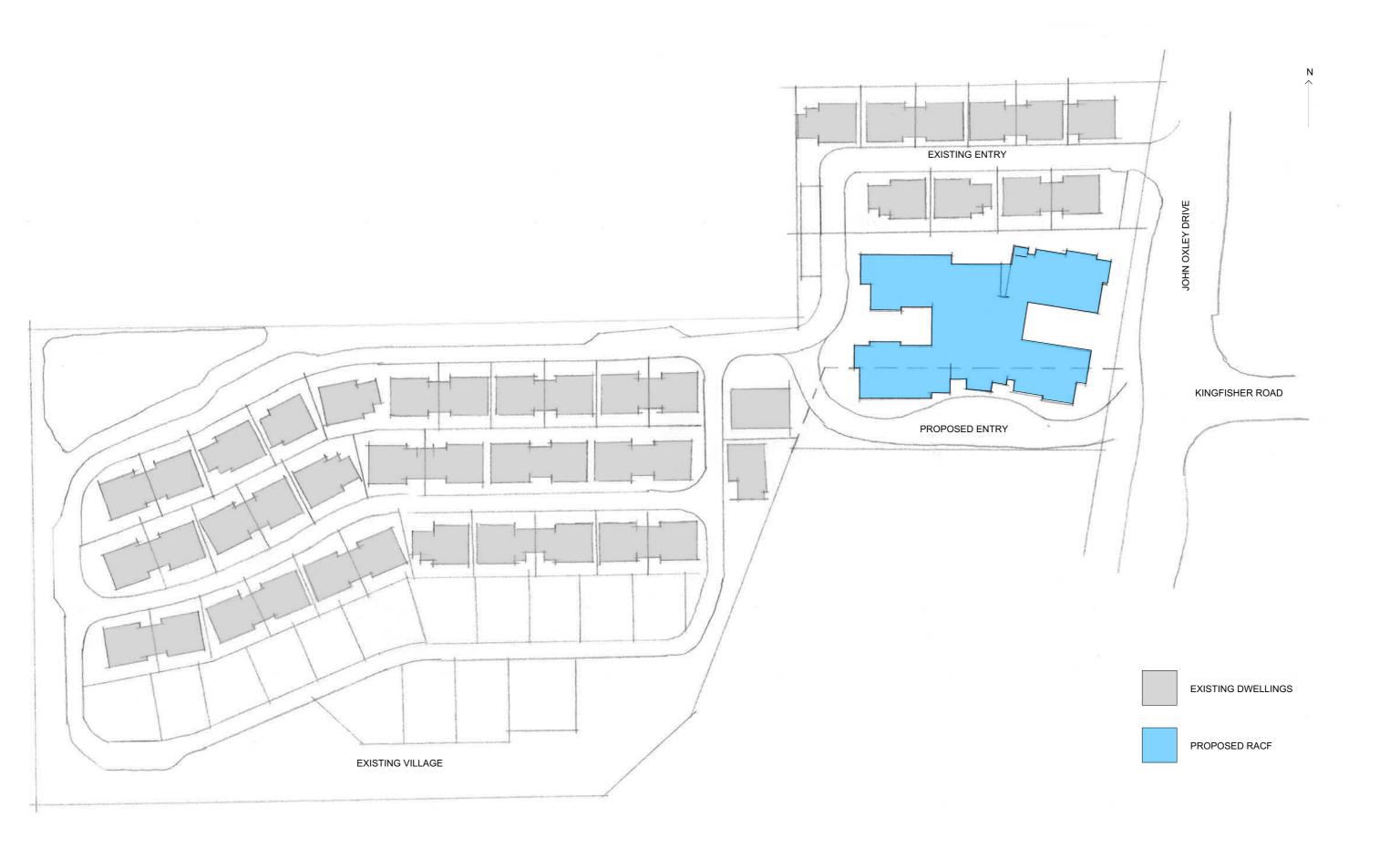
Agriculture; Air transport facilities; Airstrips; Animal boarding or training establishments; Bed and breakfast accommodation; Building identification signs; Business identification signs; Cellar door premises; Community facilities; Dual occupancies (attached); Dwelling houses; Eco-tourist facilities; Environmental facilities; Environmental protection works; Extractive industries; Farm buildings; Farm stay accommodation; Forestry; Helipads; Home-based child care; Home businesses; Home industries; Intensive livestock agriculture; Intensive plant agriculture; Open cut mining; Roads; Roadside stalls; Rural industries; Rural supplies; Rural workers' dwellings

### 4 Prohibited

Any development not specified in item 2 or 3

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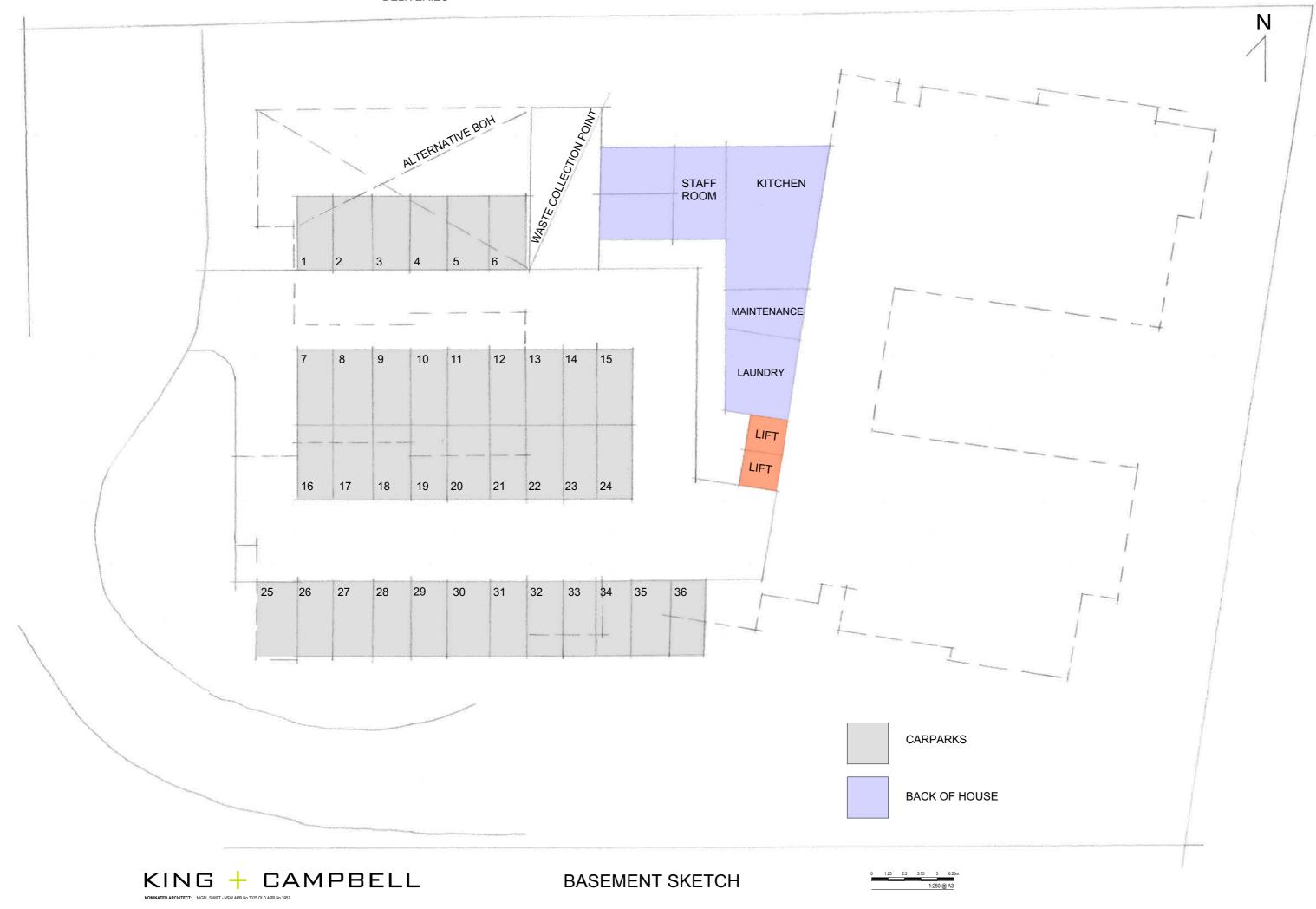






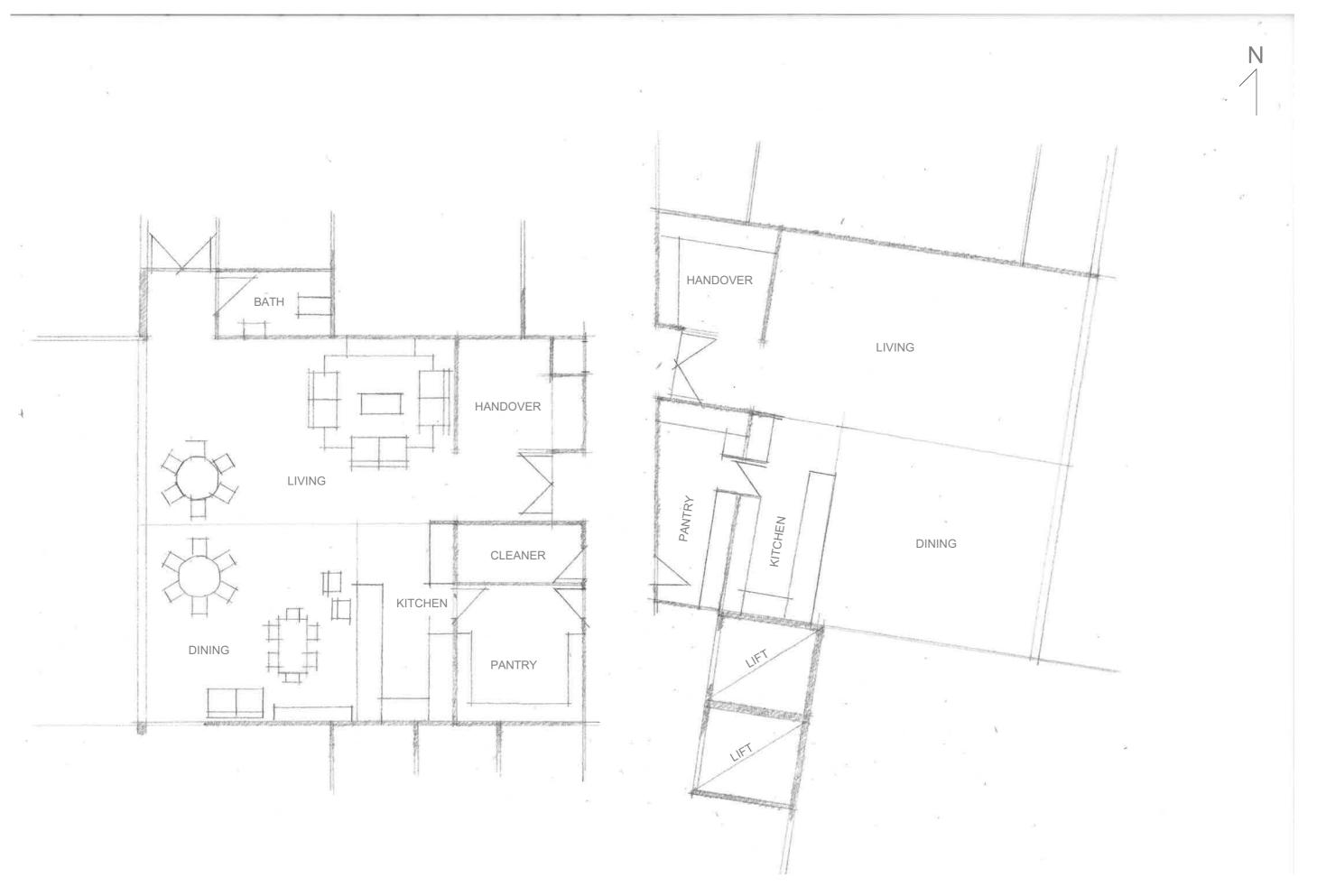


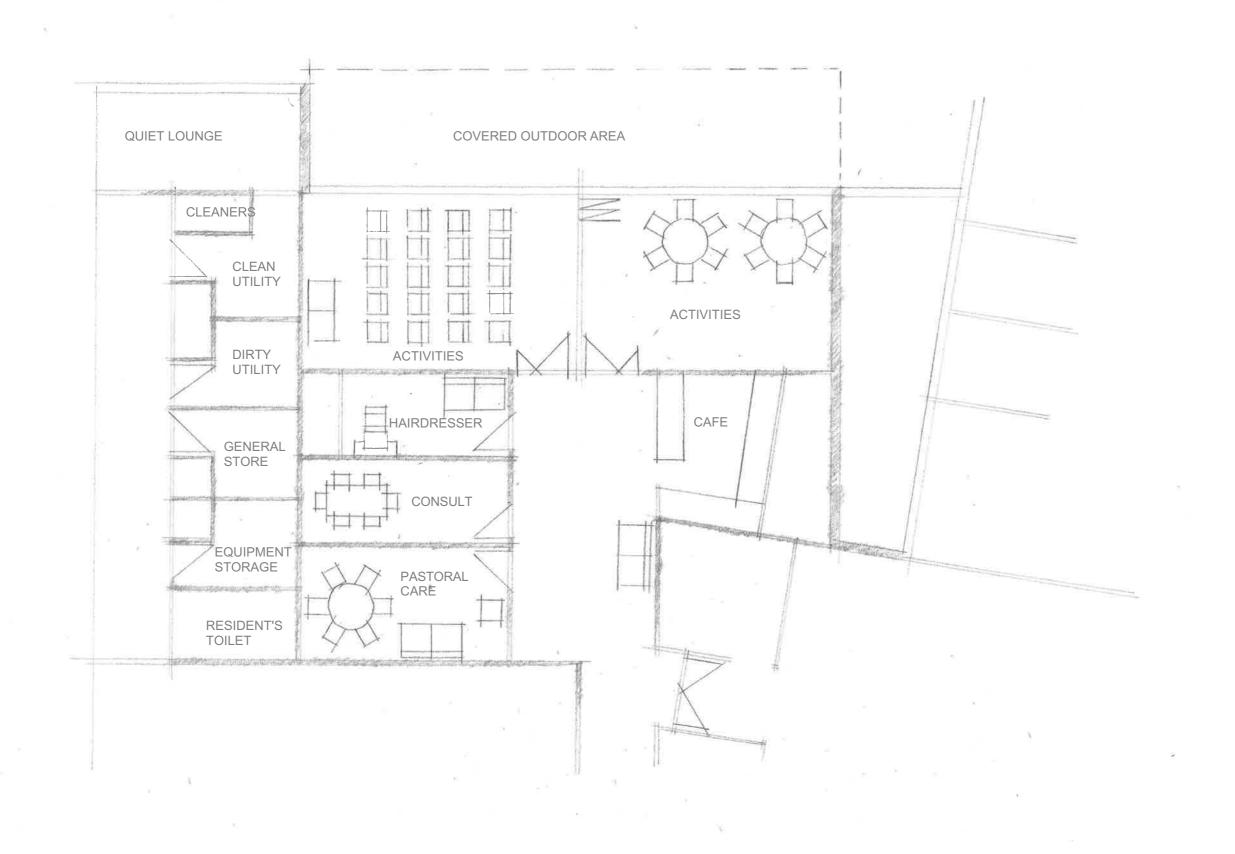


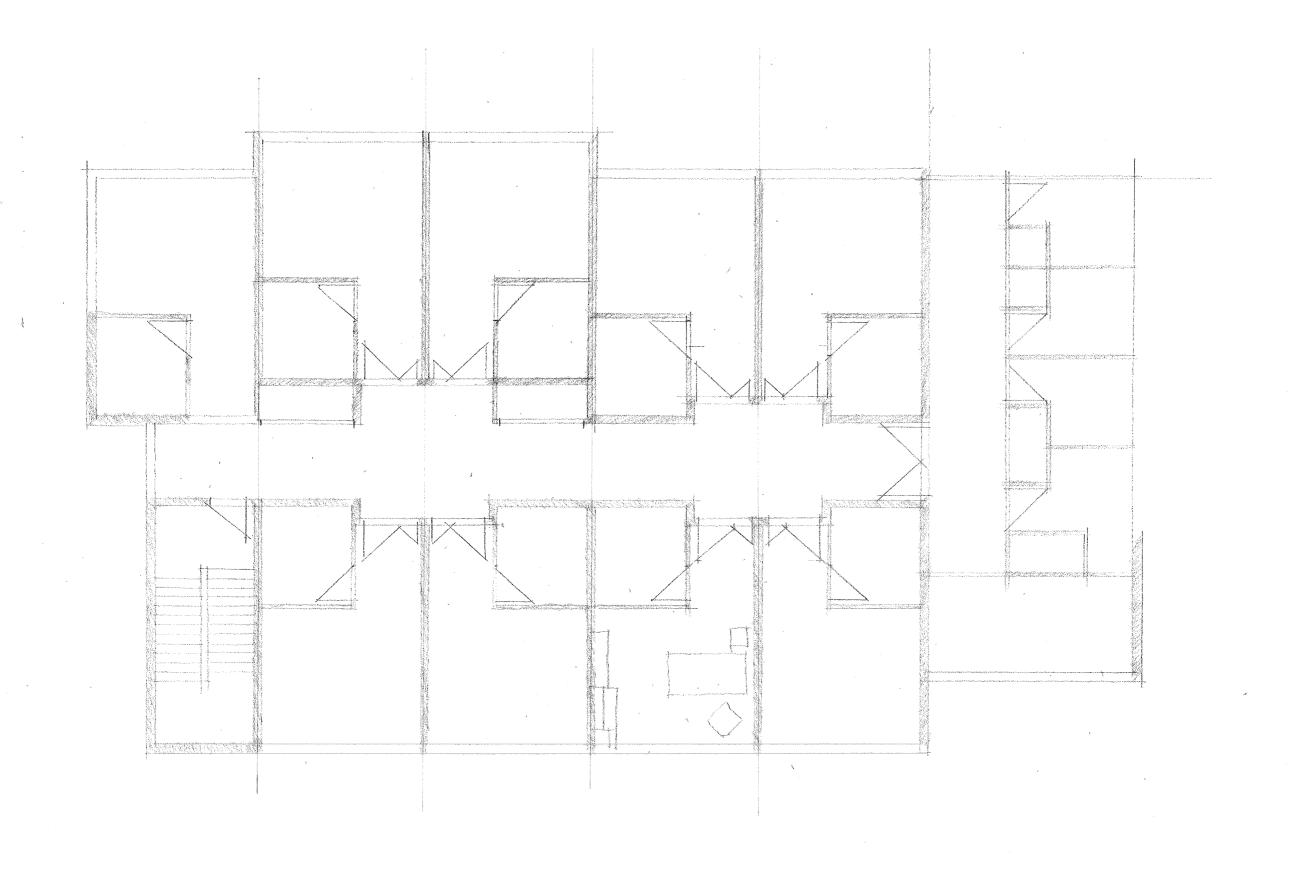


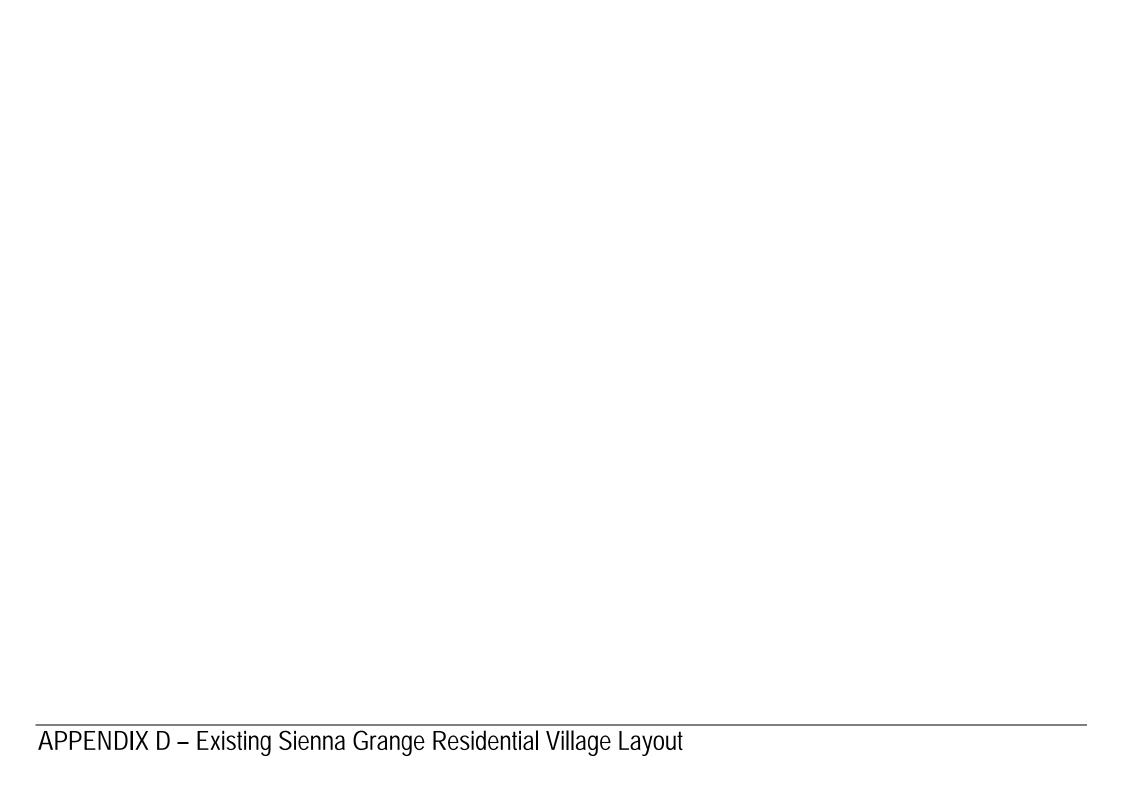


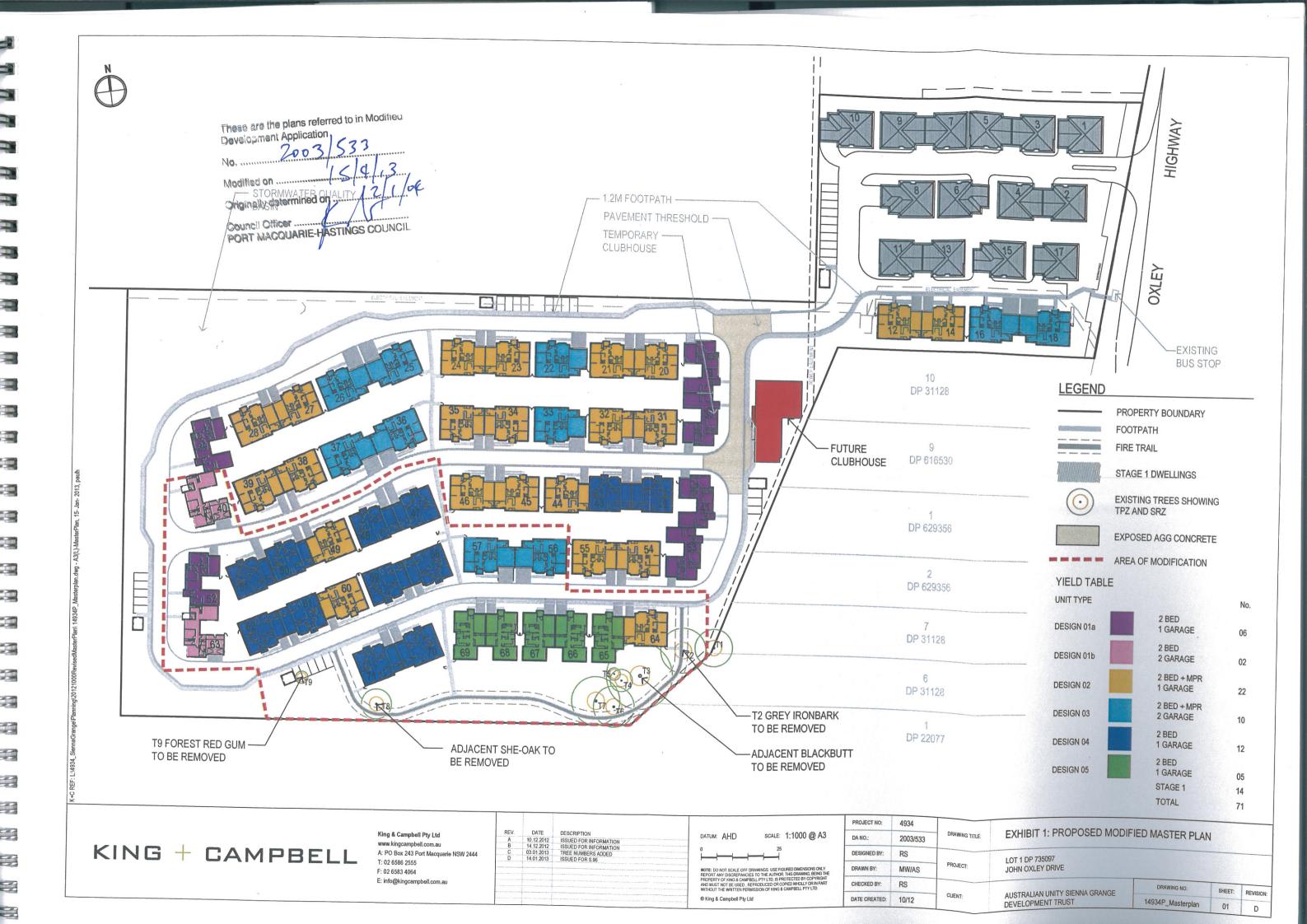


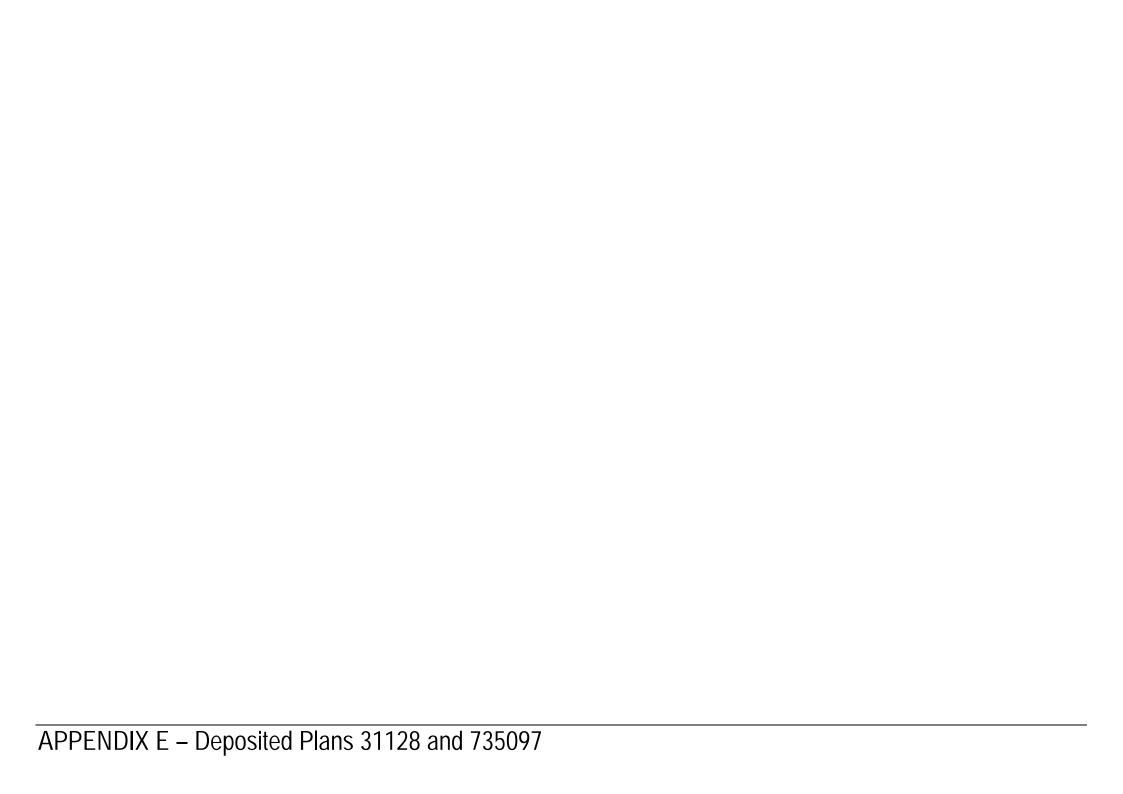












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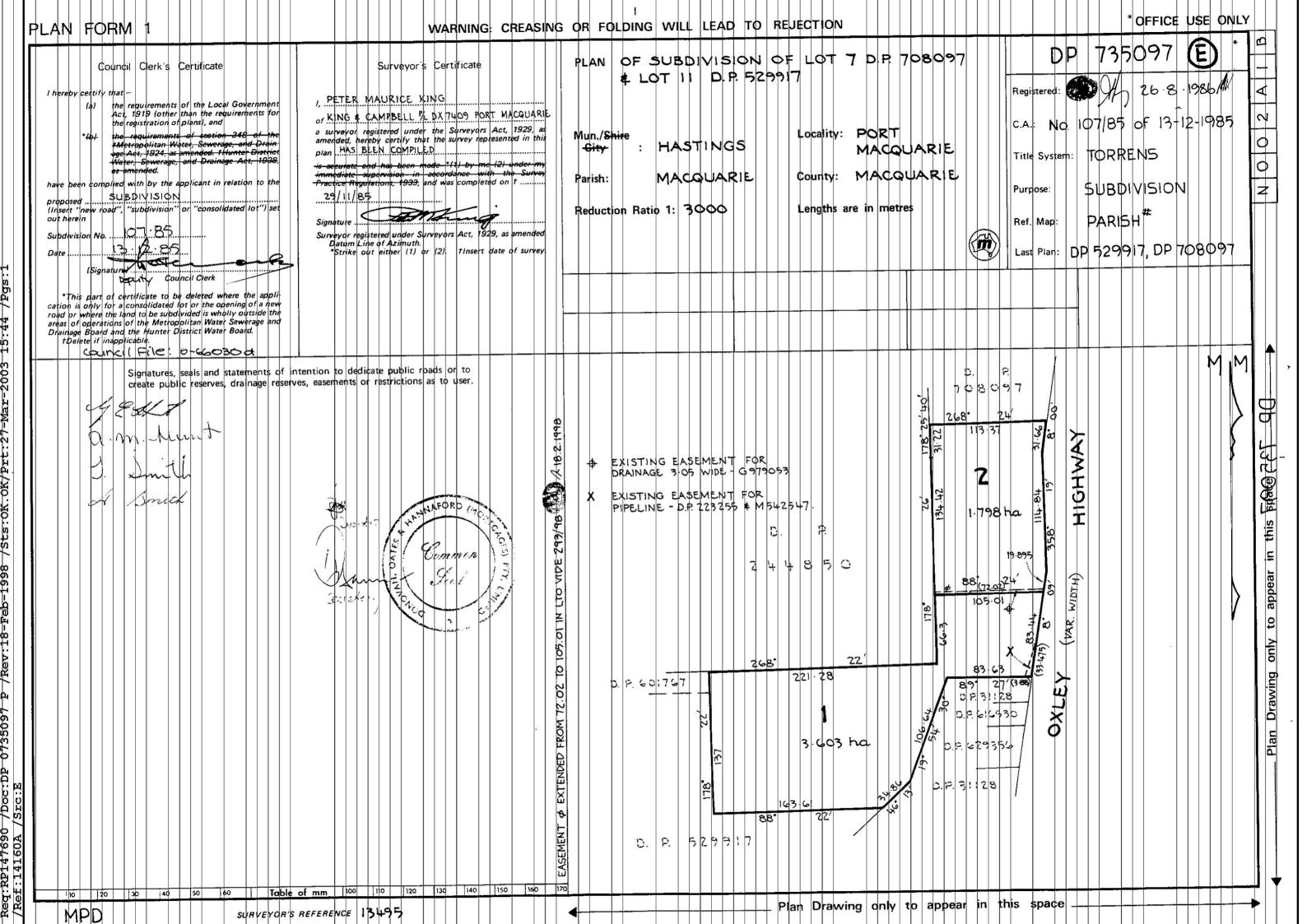
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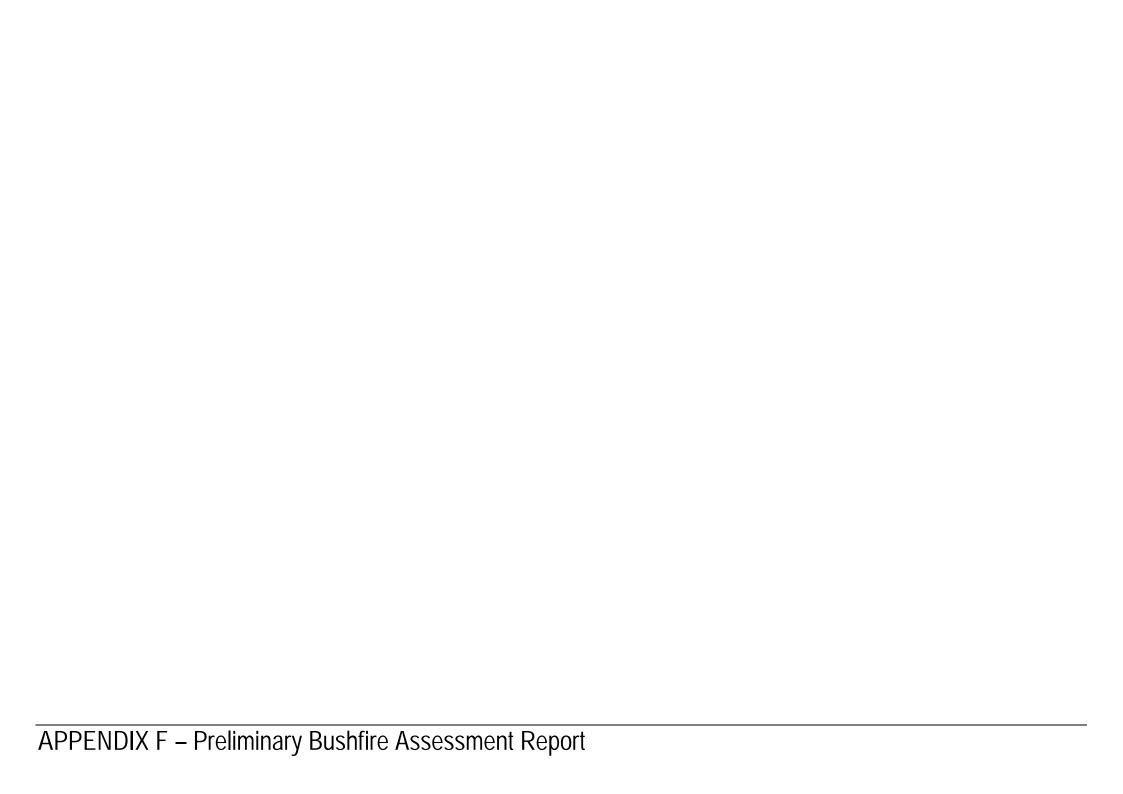
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# PRELIMINARY BUSHFIRE HAZARD PLANNING REPORT

LOT 1 DP735097 & LOT 10 DP31128 JOHN OXLEY DRIVE, PORT MACQUARIE

> CLIENT: KING & CAMPBELL PTY LTD

> > **FEBRUARY 2016**

This report has been prepared by David Pensini - Building Certification and Environmental Services with all reasonable skill, care and diligence for King and Campbell Pty Ltd.

The information contained in this report has been gathered from discussions with representatives of King and Campbell Pty Ltd, a review of the plans provided by King and Campbell Pty Ltd and experience.

No inspection or assessment has been undertaken on other aspects of the proposed development outside the scope of this report.

This report does not imply, nor should it be implied, that the proposed building design will comply fully with relevant legislation.

The report shall not be construed as relieving any other party of their responsibilities or obligations.

David Pensini - Building Certification and Environmental Services disclaims any responsibility King and Campbell Pty Ltd and others in respect of any matters outside the scope of this report.

The report is confidential and the writer accepts no responsibility of whatsoever nature, to third parties who use this report, or part thereof is made known. Any such party relies on this report at their own risk.

For and on behalf of David Pensini - Building Certification and Environmental Services.

Prepared by: David Pensini

Signed:

Dated: 2<sup>nd</sup> February 2016

Version	Date	Information relating to report			
		Reason for issue			
1.0	29 <sup>th</sup> January 2016		Draft		
2.0	2 <sup>nd</sup> February 2016		Issued to Client		
			Prepared by	Verified by	Approved by
		Name	David Pensini		David Pensini
		Signature	Dovedan		Davedan

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# 1.0 INTRODUCTION

The subject site is located at Lot 1 DP735097 and Lot 10 DP31128 John Oxley Drive, Port Macquarie and is situated within the Port Macquarie-Hastings Council local government area. With a population of approximately 45,000 Port Macquarie, serves as the regional centre for the Port Macquarie-Hastings local government area.

The subject site is located in the southwestern fringe of the urbanized area of Port Macquarie approximately 5km south west of the Port Macquarie CBD. The site location can be seen in **Figure 1** below, 1:25,000 scale topographic map.

Figure 1 - Site Location



The closest Fire Service is located approximately 3km to the northeast of the subject site, (Port Macquarie Fire Brigade), with the closest Fire Control Centre being at Wauchope which is 20 kilometres west or 20 minutes by car from Port Macquarie.

# 2.0 PURPOSE OF THE REPORT

David Pensini - Building Certification and Environmental Services has been requested to prepare a preliminary report which identifies relevant bushfire hazard planning and

construction issues, which require consideration in relation to the possible development of the subject site as a further stage of the already existing Sienna Grange aged care complex.

Given the nature of the development proposal for the site, this report has been structured to provide information regarding the following categories of development provided for by NSW Rural Fire Service, *Planning for Bushfire Protection*, 2006;

 Special Fire Protection Purpose (SFPP) – schools, hostels, group homes, aged care facilities, tourist accommodation etc.

It is noted that any proposal to construct aged care accommodation, (SFPP), will require the issuing of a Bush Fire Safety Authority under Section 100B of the *Rural Fires Act 1997 by the NSW Rural Fire Service*.

#### 3.0 DESCRIPTION OF THE DEVELOPMENT SITE

The subject site is located at Lot 1 DP735097 and Lot 10 DP31128 John Oxley Drive, Port Macquarie and is situated within the Port Macquarie-Hastings Council local government area.

As can be seen in **Figure 1** above the subject site is located on the south-western fringes of Port Macquarie with the Lake Innes urban growth area located to the southeast of the subject site. Being on the south-western fringe of the urban area of Port Macquarie the area of the subject site and surrounds has and continues to experience significant urban expansion and land use transformation.

The character of the immediate area is that of a typical evolving urban area with significant redevelopment of existing residential lots. The locality of the subject site is characterized by the already developed Sienna Grange aged care facility to the north and west with developed urban allotments to the south and east. The John Oxley Drive road reserve adjoins the subject site along its eastern property boundary and as such direct road frontage is available to the subject site.

The entire site has been cleared of all of the native vegetation in the past to facilitate the residential development and use of the subject site. Managed grasses amongst gardens are the predominant vegetation on the subject site although a number of scattered shrubs are present on the subject site. A narrow band of remnant Dry Sclerophyll Forest which has been retained within an unformed portion of the John Oxley Drive road reserve is present to the northeast of the subject site.

The topography of the subject site and adjoining and adjacent land consists of gentle to moderate slopes in the order of 2° to 5°. The predominant slope condition is north to south downslopes with an east to west cross fall.

The subject site has been identified as bushfire prone land primarily due to vegetation within the eastern portion of the John Oxley Drive road reserve to the northeast/east of the subject site.

#### 4.0 PROJECT BRIEF

David Pensini - Building Certification and Environmental Services has been requested to prepare a preliminary report which identifies relevant bushfire hazard management issues, which require consideration in the planning for the possible aged care accommodation development of the subject site, refer to **Appendix 1**.

#### 5.0 REPORT BASIS

This report is based on:

- NSW Rural Fire Service, *Planning for Bushfire Protection*, 2006.
- Building Code of Australia, 2015 (including AS3959 2009)
- Site Inspection conducted on 30<sup>th</sup> January 2016.

#### 6.0 PLANNING ISSUES

Any proposal to construct aged care accommodation buildings, (SFPP), would require the issuing of a Bush Fire Safety Authority under Section 100B of the *Rural Fires Act 1997*. Accordingly any development application which is submitted to Port Macquarie Hastings Council would be an Integrated Application requiring referral to the Rural Fire Service for their assessment and concurrence to the issuing of a Bush Fire Safety Authority.

Proposals involving SFPP must demonstrate that compliance with the relevant requirements of NSW Rural Fire Services, *Planning for Bushfire Protection*, 2006 is possible for the proposed new building/s. Key aspects of compliance with NSW Rural Fire Services, *Planning for Bushfire Protection*, 2006 include;

- Suitable and appropriate APZ's can be provided to the subject development.
- Buildings can be constructed in accordance with the requirements of AS 3959-2009.
- An adequate supply of water is available for firefighting purposes and services such as electricity will be available.
- Adequate and suitable access and egress is available to and from the subject site.
- Emergency and evacuation planning.

#### 7.0 BUSHFIRE HAZARD ASSESSMENT

# 7.1 Assessment Methodology

A preliminary assessment of the slopes and vegetation structures on and surrounding the site was carried out on  $30^{th}$  January 2016.

The assessment of slope and vegetation being carried out in accordance with;

- Appendix 2 and Appendix 3 of NSW Rural Fire Service, Planning for Bushfire Protection, 2006; and
- Section 2 of AS3959 2009.

# 7.2 Slopes

The following table indicates the slopes measured within the bushfire hazard vegetation that was identified as affecting the subject site.

<u>Table 1 - Bushfire Hazard Slopes</u>

Hazard Direction	Indicative Slope	Upslope/Down slope
East/Northeast	2°-4° (0°)	Up slope

<sup>\*\*</sup>Note: In accordance with NSW Rural Fire Services, Planning for Bushfire Protection, 2006 and AS3959 – 2009 all upslope vegetation is considered to be  $0^{\circ}$ .

# 7.3 Bushfire Hazard Vegetation

The northern, south-eastern and western aspects of the subject site consist of urban development for greater than 140m from the subject site and accordingly there are no areas of vegetation of bushfire significance in these aspects of the subject site.

To the east/northeast of the subject site is a narrow band of Dry Sclerophyll Forest vegetation which is confined to the eastern fringes of the John Oxley Drive road reserve. Given the narrow width of the remnant forest vegetation and the disconnection from other areas of hazard vegetation a specification similar to Rainforest is applicable to the remnant forest vegetation which is present to the east/northeast of the subject site.

The following table indicates the various vegetation structures adjoining/adjacent to the subject site and the vegetation classifications which have been determined in accordance with Appendix 2 of NSW Rural Fire Service, *Planning for Bushfire Protection*, 2006, (PfBP 2006), and Section 2 of AS3959 - 2009.

<u>Table 2 – Summary of Vegetation Characteristics and Classifications</u>

ASPECT	VEGETATION DESCRIPTION	SLOPE	VEGETATION CLASSIFICATION (PfBP 2006 - Keith 2004)	VEGETATION CLASSIFICATION (AS3959 – 2009)
East/Northeast	Narrow band of Dry Sclerophyll Forest within unformed portion of the John Oxley Drive road reserve	2° - 4° Upslope	Similar in specification to Rainforest	Rainforest

# 7.4 Fire Danger Index

The fire weather for the site is assumed on the worst-case scenario. In accordance with NSW Rural Fire Services, *Planning for Bushfire Protection*, 2006 and Section 2 of AS 3959 – 2009 the fire weather for the site is based upon the 1:50 year fire weather scenario and has a Fire Danger Index (FDI) of 80.

# 8.0 BUSHFIRE HAZARD ISSUES AND CONSTRAINTS

# 8.1 NSW Rural Fire Service, Planning for Bushfire Protection, 2006

The following issues and constraints have been identified through considering the requirements of NSW Rural Fire Service, *Planning for Bushfire Protection*, 2006.

#### 8.1.1 <u>Asset Protection Zones</u>

The following table details the minimum required Asset Protection Zones for 'Special Fire protection Purpose Development' as provided for by NSW Rural Fire Service, *Planning for Bushfire Protection*, 2006 which would be applicable to any aged care accommodation development of the subject site.

#### Table 3 – APZ Requirements

VEGETATION CLASSIFICATION	SLOPE	IPA	OPA	TOTAL APZ
				REQUIRED
Rainforest Specification				
	2° - 4° (0°)	30m	-	30m
	Upslope			

The minimum APZ requirement for each aspect of the subject site is as follows;

Table 4 – APZ Requirements for Each Aspect

Direction of Vegetation Hazard Type		IPA	OPA	Total APZ Required
East/Northeast	Rainforest	30m	-	30m

Issues which have been identified from the above assessment indicate that;

 The minimum required APZ for the eastern/north-eastern aspect could be achieved utilizing the existing formed pavement area of the John Oxley Drive road reserve in addition to an appropriate building setback from the eastern property boundary of the subject site.

A preliminary APZ Concept Plan as it applies to the subject site is provided for as Appendix 2.

#### **8.1.2** Asset Protection Zones Performance Requirements

The performance requirements for Inner and Outer Protection Areas are as follows;

#### (i) Inner Protection Area

An IPA should provide a tree canopy cover of less than 15% and should be located greater than 2 metres from any part of the roofline of a dwelling.

Garden beds of flammable shrubs are not to be located under trees and should be no closer than 10m from an exposed window or door.

Trees should have lower limbs removed up to a height of 2 metres above the ground

#### 8.1.3 Access and Egress

Specific details of any development would be required in order to determine the specific access and egress requirements for any development of the site. Not withstanding this, the subject site has road frontage to John Oxley Drive which provides for two wheel drive all weather public road infrastructure.

Where possible internal access roads and supporting infrastructure should be positioned so as to separate areas of hazard vegetation from residential buildings. This approach provides for a perimeter road strategy for access and egress.

It will be necessary to construct all new internal access roads within the proposed development so as to comply with the relevant provisions of the internal access road requirements of Section 4.1.3 of NSW Rural Fire Services, *Planning for Bushfire Protection*, 2006. The specific internal road design requirements provided for in Section 4.2.7 of NSW Rural Fire Services, *Planning for Bushfire Protection*, 2006 are also required to be complied

with. The relevant internal road provisions which are applicable to the proposed development are summarized as follows;

Table 5 - Acceptable Solutions (Access/Internal Roads)

Intent of measures: to provide safe access to/from the public road system for	
firefighters providing property protection during a bush fire and for occupants faced	
with evacuation.	

with evacuation.				
Performance Criteria	Acceptable Solutions			
The intent may be achieved where:				
Access to properties is provided in	At least one alternative property access road is			
recognition of the risk to fire fighters	provided for individual dwellings (or groups of			
and/ or evacuating occupants.	dwellings) that are located more than 200 metres			
	from a public through road			
The capacity of road surfaces and	Bridges clearly indicate load rating and pavements			
bridges is sufficient to carry fully	and bridges are capable of carrying a load of 15			
loaded fire fighting vehicles.	tonnes.			
	Roads do not traverse a wetland or other land			
All weather access is provided.	potentially subject to periodic inundation (other than			
	a flood or storm surge).			
Internal road widths and design	Internal roads are two-wheel drive, sealed, all			
enable safe access for emergency	weather roads.			
services and allow crews to work with				
equipment about the vehicle	Internal perimeter roads are provided with at least			
	two traffic lane widths (carriageway 8 meters			
	minimum kerb to kerb) and shoulders on each side,			
	allowing traffic to pass in opposite directions;			
	Roads are through roads. Dead end roads are not			
	more than 100m in length from a through road,			
	incorporate a minimum 12 meters outer radius			
	turning circle, and are clearly signposted as a dead			
	end;			
	Traffic management devices are constructed to			
	facilitate access by emergency service vehicles;			
	A minimum vertical clearance of four meters to any			
	overhanging obstructions, including tree branches, is			
	provided;			
	Curves have a minimum inner radius of six meters			
	and are minimal in number to allow for rapid access			
	and egress;			
	The minimum distance between inner and outer			
	curves is six meters;			
	Maximum grades do not exceed 15 degrees and			
	average grades are not more than 10 degrees;			
	Cross fall of the pavement is not more than 10			
	degrees;			

Roads do not traverse through a wetland or any other land potentially subject to periodic inundation (other than flood or storm surge);
Roads are clearly sign posted and bridges clearly indicate load ratings;
The internal road surfaces and bridges have a capacity to carry fully-loaded fire fighting vehicles (15 tonnes);

# 8.1.4 Water Supply and Utilities

As set out in Section 4.2.7 of NSW Rural Fire Services, *Planning for Bushfire Protection*, 2006, Special Fire Protection Purpose Developments must maintain a water supply reserve dedicated to firefighting purposes.

Access is available to the reticulated water supply that services the area and as such a water supply is potentially available to the subject site for fire fighting purposes. In this regard further investigation is required in order to determine the suitability of the existing reticulated supply for the proposed development.

Electricity supply is available and connected to the subject site.

#### 8.1.5 Landscaping

Landscaping is a major cause of fire spread to any building and therefore any landscaping within the subject site will need careful planning to produce gardens that do not contribute to the spread of a bushfire.

Appendix 5 of NSW Rural Fire Services, *Planning for Bushfire Protection*, 2006 contains standards that are applicable to the provision and maintenance of landscaping.

#### 8.1.6 Construction Requirements

It is noted that Appendix 3 of NSW Rural Fire Service, *Planning for Bushfire Protection*, 2006 now contains specific construction requirements which the NSW Rural Fire Service will seek to impose, through the development control process, in addition to the construction requirements contained within AS3959 – 2009.

Accordingly the determination of the construction requirements which will be applicable to any specific development proposal will need to have regard to the construction requirements nominated in Appendix 3 of NSW Rural Fire Service, *Planning for Bushfire Protection*, 2006 in addition to the requirements of AS3959 – 2009.

# 8.1.7 Evacuation Planning

Special Fire Protection Purpose Developments should have suitable management arrangements and structures capable of developing and implementing an Emergency Plan. Before occupation of any proposed buildings an Emergency Evacuation Plan incorporating bushfire evacuation will be required to be produced for aged care accommodation buildings.

# 8.2 Australian Standard 3959 – 2009, Construction Requirements for Buildings in Bushfire Prone Areas

# 8.2.1 Construction Requirements – AS 3959 (2009)

The bushfire construction requirements of Volume 2 of the Building Code of Australia for residential buildings are applicable in NSW. In this regard the Building Code of Australia provides that compliance with the relevant requirements of AS3959 – 2009 satisfies the performance requirements which are applicable to Part 3.7.4, (Bushfire Areas), of Volume 2 of the Building Code of Australia.

It is however noted that there are a number of NSW variations to the application of AS3959 – 2009 including a restriction on the utilization of the Bushfire Attack Level – Flame Zone requirements of the Australian Standard as a 'deemed to satisfy solution' for these situations. Consequently in NSW all situations which are determined as being subject to the Bushfire Attack Level – Flame Zone requirements of AS3959 – 2009 must be treated on merit with construction requirements being determined on a specific site assessment basis.

Based upon the provision of the minimum required Asset Protection Zones as provided for in **Table 4** of this report the following worst case Bushfire Attack Levels will be applicable to the construction of aged care accommodation buildings.

Table 6 – Bushfire Attack Levels for Nominated Vegetation Classifications and Slopes

ASPECT	VEGETATION CLLASSIFICATION	MINIMUM APZ (between building and Hazard Vegetation)	SLOPE	BUSHFIRE ATTACK LEVEL (BAL)
East/Northeast	Rainforest	30m	2° - 4° Upslope	BAL 12.5

#### 9.0 CONCLUSION

The above is a Preliminary Bushfire Planning Assessment Report for Lot 1 DP735097 and Lot 10 DP31128 John Oxley Drive, Port Macquarie and is based upon the slope and vegetation characteristics of the site at the time of the inspection of the site.

It should be noted that this is only a preliminary report and that further detailed information would need to be provided in order to prepare a Bushfire Hazard Assessment Report which is suitable for submission to the local Council and the NSW Rural Fire Service for the proposed development of the subject site.

#### 10.0 REFERENCES

NSW Rural Fire Services, *Planning for Bushfire Protection*, 2006

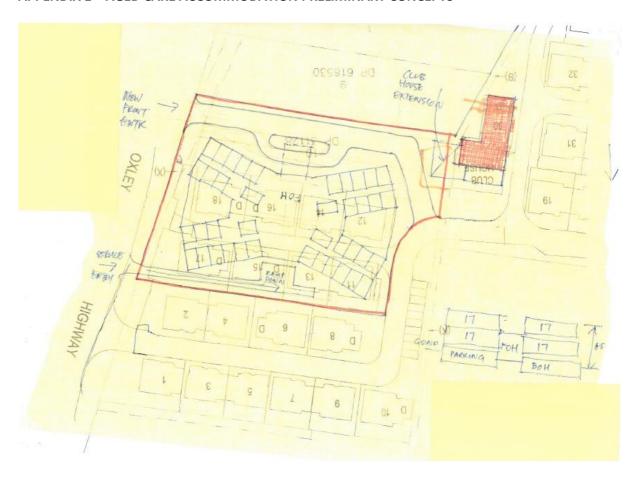
NSW Rural Fire Services, *Planning for Bushfire Protection*, 2001

AS 3959-2009 Construction of Buildings in Bushfire Prone Areas

Building Code of Australia, Australian Building Codes Board, 2015

Keith David 2004, Ocean *Shores to Desert Dunes, The Native Vegetation of New South Wales and the ACT*, Department of Environment and Conservation

# APPENDIX 1 - AGED CARE ACCOMMODATION PRELIMINARY CONCEPTS



Appendix E (ii) – RACF Design Options (purchase 2 lots)

PCG #08



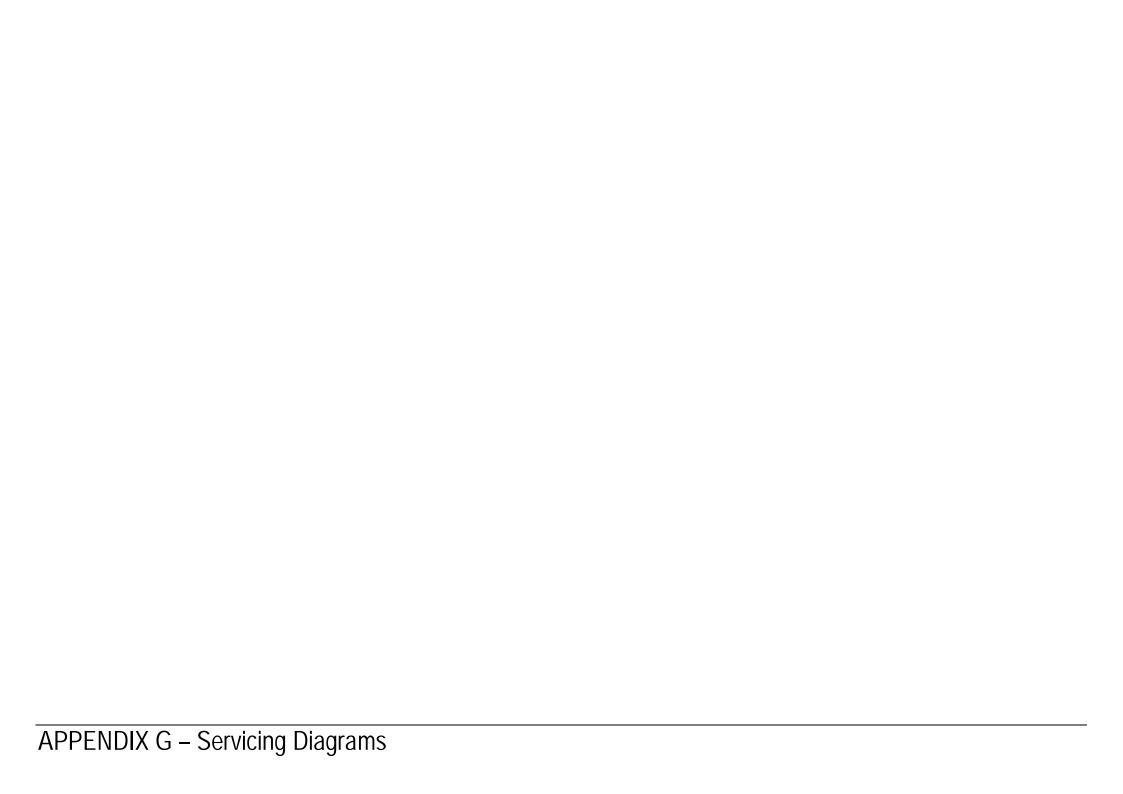


Australian Unity

# **APPENDIX 2 – APZ CONCEPT**



NOT TO SCALE INDICATIVE ONLY



# PORT MACQUARIE-HASTINGS COUNCIL

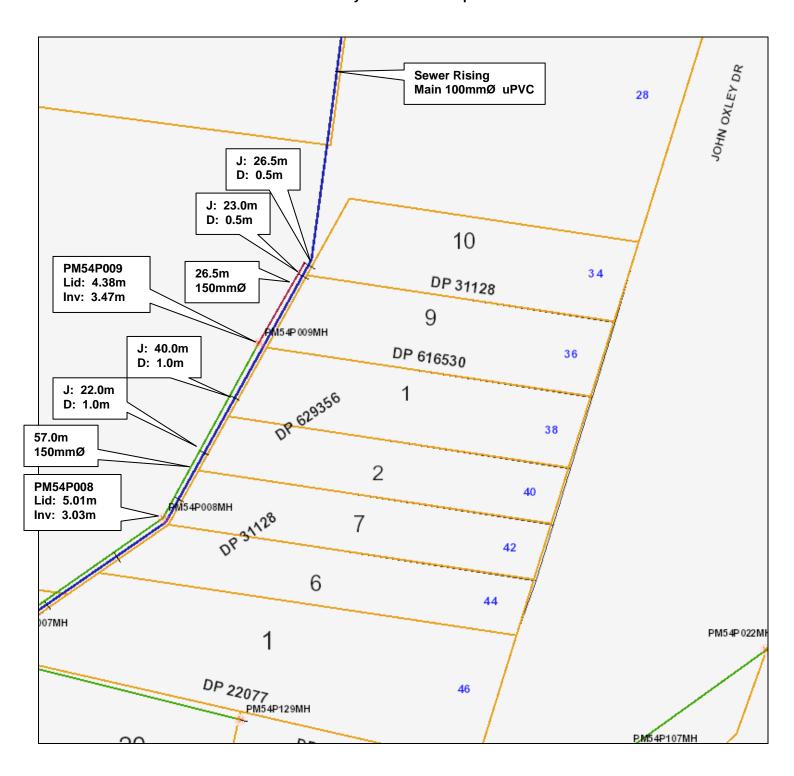
PO Box 84 Port Macquarie NSW Australia 2444 02 6581 8111 ABN: 11 236 901 601

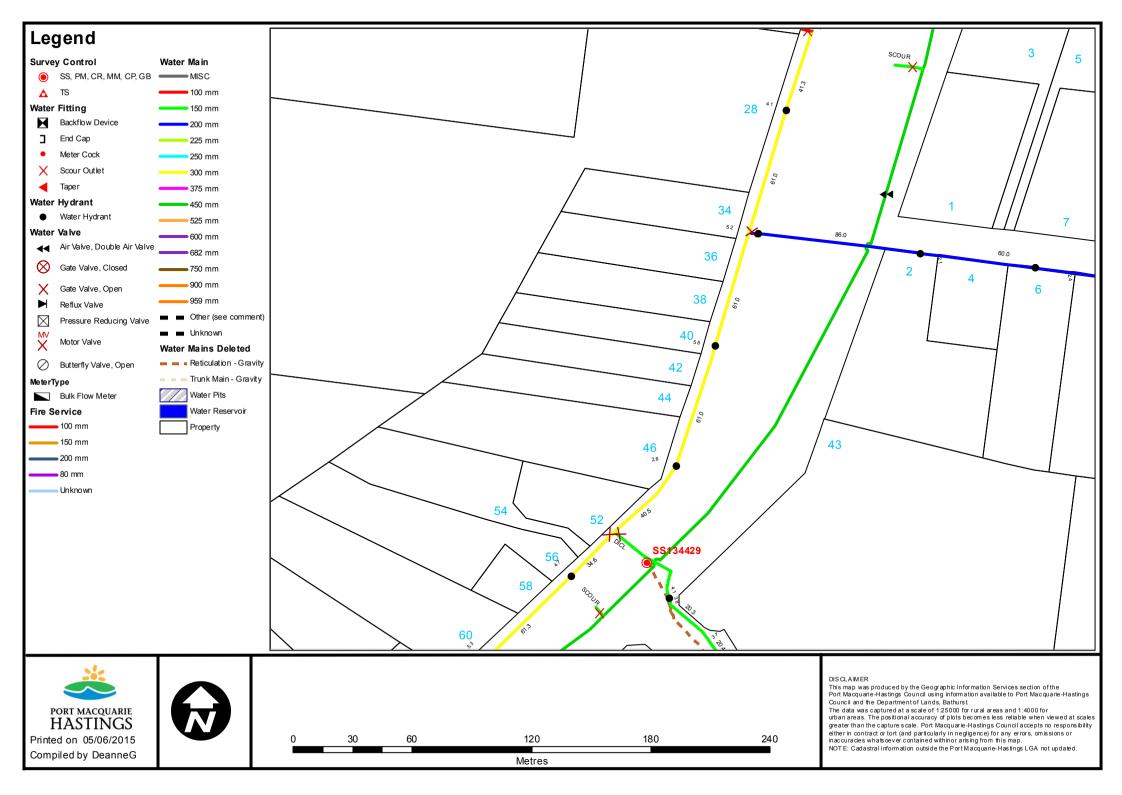
# **SEWER CONNECTION**

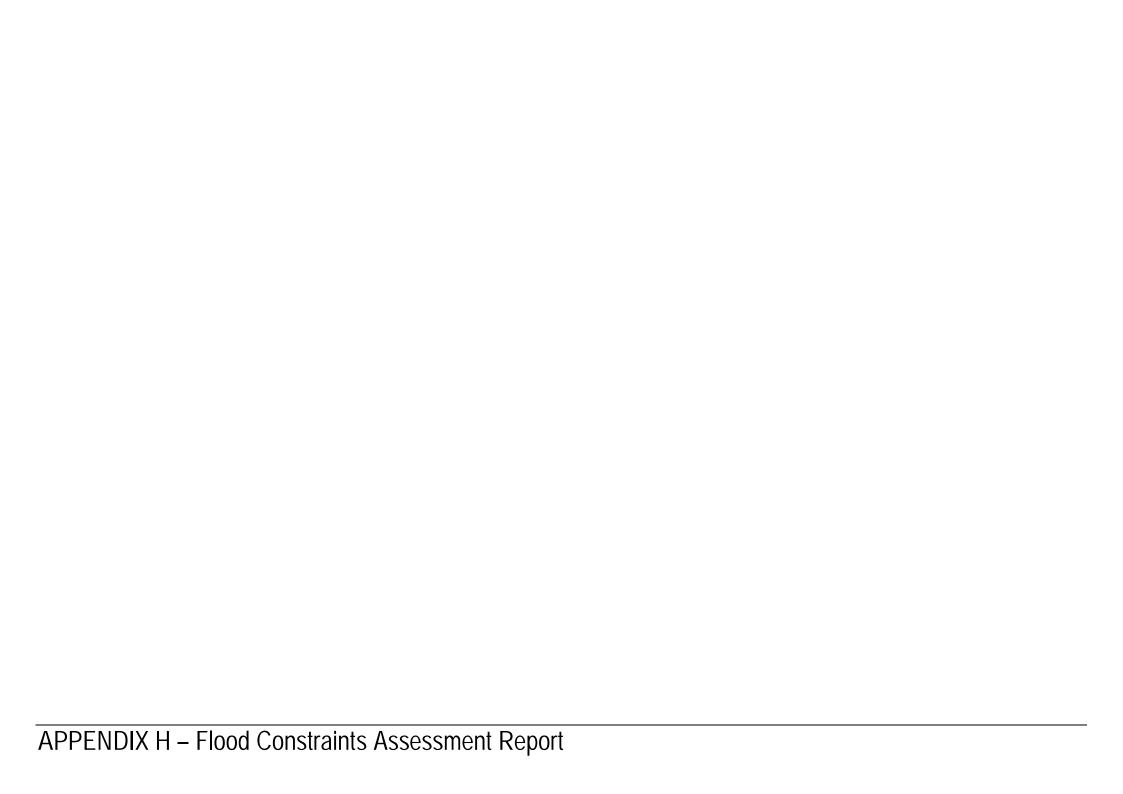
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# 34 - 40 John Oxley Drive Port Macquarie









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Ref: 301310-08624
File: Ir301310-08624rg160429-Proposed Aged Care Facility
(Stage 1 Report).docx

Mr Mathew Jarvis
Australian Unity Limited
114 Albert Road
SOUTH MELBOURNE VIC 3205

29<sup>th</sup> April 2016

Dear Mathew,

## PROPOSED AGED CARE FACILITY, JOHN OXLEY DRIVE, PORT MACQUARIE FLOOD CONSTRAINTS ASSESSMENT REPORT

I refer to the request from Australian Unity Limited for Advisian to complete an assessment of the flood constraints that could be expected to affect development of a Residential Aged Care Facility (*RACF*) at a site that includes part of, and adjoins, the Sienna Grange Retirement Village (*Lot 1 DP 735097*), Port Macquarie. Although the development plans have not yet been finalised, we understand that the RACF is currently proposed to operate with the capacity for:

- 68 Aged Care Beds (made-up of 4 x 17 'Better Together Cottages'),
- Wellbeing Facilities,
- General Stores and Cafes,
- Day Respite,
- Basement Staff and Visitor Parking
- A Rehabilitation Gym, and
- ADL Kitchen/Laundry.

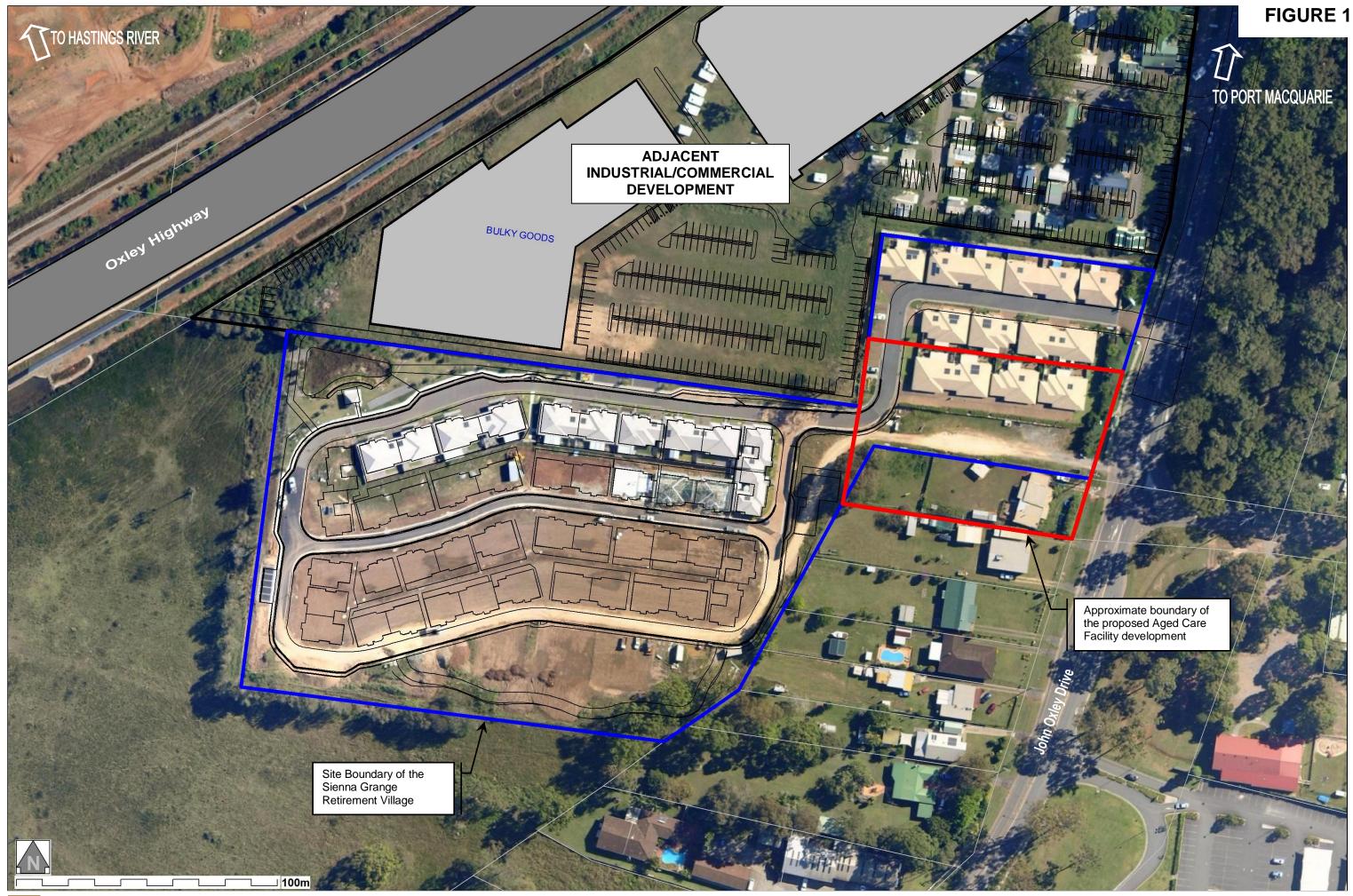
Concept plans for the proposed RACF are included as **Attachment A**.

We understand that a Site Compatibility Certificate is required under Section 50(2A) of the Environmental Planning and Assessment Regulation 2000 to accompany development applications for Residential Aged Care Facilities on land not zoned for urban purposes, such as the subject site. This report will accompany the Site Compatibility Certificate Application to the Department of Planning.

The extent of the proposed RACF site relative to the Sienna Grange Retirement Village is shown in **Figure 1**.

We understand that Australian Unity Limited would like to determine the feasibility of constructing the RACF on the subject site. The objective of this Stage 1 Feasibility Assessment is to establish the flood constraints for the proposed RACF and to consider these constraints with reference to planning instruments, site topography and best practice in floodplain management.

This report documents the findings from the Stage 1 Feasibility Assessment and is provided as a preliminary report to inform Australian Unity Limited whether a sufficient case exists to support the development of the proposed RACF.





## 1. INTRODUCTION

Australian Unity Limited is planning to construct an RACF on a site that includes part of, and adjoins, the Sienna Grange Retirement Village at Port Macquarie. As shown in **Figure 1**, the proposed development site is located at the south-east corner of the Sienna Grange site and extends into the adjoining residential site to the south. It is understood that the existing townhouses that are located within the development site are to be demolished.

The layout of the proposed RACF building and internal access roads are shown in **Figure 2**. As shown, the RACF building is proposed to occupy much of the site with remaining areas dedicated to site access and outdoor landscaping. A new entrance to the RACF is also proposed to be constructed along the southern boundary of the site connecting the RACF and Sienna Grange to John Oxley Drive.

Concept plans for the proposed development are included as **Attachment A**.

As shown in **Attachment A**, the RACF is proposed to operate across three floors referred to herein as the basement, ground floor and first floor. The concept plans include a breakdown of each floor showing areas dedicated to living spaces, commercial uses, ancillary services and administration.

The existing topography across the subject site is generally higher than much of the Sienna Grange Retirement Village which was constructed to have minimum surface elevations of at least 3.8 mAHD; i.e., to satisfy the minimum floor level requirements outlined within the Interim Port Macquarie-Hastings LGA Flood Policy (*April 2007*). As shown in **Figure 3**, the topography generally rises across the site towards John Oxley Drive, with minimum elevations of 4.3 mAHD and 7.9 mAHD at the west and east site boundaries, respectively.

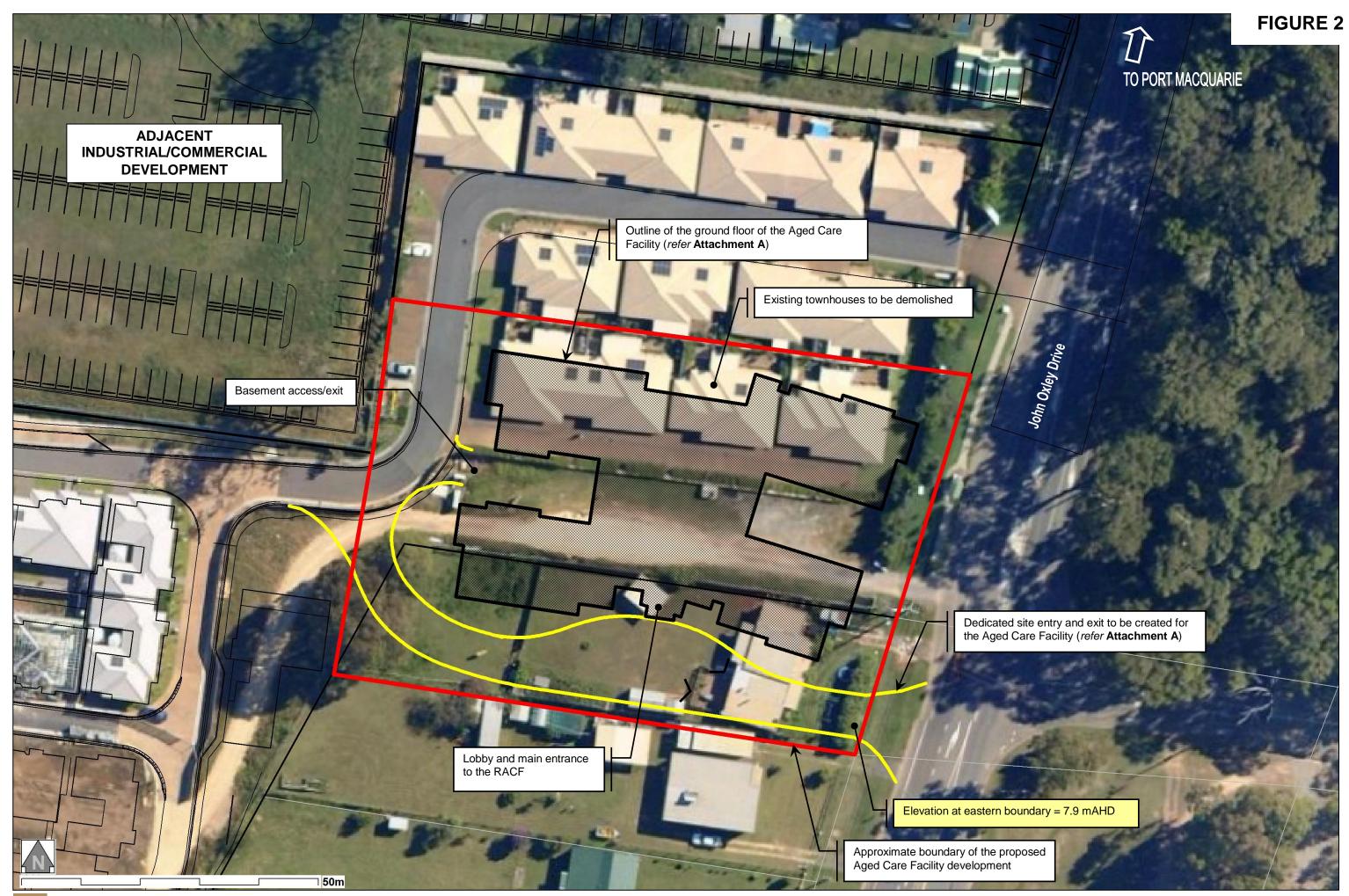
In August 2015, Port Macquarie Hastings Council indicated that an aged care facility should be able to be incorporated in the vicinity of the Sienna Grange retirement village development provided minimum floor level and evacuation requirements could be met. The potential flood risks identified by Council are summarised as follows.

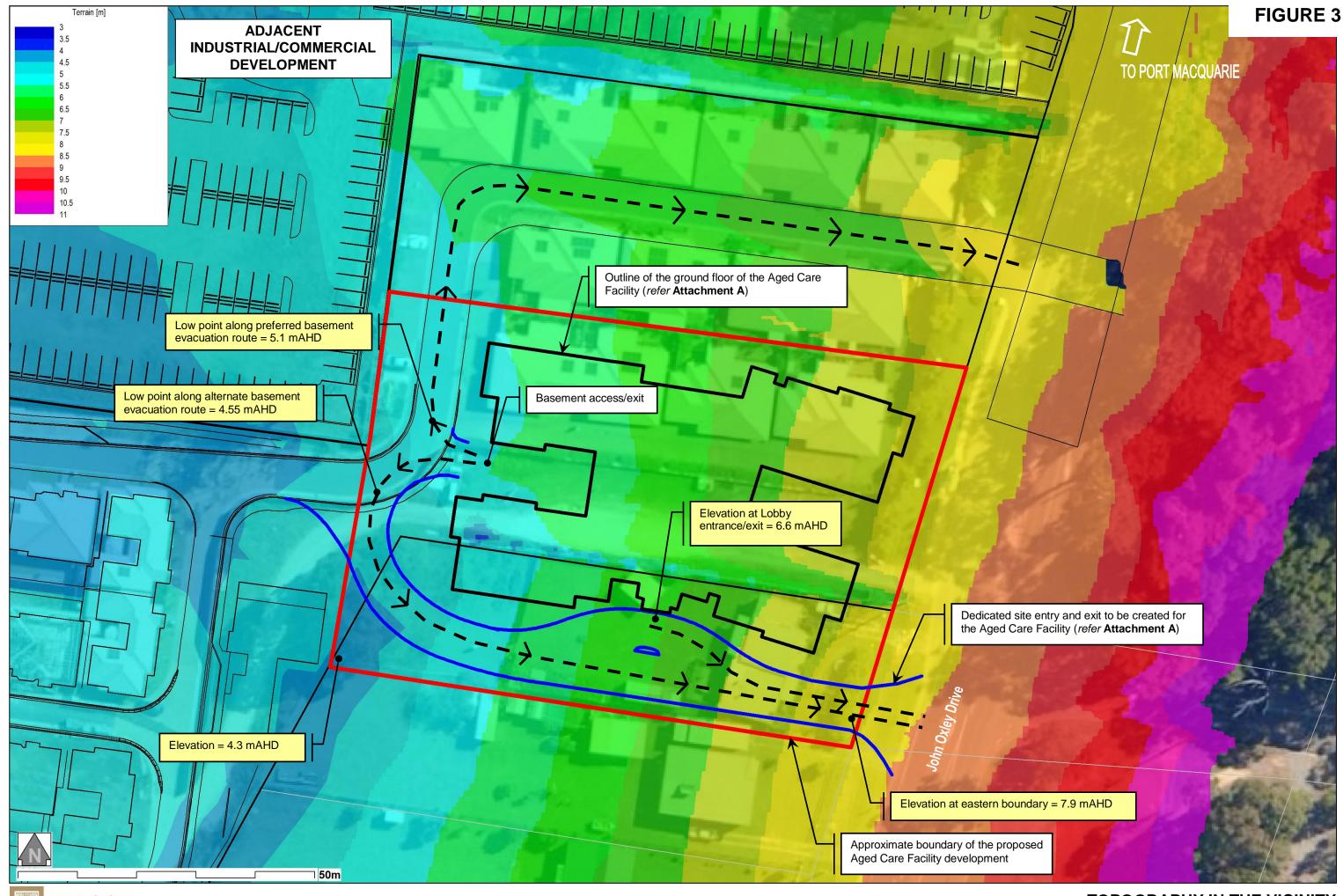
- Finished Floor Levels (*FFL*) for the proposed facility would need to be at or above the Probable Maximum Flood (*PMF*) level of 6.6 mAHD.
- Although the development would be constructed on land that is above the PMF, isolation and evacuation issues will need to be addressed due to potential constraints such as the limited capacity for existing access roads to be raised.

This report documents the findings of investigations that Advisian has undertaken to assess the flood related constraints for the proposed Residential Aged Care Facility.

## 2. PLANNING CONSTRAINTS

The subject site is zoned RU1 Primary Production under the Port Macquarie-Hastings Local Environmental Plan 2011. The LEP indicates that Aged Care Facilities are not permitted within this zone. However, it is understood that Council plans to rezone the land to R3 Medium Density Residential in accordance with the 'John Oxley Precinct – Structure Plan' (July 2012). The LEP does allow for Aged Care Facilities within this zone and as such could be permitted with consent. Aged Care Facilities are also permitted in this zone according to the related State Environmental Planning Policy (Housing for Seniors or People with disability).







The LEP 2011 indicates that the site is affected by mainstream flooding from the Hastings River. Mapping that accompanies the LEP indicates that parts of the site, including the land on which the development is proposed, falls within the Flood Planning Area (*FPA*) as well as the extent of the PMF. Only the eastern-most parts of the site fronting John Oxley Drive are shown to be flood free during the PMF.

## 3. AVAILABLE FLOOD INFORMATION

Detailed flood modelling has been undertaken for the lower Hastings River floodplain as part of the 'Hastings River Flood Study' (WorleyParsons, 2006) and more recently as part of the 'Hastings River Floodplain Risk Management Study' (WorleyParsons, 2012). The modelling for both studies has been based on the use of a RMA-2 two-dimensional flood model that extends from the ocean inlet at Port Macquarie to beyond Wauchope to the west. The model also includes parts of the Wilson/Maria River floodplains.

The model results indicate that the site is located along the fringes of a large flood storage area. During significant events, floodwaters back-up into the site through the large culverts and cross-drainage structures that exist along the recently constructed Oxley Highway.

The 5%, 2%, 1% and 0.5% AEP events and the PMF have been simulated as part of the Flood Study (2006) and Floodplain Risk Management Study (2012). Peak flood levels have been extracted at the site for each of these events and are provided in **Table 1**.

Additional flood modelling of the 0.2% and 0.05% AEP events has been undertaken specifically for this study. These larger events have been simulated in order to more reliably understand the potential risks to future residents of the proposed RACF. Peak flood levels for these additional design events are also listed in **Table 1**.

Table 1 Design Flood Levels in the vicinity of the Subject Site

DESIGN EVENT (AEP)	PEAK FLOOD LEVEL (mAHD)
5%	2.60
2%	3.00
1%	3.38
0.5%	3.74
0.2%	4.27
0.05%	5.12
PMF	6.60

Sources: 5%, 2%, 1%, 0.2% AEP events & PMF - 'Hastings River Flood Study' (2006)

0.2% and 0.05% AEP events – Additional flood modelling completed using the Hastings RMA-2 model; i.e., the Flood Study model



Peak flood extents for the 1%, 0.5%, 0.2% and 0.05% AEP events and the PMF are shown in **Figure 4.** 

## 4. MINIMUM FLOOR LEVEL REQUIREMENTS

Council's minimum floor level requirements for this type of development includes the following:

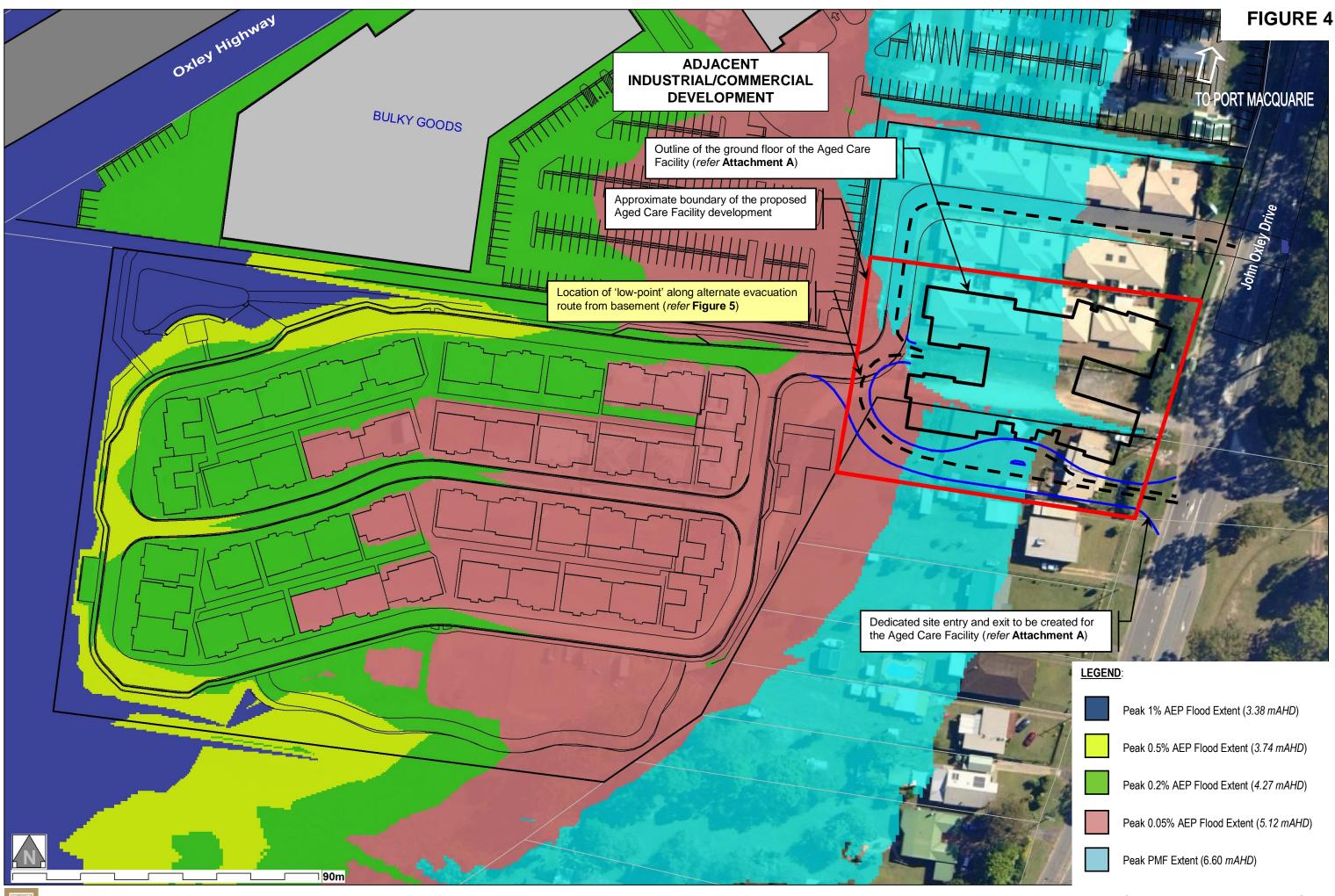
- The minimum Finished Floor Level (FFL) for all habitable areas is the PMF flood level of 6.6 mAHD.
- The minimum FFL for all ancillary essential service areas (*including kitchens, communal facilities, and laundry areas*) must be at or above the PMF flood level of 6.6 mAHD.
- The minimum FFL for car parking and ancillary storage can be at or above the 5% AEP flood level of 2.60 mAHD.
- The minimum level for all access ramps and all entry points to basement and underground carparks is 3.88 mAHD, representative of the year 2100 design 1% AEP flood level; i.e., FPL2.

Based on the concept sketches provided (*refer* **Attachment A**) and the existing topography across the site (*refer* **Figure 3**) we understand that the minimum floor level requirements for all habitable areas can be met for the proposed RACF. That is, all habitable areas would be located on the ground floor and first floor which will be constructed to a FFL of at least 6.6 mAHD.

The requirement for all ancillary essential service areas to be at or above the PMF level is partly achieved based on the concept sketches. In that regard, the RACF is proposed to include kitchen and laundry facilities on the ground floor and first floor which would have a FFL of at least 6.6 mAHD.

Additional kitchen and laundry facilities are however also proposed to be located within the basement, which is to be constructed with a FFL of 4.0 mAHD. Although this does not directly comply with the minimum floor level requirements, it is our understanding that the requirement is concerned with ensuring the facility can continue to operate in times of flood. Given alternate facilities on the ground and first floors would be adequate if the basement facilities were temporarily closed we do not consider this to be a concern. This is further supported by the high flood immunity of the basement which has FFL that is over 0.26 metres above the peak 0.5% AEP flood level. Furthermore, the basement would be protected from inundation by the elevated access road which would only be overtopped once floodwaters reach 5.1 mAHD; i.e., the peak 0.05% AEP flood level (see **Figure 3**).

The proposed basement level of 4.0 mAHD is compliant with Council's FFL requirements for basement and underground carparks. Because the basement level is above the minimum FFL we do not believe that floodgates will be necessary at the western access point. Furthermore, the raised access point to the basement will offer additional flood immunity to the basement and protect it from inundation during events up to and including the 0.05% AEP flood; i.e., up to a peak flood level of 5.1 mAHD (*refer* **Figure 4**). This level of flood immunity for the basement is over 1.2 metres above Council's minimum requirements.





PREDICTED FLOOD EXTENTS IN THE VICINITY OF THE PROPOSED AGED CARE FACILITY



## 5. ASSESSMENT OF POTENTIAL FLOOD IMPACTS

Given the site and all associated works are located outside of the Hastings River 1% AEP flood extent and on the fringes of the PMF extent, we do not believe there is any potential for the proposed development to impact flood levels or flow velocities across adjoining properties (*refer Figure 4*). This recognises that the site is located within a large flood storage area and that any cut and fill works associated with the development will result in no reduction in the available storage volume for a 1% AEP flood and a negligible reduction for the PMF event.

## 6. ASSESSMENT OF EMERGENCY RESPONSE CONSTRAINTS

#### 5.1 Potential Evacuation Route

As discussed in **Section 4**, floor levels for the ground floor and first floor of the RACF will be at or above the peak PMF level of 6.6 mAHD. As shown in **Figure 3**, the topography at the pick-up/drop-off location outside the main lobby of the RACF is at 6.6 mAHD and, as such, a suitable flood-free evacuation route to John Oxley Drive will be available. The eastern most parts of the RACF facility/site will be above the PMF level allowing flood free pedestrian access to John Oxley Drive, which is located only a short distance away.

With the ground floor and first floors of the RACF above the PMF, a flood-free evacuation route available for vehicles from the main lobby, and alternative flood-free evacuation available by foot from the eastern most parts of the RACF, we consider there to be a negligible flood risk to residents and staff inhabiting the ground and first floors of the RACF facility.

As discussed in **Section 4**, the basement is protected from inundation by the raised vehicular access which will have a minimum elevation of approximately 5.1 mAHD. In that regard, although the floor level of the basement will site at 4.0 mAHD, it will be protected from inundation up to a peak flood level of 5.1 mAHD; i.e., up to and including a 0.05% AEP flood event, equivalent to a 2,000 year average recurrence interval (*ARI*) flood.

Based on the topographic elevations shown in **Figure 3**, we propose that evacuation of the basement be directed through the Sienna Grange Retirement Village towards John Oxley Drive to the north east. This route is preferred as opposed to along the RACF access road to the southeast as it will provide an upwardly grading route with a minimum elevation of 5.1 mAHD compared to 4.55 mAHD along the RACF route. With a minimum elevation of 5.1 mAHD the preferred evacuation route would remain flood free during events up to an including the 0.05% AEP flood; i.e., the 2,000 year ARI flood.

Although the route to the north-east is preferred, it should be recognised that the 'low-point' along the alternate route is in fact at a relatively high elevation that sits above the peak 0.2% AEP flood level. That is, the alternate evacuation route would remain flood free during events up to and including the 0.2% AEP flood; i.e., the 500 year ARI flood.

## 5.2 Available Warning Times

To determine the available flood warning time for the site, the response time of flooding to rainfall in the upper catchment must be assessed for upstream locations and compared with the response time of flooding at the site. Flood emergency response planning should be based on



Bureau of Meteorology (*BOM*) telemetry and warnings disseminated by the SES during a flood event. The nearest upstream SES flood warning river gauges are located:

- 6 km upstream at Dennis Bridge (*Pacific Highway*); and
- 18 km upstream at the Wauchope Rail Bridge.

Flood warning levels (*i.e.*, *minor*, *moderate or major*) are not assigned to the Dennis Bridge gauge and so it is understood that the SES does not rely upon this gauge directly for the trigger of flood warnings. This is not to say that the gauge is not monitored during a flood.

The Wauchope Rail Bridge gauge is linked more readily to SES' minor, moderate and major flood level triggers and therefore, has been used to assess the available flood warning time for the proposed development.

Flood level hydrographs were extracted from the flood model results that were generated for the Probable Maximum Flood to predict the maximum rate of rise of floodwaters at Wauchope. Similar data was also extracted from the model results to establish the rate of rise in the vicinity of the Sienna Grange Retirement Village and the proposed RACF. The PMF hydrograph rises more steeply/rapidly than lesser flood events and is therefore considered to represent a worst-case scenario in terms of available flood warning time. The flood evacuation and flood management warning time available to occupants of the site has been determined through comparison of these two flood level hydrographs (refer Figure 5).

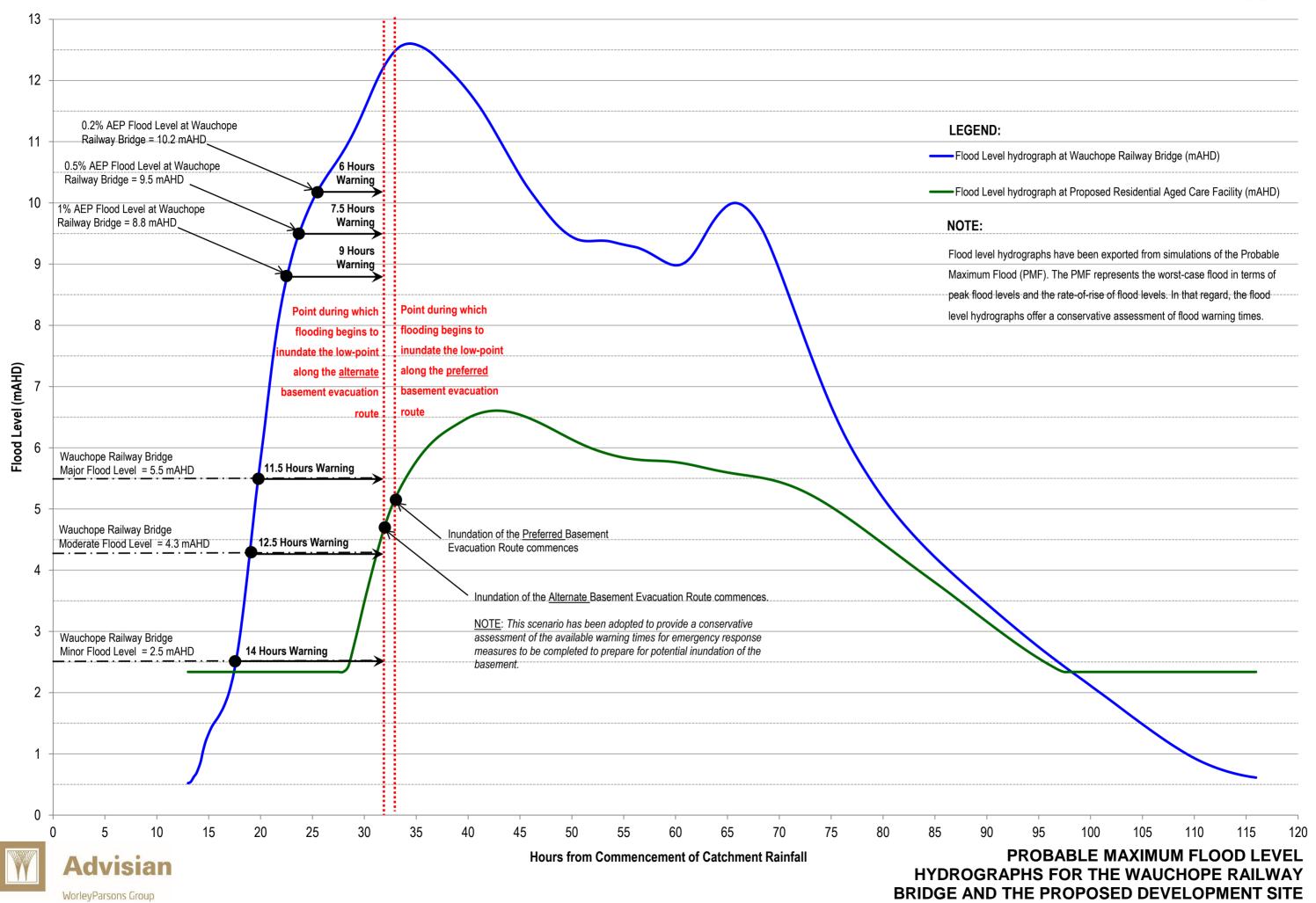
As shown in **Figure 5**, available flood warning times have been assessed based on the worst-case scenario that evacuation measures or flood management measures would need to be completed prior to inundation of the 'low-point' along the alternate evacuation route. This represents a conservative estimate of warning times given there is a higher evacuation route available to the north and because the ground floor and first floor of the RACF would not be impacted at this stage.

As shown, there is expected to be at least 14 hours between the time a Minor flood warning level (gauge level of 2.5 mAHD) is reached at the Wauchope Railway Bridge to when initial inundation would begin to occur at the 'low-point' along the alternate basement evacuation route. The time would reduce to 12 hours and 11.5 hours once a Moderate (gauge level of 4.3 mAHD) or Major (gauge level of 5.5 mAHD) flood warning level was reached, respectively.

Accordingly, at least 11.5 hours warning time would be available to evacuate vehicles from the basement and to prepare the RACF for operation without the basement facilities if evacuation and preparations did not commence until a Major flood warning was issued. It should also be recognised that if floodwaters reach the Major flood level at Wauchope, it does not necessarily mean that inundation will occur at the site. In fact, the Major flood level at Wauchope is approximately 3 metres lower than the corresponding 1% AEP flood level, which indicates that in most cases of the flood warning being triggered, the need to evacuate or prepare the RACF for emergency operations would never eventuate.

Given inundation of the alternate evacuation route would only impact the evacuation of vehicles from the basement and would signal the potential that the basement may need to be shut down, we consider that this would only marginally impact the overall function of the RACF. The primary

## FIGURE 5





impact to the RACF would be that the kitchen and laundry services and staff facilities that are operating on the basement level would need to be transferred to the ground or first floors. We understand that the facilities on the ground and first floors would have sufficient capacity and therefore, this temporary change would have only a minor impact to the regular operation of the RACF.

Recognising the above we believe that there could be potential to adopt less conservative flood warning triggers that could reduce the frequency and potential for unnecessary evacuation of the basement and changes to the regular operations of the RACF. This could be achieved by adopting higher trigger levels at the Wauchope Railway Bridge such as the 1%, 0.5% or 0.2% AEP flood levels. This would ensure that emergency response measures (*evacuation of the basement and movement of services to higher floors*) are triggered less frequently and would minimise the chance of a false alarm.

The timing at which peak flood levels for the 1%, 0.5% or 0.2% AEP events are reached at the Wauchope Railway Bridge are indicated on **Figure 5**. As shown, there would be at least 9, 7.5 and 6 hours warning time available if emergency response measures did not commence until the peak 1%, 0.5% or 0.2% AEP levels were reached at Wauchope, respectively. Either of these durations are considered sufficient for staff and visitors to evacuate the basement and complete preparations to move services to the other floors.

Based on the above warning times it is considered that adoption of a 1% or 0.5% AEP trigger level would be appropriate for this site. This would ensure that emergency response measures were only triggered on rare occasions, occurring on average at most once every one hundred years, and that there was still sufficient time available (at least 6 hours) to evacuate parked vehicles from the basement and to move equipment, stock and services to the ground floor and first floor.

It should be recognised that the analysis presented above and the flood level hydrographs shown on **Figure 5** are conservative as they are based on the PMF hydrograph shape. In that regard, completion of a similar analysis for the 0.2% AEP flood hydrograph suggests that if a 1% AEP trigger level was adopted, then over 14 hours warning time would be available for evacuation of vehicles from the basement and temporary movement of services to the ground and first floors of the RACF; i.e., more than 5 hours longer than determined for the PMF event.

## 5.3 Shelter in Place

Given that the RACF and the eastern half of the site would be elevated above the PMF level, and the long warning times available, it is recommended that a "Shelter-In-Place" policy be adopted for all facility operations that are located on the ground and first floors of the RACF. That is, we do not believe that the RACF will need to be evacuated during a flood granted inundation of the basement would not affect the structural integrity of the building.

Although the ancillary services that would normally operate on the basement level would be closed, there would be adequate alternate options for the services to be carried out on the ground and first floors. For example, the function of the basement commercial kitchen could be transferred to the four domestic kitchens that are located on the ground and first floors (*two per floor*). Although this arrangement may not be suitable long term, the temporary closure of the commercial kitchen should not manifest as a significant issue to the operation of the RACF.



## 7. CONCLUSIONS

Major flooding of the Hastings River has the potential to present emergency response issues for the proposed Residential Aged Care Facility. The above preliminary analysis has shown:

- a. The ground and first floors of the RACF will have flood-free evacuation available to John Oxley Drive. Flood-free access will be available for vehicles via the main access road. Alternate floor free access will be available by foot along much of the site frontage to John Oxley Drive.
- b. 'Shelter-in-Place' is considered to be the best option for the ground and first floors of the RACF during all flood events; i.e., evacuation is not required.
- c. There is potential for the basement to be inundated if flood levels at the site exceed 5.1 mAHD; i.e., a 0.05% AEP flood. At least 6 hours warning time would be available to complete emergency response measures if a trigger level equal to the 1% AEP flood level at the Wauchope Railway Bridge is adopted.
- d. Emergency response measures will be required for the basement to reduce potential damages and to ensure ancillary services can be re-located temporarily to the facilities available on the ground or first floors.

Based on the above, we believe it can be demonstrated that the proposed RACF could be developed and operated to comply with the requirements of Council's Development Control Plan and Interim Flood Policy. It is recommended that discussions occur with Council officers to confirm the acceptability of this approach.

## 8. REFERENCES

- NSW Government (*April 2005*), '<u>Floodplain Development Manual: the Management of Flood Liable Land</u>'; ISBN 0 7347 5476 0.
- NSW Government (2004), '<u>State Environmental Planning Policy (Housing for Seniors or People with a Disability) 2004</u>', under the Environmental Planning and Assessment Act 1979
- Port Macquarie-Hastings Council (2006), '<u>Hastings River Flood Study</u>'; prepared by Patterson Britton & Partners (now WorleyParsons).
- Port-Macquarie Hastings Council (2012), '<u>Hastings River Floodplain Risk Management Study</u>', prepared by WorleyParsons.
- Port Macquarie Hastings Council (September, 2015), 'Port Macquarie Hastings LGA Flood Policy'.
- Port Macquarie Hastings Council, '<u>Port Macquarie-Hastings Council Development Control Plan 2013</u>'.
- Port Macquarie-Hastings Council (2011), '<u>Port Macquarie-Hastings Local Environmental Plan</u> 2011'.
- NSW State Emergency Services (November 2013), 'Port Macquarie-Hastings Flood Emergency Sub Plan'.

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I trust that this report suitably addresses the flood related constraints that will have the potential to impact the proposed development of the Residential Aged Care Facility along John Oxley Drive, Port Macquarie. We would be happy to proceed with preparation of detailed documentation for the development (Stage 2) upon your instruction to proceed. Please feel free to contact me should you require clarification of any item.

## **ADVISIAN**

(Part of the WorleyParsons Group)

Roy Golaszewski

Lead Engineer, Water Resources

Reviewed by

**Warick Honour** 

Principal Engineer, Water Resources



# **ATTACHMENT A**

PRELIMINARY CONCEPT PLANS
FOR THE
RESIDENTIAL AGED CARE FACILITY

















