



**Barker Ryan Stewart**  
Planning • Sustainability • Infrastructure • Development • Certification

## **SITE COMPATIBILITY REPORT**

### **PROPOSED MOUNTAIN VIEW ESTATE SERVICED SELF-CARE HOUSING DEVELOPMENT**



**28 & 30 IVY AVENUE McGRATHS HILL  
LOT 25 & 26 DP 1025505**

**February 2011  
Our Ref: 20070055 SCC**



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### **Sydney**

Suite 603, Level 6, 12 Century Circuit  
Baulkham Hills NSW 2153  
P: 02 9659 0005 F: 02 9659 0006  
sydney@barkerryanstewart.com.au

### **Hunter**

Suite 19, Level 4, 19 Bolton St  
Newcastle NSW 2300  
P: 02 4929 3639 F: 02 4929 3686  
hunter@barkerryanstewart.com.au

### **Central Coast**

Suite 4A, 257 Central Coast Hwy  
Erina NSW 2250  
P: 02 4367 2055 F: 02 4367 2155  
coast@barkerryanstewart.com.au

### **Brisbane**

PO Box 1790  
Brisbane QLD 4001  
P: 07 3118 5158 F: 07 3112 4090  
brisbane@barkerryanstewart.com.au

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### Sydney

Suite 603, Level 6, 12 Century Circuit  
Baulkham Hills NSW 2153  
P: 02 9659 0005 F: 02 9659 0006  
sydney@barkerryanstewart.com.au

### Hunter

Suite 19, Level 4, 19 Bolton St  
Newcastle NSW 2300  
P: 02 4929 3639 F: 02 4929 3686  
hunter@barkerryanstewart.com.au

### Central Coast

Suite 4A, 257 Central Coast Hwy  
Erina NSW 2250  
P: 02 4367 2055 F: 02 4367 2155  
coast@barkerryanstewart.com.au

### Brisbane

PO Box 1790  
Brisbane QLD 4001  
P: 07 3118 5158 F: 07 3112 4090  
brisbane@barkerryanstewart.com.au

## 1 INTRODUCTION

This report has been prepared on behalf of Mr David Woodham, the owner of the land.

It is proposed to develop the site for serviced self-care housing comprising 36 serviced self-care housing units and a community centre.

The serviced self-care housing development will be managed as a Retirement Village (within the meaning of the Retirement Villages Act 1999). Residents will live independently within their units but will also have access to meals, cleaning services, personal care and nursing care as required.

The site adjoins urban land and in accordance with clause 24 of SEPP (Housing for Seniors or People with a Disability) 2004, a Site Compatibility Certificate is requested.

This report is to be read in conjunction with the Infrastructure Report prepared by Barker Ryan Stewart is included in the application.

A detailed description of the proposal is provided at Section 3.0.

This report has determined:

- the proposal is compliant with relevant state and local planning controls;
- the proposed uses will meet community needs and provide local employment opportunities; and
- the design will not cause adverse impacts on neighbouring landowners.

Accordingly, the proposal promotes the rational, sustainable, orderly and economic use of land and should be supported.



Figure 1: Aerial Photo of Subject Site



## 2 CONCEPT DEVELOPMENT PROPOSAL

### 2.1. Units

The proposal is for a Retirement Village comprising 36 serviced self-care housing villas and a community centre.

The serviced self-care housing development will comprise 17 attached and 19 detached single storey villas. A concept development layout plan is included as an attachment in Appendix A.

Entrance to the site will be via a 6.0m wide internal road from Ivy Avenue. The demolition of the dwelling at 30 Ivy Avenue is proposed to allow for a wider access driveway to the development.

All villas/apartments and the community centre will be accessed via the internal road with no direct access off Ivy Avenue. Parking provision will include 1 covered space and 1 stacked driveway parking space per villa. A number of visitors' car parks will be located around the community centre, while emergency parking will be located toward the entrance to the site.

Detailed architectural plans have not been prepared at this stage. However, it is anticipated that the buildings will have a "conventional" design with pitched roofs.

Each residence will comprise two bedrooms, living, kitchen and bathrooms. Private courtyards will be provided for each of the villas.

### 2.2. Community Centre

A community centre will be located toward the dam on the southern section of the land. The community centre will be used by the residents of the estate for socialising, meetings, functions and recreational activities.

The community centre will also contain an administration area for the day to day management of the retirement village.

A health consulting room will be provided in the community centre for visiting health professionals.

The serviced self-care housing development will be managed as a Retirement Village (within the meaning of the Retirement Villages Act 1999). Residents will live independently within their villas but will also have access to meals, cleaning services, personal care and nursing care as required.

Full details on the management of the Retirement Village will be provided at the DA stage. Tree planting and landscaping will be provided along the internal road and the perimeter of the site.

### 2.3. Wetland and Recreational Facilities

It is proposed that the existing dam be upgraded to create a wetland setting with park benches and barbeque facilities along the perimeter of the wetland. This will not only add to the facilities available, but also result in the treatment of stormwater through the wetland system prior to discharge into the adjoining river system.

### 3 SITE ANALYSIS

#### 3.1. Overview

It is evident from the site analysis that the site is one of the few remaining parcels of land in the locality that is unconstrained for future residential development.

The site can be developed without causing adverse environmental impacts and will be compatible / complementary with surrounding land uses.

The site is located adjacent to residential land.

There is no public benefit in retaining the land for rural living as the site has limited agricultural viability and agricultural uses would conflict with existing residential land uses.

The site is already serviced by water, sewer, power and telecommunication services and major infrastructure upgrades are not required.

A concept development layout is included as an attachment in Appendix A.

#### 3.2. Site Description

The area of the site is approximately 2.1ha and located at 28 & 30 Ivy Avenue, McGraths Hill. The real property description is Lots 25 & 26 DP 1025505.

The site currently contains a residence, dam and fencing.

The site is split into two distinct levels. The area that adjoins the residential development to the south and east, has been filled to an approximate level of RL 16.9m AHD and comprises approximately 6,000m<sup>2</sup>.

The remainder of the site, towards the north and west, is situated at approximately RL 15.0m AHD and contains a dam.

On-site gradients range between 1-3% on the raised flat area with batters down to the existing dam and surrounding lower ground. There are no apparent geotechnical constraints on future residential development.

The site is located on the northern side of Ivy Avenue and adjoins the residential development along both Ivy Avenue and Winnifred Road.

#### 3.3. The Locality

The locality is characterised by a mixture of land uses including detached dwelling houses, small rural holdings and conservation zoned land.

##### To the North

A small rural land holding adjoins the site to the north. Further north is South Creek and lots utilised for intensive agricultural practices.

##### To the South

Residential allotments along Ivy Avenue, adjoins the southern boundary of the site.

### To the East

Residential allotments along Winnifred Road, adjoins the eastern boundary of the site.

### To the West

The land to the west of the subject land is developed with a childcare centre. The centre is setback approximately 70m from the common boundary.



Figure 2: Locality Plan

## 3.4 Environmental Characteristics

### Existing Improvements

On-site improvements include a residence, dam and fencing.

### Topography and Geotechnical

As stated above there are no apparent geotechnical constraints on future residential development.

### Flooding & Drainage Lines

Although the site is identified on Council maps as being flood affected, with appropriate relatively minor filling the land will be flood proofed above the 1 in 100 year ARI flood level of RL 17.3m AHD.

A stormwater channel and pipe runs along the sites western boundary. The existing stormwater infrastructure directs flows from Ivy Avenue via a stormwater pipe into the dam, while an outlet from the northern end of the dam releases water via a stormwater pipe into South Creek.

It is proposed that the dam be converted into a wetland, providing future residents with recreational space to enjoy the natural beauty of the area.

Flooding and stormwater drainage items are addressed in more detail in the Infrastructure Services Report.

### Vegetation

The majority of the site has been previously cleared for development and rural living pursuits.

On-site vegetation is limited to grass paddocks and a small number of trees mostly located near the dam.

More detailed investigation may be required at the development application stage in accordance with relevant legislation. Any future development of the site is unlikely to cause adverse flora and fauna impacts.

### Soils

The site is currently zoned for rural living. The client has advised that they are not aware of any known history of contaminating activities.

The land falls within Class 5 Acid Sulfate Soils which is the lowest risk class. Some mitigation measures may be required to maintain the integrity of soils. Additional information regarding the risk will be provided at the DA stage.

### Aboriginal Archaeology

The site has been previously disturbed by means of tree clearing, levelling and filling. It is considered unlikely that any items of Aboriginal significance would be located on the site and further investigations are not required at this stage.

### European Heritage

The site is located approximately 200m from to a listed heritage item however the design is unlikely to adversely affect this item. At some future stage a proper heritage assessment may be required.

### Acoustics

Ambient background noise levels are relatively low in the locality and there are no likely disturbing noise sources that would disrupt future residential amenity.

### Road and Pedestrian Network

Ivy Avenue is a sealed road with an approximate carriageway width of 10m and a road reserve width of approximately 20m at the existing driveway access to the site.

Ivy Avenue connects with Pitt Town Road to the south that links the site with Windsor and Pitt Town.

Adequate road access, car parking and vehicle manoeuvring areas will be incorporated into the design at the relevant DA design stage.

Good sight distance is available for entry and exit along Ivy Avenue.

It is considered that the traffic generated by the development of 36 serviced self-care villas will not conflict with the efficiency of the surrounding road network.

The road and pedestrian network is discussed in more detail in the Infrastructure Services Report.



Public Transport

A bus stop is located opposite the site on Pitt Town Road. A regular bus service (generally every hour on weekdays) provides connections to the commercial centre of Windsor, where trains connect to various other commercial centres such as Blacktown and Sydney.

Scenic Quality

The site is not visually prominent from surrounding areas.

Appropriate architectural and landscaping treatment will be incorporated into the future residential development to provide an aesthetically appealing development when viewed from surrounding streets.

Acoustic

There are no disturbing noise sources within the locality that that would adversely impact on future residential development.

The site is situated outside of the Australian Noise Exposure Forecast (ANEF) contours of the Richmond RAAF base located to the north of Windsor.

Amenity & Relationship to Surrounding Land

The site is located at the interface of existing low density residential and rural-residential zones.

The serviced self-care housing would be generally compatible with neighbouring land and would not cause unacceptable environmental impacts.

The proposal is considered to be compatible with the amenity of the locality.

## 4 STRATEGIC JUSTIFICATION

### 4.1. Statutory Framework

#### SEPP (Housing for Seniors or People with a Disability) 2004

It is proposed to develop the site for serviced self-care housing in accordance with the requirements of Clause 17:

*Clause 17 - Development on land adjoining land zoned primarily for urban purposes.*

- (1) Subject to Subclause (2), a consent authority must not consent to a development application made pursuant to this Chapter to carry out development on land that adjoins land zoned primarily for urban purposes unless the proposed development is for the purpose of any of the following:*
  - (a) a hostel,*
  - (b) a residential care facility,*
  - (c) **serviced self-care housing.***
- (2) A consent authority must not consent to a development application made pursuant to this Chapter to carry out development for the purposes of serviced self-care housing on land that adjoins land zoned primarily for urban purposes unless the consent authority is satisfied that the housing will be provided:*
  - (a) for people with a disability, or*
  - (b) in combination with a residential care facility, or*
  - (c) **as a retirement village (within the meaning of the Retirement Villages Act 1999).***

Note. Clause 13 (3) defines serviced self-care housing as seniors housing that consists of self-contained dwellings where meals, cleaning services, personal care and nursing care are available on site. Clause 42 requires the consent authority to be satisfied that residents of such housing have reasonable access to services. Clause 42 also provides that if services are limited to those provided under Government provided or funded community based care packages, this does not constitute reasonable access to services.

In accordance with clause 24 a site compatibility certificate is required to be issued by the Director-General for this proposal. Clause 24 reads in part:

- (1) This clause applies to a development application made pursuant to this Chapter in respect of development for the purposes of seniors housing (other than dual occupancy) if:*
  - (a) the development is proposed to be carried out on any of the following land to which this Policy applies:*
    - (i) land that adjoins land zoned primarily for urban purposes,*

The zoning plan included as an attachment in Appendix B, confirms that the site is zoned Rural Living and adjoins urban land to the south and east.

Clause 25(5) sets out certain criteria that must be considered by the Director-General prior to issuing a Site Compatibility Certificate. The matters to be considered and comments in response are provided in Table 1 below.

**Table 1: Site Compatibility Criteria**

| Clause 25(5) Criteria   | Comments  |
|---|---|
| <p><i>The natural environment (including known significant environmental values, resources or hazards) and the existing uses and approved uses of land in the vicinity of the proposed development</i></p>  | <p>The site is one of the few remaining parcels of land in the locality that is relatively unconstrained for future development.</p> <p>As outlined in section 2.0 there are no known significant environmental values, resources or hazards that would restrict the development as proposed.</p> <p>Urban land adjoins the site to the north and east. The proposed seniors living development can be developed in a manner that complements surrounding land uses and without causing unreasonable environmental impact.</p> <p>Habitable areas will be flood proofed during the 1 in 100 year ARI event. Flooding is addressed in more detail in the Infrastructure Services Report.</p> |
| <p><i>The impact that the proposed development is likely to have on the uses that, in the opinion of the Director-General, are likely to be the future uses of that land</i></p>  | <p>The site is zoned RL - Rural Living under the Hawkesbury Local Environmental Plan 1989 (LEP).</p> <p>The site is currently used for keeping a small number of cattle and storage of farm machinery used in the maintenance of the site.</p> <p>There is minimal public benefit in retaining the land for rural living as the site has limited agricultural viability and agricultural uses would conflict with existing residential land uses.</p> <p>The proposed serviced self-care housing is compatible with the sites environmental characteristics and will complement surrounding land uses.</p>  |
| <p><i>The services and infrastructure that are or will be available to meet the demands arising from the proposed development (particularly, retail, community, medical and transport services having regard to the location and access requirements set out in clause 26) and any proposed financial arrangements for infrastructure provision</i></p> | <p>A bus stop is located opposite the site on Pitt Town Road. A regular bus service (generally every hour on weekdays) provides connections to Windsor, where trains connect to Blacktown and Sydney.</p> <p>The types of services and facilities located in Windsor include: health consulting rooms; supermarkets; small retail shops; open space; Clubs; banks; and post office.</p> <p>The larger commercial centres of Penrith and Blacktown provide a full range of services, community facilities and recreational activities.</p> <p>The site is already serviced by water, sewer, power and telecommunication services and major infrastructure upgrades are not required.</p>     |

|   |  |
|---|--|
| <i>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 and special uses in the vicinity of the development</i>                                | The site is not zoned open space or special uses.  |
| <i>Without limiting any other criteria, the impact that the bulk, scale, built form and character of the proposed development is likely to have on the existing uses, approved uses and future uses of land in the vicinity of the development</i>                                    | <p>The predominant built form in the locality is single and two storey housing.</p> <p>The proposed seniors living development will comprise of single storey villas and will be constructed in traditional building materials.</p> <p>Architectural elevations have not been developed at this stage of the project however the built form will most likely be conventional design with pitched roofs.</p> <p>Appropriate landscape screening to property boundaries is proposed to provide landscape screening and to complement the built form.</p> |
| <i>If the development may involve the clearing of native vegetation that is subject to the requirements of section 12 of the <u>Native Vegetation Act 2003</u>—the impact that the proposed development is likely to have on the conservation and management of native vegetation</i> | The majority of the site has been cleared in the past for rural living pursuits. Existing native vegetation surrounding the dam will be retained where possible.   |

#### Hawkesbury Local Environmental Plan 1989

Under Hawkesbury LEP the site is zoned RL - Rural Living.

The Land Use Matrix provided in the LEP 1989 indicates which uses are permissible and prohibited in the RL - Rural Living zone.

#### **4 Prohibited**

**Advertising Structure; Bed and Breakfast; Bulky Goods; Car Repair Stations; Commercial Premises; Exhibition Homes; Extractive Industry; Forestry; Industry; Junk Yards; Light Industry; Liquid Fuel Depot; Mineral Sand Mines; Mines; Motor Show Rooms; Multiple unit housing; Offensive or Hazardous Industries; Road Transport Terminals; Rural Industry; Rural Workers Dwelling; Sawmills; Service Stations; Shop Fit Outs; Shops; Stock and Sale Yards; Timber and Building Supplies; Transport Terminals; Truck Depots; **Units for Aged Persons**; Warehouse**

As stated above, the Hawkesbury LEP 1989 prohibits the development of Units for Aged Persons in the RL – Rural Living zone.

The instrument does not contain any other enabling clauses that permit *Units for Aged Persons* or similar development.



### Draft Environmental Planning Instruments

On 31 March 2006, the NSW Government gazetted a standard instrument for preparing new LEPs, also known as the LEP template. LGA's across NSW are required to prepare comprehensive LEP's using consistent land use zoning descriptions, definitions and terminologies as well as localised planning objectives and provisions.

The Draft Hawkesbury Local Environmental Plan 2009 was placed on exhibition in 2010.

Under Draft Hawkesbury LEP the site is zoned RU4 - Rural Small Holding.

The objectives of the RL - Rural Living zone are:

- *To enable sustainable primary industry and other compatible land uses.*
- *To maintain the rural and scenic character of the land.*
- *To ensure that development does not unreasonably increase the demand for public services or public facilities.*
- *To minimise conflict between land uses within the zone and land uses within adjoining zones.*
- *To enable identified agricultural land uses to continue in operation.*
- *To ensure that agricultural activity is sustainable.*
- *To ensure that agricultural activities occur in a manner that do not have a significant adverse effect on water catchments, including surface and groundwater quality and flows; land surface conditions and important ecosystems such as streams and wetlands.*
- *To prevent the establishment of traffic generating development along classified roads.*
- *To encourage tourism related development that will not have significant adverse environmental effects or conflict with other land uses in the locality.*

The zoning table does not include Seniors Housing as a permitted use and is therefore prohibited in the RU4 – Rural Small Holding zone.

## **4.2. Consistency with Local and Regional Strategies**

This report finds that the proposed development is consistent with:

- Sydney Metropolitan Strategy; and
- Hawkesbury Community Plan 2005.

### Sydney Metropolitan Strategy

The Regional Strategy is the strategic land use planning framework to guide the sustainable growth of the wider Sydney Metropolitan area over the next 25 years.

The key elements of the Strategy relevant to the proposal include:

- *A population growing by 1.1 million to 5.3 million in 2031.*
- *Stronger cities within the metropolitan area, including Global Sydney (Sydney City and North Sydney) and the Regional Cities of Parramatta, Liverpool and Penrith.*
- *A stronger Global Economic Corridor from Macquarie Park through North Sydney to Sydney Airport and Port Botany.*
- *A target of over 550,000 new jobs for Sydney, with around half of these new jobs in Western Sydney to 2031.*
- *A target of 640,000 new homes by 2031, with 70% in existing areas and 30% in new release areas.*

- *Containing Sydney's urban footprint by protecting rural and resource lands and only releasing land for development that meets strict sustainability criteria.*
- *New greenfield development is focussed in the North West and South West Growth Centres.*
- *Major Centres emerging as jobs, service and residential locations with Sydney as a City of Cities.*
- *Fair access to housing, jobs, services and open space.*
- *Connected centres supported by an expanded and improved transport network.*
- *Stronger regions in the Central Coast, Illawarra and the Lower Hunter.*

The Strategy recognises the significance of ageing population and states:

*Changes in the age profile of the population will be felt most strongly from 2011, when the first 'baby boomers' (those born between 1946 and 1965) celebrate their 65th birthday and reach retirement age. As the number of older Australians increases, there will be proportionately fewer experienced workers to support and maintain services. The way we plan our towns and cities must encourage social inclusion and allow older people to move easily around by walking or public transport, and to participate in all aspects of society.*

According to the Strategy, a key challenge for the Region is to refocus the current housing trends so that a more sustainable balance between new release and infill development is achieved. To achieve this, the Strategy will facilitate greater opportunities for housing to be provided within the existing urban areas.

The proposed self-care housing is entirely compatible with the key elements of the Strategy and the future population projections for the region. In particular:

- Development of unconstrained land adjacent to residential land will meet the challenge of more compact settlement.
- The development will contribute to a range of housing choices to ensure a demographically broad population can be housed.
- The subject land and nearby rural-residential lots have limited agricultural viability and do not make a significant contribution to the economy of the North West Subregion.
- The development will not adversely affect environmental assets, viable rural land or natural resources.

#### Hawkesbury Community Strategic Plan 2010-2030

The Hawkesbury Community Strategic Plan 2010-2030 provides a definitive set of directions and initiatives to guide the development of the community during the next 20 years.

The Community Plan provides an overview of the community's major priorities grouped under five key focus areas of:

- *Looking after People and Place*
- *Caring for our Environment*
- *Linking the Hawkesbury*
- *Supporting Business & Local Jobs*
- *Shaping our Future Together*

### Looking after People and Place

The Strategy states that the Hawkesbury should be a place in where the *character is preserved and lifestyle choices are provided with sustainable, planned, well serviced development, within strongly connected, safe and friendly neighbourhoods.*

It is considered that the proposed development will provide lifestyle choice to the aging population of the Hawkesbury, by providing a well serviced development in close proximity to the Windsor city centre.

### Caring for our Environment

The Strategy strives to create *a community dedicated to minimising its ecological footprint, enjoying a clean river and an environment that is nurtured, healthy, protected and provides opportunities for its sustainable use.*

The proposed development will create a natural wetland environment around the existing dam that will facilitate a more sustainable and healthy water system. The proposed buildings will also not have a significant impact on the surrounding environment

### Linking the Hawkesbury

The Strategy aims to *provide facilities and services efficiently linked by well-maintained roads and accessible and integrated transport and communications systems which also connect surrounding regions.*

The proposed development is well connected to larger centres by road, bus and rail infrastructure.

The proposed development will not require the provision of new infrastructure or the upgrading of any existing roads.

### Supporting Business & Local Jobs

The Strategy aims to foster and support new industries *which provide opportunities for a range of local employment and training options, complemented by thriving town centres.*

The proposed development will create employment opportunities in the locality. A number of new support businesses can be created to fill the needs of the elderly community.

### Shaping our Future Together

The Strategy aims to create an *independent, strong and engaged community.*

This section of the plan is not applicable to the proposal as it mainly relates to the efficiency of local government.

## 5 CONCLUSION

The proposed serviced self-care housing site adjoins urban land and can be developed for the intended use subject to granting of a Site Compatibility Certificate by the Director-General and development consent by the consent authority.

The land is relatively unconstrained and can be developed with both minimal and manageable environmental impact.

The site and the road frontage is relatively level, which is a key consideration for retirement living to maintain ease of access for elderly residents.

The site is well serviced by water, sewer, power and telecommunication infrastructure. A regular bus service stops at the site frontage for connection with local and regional centres.

Benefits arising from the proposal include:

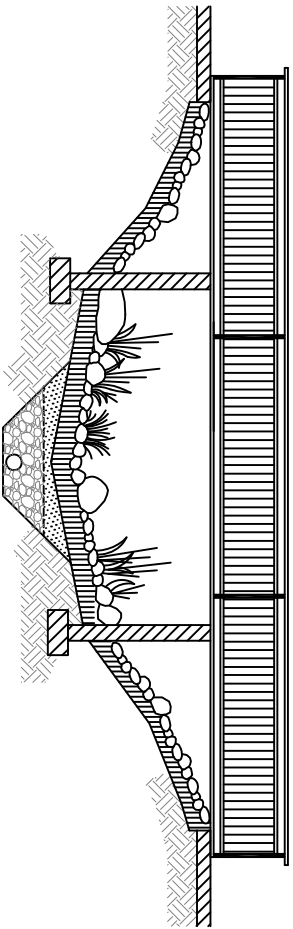
- Improves housing mix within the locality;
- provides an opportunity for older residents to remain in the area close to family and friends;
- the development will be compatible with the surrounding settlement pattern and will not cause adverse bulk and scale impacts; and
- additional housing stock will potentially improve housing affordability in the locality.

In our opinion, the proposed serviced self-care housing development will provide a much needed retirement living development to service the ageing population of the local community and is in the public interest.



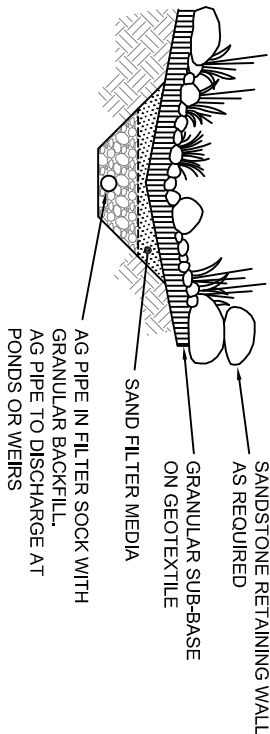
**Appendix A**

**CONCEPT  
DEVELOPMENT PLAN**



FOOTBRIDGE DETAIL

NOT TO SCALE



OVERLAND FLOWPATH DETAIL

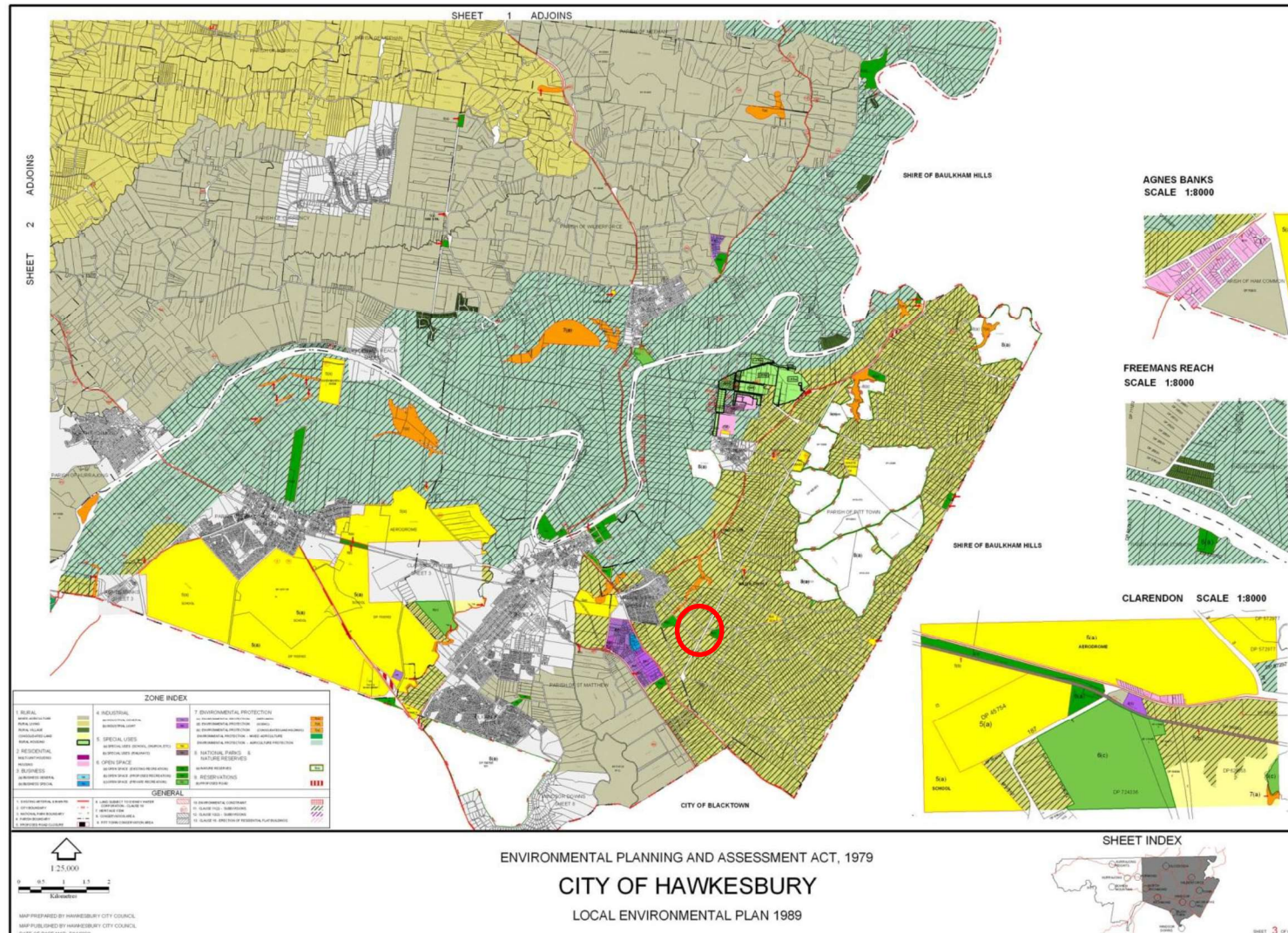
NOT TO SCALE

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## **Appendix B**

### **ZONING MAPS**





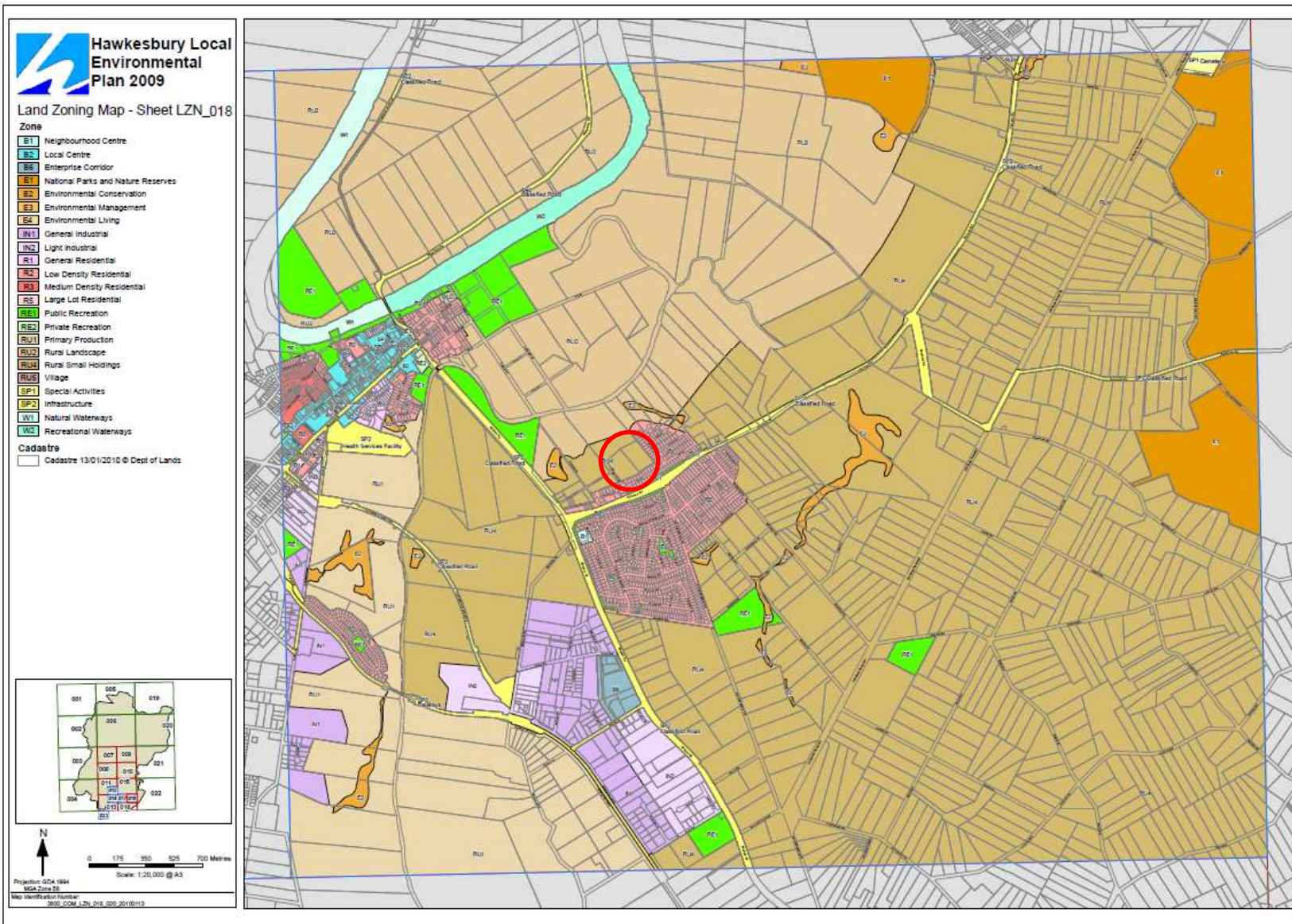
Hawkesbury Local Environmental Plan 1991 – Zoning Map





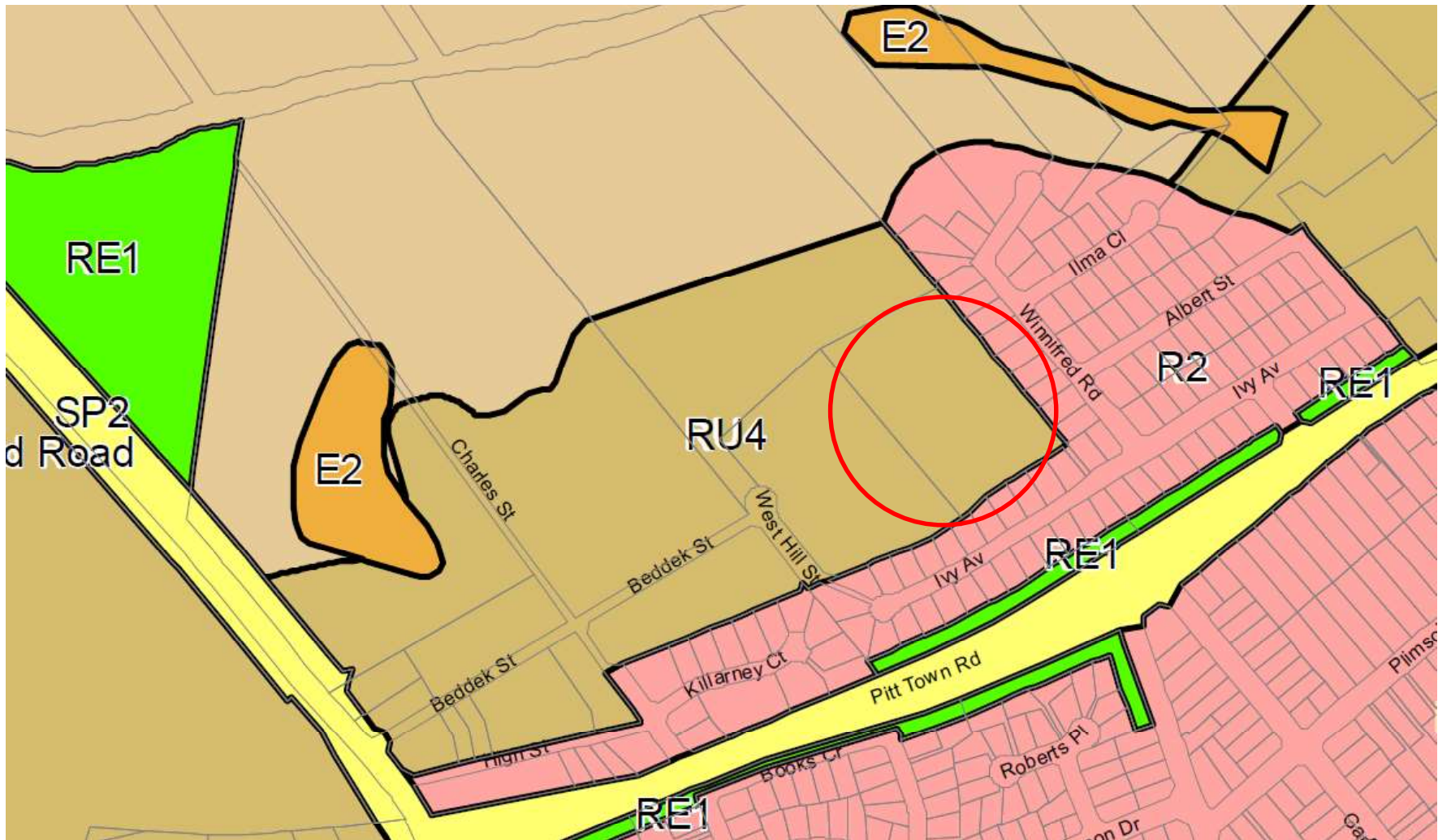
Hawkesbury Local Environmental Plan 1991 – Zoning Map





Draft Hawkesbury Local Environmental Plan 2009– Zoning Map





Draft Hawkesbury Local Environmental Plan 2009 – Zoning Map

## **Appendix C**

### **SITE PHOTOGRAPHS**





Photo 1: Site viewed from the adjoining development to the west



Photo 2: Site viewed from the adjoining development to the west





Photo 3: View over dam with adjoining residential development on right and rural dwelling on the left.



Photo 4: Existing development on Ivy Avenue





Photo 5: View along southern boundary with existign development on Ivy street to the right



Photo 6: Photo of rural dwelling to the north of the site.



Photo 7: View over existing dam on the subject site



Photo 8: Childcare Centre on land to the east of the site

## **Appendix D**

### **INFRASTRUCTURE SERVICES REPORT**



**INFRASTRUCTURE SERVICES REPORT**

**PROPOSED  
MOUNTAIN VIEW ESTATE  
SERVICED SELF-CARE HOUSING DEVELOPMENT**



**28 & 30 IVY AVENUE, McGRATHS HILL  
LOT 25 & 26 DP 1025505**

February 2011  
Our Ref: 20070055 ISR



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|             |              |
|-------------|--------------|
| Project No. | 20070055 ISR |
| Author      | RL           |
| Checked     | GB           |
| Authorised  | GB           |

| Rev No. | Status            | Date       | Comments |
|---------|-------------------|------------|----------|
| 1       | Draft             | 24/01/11   |          |
| 2       | Draft for Comment | 31/01/11   |          |
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| 4       | Final             | 10/02/2011 |          |

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### **Sydney**

Suite 603, Level 6, 12 Century Circuit  
Baulkham Hills NSW 2153  
P: 02 9659 0005 F: 02 9659 0006  
sydney@barkerryanstewart.com.au

### **Hunter**

Suite 19, Level 4, 19 Bolton St  
Newcastle NSW 2300  
P: 02 4929 3639 F: 02 4929 3686  
hunter@barkerryanstewart.com.au

### **Central Coast**

Suite 4A, 257 Central Coast Hwy  
Erina NSW 2250  
P: 02 4367 2055 F: 02 4367 2155  
coast@barkerryanstewart.com.au

### **Brisbane**

PO Box 1790  
Brisbane QLD 4001  
P: 07 3118 5158 F: 07 3112 4090  
brisbane@barkerryanstewart.com.au

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### Attachment A – Concept Development Plan

### Attachment B – Existing Services

#### Sydney

Suite 603, Level 6, 12 Century Circuit  
Baulkham Hills NSW 2153  
P: 02 9659 0005 F: 02 9659 0006  
sydney@barkerryanstewart.com.au

#### Hunter

Suite 19, Level 4, 19 Bolton St  
Newcastle NSW 2300  
P: 02 4929 3639 F: 02 4929 3686  
hunter@barkerryanstewart.com.au

#### Central Coast

Suite 4A, 257 Central Coast Hwy  
Erina NSW 2250  
P: 02 4367 2055 F: 02 4367 2155  
coast@barkerryanstewart.com.au

#### Brisbane

PO Box 1790  
Brisbane QLD 4001  
P: 07 3118 5158 F: 07 3112 4090  
brisbane@barkerryanstewart.com.au



# 1 Introduction

This report has been prepared in support of the Site Compatibility Report prepared by Barker Ryan Stewart, for the proposed serviced self-care housing development at 28 & 30 Ivy Avenue, McGraths Hill (Lots 25 & 26 DP1025505).

It is proposed to develop the site for serviced self-care housing comprising 36 serviced self-care housing units and a community centre, which will be managed as a Retirement Village (within the meaning of the Retirement Villages Act 1999). Residents will live independently within their units but will also have access to meals, cleaning services, personal care and nursing care as required.

The site adjoins urban land and in accordance with clause 24 of SEPP (Housing for Seniors' or People with a Disability) 2004, a Site Compatibility Certificate is requested.

This report is to be read in conjunction with Site Compatibility Report prepared by Barker Ryan Stewart.



**Figure 1:** Aerial Photo of Subject Site

## 2 Site Characteristics

### 2.1 Site Description

The area of the site is approximately 2.1ha and located at 28 & 30 Ivy Avenue, McGraths Hill. The real property description is Lots 25 & 26 DP 1025505.

The site currently contains a residence, dam and fencing.

The site is split into two distinct levels. The area that adjoins the residential development to the south and east, has been filled to an approximate level of RL 16.9m AHD and comprises approximately 6,000m<sup>2</sup>.

The remainder of the site, surrounding the dam, is situated at approximately RL15.0m AHD.

On-site gradients range between 1-3% on the raised flat area with batters down to the existing dam and surrounding lower ground. There are no apparent geotechnical constraints on future residential development.

The site is located on the northern side of Ivy Avenue and adjoins the residential development along both Ivy Avenue and Winnifred Road.

### 2.2 Existing Services

McGrath's Hill is serviced with water, sewer, power and telecommunications. Some minor upgrading of existing utility infrastructure to service the development will be necessary in consultation with Sydney Water, Hawkesbury City Council, Integral Energy and Telstra.

The site is currently accessed from the northern side of Ivy Avenue approximately 40m south of the intersection with Winnifred Road. Ivy Avenue intersects with Pitt Town Road.

Pitt Town Road provides easy access to Windsor Road where drivers could travel 1.5km west to Windsor or 13km east to Rouse Hill.

The local road network is shown in Figure 2.

Ivy Avenue is a local road under the authority of the Hawkesbury City Council and Pitt Town Road is under the authority of the Roads and Traffic Authority.

At the existing access driveway Ivy Avenue has an approximately 10m wide sealed carriageway with roll kerb and gutter on both sides of the road and a 20m wide road reserve. Left and right turn access/egress is available without causing any disruptions to the surrounding road network.

Good sight distance is available for entry and exit along Ivy Avenue.

Speed restrictions are 50km/h in Ivy Avenue and 60km/h in Pitt Town Road.



**Figure 2:** Local Road Network

### 3 Traffic

#### 3.1 Road access and car parking

To provide safer and more efficient vehicle access for vehicles and pedestrians to and from site, it is proposed that the existing dwelling located on 30 Ivy Avenue (Lot 25 DP 1025505) be removed to facilitate the construction of a 6.0m wide internal two – way vehicle driveway and a separate pedestrian footpath.

The site is accessed from the northern side of Ivy Avenue approximately 40m south of the intersection with Winnifred Road. Ivy Avenue intersects with Pitt Town Road. Ivy Avenue is a local road under the authority of the Hawkesbury City Council and Pitt Town Road is under the authority of the Roads and Traffic Authority.

At the existing access driveway Ivy Avenue has an approximately 10m wide sealed carriageway with roll kerb and gutter on both sides of the road and a 20m wide road reserve.

All villas/apartments and the community centre will be accessed via the internal road with no direct access off Ivy Avenue.

Parking provision will include 1 covered space and 1 stacked driveway parking space per villa. A number of visitors' car parks will be located around the community centre, while emergency parking will be located toward the entrance to the site.

Hawkesbury City Council's Development Control Plan requires 0.85 spaces to be provided for each 2 bedroom unit. The number of car parking required to be provided for 36 Senior Living Developments will therefore be 31 spaces.

Car parking will be provided in accordance with the requirements of Hawkesbury City Council's and RTA's *"Guide to Traffic Generating Developments"*. The attached Concept Development Plan provides 78 car parking spaces.

A more detailed assessment of the car parking space configuration will be undertaken as part of the more detailed Traffic and Car Parking Impact Assessment at the development application stage.



## 3.2 Traffic flows and volumes

### 3.2.1 Existing Traffic volumes

Average annual daily traffic data has been obtained from the RTA's website from traffic counts on Pitt Town Road, east of the intersection with Ivy Avenue, approximately 230m west of the development site.

The indicated Annual Average Daily Traffic flow (AADT) was as follows:

|      |        |
|------|--------|
| 1996 | 11,460 |
| 1999 | 11,531 |
| 2002 | 11,779 |
| 2005 | 11,984 |

To conservatively assess the current AADT it has been assumed that traffic volumes have increase by 2.0% since 2005. The 2011 AADT on Pitt Town Road can therefore be estimated to be approximately 13,496 vehicles.

In accordance with RTA's 'Guide to Traffic Generating Developments' the existing dwelling on the site would generate approximately 9.0 daily vehicle trips and 0.85 peak hour vehicle trips.

### 3.2.2 Traffic Distribution

It is assumed that traffic generated by the proposed development would be distributed in the same ratios as existing traffic entering or leaving Ivy Avenue at the intersection with Pitt Town Road.

During the AM peak it is assumed that the majority of trips from the proposed development will be outbound. During the PM peak the return arrangement is assumed, with the majority of trips being to the proposed development.

In each of the above scenarios it is assumed that approximately 25% of trips will be against the trend, allowing for local trips (such as shopping, social trips, etc), as suggested in section 3.3 of the RTA's *"Guide to Traffic Generating Developments"*.

### 3.2.3 Impact of Generated Traffic

From the RTAs "Guide to Traffic Generating Developments", Section 3 – Land Use Traffic Generation, traffic volumes generated by the proposed Senior Living development can be estimated as being approximately 1-2 daily vehicle trips and 0.1-0.2 peak hour vehicle trips.

Therefore from RTA's "Guide to Traffic Generating Developments", the total peak hour traffic that could be generated by the proposed development of site would be estimated to be 7.2 vehicles an hour.

Given the low increase in volume of traffic (7.2 vehicle trips an hour) generated by the proposed development compared to existing traffic volumes (0.85 vehicle trips an hour) on Pitt Town Road, an increase of this magnitude is not expected to have any measurable impact on the performance of the existing Ivy Avenue and Pitt Town Road intersection.

An intersection analysis can be undertaken at the more detailed Traffic and Car Parking Impact Assessment at the development application stage.

The proposed access to the development is not expected to have a significant impact on through traffic on Ivy Avenue as existing traffic volumes on Ivy Avenue are low.

### **3.3 Public Transport, Pedestrians and Cyclists.**

A bus stop is located opposite the site on Pitt Town Road. A regular bus service (generally every hour on weekdays) provide connections to the commercial centre of Windsor, where trains connect to various other commercial centres such as Blacktown and Sydney.

A pedestrian pathway will be provided from the development to the bus stop in Pitt Town Road.

### **3.4 State Environmental Planning Policy (Infrastructure)**

From the, *“State Environmental Planning Policy (Infrastructure), Schedule 3 – Traffic generating development is to be referred to the RTA”*, a Senior Living Development with 78 car parking spaces with access further than 90m of a connection point to a classified road, a referral to the RTA is not required.

### **3.5 Draft North-West Subregional Strategy**

The Metro Strategy seeks to integrate transport and land use opportunities and states the following:

*“The North West Subregion has 12 per cent of Sydney’s jobs and 18 per cent of the workforce. The average commuting trip distance of 21 km is higher than the Sydney average of 16 km, while the average commuting trip duration of 34 minutes is closer to the Sydney average of 32 minutes, reflecting use of higher speed modes.*

*On an average weekday, 79 per cent of trips by North West residents are made by vehicle, just over 7 per cent by public transport and 13 per cent by walking or cycling. The subregion has the lowest proportion of trips by public transport of any subregion.*

*The Ministry of Transport, Department of Planning and the Growth Centres Commission will coordinate transport and land use planning in North West Sydney as phased development occurs in these sectors to ensure bus and road networks connect the Growth Centre, and integrate with land use. The Growth Centre will be linked into the rail network through an upgraded Richmond branch line to the west and through the planned North West Rail link to the east.”*



## 4 Stormwater Drainage

### 4.1 Topography and drainage

The site is split into two levels being:

- The area that adjoins the residential development to the south and east, has been filled to an approximate level of RL 16.9m AHD; and
- The area towards the north and west is situated at approximately RL15.0m AHD.

On-site gradients range between 1-3% on the raised flat area with batters down to the existing dam and surrounding lower ground. There are no apparent geotechnical constraints on future residential development.

A stormwater channel and pipe runs along the sites western boundary. The existing stormwater infrastructure directs flows from Ivy Avenue via a stormwater pipe into the dam, while an outlet from the northern end of the dam releases water via a stormwater pipe into South Creek.

### 4.2 Proposed Stormwater Drainage

A drainage channel runs along the southern boundary of the site. It is intended to upgrade the existing stormwater infrastructure to cater for the internal stormwater system associated with the proposed development.

It is proposed that the existing dam be reconfigured to create a wetland setting with park benches and barbeque facilities along the perimeter of the wetland. This will not only add to the facilities available, but also result in the treatment of stormwater through the wetland system prior to discharge into the adjoining creek system.

If required the existing dam can also be modified to provide on-site detention of stormwater runoff from the proposed development.

### 4.3 Hawkesbury City Council's stormwater policy

Hawkesbury City Council's on-site stormwater detention policy states that:

*"On-site detention of stormwater runoff shall be provided for certain developments to avoid the incidence of flooding arising from increased flows discharging into the piped drainage system. These increased flows result from the construction of developments that have a greater impervious area and higher development densities than those that were considered when piped systems were initially designed."*

The majority of other Council's require on-site detention to reduce the impact of development on the trunk drainage systems for major storm events, up to the 1 in 100 year Average Reoccurrence Interval (ARI).

In contrast the major drainage impact in the Hawkesbury resulting from development (and the subsequent increase in impermeable area), is on the piped drainage systems in minor storm events. The original piped drainage systems were designed to cater for the traditional "quarter acre blocks" with a single relatively small dwelling located on them. Therefore in the design of on-site detention systems in the Hawkesbury City Council area

special consideration is to be given to minor storm events as well as the major storm events.

Essentially post development flows are to be restricted to pre development flows for all storm events from the 1 in 1 year ARI through to the 1 in 100 year ARI.

#### **4.4 On-site detention design requirements**

Post development flows are to be restricted to pre development flows for all storm events from the 1 in 1 year ARI through to the 1 in 100 year ARI. To achieve the permissible site discharge (PSD) and storage volume required to be provided for each storm event are to be determined.

The discharge from the site is to be controlled using an orifice, weir or levee or a combination of these devices. The rate of discharge from the site is generally controlled within and adjacent to a discharge control pit (DCP).

The on-site detention system proposed could essentially be a combination of above ground rainwater tanks and the conversion of the existing dam into a detention basin. Roof runoff from the buildings would need to be directed to the rainwater tanks from the downpipes. The surface runoff would then be to be piped and directed towards the proposed dam conversion on site detention system.

#### **4.5 Water Quality**

A holistic industry best practice approach to total water cycle management is proposed. This consists of potable water supply; rainwater harvesting; grey water; wastewater; stormwater and natural waterways.

The objective is to minimise the use of potable water and the volume of sewerage to be supplied/treated by Sydney Water and Hawkesbury City Council.

It is proposed that the dam be converted into a wetland, providing future residents with recreational space to enjoy the natural beauty of the area.

A water sensitive urban design treatment train will be implemented, including sediment and gross pollutant traps, and the conversion of the existing dam into a detention basin and wetlands. This will also act as a central feature of the serviced self-care housing development.

First flush higher pollutant loads from driveways and higher nutrient producing landscaped areas will be collected in the wetlands prior to discharging to South Creek.

Macrophyte planting around the wetlands will filter nutrients and trap sediment to improve downstream water quality.

#### **4.6 Inspection and maintenance**

Routine maintenance of the detention and wetland system would be an integral part of the process to successfully alleviate potential downstream drainage problems by ensuring the facilities operate in a manner in which they were designed.

## 5 Flood Assessment

Although the site is identified on Council maps as being flood affected, with appropriate relatively minor filling the land will be flood proofed above the 1 in 100 year Average Recurrence Interval flood level of RL 17.3m AHD.

The proposed minimum level of the building pads of each unit and the associated community buildings will be at the 1 in 100 year flood level of RL 17.3m Australian Height Datum (AHD). The freeboard to the final floor levels will be 300mm above this level.

Note that Hawkesbury City Council has yet to prepare and adopt a Floodplain Risk Management Plan for their local government area.

In this section, consideration has been given to the location of the site within the Hawkesbury River catchment area and the legislation requirements.

A Flood Risk Hazard and site constraint assessment was undertaken based on the location of the site, proposed levels of the buildings, access and flood levels impacting the site.

A Flood Emergency Response Plan for the subject development and the operation of the premises should be prepared at the Development Application stage for the development. It is considered that flood hazard at the site is manageable with the implementation of an appropriate Flood Emergency Response Plan.

### 5.1 Topography and flooding

The site ranges in elevation from RL 15m AHD in the south west of the site to RL 16.9m AHD in the north eastern corner of the site. The 1 in 100 year ARI flood level for the site is RL 17.3m AHD.

### 5.2 Floodplain Development Manual considerations

Consideration has been given to the guidelines outlined in NSW Government's *'Floodplain Development Manual – the management of flood liable land, April 2005'* with respect to flooding. The Manual essentially provides Council's with a framework for implementing NSW Government's Flood Prone Land Policy to achieve its primary objectives being:

*'Flood prone land is a valuable resource that should not be sterilised by unnecessarily precluding its development; and*

*If all development applications and proposals for rezoning of flood prone land are assessed according to rigid and prescriptive criteria, some appropriate proposals may be unreasonably disallowed or restricted, and equally, quite inappropriate proposals may be approved.'*

Some filling is required to the site to flood proof the land in order to meet the requirements of Hawkesbury City Council and the Floodplain Development Manual. Figure 3 shows the post development 1 in 100 year ARI flood level for the site.

The site is to be filled to a level to allow all building platforms to be above the 1 in 100 year ARI flood level of RL 17.3m AHD. Note that the exact extent of flood proofing is to be determined at the Development Application and Construction Certificate stage.



**Figure 3: Flood constraints plan**

The site is located outside a floodway and if completely filled with solid material, would not cause flood levels to increase anywhere by more than 0.1m and/or would cause the peak discharge anywhere downstream to increase by more than 10%.

This cannot be considered in isolation and should be treated as a contiguous, having regard *“for the topography and location within the overall flood-prone area.”* Due to the size of the Hawkesbury River Floodplain, the extent of filling proposed would not have any real measurable impact on the depth of the flood level, peak discharge or the flood behavior in the vicinity of the site.

Please note that Richmond, Windsor and McGraths Hill are impacted by the Probable Maximum Flood from the Hawkesbury River Floodplain. The Hawkesbury Nepean Flood Emergency Sub Plan (2005) was prepared to provide guidance to flood evacuation procedures and routes for properties potentially impacted by flooding. From the Plan, the flood evacuation route for McGraths Hill, including the development site, is via Pitt Town Road and Windsor road, refer Figure 4.

### 5.3 North West Subregion – Draft Strategy

From the strategy:

*... some dwellings that are on land above the 1 in 100 year ARI flood level remain within the area affected by the floodplain and these dwellings need to be able to be evacuated in larger flood events*

*...If further growth is to occur south of the Hawkesbury River, in order to meet the Sustainability Criteria, it would be necessary to demonstrate that flood evacuation measures are in place to the satisfaction of the State Emergency Services.*

A flood emergency response plan would need to be prepared in accordance with advice contained in the North West Subregion - Draft Subregional Strategy.

### 5.4 Hawkesbury Local Environmental Plan 1989 (HELP)

Section 25(3) of the HLEP states:

*Each habitable room in a building situated on any land to which this plan applies shall have a floor level no lower than the 1-in-100 year flood level for the area in which the land is located*

Each habitable room within the proposed development is located above the 1 in 100 year ARI flood level. As the development is for Senior Living it is considered that a freeboard of 300mm should be provided above the 1 in 100 year ARI flood level. This would result in a minimum final floor level of each habitable room of RL 17.6m AHD.

Section 25(5) of the HLEP states:

*The Council shall, in the assessment of a development application, consider the flood liability of access to the land and, if the land is within a floodway, the effect of isolation of the land by flooding, notwithstanding whether other aspects of this clause have been satisfied.*

The land is not located in a floodway it is located in a flood storage/flood fringe area. Safe evacuation from future development on the site during flooding has been considered in Section 5.6 and 5.7

Section 25(5) of the HLEP states:

*Any part of a building below the 1-in-100 year flood level is to be constructed of flood compatible materials*

After the proposed filling, all building pads would be located above the 1 in 100 year ARI flood level.

### 5.5 Flood Risk and site constraints

As stated previously, the predicted 100 year ARI flood level at the site is RL 17.3m AHD. The nature of flooding at the site is backwater flooding / flood storage, accordingly floodwater velocities will be low.

Based on the guidelines outlined in NSW Government's "Floodplain Development Manual -Appendix L" the development site when assessed against the Probable Maximum Flood



(PMF) can be categorised as High Hazard Flood Fringe and as Low Hazard Flood Fringe when assessed against the 1 in 100 year ARI flood.

That is the site is located outside a floodway and if completely filled with solid material, would not cause flood levels to increase anywhere by more than 0.1m and/or would cause the peak discharge anywhere downstream to increase by more than 10%.

It is considered that flood hazard at the site is manageable with the implementation of an appropriate Flood Emergency Response Plan.

## 5.6 Flood Emergency Response Plan

At the DA stage a detailed Flood Emergency Response Plan is to be submitted with the application.

Flood warning time and evacuation procedures used by the State Emergency Service (SES) are widely used throughout NSW to reduce flood damage and to protect lives.

The Bureau of Meteorology (BOM) and the SES are responsible for storm/rainfall predictions and for issuing flood warnings throughout Sydney.

The Hawkesbury Nepean Flood Emergency Sub Plan (2005) defines the type of flood response required into the following two (2) categories:

*A Level 1 flood is defined as one in which the water level of the Hawkesbury-Nepean River is not expected to exceed 15.0 metres on the Windsor Bridge gauge. For such a flood the operation is within the scope of normal arrangements detailed in the respective SES Region and Local Flood Plans and the respective District and Local DISPLAN's. Additional high level planning is not required.*

*A Level 2 flood is defined as one in which the water level of the Hawkesbury-Nepean River is expected to exceed 15.0 metres on the Windsor Bridge gauge. In such a flood the operation will be beyond the scope of the respective SES Region and Local Flood Plans and the respective District and Local DISPLAN's. Additional planning in the form of State level arrangements is needed.*

The subject site has potential access points to Ivy Avenue at approximately RL 17.0m AHD.

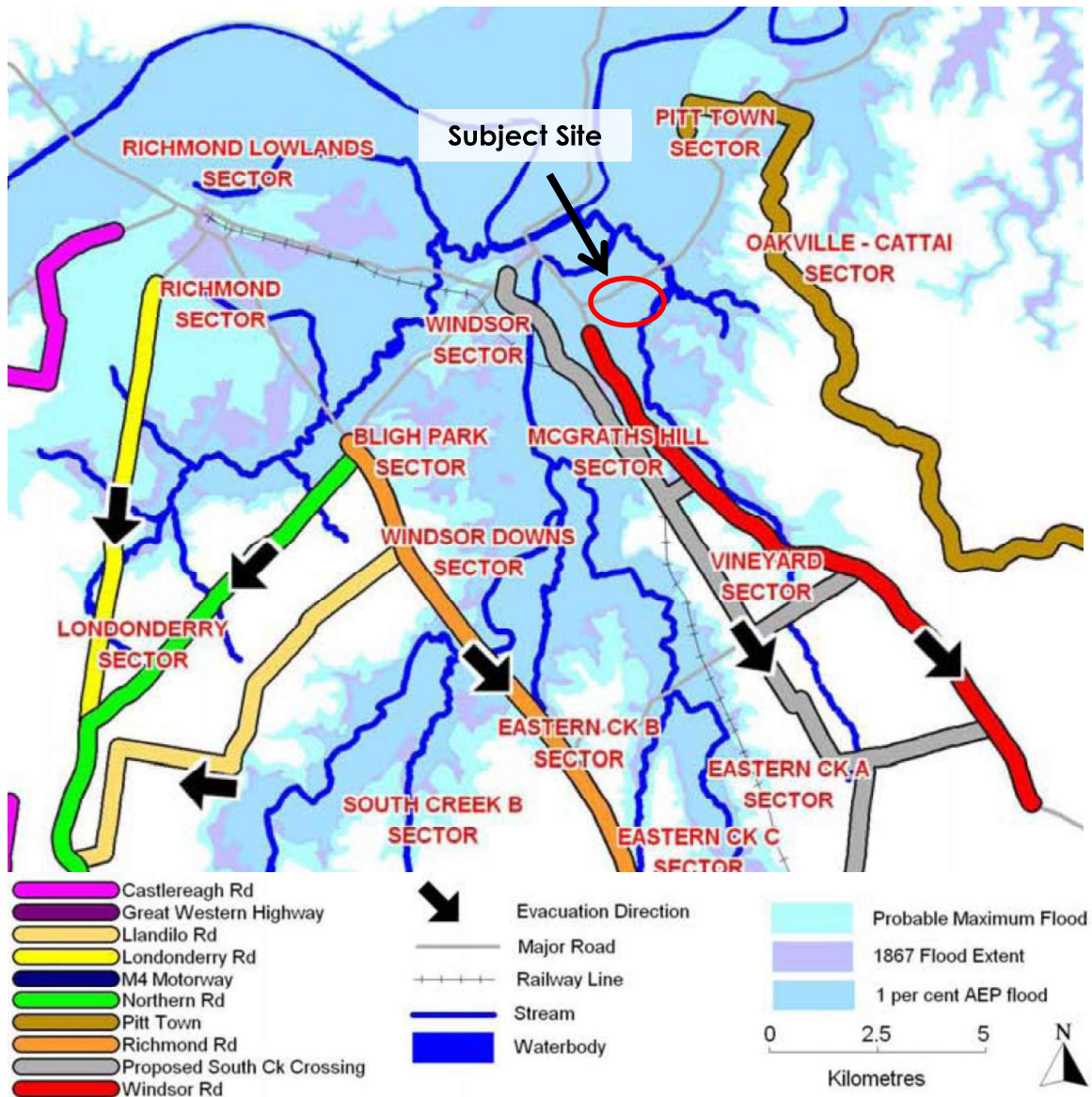
The objective of a Flood Emergency Response Plan would be to ensure that the occupants of the buildings are aware of the possibility of flooding and are aware of the evacuation routes and procedures to follow if a flood warning is made.

## 5.7 Flood Evacuation Route

When preparing for evacuation from the site during an extreme flood event, a flood evacuation route, which takes into account the sequence of road flooding as flood develops aims to:

1. Maximise opportunities for the occupants to evacuate.
2. Prevent unnecessary traffic through the affected area.
3. Ensure access for SES Vehicles.

Once the flood level of the Hawkesbury Floodplain reaches RL 6.0m AHD at Windsor Bridge, residents and staff of any development on the subject site would have approximately 17 hours before the flood level reaches RL 15.0m AHD (the 1 in 20 year ARI flood level is RL 15.1m AHD). It is estimated that it would take approximately 14 hours to evacuate all the residents of McGraths Hill.



**Figure 4: Hawkesbury Flood Evacuation Routes**

Note that prior to the 1 in 20 year ARI flood level being reached it is considered the residents of the subject site would, with the implementation of a suitable Flood Emergency Response Plan, have adequate time to travel less than 1km to Windsor Road Evacuation Route.

From the Hawkesbury Nepean Flood Emergency Sub Plan (2005), the flood evacuation route for Windsor, including the development site, is via the Windsor Road, south east of the development site. Residents and staff will be required to evacuate the site from Ivy Avenue via this route by vehicle when advised by the SES (See Figure 4).

## **6 Utility Services**

### **6.1 Water and Sewer**

The subject site is serviced with water, sewer, power and telecommunications. Some minor upgrades and extensions to the existing utility infrastructure to service the development will be necessary in consultation with Sydney Water, Hawkesbury City Council, Integral Energy and Telstra.

Hawkesbury City Council is the sewer authority for McGrath's Hill. There is existing sewer reticulation servicing the subject site.

Sydney Water is the water authority for McGraths Hill. There is existing water reticulation servicing the subject site.

Upgrading of the existing infrastructure will be required to service the development. The location of the existing services are shown in Appendix B

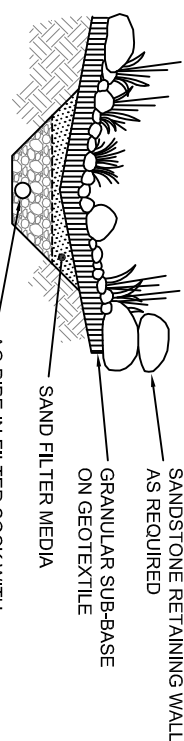
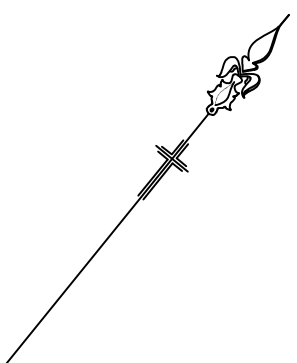
### **6.2 Electricity, gas and telecommunications**

Provision of all utility services to the development will be considered in more detail as part of the Project Application process. All services will be provided in consultation and in accordance with the requirements of the relevant authorities.

The site is serviced with electricity and telecommunications. The locations of the existing services are shown in Appendix B.

## **Appendix A      Concept Development Plan**





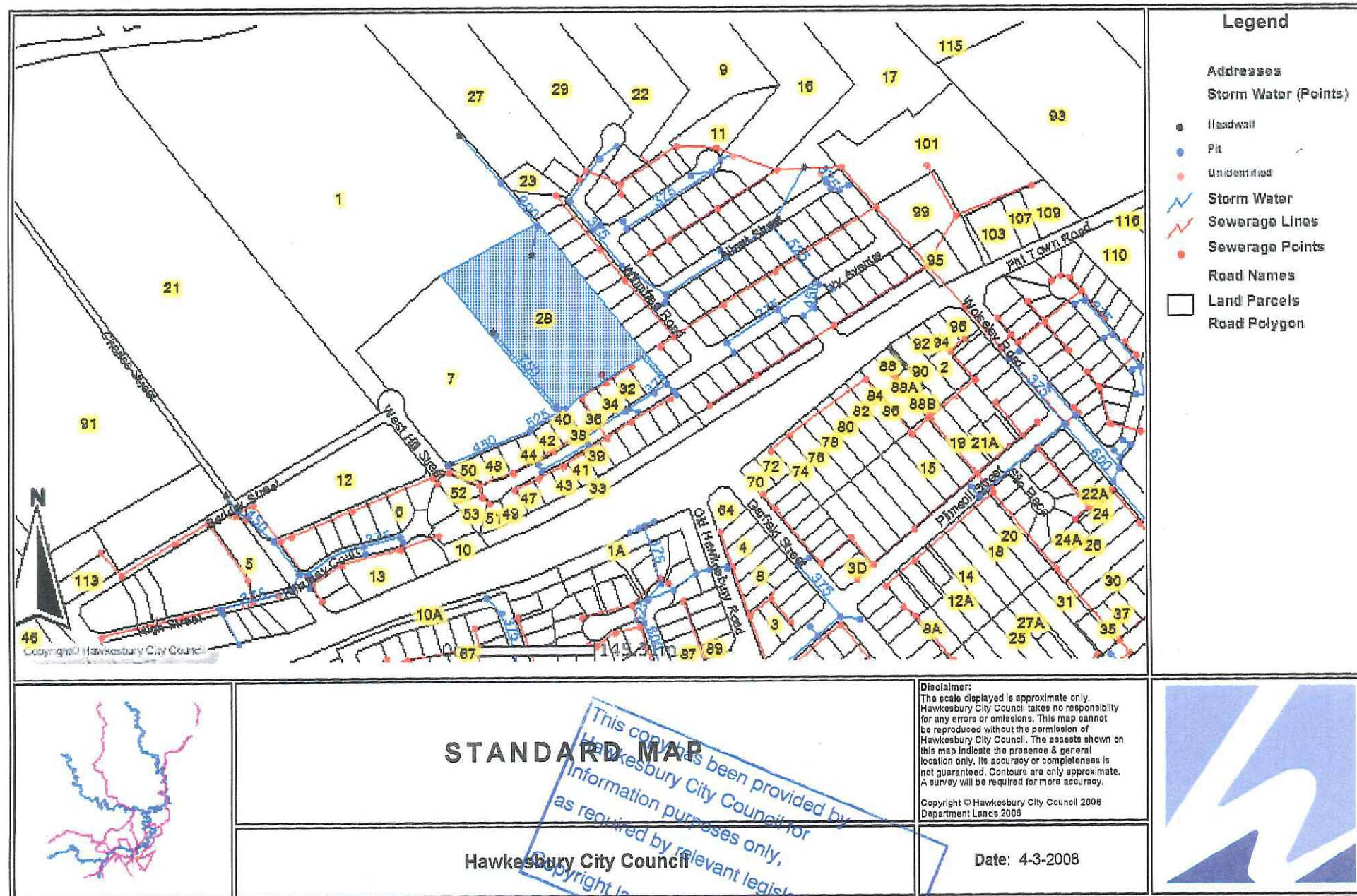
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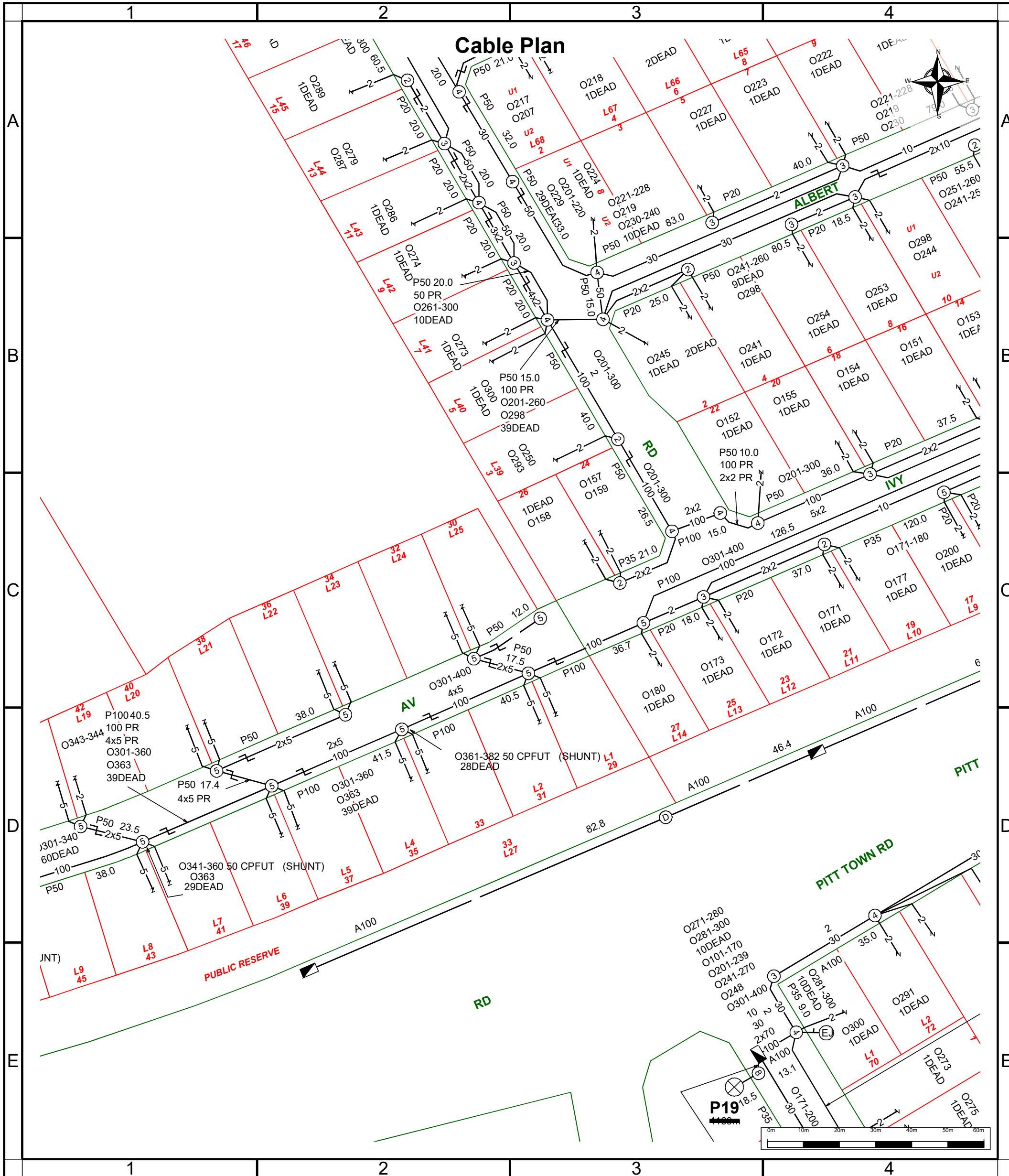
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## **Appendix B      Existing Services**







|   |   |                           |
|---|---|---------------------------|
|  | For all Telstra DBYD plan enquiries -<br>email - Telstra.Plans@team.telstra.com<br>For urgent onsite contact only - ph 1800 653 935 (bus hrs) | Sequence Number: 20642450 |
| TELSTRA CORPORATION LIMITED A.C.N. 051 775 556                                      |   | Exchange Area: WSOR       |
| Generated On 10/02/2011 09:53:15  |   |                           |

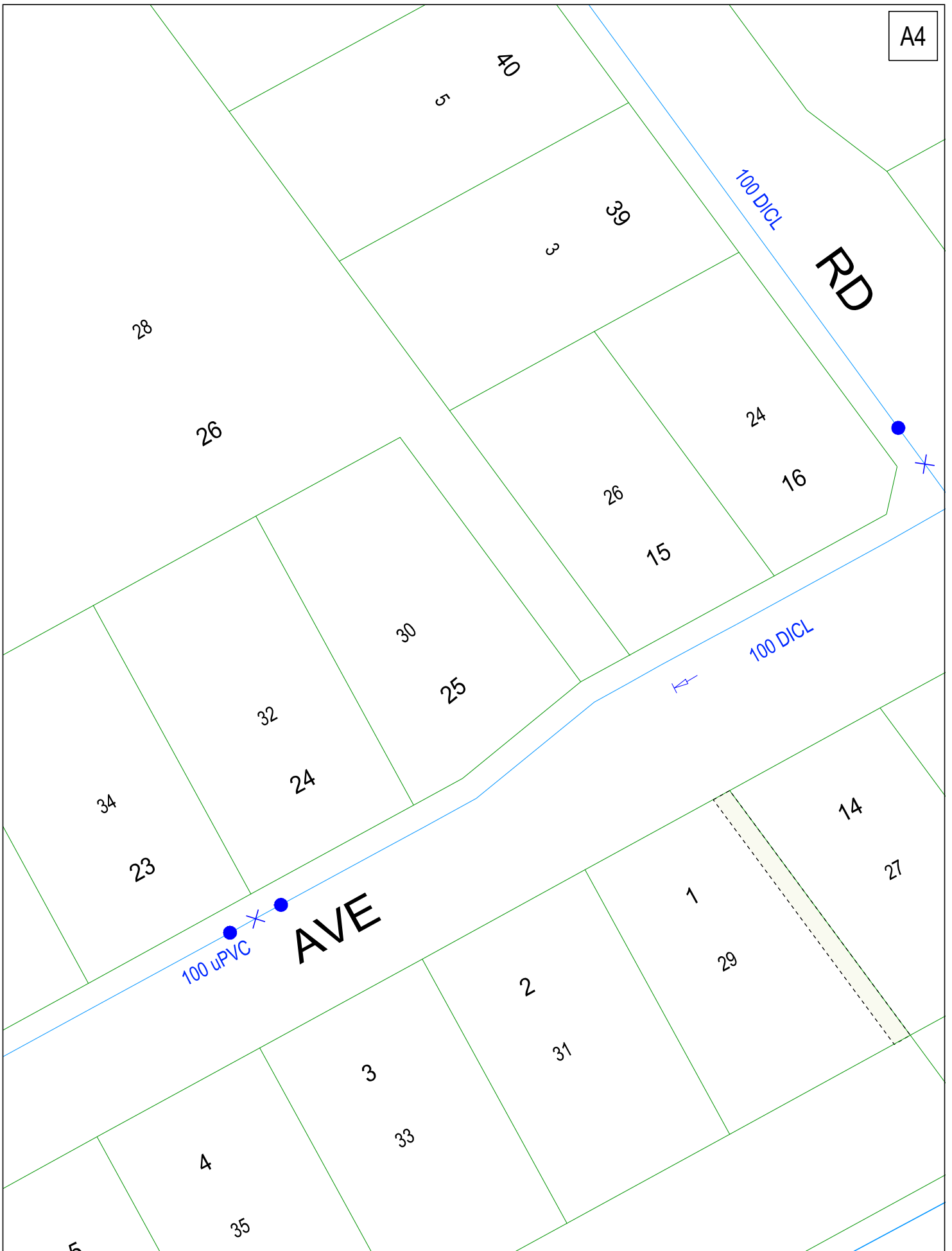
WARNING - Due to the nature of Telstra underground plant and the age of some cables and records, it is impossible to ascertain the precise location of all Telstra plant from Telstra's plans. The accuracy and/or completeness of the information supplied can not be guaranteed as property boundaries, depths and other natural landscape features may change over time, and accordingly the plans are indicative only. Telstra does not warrant or hold out that its plans are accurate and accepts no responsibility for any inaccuracy shown on the plans.

It is your responsibility to locate Telstra's underground plant by careful hand pot-holing prior to any excavation in the vicinity and to exercise due care during that excavation.

Please read and understand the information supplied in the duty of care statement attached with the Telstra plans. TELSTRA WILL SEEK COMPENSATION FOR LOSS CAUSED BY DAMAGE TO ITS PLANT.

Telstra plans and information supplied are valid for 60 days from the date of issue. If this timeframe has elapsed, please reapply for plans.





DBYD Address:  
28 Ivy Av  
Mcgraths Hill NSW 2756  
DBYD Job No: 306245  
DBYD Sequence No: 20642448

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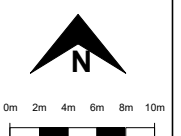
No warranty is given that the information shown is complete or accurate.

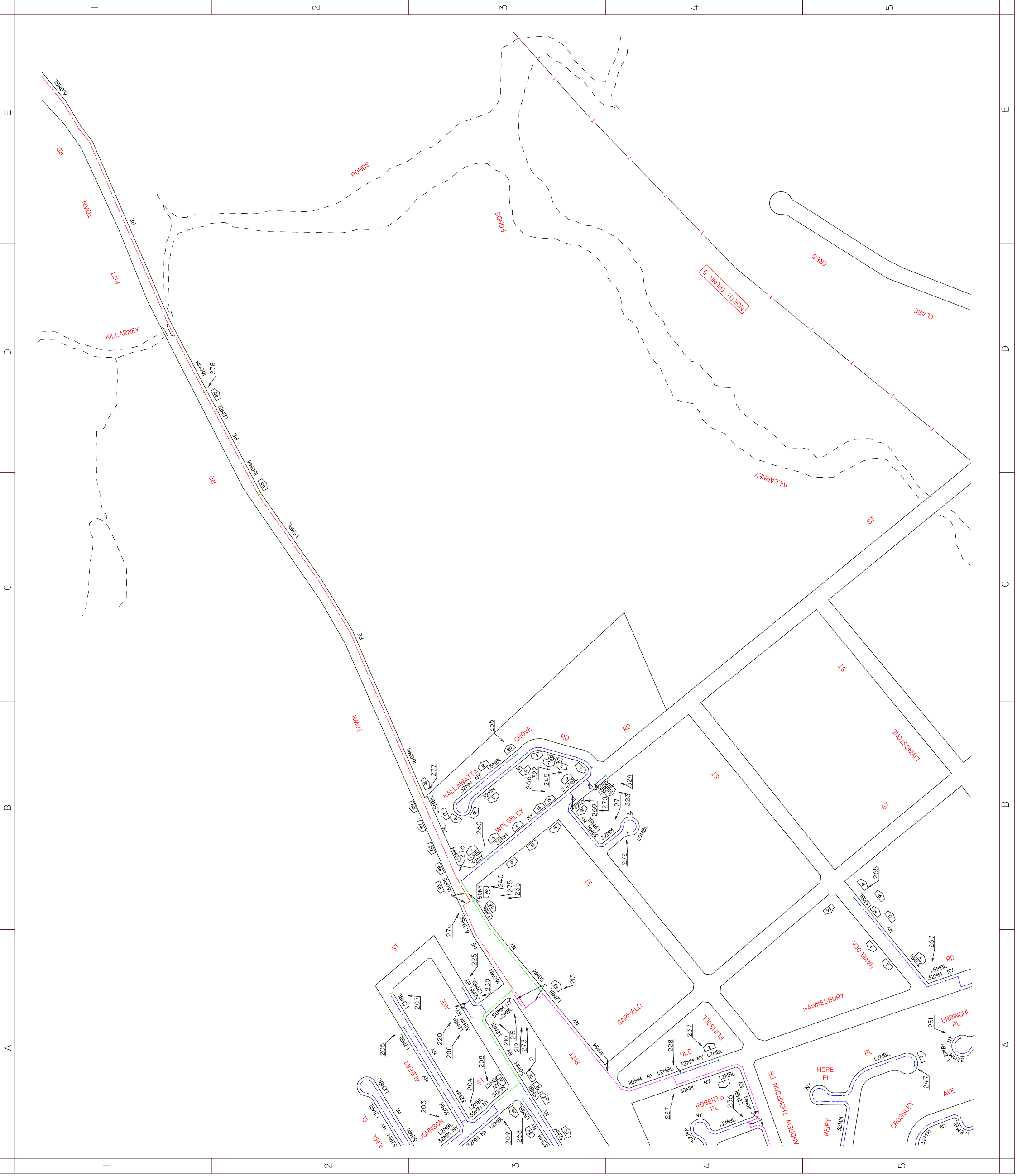
SYDNEY WATER CORPORATION

Scale: 1:500

Date of Production: 10/02/2011

Plan 1 of 1





WINDSOR  
5A



THIS MAP UPDATED ON 15/12/10  
THIS PLAN IS DIAGRAMATIC ONLY. DISTANCES  
SCALED FROM THIS PLAN MAY NOT BE ACCURATE.

|     |     |     |
|-----|-----|-----|
| WID | W2C | W2D |
| W4B | W5A | W5B |
| W4D | W5C | W5D |

ADJOINING MAPS

|     |            |
|-----|------------|
| 272 | HAWKESBURY |
|-----|------------|

NETWORK AREA      MUNICIPALITY AREA

Jamena

KEY

|       |                |          |
|-------|----------------|----------|
| — T — | TRUNK MAIN     | 7000 kPa |
| — P — | PRIMARY MAIN   | 3500 kPa |
| — S — | SECONDARY MAIN | 1050 kPa |

|       |         |
|-------|---------|
| — — — | 300 kPa |
| — — — | 210 kPa |
| — — — | 7 kPa   |
| — — — | 400 kPa |
| — — — | 100 kPa |
| — — — | 2 kPa   |

PROPOSED MAINS

- STEEL MAIN PROJECT NUMBER
- PRESSURE MONITORING STATION
- VALVE
- SYSTEM PRESSURE REGULATOR
- SIPHON
- NETWORK NODES
- ITEM DETAIL SKETCH AVAILABLE
- VALVE NUMBER (OLD NUMBERING)
- 6 INCH CAST IRON MAIN
- 150MM STEEL MAIN
- 110MM POLYETHYLENE/NYLON MAIN
- 50MM NYLON INSERTED INTO
- 6NB MAIN CAST IRON MAIN
- 110MM PE/NY
- 100MM 50MM NY
- 12MBL
- 1957
- DISTANCE IN METRES OF MAIN FROM BUILDING LINE (TOLERANCE OF 0.4M)
- YEAR LAID
- MUNICIPALITY BOUNDARY
- NETWORK BOUNDARY
- HOUSE NUMBER

WINDSOR 5A