

# Services Infrastructure Report

Kingfisher Estate

CG140997



Prepared for  
Wincity Development Pty Ltd

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**Appendix B** Sewer Strategy Plan  
**Appendix C** Water Strategy Plan

# 1 Introduction

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Wincity Development Pty Ltd has engaged Cardno to investigate the provision of services infrastructure to the proposed Kingfisher Estate and specifically to cater for the development of the central portion of the site for which a Section 96A planning application is to be lodged.

As a part of this investigation, we have inspected the site, reviewed existing services asset information and liaised with the relevant authorities regarding servicing strategies to cater for the development of the site and the broader catchment. This report summarises the outcomes of this investigation, with significant existing services infrastructure in the vicinity of the site shown on the Existing Services Infrastructure Plan in Appendix A.

## 2 Site Description

The Kingfisher Estate site is located on the east side of Lancefield Road extending north from Gellies Road and is bounded to the east by Emu Creek, as shown in green in Figure 1 below. The site comprises 3 land parcels of total area of approximately 276 ha, of which 184.6 ha is zoned Urban Growth Zone.

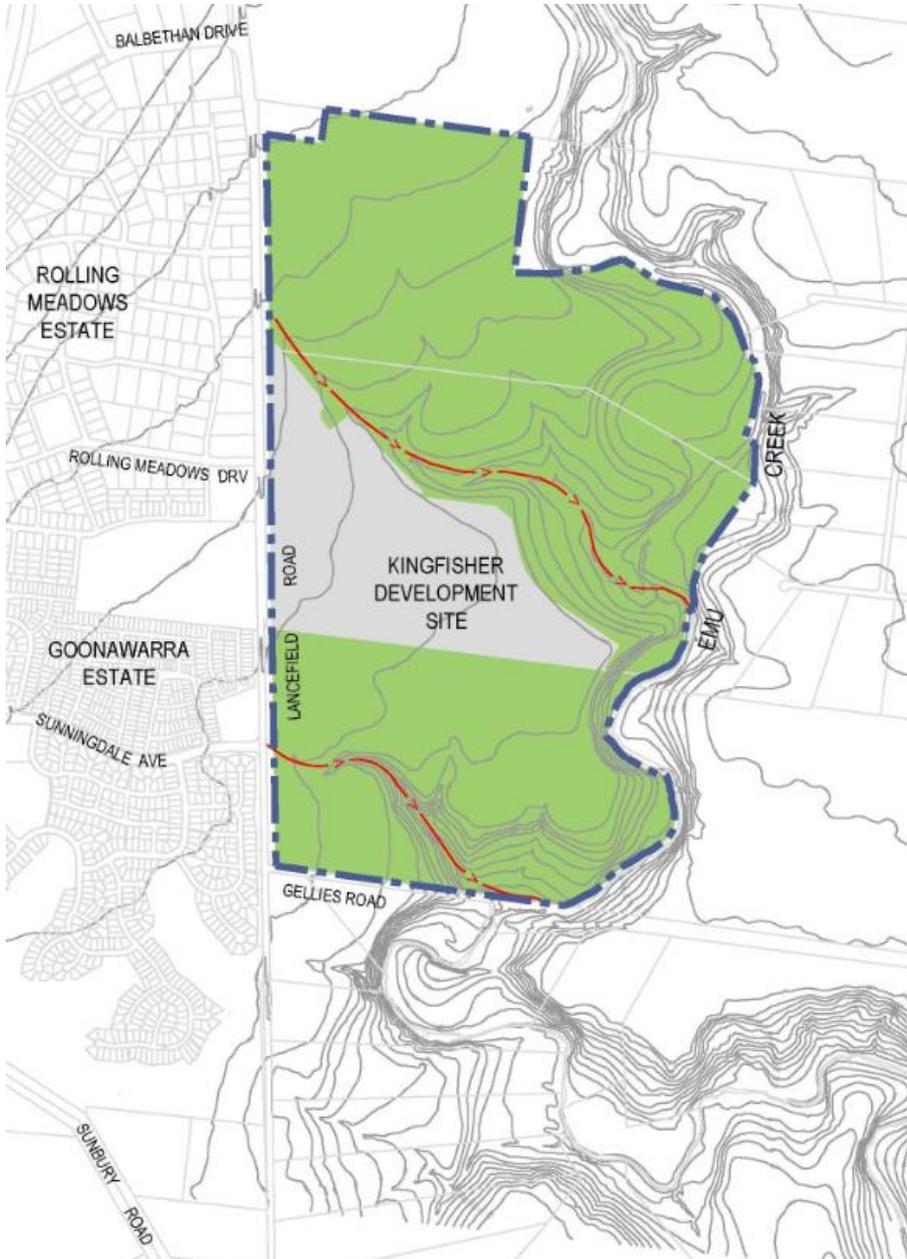


Figure 1 – Site Locality Plan

The central portion of the site is bounded to the north and south by gullies that extended eastward from Lancefield Road to Emu Creek. The area proposed for development slopes gently to the east to the ridgeline along the western edge of the Emu Creek corridor

The Application Area covers the northern section of the central portion of the site as shown in grey and is wholly contained within the central land parcel.

### 3 Development Proposal

The subdivision masterplan for the Application Area is shown in Figure 2 below.

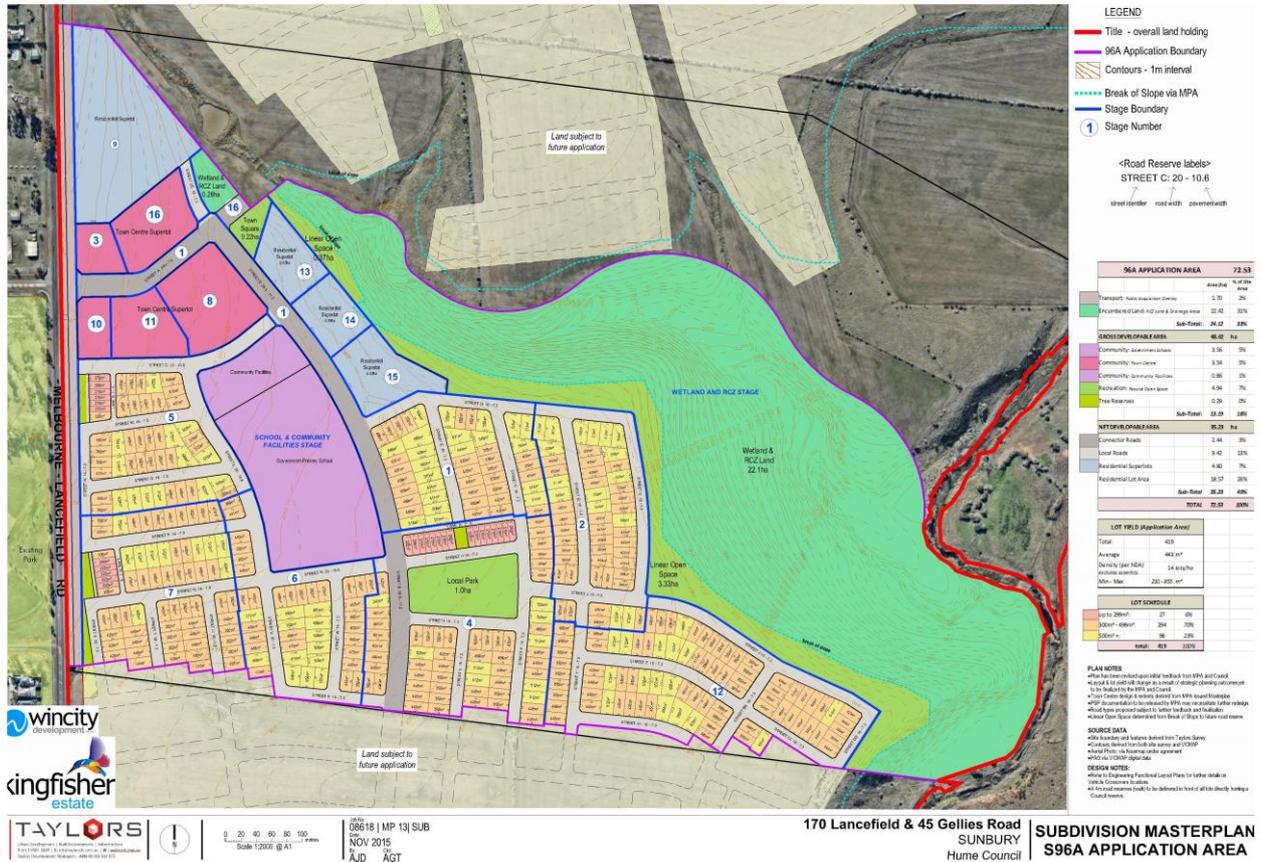


Figure 2 –Subdivision Masterplan

The developable portion of the Application Area is approximately 46 ha in size and development of this area is expected to yield the following:

- A Town Centre comprising retail and commercial facilities of approximately 2.5 ha in area;
- A Government Primary School and co-located Community Facilities;
- 419 residential lots ranging in size from 200 m<sup>2</sup> to over 600 m<sup>2</sup>;
- 3 residential superlots for further medium density development
- A local park.

The existing gully along the northern boundary of the Application Area will be enhanced in conjunction with the development of this area.

## 4 Services Infrastructure

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### 4.1 Sewerage Reticulation

Western Water is the authority responsible for the provision of sewerage facilities within this area.

#### 4.1.1 Existing Infrastructure

The existing trunk sewer infrastructure for this area is shown on the Existing Services Infrastructure Plan in Annex 1 and is comprised of the following:

- The 750mm dia Sunbury Outfall sewer extending north from the Sunbury Recycled Water Plant generally along Jacksons Creek to Sunbury Road;
- A 375mm dia sewer extending to the east along Sunbury Road, through Goonawarra Golf Course and then north along Lancefield Road to Gellies Road;
- North of this point a 300mm dia sewer main.

Previous investigation work undertaken for Western Water by Montgomery Watson Harza (MWH) in 2003 had identified existing capacity for 700 new lots in the 375 mm dia sewer at Gellies Road and downstream. Subsequent development in Sunbury is expected to have reduced the capacity of the system particularly in the Sunbury Outfall sewer south of Sunbury Road which surcharges in peak wet weather events.

Western Water are currently reviewing the system capacity. With limited recent development in the Goonwarra / Sunbury East catchment it is expected that significant capacity will still be available upstream of the Sunbury Outfall sewer.

#### 4.1.2 Ultimate Strategy

Western Water's original ultimate strategy for sewerage the development of the broader East Sunbury area is shown in the extract from Western Water's Sewerage Strategy plan in Figure 3 below (refer full plan in Appendix B).



Upgrading of the Recycled Water Plant will be required to cater for envisaged increased flows from new development area, and Western Water has confirmed that there is capacity for this to occur.

#### **4.1.3 Interim Strategy**

Western Water is currently designing the duplication of the Sunbury Outfall sewer from Sunbury Road to the Recycled Water Plant to cater for future growth in the north west catchment of Sunbury. In the interim, the capacity in this new sewer and the expected remaining capacity in the existing sewer mains to the north will be available to cater for initial development of the Kingfisher site.

Gravity sewers will be constructed through the Application Area and extend south east to a local sewer pumping station, from where sewage flows will be discharged via rising main to the existing 375 mm dia sewer main in Lancefield Road at Gellies Road. The location of the pumping station is subject to further functional work in consultation with Western Water.

## **4.2 Water Supply**

Western Water is the authority responsible for the provision of water supply facilities within this area.

### **4.2.1 Existing Infrastructure**

The area to the east of Sunbury, which includes Rolling Meadows and Goonawarra Estates, is serviced by a number of mains off the trunk water mains in Sunbury Road, including a 450mm dia main in Jacksons Road, 150 / 300mm dia main in Francis Boulevard and 100mm dia main in Lancefield Road (refer Annex 1).

Previous investigation work undertaken for Western Water by MWH has identified that the existing potable water reticulation system adjacent to the development site has capacity to supply approximately 200 new lots. Western Water are currently reviewing the capacity of the existing water supply system.

### **4.2.2 Ultimate Strategy**

Western Water's ultimate strategy for the provision of potable water supply to the development of the East Sunbury area is shown in the extract from their Water Strategy Plan in Figure 4 below (refer full plan in Appendix C).

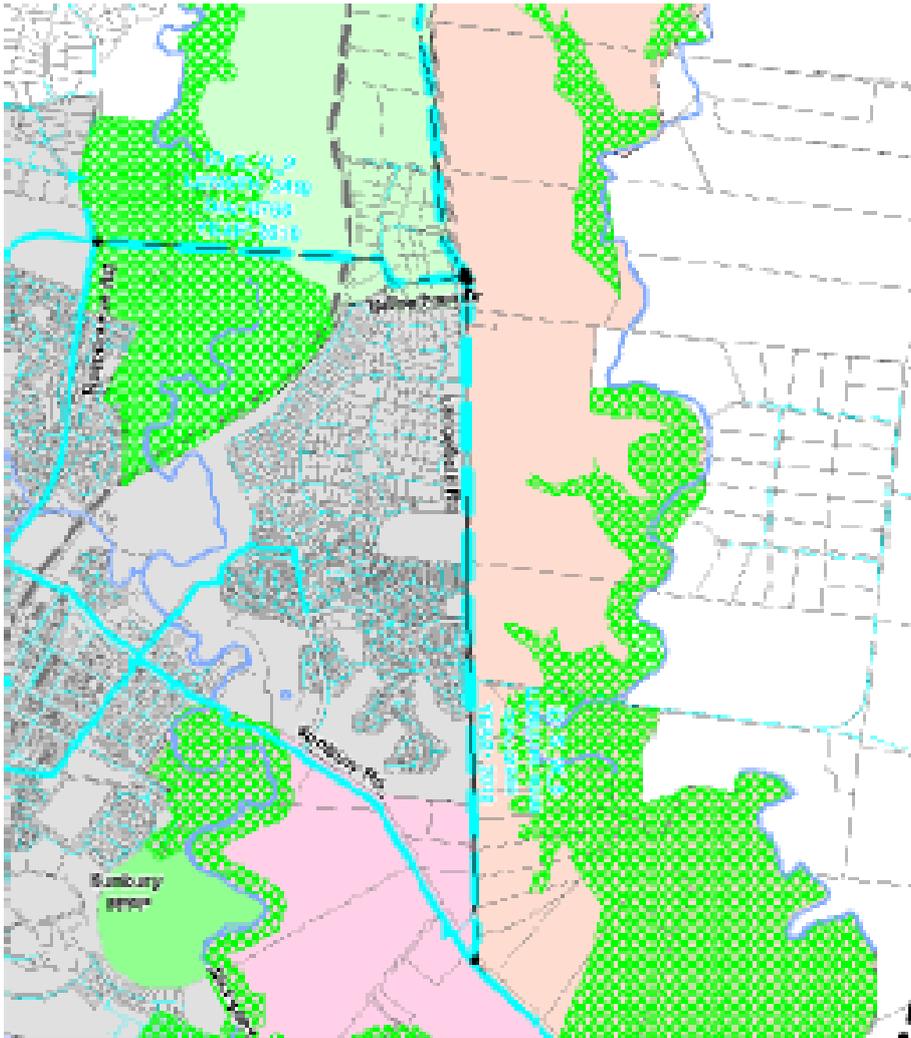


Figure 4 – Western Water Water Strategy Plan

Ultimately a large diameter water transfer main is proposed to be constructed along Lancefield Road to supply a new storage tank to be sited north of Sunbury, boosting the capacity and security of potable water supply for the East Sunbury development area.

Western Water are investigating the upgrade of the Sunbury Treatment Plant to produce Class A recycled water for supply to new development areas, however have advised that Class A recycled water supply will not be reticulated to development within the East Sunbury Area.

#### 4.2.3 Interim Strategy

As demand for water supply approaches the capacity of the current local system it is expected that a new trunk water reticulation main will be extended along Lancefield Road from Sunbury Road which will cater for the progressive development of the Kingfisher Estate until such time as the ultimate water supply infrastructure is constructed.

### 4.3 Electricity Supply

Jemena is the authority responsible for the provision of electricity supply facilities within this area.

A 22 kV high voltage feeder line runs along Lancefield Road which provides the backbone of the electricity supply network for this area. This asset has been partially augmented to cater for full development of the Rolling Meadows Estate and would have some spare capacity to cater for initial stages of the development of the Kingfisher Estate.

Jemena has advised that a second feeder line will be constructed from the zone substation to improve supply security to the area, and that these augmentation works would provide electricity supply to the full development of the Kingfisher Estate.

#### 4.4 Gas Supply

AusNet is the authority responsible for the provision of gas supply facilities within the area.

Gas mains exist within Lancefield Road and the Goonawarra and Rolling Meadows Estates immediately to the west of the Kingfisher site as shown in Figure 5 however these mains have limited capacity to service development of the Kingfisher Estate.

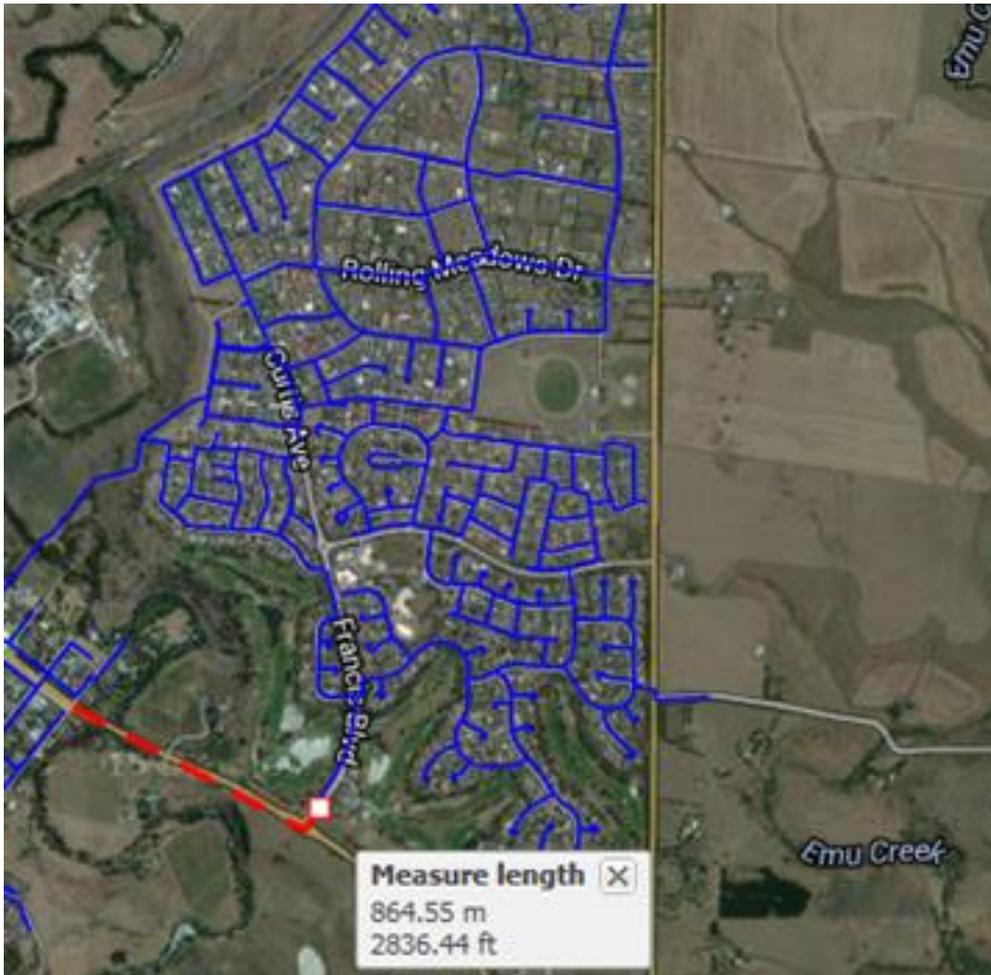


Figure 5 – Existing Gas Supply & Augmentation

The development of the Application Area will require augmentation of the existing gas supply network, comprising of approximately 865 m of new 125 mm dia gas supply main extending east along Sunbury Road from Powlett Street to Francis Boulevard as shown in red on Figure 5.

#### 4.5 Telecommunications

NBN Co. is the provider of last choice of telecommunication facilities to the development. The development will far exceed the minimum service requirement for provision of NBN of 100 dwellings. NBN Co. does not release planning information except in response to specific development applications.

The developer will be required to install the pit and pipe infrastructure as part of their subdivisional works with the installation of fibre optic to be carried out by NBN Co. including any backhaul works required bring the service to the site.

The developer also has the option of making alternative arrangements for the provision of fibre optic systems with other telecommunication providers.

## 5 Summary

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There is currently capacity in the services infrastructure networks to cater for the initial development of the Kingfisher Estate. The planned duplication of the Sunbury Outfall sewer by Western Water will provide interim capacity in the sewerage system that can be utilised for initial development of the Kingfisher Estate.

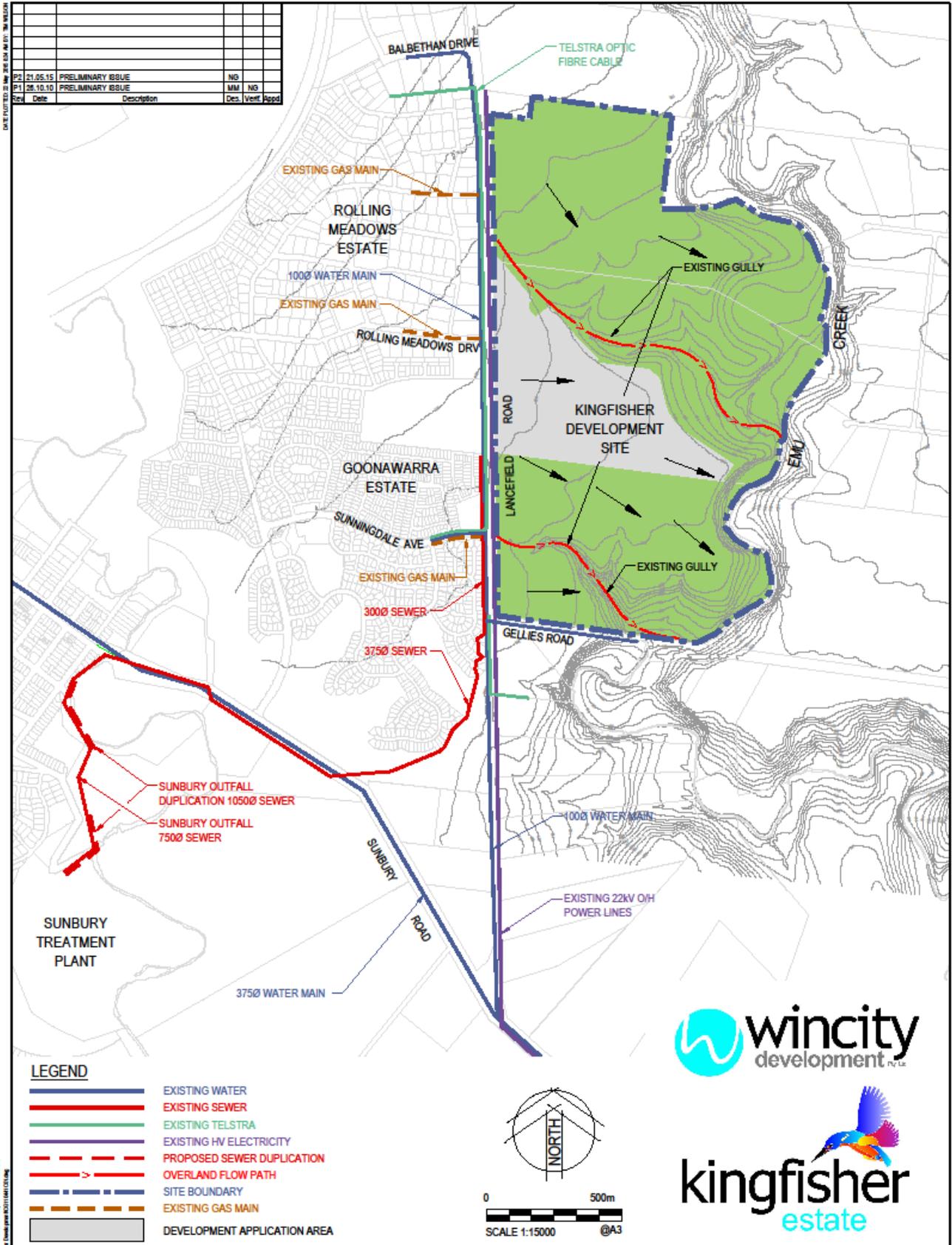
Whilst significant infrastructure augmentation works are required to service the full development of the Kingfisher Estate and the broader East Sunbury development area, strategies prepared by the various authorities will deliver these works in an efficient, timely and logical manner to cater for ongoing development.

Kingfisher Estate

APPENDIX

A

EXISTING SERVICES  
INFRASTRUCTURE PLAN



Rev	Date	Description	Des.	Verif.	Appd.
P2	21.05.15	PRELIMINARY ISSUE		MM	MB
P1	28.10.10	PRELIMINARY ISSUE		MM	MB

**LEGEND**

- EXISTING WATER
- EXISTING SEWER
- EXISTING TELSTRA
- EXISTING HV ELECTRICITY
- PROPOSED SEWER DUPLICATION
- OVERLAND FLOW PATH
- SITE BOUNDARY
- EXISTING GAS MAIN
- DEVELOPMENT APPLICATION AREA



DRAWN BY: M. HARRIS; CHECKED BY: M. HARRIS; DATE: 21.05.15; SCALE: 1:15000; SHEET: 14 OF 14

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		Drawing Number: CG110441-C01 Scale: 15000 Size: A3 Revision: P2			

Kingfisher Estate

APPENDIX

B

SEWER STRATEGY PLAN



Kingfisher Estate

APPENDIX

C

WATER STRATEGY PLAN

