Expert Witness Report - Services Infrastructure

Kingfisher Estate

CG140997

Prepared for
WinCity Development

11 August 2017

Cardno
Shaping the Future

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1 Expert Witness Statement

Name: Nick Glasson

Address: Level 4, 501 Swanston Street, Melbourne Vic 3000

Professional Qualifications:

Bachelor of Engineering (Civil, Hons) 1987, Monash University

Professional Experience:

Principal – Cardno 2007 - present

Director - Grogan Richards Pty Ltd 2005 - 2007

Associate - Grogan Richards Pty Ltd 2001 – 2005Panel

Senior Engineer - Grogan Richards Pty Ltd 1997 - 2001

Design Engineer – Grogan Richards Pty Ltd 1993 - 1997

Design Engineer – Koukourou & Partners 1992 - 1993

Design Engineer – City of Plymouth, England 1991

Design Engineer – Borough of Southwark, London 1990

Design Engineer – WBCM Consultants 1988 - 1990

Areas of Expertise:

Roads and services infrastructure for urban development projects, specifically Stormwater Drainage, Sewer and Water Reticulation.

Planning, design and documentation, and construction management of these works.

Expertise to Prepare this Report:

My training and experience qualifies me to comment on the development infrastructure matters for this property.

Instructions, which defined the scope of this report:

I have been requested to express my expert opinion regarding the provision of utility services infrastructure for the property in question.

Identity of Persons Undertaking the Work:

Nick Glasson of Cardno

2 Services Infrastructure

Cardno's Services Infrastructure Report of 19 November 2015 ref CG140997 version 04 as exhibited details the provision of utility services infrastructure to the proposed Kingfisher Estate and specifically to the central portion of the site for which a Section 96A planning application has been lodged.

This report was prepared by Nick Glasson and has been adopted as expert evidence, noting the following departures:

3 Development Proposal

The subdivision masterplan for the Application Area is to be amended to address feedback arising from the exhibition process.

4.1 Sewerage Reticulation

Western Water has advised that they have adopted the strategy of aligning the branch sewer that will ultimately service Kingfisher and the development corridor to the north along Lancefield Road, as shown in the plan extract below:

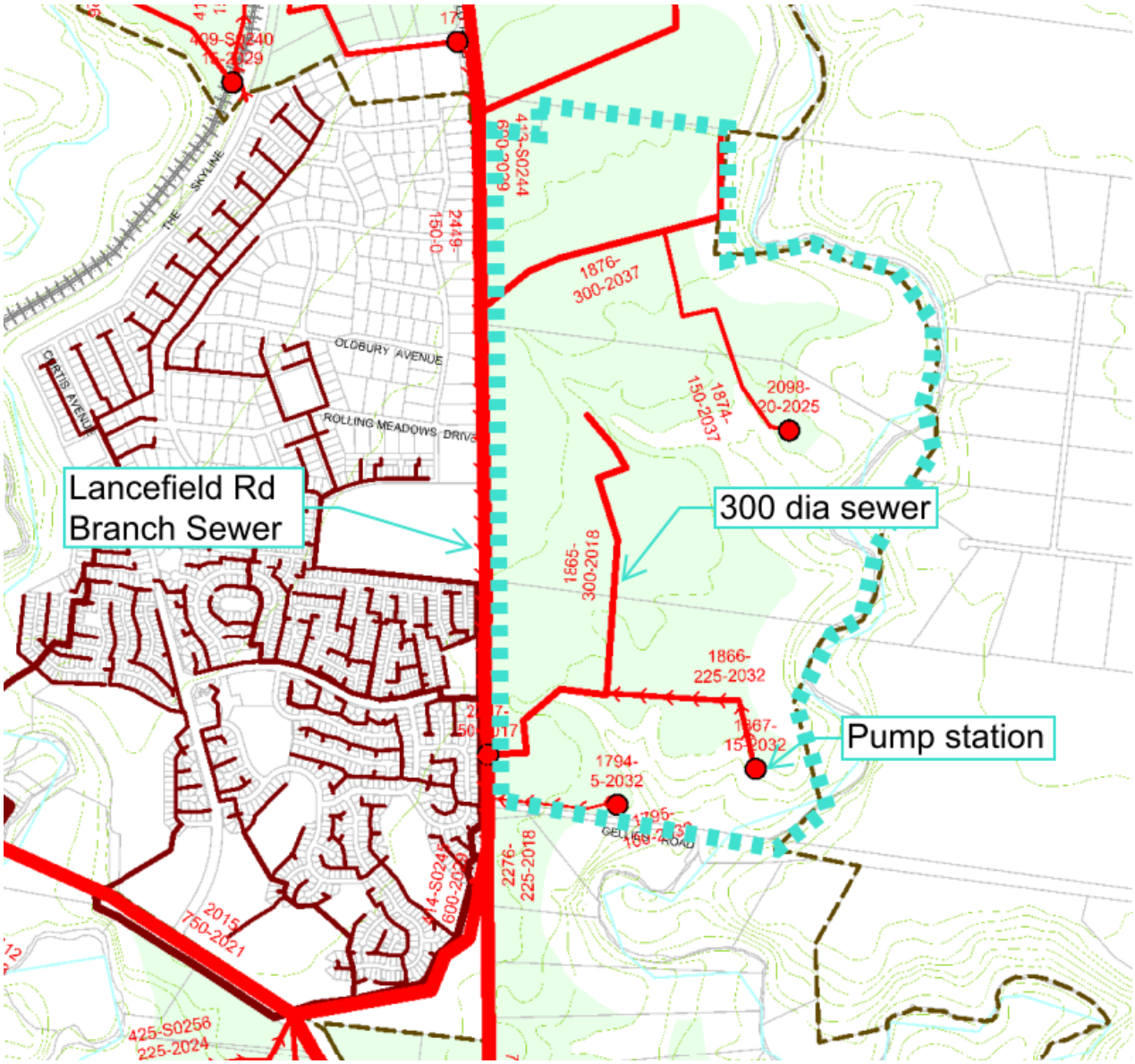

Figure 2-1 Extract from Western Water Sewerage Strategy Plan

As a result, the strategy for servicing Kingfisher has also changed from that previously reported. A 300 mm dia sewer is proposed to extend from the Lancefield Road branch sewer at the south west corner of the site to service the majority of the central part of the site, including the 96A application area. The eastern portions of this area that cannot discharge directly by gravity to the 300 mm dia sewer are proposed to outfall to a sewage pump station at the south east corner of the site, from where sewage flows will be pumped back via a sewer rising main to the gravity system.

In the interim until the Lancefield Road Branch Sewer is constructed, the existing 375 mm dia sewer main in the vicinity of the Lancefield Road / Gellies Road intersection will be the point of discharge for sewage flows from the development. Western Water has advised that this sewer has capacity for approximately 1000 lots.

A temporary sewage pump station and rising main may be required in the south west corner of the site to outfall flows to the existing 375 mm dia sewer main.

4.2 Water Supply

Western Water has advised that the existing 225 mm dia water main at the Goonwarra Recreation Reserve has capacity to cater for the first 500 lots of the Kingfisher development. Once this capacity is utilised, a new trunk water main will be required to be constructed from Sunbury Road north along Melbourne Lancefield Road to the site.

A 375 mm dia trunk water main is proposed running north –south through the site as shown on the plan extract below. This main is to be constructed as development progresses and will ultimately connect to the Lancefield Road main and form the backbone of water supply to the development.

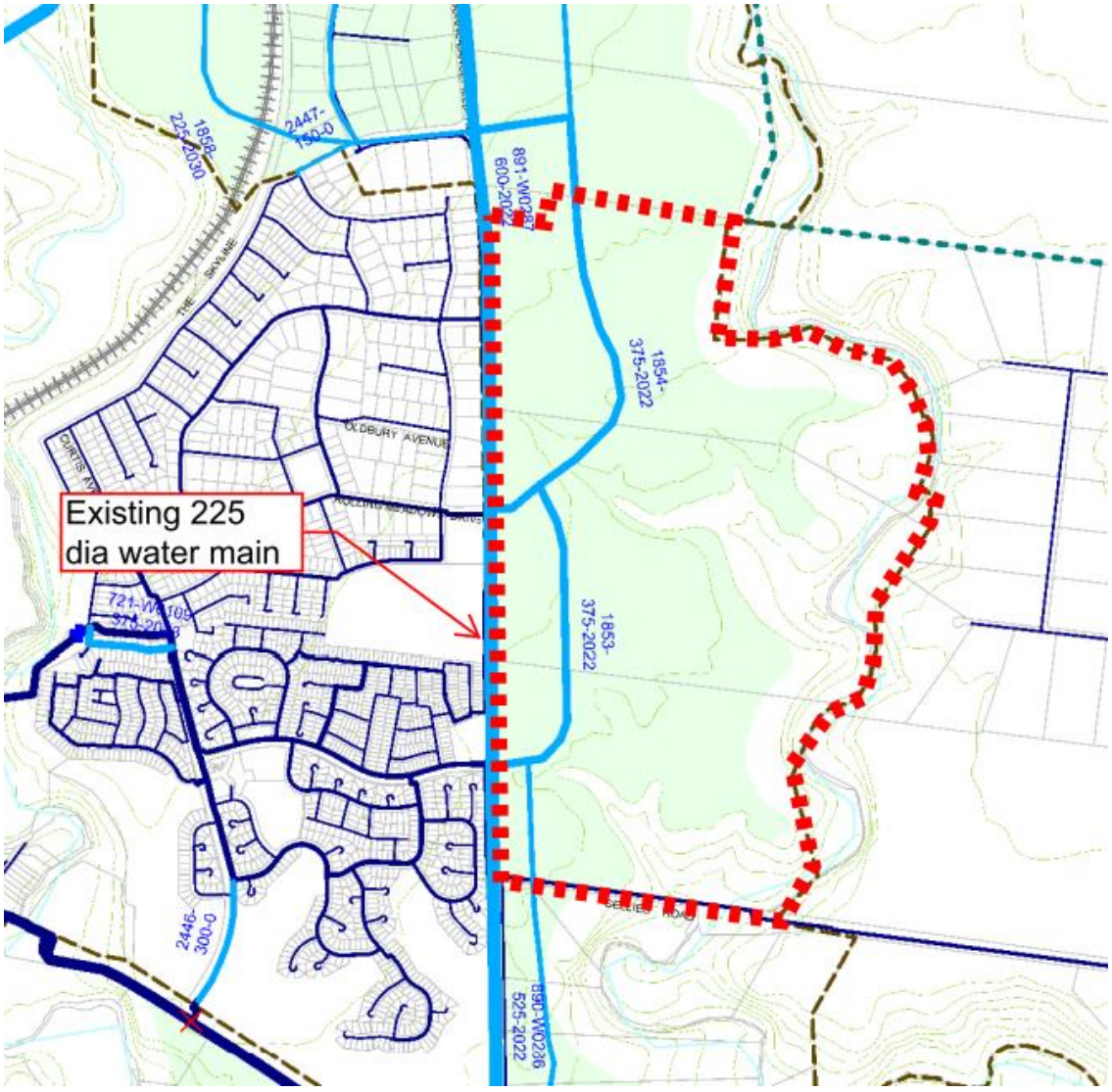

Figure 2-2 Extract from Western Water Water Supply Strategy Plan

Western Water has advised that the reticulation of recycled water will not be mandatory for the development, however the reduction of potable water usage will need to be addressed as part of an Integrated Water Management Plan for the development. This could include such measures as rainwater tanks for new households, stormwater harvesting, or the reticulation of recycled water. The latter option is not likely to be feasible given that the site is remote from Western Water's existing Class A recycled water network.

Hume City Council Submission

In addition to the above, I have noted Hume City Council's submission and provide the following evidence with respect to a number of their submission items which are of concern (reference Appendix 2 of the VPA Part A Submission of August 2017).

Item HCC170

Western Water are proposing that their trunk services be installed in service roads rather than Lancefield Road. This presumes the availability of a service road for the full length of Lancefield Road which may not be the case.

Further, Western Water's trunk services are not planned to be installed until well after the Kingfisher development will commence. It is quite possible that portions of the service road along the Lancefield Road frontage will be built and adjacent lots occupied well prior to the services being installed, making construction of these services particularly of the trunk sewer problematic.

The installation of these trunk services in the Lancefield Road reservation should be the preferred option subject to further investigation.

Item HC199

The proposed change to the service placement guidelines to disallow drainage under the kerb is not practical for larger diameter drains that require larger than standard pits. For these situations it is standard industry practice to haunch larger pits into the roadway to maintain the back of pit at a standard offset from the kerb, with the pipe encroaching marginally under the kerb. This maintains space in the verges for services to be installed at standard offsets.

Drainage under kerbs should be noted as 'possible', with under nature strips as 'preferred' as per Councils submission HCC200.

HCC202

The requirement for Level 1 geotechnical supervision of crushed rock backfill of services under paths appears excessive.

HCC203

Councils comment appears in conflict with the intent of this part of the services placement guidelines which is to allow electrical and telecommunications property services pits to be located in footpaths. This flexibility ensures that there is sufficient room for street trees and paths in non – standard situations without the need for widened nature strips. The nature strips of the standard cross sections accommodate all elements so widened nature strips are not necessary.

3 Declaration

I have made all the inquiries that I believe are desirable and appropriate, and no matters of significance, which I regard as relevant, have to my knowledge been withheld from the Panel.

Nick Glasson
Principal / Civil Engineer
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