

31 Lane Cover Road, Ingleside NSW

On-Site Wastewater Report

June 2023

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Wastewater | Stormwater | Flood | Environmental | Geotechnical | Acoustic | Structural

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Approval and Authorisation

Title	31 Lane Cover Road, Ingleside NSW On-Site Wastewater Report
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Signed:	
Dated:	2/06/2023

Document Status

Date	Internal Reference	Document Status	Prepared by	Reviewed by
2/06/2023	2910-WW-A-01	For release	A. McAlister	R. A. Starkey

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1 INTRODUCTION

1.1 Foreword

An On-Site Wastewater Report is a technical document which specifies how the sewage produced on-site will be managed, treated, and then disposed. An On-Site Wastewater Report carefully considers the environment, health, cost, and long-term management options for the on-site management of sewage.

1.2 Background

Broadcrest Pty. Ltd. was engaged by M. Mina of Dream Homes Custom Build to produce an On-Site Wastewater Management Report at 31 Lane Cover Road, Ingleside NSW (the site). The report will accompany plans for construction of a 5-bedroom equivalent dwelling.

Site and desktop inspections were carried out which involved an aerial assessment of the site and development documents. The assessment of the results, system design and recommendations are detailed in this report.

1.3 Objectives

The performance objectives of the On-Site Wastewater Assessment are to:

- Protect human health
- Protect ground and surface water
- Maintain and enhance the quality of the land and vegetation
- Maintain and enhance community amenity
- Ensure maximum re-use of resources
- Promote an ecologically sustainable development.

1.4 Scope of Works

The scope of works included the following:

- Determination of existing system capacity (where present)
- Wastewater management assessment
- Drafting of the proposed system
- Reporting in accordance with the associated legislations and guidelines.

1.5 Compliance

This report has been produced in accordance with the following guiding documents:

- Local DCP requirements
- DLG 1998, *On-site Sewerage Management for Single Households*
- SCA 2012, *Designing and Installing On-Site Wastewater Systems*
- Australian Standard AS 1289.3.8.1:2006 *Methods for testing soils for engineering purposes*
- Australian Standard AS 1546.1-3:2008 *On-site domestic wastewater treatment units*
- Australian Standard AS 1547:2012 *On-site domestic wastewater management*

2 SITE ASSESSMENT & INVESTIGATION

2.1 Site Information

Address / Locality	31 Lane Cover Road, Ingleside NSW
Lot Area:	920m ²
Zoning:	RU2 Rural Landscape
Council / LGA:	Northern Beaches Council
Intended Water Supply:	Town
Inspection Officer:	A. McAllister - 30/05/2023

2.2 General

At the time of investigation, the site was unoccupied, with coverage of dense ground covers and sporadic shrubs. The lot landform slopes gently towards the north. The street is understood to be currently serviced via a municipal pressure main. The proposal is to connect the wastewater generated by the proposed dwelling to the pressure main via pump and raising main.



Figure 2.1 – North orientated plan (Sydney Sewerage Pressure mains inc.)

2.3 Suitability of On-site Effluent Management

Typical assessment methodology for On-site Sewerage Management Systems (OSSM) follows that prescribed in DLG (1998), where the restriction imposed by a site/soil features are categorised by severity, and their impact forms the basis for subsequent system selection, design, and recommendations. In the case of the present site investigations has determined that the existing access to pressure sewer mains is most favourable for occupancy and environmental outcomes, and therefore recommended for continued use. The proposed system capacities, calculations and servicing intervals are detailed in Section 3 below.

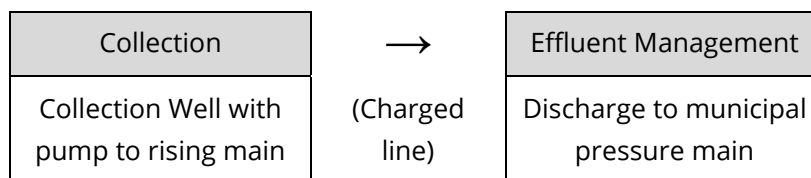
2.4 Environmental Constraints to Pump-Out

Given the sites proximity to local stormwater overland flow paths, the convergence components of the site are likely subject to inundation. OSSM system location is typically required by LGA and State guidelines to be above the 1% Annual Exceedance Probability (AEP) inundation extent. It is noted that the stormwater design has OSD located at the front boundary. Potential interaction of stormwater with the system is to be limited, with all electrical controls situated outside of the OSD.

3 NOMINATED WASTEWATER MANAGEMENT

3.1 Proposed OSSM Summary

Site conditions and constraints were evaluated in selection of appropriate treatment and Effluent management method. Summary of the recommended OSSM system and application sizing is presented below.



3.2 Wastewater Treatment

It is proposed to treat all wastewater generated by the development to a primary standard via a domestic septic tank. Doing so will allow for pre-treatment and liquid only transmission within the subsequent collection well. Design loading rates for the proposed development were determined per LGA per capita and bedroom occupancy rates (Table 3.1).

Table 3.1 – Design Wastewater Loading Rate

I.D	Equivalent Bedrooms	Population per Bedroom	Equivalent Population [Persons]	Water Supply	Wastewater Generation Rate per Capita [L/Person/Day]	Design Wastewater Loading [L/Day]
Single Residence	5	2	10	Tank Water	120	1,200

3.3 Pump and rising line

Wastewater connection has been conditionally approved by Sydney Water (See Appendix B). Details of the pump-well, pump and raising line are to be confirmed with Sydney Water by the installing contractor prior to undertaking works. Nominal considerations below:

1. A design discharge rate of 2L/s is proposed from the pump-well to the municipal rising main.
2. The pump-well tank or vessel, containing the grinder pump, shall have a minimum capacity equal to six (6) hours of the average peak flow measured over an eight-hour period per day. 900L minimum.
3. Backflow prevention is located at the pump-well, and the existing line pressured rated.

4 ADDITIONAL INFORMATION

4.1 Pipework Detail

All associated plumbing / drainage work for the proposed development are to be in accordance with AS 3500.2:2015 *Sanitary Plumbing Drainage*. Positioning of the receiving treatment system is to ensure drainage from internal plumbing fixtures achieves the minimum grade and cover of the excerpts below.

Table 4.1 – Excerpts of AS3500.2:2015

Nominal Pipe Diameter (DN)	Minimum Grade	
(mm)	(%)	(Ratio)
65	2.50	1:40
80	1.65	1:60
100	1.65*	1:60*
125	1.25	1:80
150	1.00	1:100

Location	Minimum depth of cover (mm)	
	Cast iron & Ductile iron	Other materials
Subject to vehicular loading	300	500
All other locations	NIL	300

*Drains from treatment plants may be 1.00% Min.

4.2 Licensing

Operating a system of sewage management is a Prescribed Activity under the Local Government Act 1993 and clause 45 of the Local Government (Approvals) Regulation 1999. This means that an 'Approval to Operate' a system of sewage management must be obtained from Council.

5 CONCLUSION

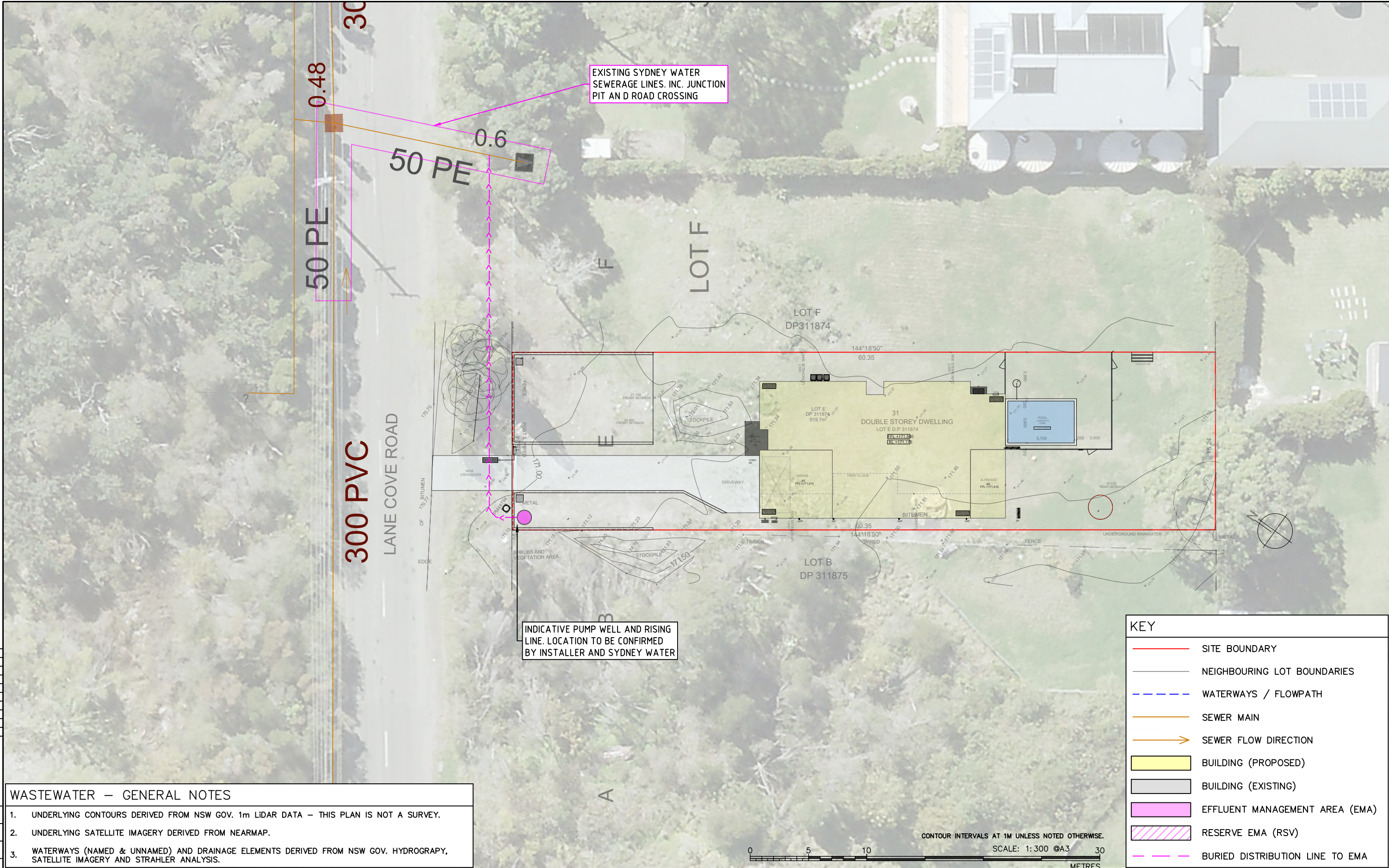
- It is proposed to construct a 5-bedroom equivalent dwelling at 31 Lane Cove Road, Ingleside NSW
- The anticipated wastewater loading rates generated by the 5-bedroom equivalent dwelling is calculated to be 1,200 L/day.
- Wastewater connection has been conditionally approved by Sydney Water (See Appendix B). Details of the pump-well, pump and raising line are to be confirmed with Sydney Water by the installing contractor prior to undertaking works.

APPENDIX A: SITE PLAN



THIS DRAWING MAY BE PREPARED IN COLOUR AND MAY BE MADE INCOMPLETE IF COPIED

0 5 10 15 20 25 30 35 40 45 50m A1



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PROJECT DESCRIPTION	SHEET
PROPOSED RESIDENCE	APPENDIX A - SITE LAYOUT PLAN
PROJECT SITE	PLAN
31 LANE COVE ROAD, INGLESIDE	ON-SITE WASTEWATER MANAGEMENT PLAN
LGA	CLIENT
NORTHERN BEACHES COUNCIL	DREAM HOMES CUSTOM BUILD

PROJECT ID	2910-WW
SCALE	1:300 @ A3
	- @ A1
SHEET NO.	1 of 1



APPENDIX B: WASTEWATER CONNECTION APPLICATION



Wastewater connection application

Application number 1659321

Property number 5163877

31/05/2023

Dear Broadcrest Consulting

Your application for the property at Lane Cove Rd, Ingleside 2101 to our wastewater system has been

CONDITIONALLY APPROVED

If you follow the conditions in this letter, you're authorised to connect to the service and use it, under section 48A of the Sydney Water Act.

This approval is valid until **31/05/2024** (one year).

NEXT STEPS

We will send you emails with instructions at each stage of the process.

STANDARD CONDITIONS

The connection must be made to the existing wastewater connection point. A licensed plumber must connect your property plumbing to our connection point.

You must not discharge stormwater or groundwater to your wastewater connection, or connect any pipe carrying stormwater or groundwater to your wastewater connection.

This letter gives you permission to discharge domestic quality wastewater only. If you want to discharge trade wastewater from business activities you must lodge a Trade Waste Application through **Sydney Water Tap in™ – Discharge Trade Wastewater**.

The letter does not provide approval to pump wastewater into Sydney Water's Wastewater network. If you want to pump wastewater into our network you must lodge a Pump to Wastewater application through **Sydney Water Tap in™ – Pressure Boosting and Pumps**.

If there is no wastewater property connection point available or if it is not serviceable you must apply to insert a new connection point through **Sydney Water Tap in™ – Connection Approvals**. A listed constructor, including Sydney Water, must insert the wastewater connection point. Refer to www.sydneywater.com.au and go to the Providers page in the Plumbing, building and developing section for a list of suppliers.

If you are connecting to a Sydney Water pressure sewer network, a boundary kit (connection point) must be present on the property to enable connection of the private service. To connect this service to the boundary kit, you must lodge a Pump to Wastewater application through Sydney Water Tap In™ – Pressure Boosting and Pumps.

If there is no boundary kit available, you must arrange for one to be installed. To arrange for these works to be carried out, you must engage a Water Servicing Co-ordinator to facilitate this process for you. Refer to www.sydneywater.com.au and go to Building and Developing for listed Co-ordinators.

SPECIAL CONDITIONS

Boundary trap required	No
Watercharged / tidal area	No
Partial drainage area	No
Aggressive soil area	No
Cast iron pipe area	No
Sewer surcharge area	No
Minimum gully height area	No
Sewer available	Yes
Connection type	Gravity

You must contact Sydney Water to clarify the property special conditions where:

1. the property special conditions are not shown
2. are shown as “unset”, “unknown” or “not available”
3. the proposed development is being built over more than one existing property.

Please note that boundary traps must be fitted for all commercial and industrial properties and you must ensure that all plumbing/drainage and building works are carried out in accordance with the relevant codes and standards.

If your connection does not comply with these conditions it will be regarded as an unauthorised connection. We may ask you to rectify the unauthorised connection, or we may restrict your services or disconnect you until you rectify any faults.

Customers with approved connections are covered by the conditions of our Customer Contract. If you have special conditions of connection, they will be covered in a Connection Agreement.

PLUMBING INSPECTIONS

Private plumbing is regulated by NSW Fair Trading.

ANY QUESTIONS?

Email us
connections@sydneywater.com.au

Call us
 1300 082 746