Integrated Water Management Report

300 Burns Bay Road, Lane Cove

Issue B

Prepared For Lane Cove Developments No. 1 Pty Ltd

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REVISION TABLE

Revision	Date	Issue Description	Issued by	Approved by	Signed
P01	03.11.2025	Preliminary Issue	SC	SELH	
A	08.12.2025	Client Comments Issue for Approval	SC	SELH	
A	23.02.2026	Client Comments Issue for Approval	SC	SELH	

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1.1 Addressing Relevant SEARs

Table 1-1 Relevant SEARS

Item	Description	Section Reference
11. Water Management	Detail the proposed drainage design and servicing infrastructure to be incorporated as part of the development (stormwater and wastewater).	Appendix 3 Stormwater Plans
	Demonstrate how the development complies with council's drainage requirements and identify proposed stormwater treatment and water quality management measures to minimise adverse environmental impacts.	Section 4.3

1.2 Project Description

This Integrated Water Management Plan (IWMP) has been prepared by S&G Consultants Pty Ltd to accompany a detailed SSDA with concurrent rezoning via the Housing Delivery pathway (HDA) for the mixed-use development at 300 Burns Bay Road, Lane Cove. The site made up of one lot. The legal description of the site is outlined in Table 1-2.

Table 1-2 Legal Description

Property Address	Legal Description
300 Burns Bay Road, Lane Cove	Lot 15 DP 1230609

This report has been prepared to address the Secretary's Environmental Assessment Requirements (SEARs) issued for the project (SSD-87925706).

This report concludes that the proposed in-fill affordable housing development is suitable and warrants approval subject to the implementation of the following mitigation measures.

- Provide an On-Site Detention system to limit the post developed discharge;
- Provide a rainwater tank to collect part of the roof runoff and to re-use on site for irrigation of landscaped areas;
- Provide a water quality treatment system capable of meeting the pollutants reduction targets as stipulated by Council; and

- Divert and upgrade (if required) the stormwater infrastructure that traverses the site around the footprint of the proposal.

Following the implementation of the above mitigation measures, the remaining impacts are considered appropriate.

2 Introduction

2.1 The Proposal

This Integrated Water Management Plan prepared by S&G Consultants Pty Ltd on behalf of Lane Cove Developments no.1 Pty Ltd ('the Applicant') in support of a concurrent Rezoning Proposal and State Significant Development Application (Rezoning and SSDA) for a mixed-use development for the site at 300 Burns Bay Road, Lane Cove (the site).

This SSDA seeks approval for:

- Demolition of existing structures on the site, tree removal and site excavation for basement levels.
- Construction of a new residential flat building ranging from 7-15 storeys and comprising 225 apartments including:
    a. 198 market apartments;
- 34 affordable apartments; and
    a. Communal areas at lower ground, ground level with new recreation park at the eastern edge of the site, rooftop levels including a pool.
- Car and bicycle parking for residents and visitors at lower ground and two (2) basement levels, including:
    a. 237 car parking spaces;
- Garbage storage; and
    a. Plant rooms and other associated services.
- Public domain and landscaping improvements, including:
    a. New open space at the eastern edge of the site; and
    b. Hard and soft landscaping works.

The concurrent Rezoning seeks the following amendments to the *Lane Cove Local Environmental Plan 2010* (LCLEP 2010) to facilitate the proposed development:

- Amend the Height of Buildings Map under Clause 4.3 to increase the building height from 21m to 54m; and
- Amend the Maximum Floor Space Ratio Map under Clause 4.4 to change the maximum Floorspace Ratio (FSR) from 2:1 to 3.22:1.

For a further detailed project description, please refer to the Environmental Impact Statement and Rezoning Report prepared by Colliers Urban Planning.

This report should be read in conjunction with the Rezoning Request and Environmental Impact Statement prepared by Colliers Urban Planning, the Architectural Plans prepared by

PBD Architects, and the other accompanying technical documents that form part of the State Significant Development Application.

For a further detailed project description, please refer to the Environmental Impact Statement and Rezoning Report prepared by Colliers Urban Planning.

This report should be read in conjunction with the Rezoning Request and Environmental Impact Statement prepared by Colliers Urban Planning, the Architectural Plans prepared by PBD Architects, and the other accompanying technical documents that form part of the State Significant Development Application.

2.2 The Site

The site is located at 300 Burns Bay Road, Lane Cove NSW 2066 and is legally described as Lot 15 DP1230609.

Situated within the Lane Cove Council (LCC) Local Government Area (LGA), the site is zoned R4 High Density Residential within the Lane Cove Local Environmental Plan 2009 (LCLEP). It has an area of 7,595 m^2 and comprises an existing office building and warehouse extension on the eastern portion of the site. A single storey structure providing car parking occupies the western part of the site. Car parking is also provided at grade along the southern site boundary and a tennis court is located on the western part of the site.

The site has a sloping topography, with a high point at 22.15m (AHD) along the boundary with the properties to the north, sloping south to a low point of 18.83m (AHD) along the southern boundary, representing an approx. 3.5m level change across the site from north to south.

Vehicle and pedestrian access to the site is via Burns Bay Road. A right of carriageway extends along the western site boundary for driveway access to the neighbouring buildings at 292-298 Burns Bay Road.

An aerial photo of the site is shown at **Figure 1** below.

Figure 1 Site aerial

Source: Nearmap, edits by Colliers Urban Planning

2.3 Methodology

This report describes the stormwater quality and quantity measures proposed to address the local Council's requirements for stormwater drainage and reports on the results of modelling carried out in support of the development.

In summary, the stormwater strategies adopted for the development are as follows:-

- OSD systems provided to reduce the site discharge;
- Water quality devices are provided to meet the pollutants reduction targets;
- Rainwater reuse tanks to irrigate the proposed landscaping; and
- Stormwater discharge to suitable location.

This report describes how the proposed stormwater drainage design and servicing infrastructure will be incorporated as part of the development and how the development complies with council's drainage requirements and identify proposed stormwater treatment and water quality management measures to minimise adverse environmental impacts.

The concept stormwater drainage plans have been prepared by S&G Consultants (SGC) to comply with the following:

- Lane Cove Council Development Control Plan Part O : Stormwater Management; and

- Applicable sections from SEPP (State Environmental Planning Policy).

2.4 Methodology

This report describes the stormwater quality and quantity measures proposed to address the local Council's requirements for stormwater drainage and reports on the results of modelling carried out in support of the development.

In summary, the stormwater strategies adopted for the development are as follows:

- A 10m^3 volume rainwater tank to ensure rainwater retention and re-use as per council's guidelines;
- 2x separate On-Site Detention (OSD) tanks to ensure post-development site discharge is minimised to permissible site discharge as per Council's DCP; and
- Stormfilter chambers consist a total of 18 x 690 PSorb Stormfilter cartridges and Ocean Guard baskets or similar equivalent to comply with Council's DCP.

2.5 Limitations

This report is intended solely for Lane Cove Developments No. 1 Pty Ltd as the Client of SGC and no liability will be accepted for use of the information contained in this report by other parties than this client.

This report is limited to visual observations and to the information including the referenced documents made available at the time when this report was written.

2.6 Reference Documents

The following documents have been referenced in this report:-

1. Site survey prepared by Exceed Consulting Group ref. PM 51190 dated 16/05/2024;
2. Architectural plans prepared by PBD Architects:
3. Engineers Australia, *Australian Rainfall & Runoff* (AR&R 1999);
4. Lane Cove Council LEP 2010;
5. Lane Cove Council DCP 2010 Part O & S; and
6. Industry Specific SEARs for application number SSD-87925706.

3 Assessment & Results

3.1 Addressing Lane Cove Council's DCP Requirements

The stormwater requirements are set out in Part O & S of Lane Cove Council DCP as per below.

7.1 When is OSD Required

7.1.1 Dwelling houses and dual occupancies

OSD will be required if one or more of the following criteria are satisfied:

a) All new residential developments where the proposed impervious area of the site exceeds 35%.

b) All alterations or additions to residential dwellings where the impervious area (including roof area, paving, swimming pools and driveways) increases by more than $50m^2$.

c) All alterations or additions to residential dwellings where the impervious area (including roof area, paving, swimming pools and driveways) increases by less than $50m^2$ and the total impervious area of the site is greater than 65% of the total site area.

d) Where successive developments take place on a residential dwelling within a 5 year period and the cumulative increase in the built-upon site area exceeds $50m^2$ or the total impervious area is greater than 65% of the total site area.

7.1.2 Attached dwellings, multi-dwelling housing and residential flat buildings

All developments with more than two dwellings proposed on the site and the proposed impervious area of the site exceeds 35% will require OSD.

7.1.3 Commercial and industrial developments

All commercial developments and redevelopment where the footprint of the building is altered will require OSD.

4.2 Stormwater Management

Objectives

The objectives for stormwater management are to:

1. Reduce the load onto stormwater infrastructure.
2. Protect aquatic ecology by minimising the transport of pollutants from the site.
3. Provide water in the soil to promote the growth of trees and landscape.
4. Reduce potential flooding and prevent stream erosion.

Provisions

a) Peak stormwater flows are to be reduced with a stormwater detention system. Other measures can include green roofs, stormwater harvesting, rain gardens, bio-retention basins and passive filtration measures. Other water sensitive urban design measures are described in *Part J – Landscaping and Tree Preservation*.

b) The use of porous surfaces is to be maximised.

c) Where required, Gross Pollutant Traps and filtration are to meet Sydney Water Best Practice guidelines for reducing stormwater pollutants.

d) Any other relevant provisions described in *Part O – Stormwater Management* may still apply.

The responses to these requirements are included below.

A rainwater tank is proposed as an alternative water supply for irrigating the landscaping within the proposal.

The proposal includes water quality and water quantity measures that ensure that the proposal does not have any adverse impacts on the receiving stormwater infrastructure and the adjoining properties.

3.2 NSW Government's SEPP Requirements

The table below provides a response to the requirements of the SEPP.

SEPP	**Section 6.7(1)(c) and (f)** - In deciding whether to grant development consent to development on land in a regulated catchment, the consent authority must consider the following—**(c)** whether the development will minimise or avoid— **(i)** the erosion of land abutting a natural waterbody, or **(ii)** the sedimentation of a natural waterbody and **(f)** if the development site adjoins a natural waterbody—whether additional measures are required to ensure a neutral or beneficial effect on the water quality of the waterbody.	An erosion & sediment control plan has been plan has been prepared as a part of the stormwater concept plan.
SEPP	**Section 6.10** -In deciding whether to grant development consent to development on land in a regulated catchment, the consent authority must consult with the council of each adjacent or downstream local government area on which the development is likely to have an adverse environmental impact.	Stormwater plans and Stormwater management report is to be submitted to council for approval

Table 3-1 Responses to SEPP Requirements

3.3 Addressing Lane Cove Council's DCP Requirements

3.3.1 Rainwater Tank

A 10.0m^3 rainwater tank is proposed to supply the landscaping irrigation around the proposal. The tank collects the runoff from non-trafficable roof areas within the proposed development.

3.3.2 Water Quality

It is proposed to collect and convey the roof and the surface water from the proposed development in a new stormwater system to cater for the 100-yr ARI storm event.

The runoff from the roof areas (331m^2) will be directed to the rainwater tank. The overflow from the tank along with the surface runoff will be directed towards stormfilter chamber 1. Stormfilters have the capacity to remove suspended solids, fine particles and other nutrients such as TSS, TP & TN.

A MUSIC model has been setup to determine if the proposed measures are adequate to treat the runoff from the catchment.

The MUSIC model diagram is included below for reference. The proposed measures reduce the pollutant loads significantly when compared with existing site conditions:

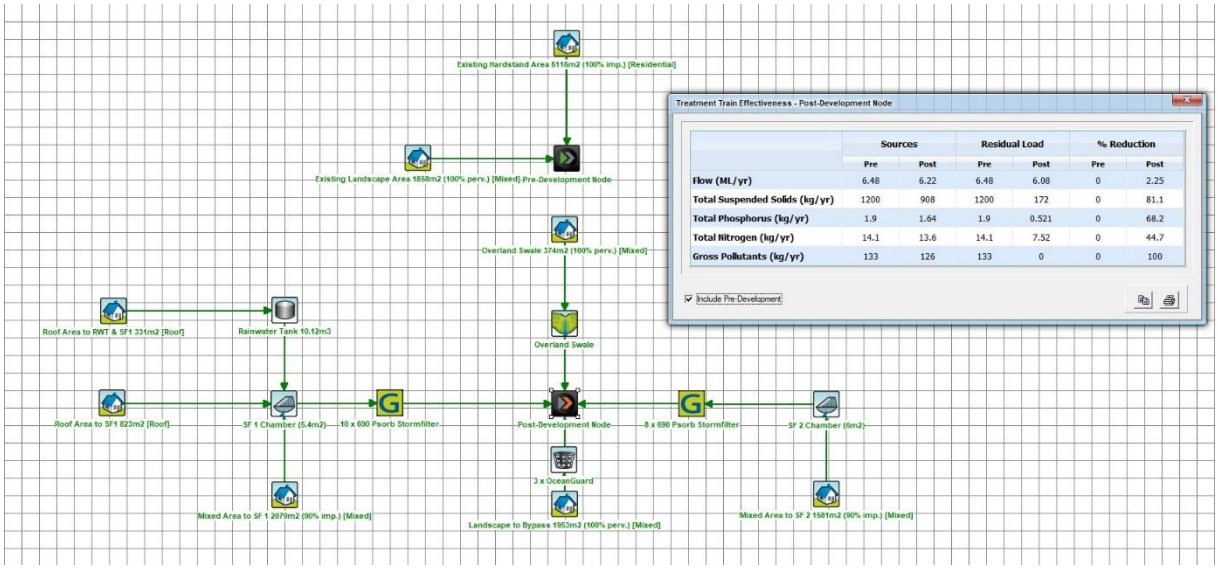


Figure 3-1 MUSIC Diagram & Results

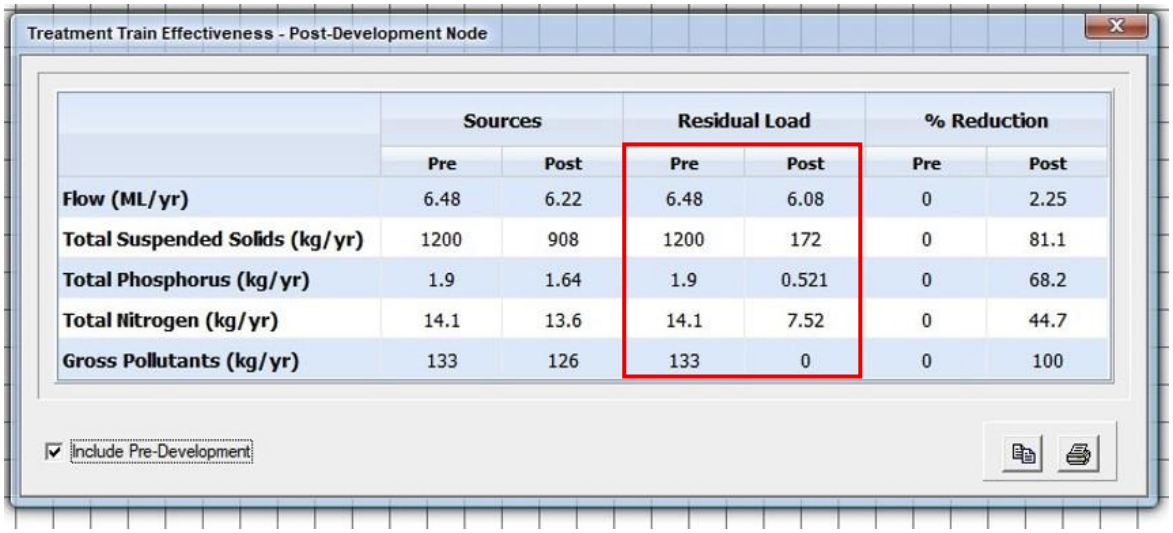
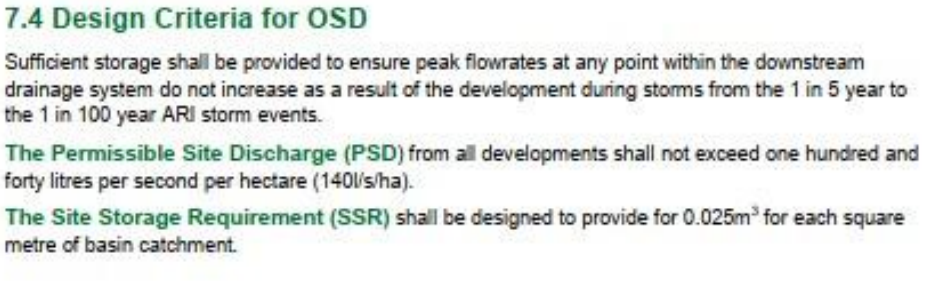


Figure 3-2 Pre-Development & Post-Development MUSIC Results

3.3.3 Water Quantity / On-Site Detention

Two (2) separate OSD tanks have been proposed for the development. The OSD tanks have been sized using Council's PSD & SSR guidelines. Refer to Appendix for OSD location and sizing.



7.4 Design Criteria for OSD

Sufficient storage shall be provided to ensure peak flowrates at any point within the downstream drainage system do not increase as a result of the development during storms from the 1 in 5 year to the 1 in 100 year ARI storm events.

The Permissible Site Discharge (PSD) from all developments shall not exceed one hundred and forty litres per second per hectare (140l/s/ha).

The Site Storage Requirement (SSR) shall be designed to provide for 0.025m^3 for each square metre of basin catchment.

Figure 3-3 Council OSD Requirement

The PSD calculated from both OSD tanks equals to 68 L/s. The 100-yr flow from OSD bypass areas are considered as 98 L/s. Therefore, the total flow coming from the site is 166 L/s. A site investigation was carried out prior to preparation of the plans/report and existing site discharge was observed as DN 450mm VC. The estimated flow rate for 450mm pipe graded at min. 1% is 323 L/s. Hence, proposed development reduces the load to stormwater infrastructure through use of On-site detention tanks.

4 Stormwater Disposal

It is proposed that Stormwater is discharged to an existing stormwater drainage infrastructure towards the rear of the property. A site investigation was carried out prior to the design, and existing large DN450mm VC pipe was explored draining existing site.

The surveyor has confirmed existing easement over adjacent development to utilize this line as our main discharge point. Given the calculations above, the existing stormwater arrangement directed towards Tannery Creek is sufficient to cater for the flow from site.

5 Overland Flow Management

A flood desktop review report is prepared by S&G Consultants P/L to address the requirement of the Department of Planning's SEARs item 19. Reference to report for details.

6 Soil & Water Management

6.1 Construction Stage

A Soil and Water Management Plan (SWMP) has been prepared for the DA submission. The implementation of the SWMP shall be in accordance with the guidelines of the NSW Department of Housing publication "Managing Urban Stormwater: Soils & Construction" (The Blue Book) and relative sections of the DCP.

The SWMP outlines the erosion and sediment control processes for the duration of the project. Emphasis should be placed firstly on minimising erosion then on preventing movement of sediment.

The clearing of the site leaves the land surface susceptible to increased erosion. The eroded particles can be transported off site and into natural waterways causing siltation, loss of hydraulic capacity and environmental stress. The SWMP aims to minimise the extent of erosion of the site, restrict movement of soil particles and mitigate the impacts of the works on the natural environment.

The SWMP provides for the:-

- Protection of disturbed ground through devices such as temporary vegetation, diversion banks and sediment fences;
- Early installation and progressive implementation of erosion controls;
- Early construction of permanent drainage structures, culverts, sediment basins traps and catch drains;
- Progressive revegetation of disturbed areas;
- Use of geotextile to stabilise disturbed surfaces during construction of culverts;
- Control of runoff from embankments through shaping of fill and construction of temporary windrows and batter drains;
- Implementation of erosion control measures at associated sites, including access tracks, roads, office/compound site and extraction sites;
- Progressive and continual implementation of temporary sediment controls;
- Diversion of runoff from disturbed areas to sediment control structures;
- Management of turbid water in basins after rain through flocculation or extraction and use for construction or dust suppression;
- Construction of temporary sediment traps at strategic locations;
- Routine maintenance of sediment control devices to ensure that they remain fully functional at all times;
- Removal of sediment from basins and other structures and placement in secure locations where further movement will not occur;
- Minimisation of transportation of mud and soil by vehicles onto Burns Bay Road, through the use of shakers and wash-bays;
- Provision for regular inspections of the control measures by a trained personnel to review and update control measures. Inspections should be conducted weekly and immediately after every significant storm event;
- Dust control through progressive revegetation and application of water;

- A procedure to ensure that water is not released from basins until achieving the appropriate quality standard; and
- Meeting EPA requirements & the guidelines of the Department of Housing publication “Managing Urban Stormwater: Soils & Construction” (Blue Book).

7 Maintenance Strategy

The maintenance strategy relating to the internal drainage system involves inspecting and maintaining the following structures:-

- On-Site Detention systems including the orifice plates and the mesh screens;
- Stormfilter Chamber;
- Ocean guard Baskets; and
- Rainwater tank.

The corporate body managing the development, or their contractors have the obligation to inspect and maintain these structures.

The following table indicates the minimum requirements for the inspection of the above structures and the maintenance procedures to be adopted.

Table 7-1 OSD & Ocean Guard Basket & Rainwater tank Maintenance Strategy Requirements

Item	Inspection Frequency	Inspection Check Items	Maintenance Procedures
OSD Tanks	6m	Clogging and blockage of mesh screen. Sediment depth in trap.	Leaves and debris to be removed from screen. Trap flood to be cleaned out
Ocean Guard Basket	6m	Maintenance Contractor	Follow recommended procedure set out in Ocean Protect "Operation and Maintenance Guidelines"
Rainwater Tank	6m-1yr	Clogging and blockage of tank	First flush device and tank to be cleared of any debris.

Table 7-2 Stormfilter Maintenance Strategy Requirements

Item	Inspection Frequency	Inspection Check Items	Maintenance Procedures
Inspection – Minor Maintenance	2 years and after major storms	Maintenance Contractor	Follow recommended procedure set out in Ocean Protect "Operation and Maintenance Guidelines"
Inspection – Major Maintenance	1 year (except in case of spill)	Maintenance Contractor	Follow recommended procedure set out in Ocean Protect "Operation and Maintenance Guidelines"

Inspection Frequency Key:-

1yr	one year
6m	six monthly
3m	three monthly

8 Design Statement

I, Sam Haddad of S&G Consultants P/L, confirm that this report addresses the requirement of SEAR No. 11 “Water Management” (Stormwater component only) and relevant State and local legislation, policies and guidelines including DCP of Lane Cove Council. I further confirm that none of the information contained in the SSDA is false or misleading.

A1 Appendix 1

Survey Plan

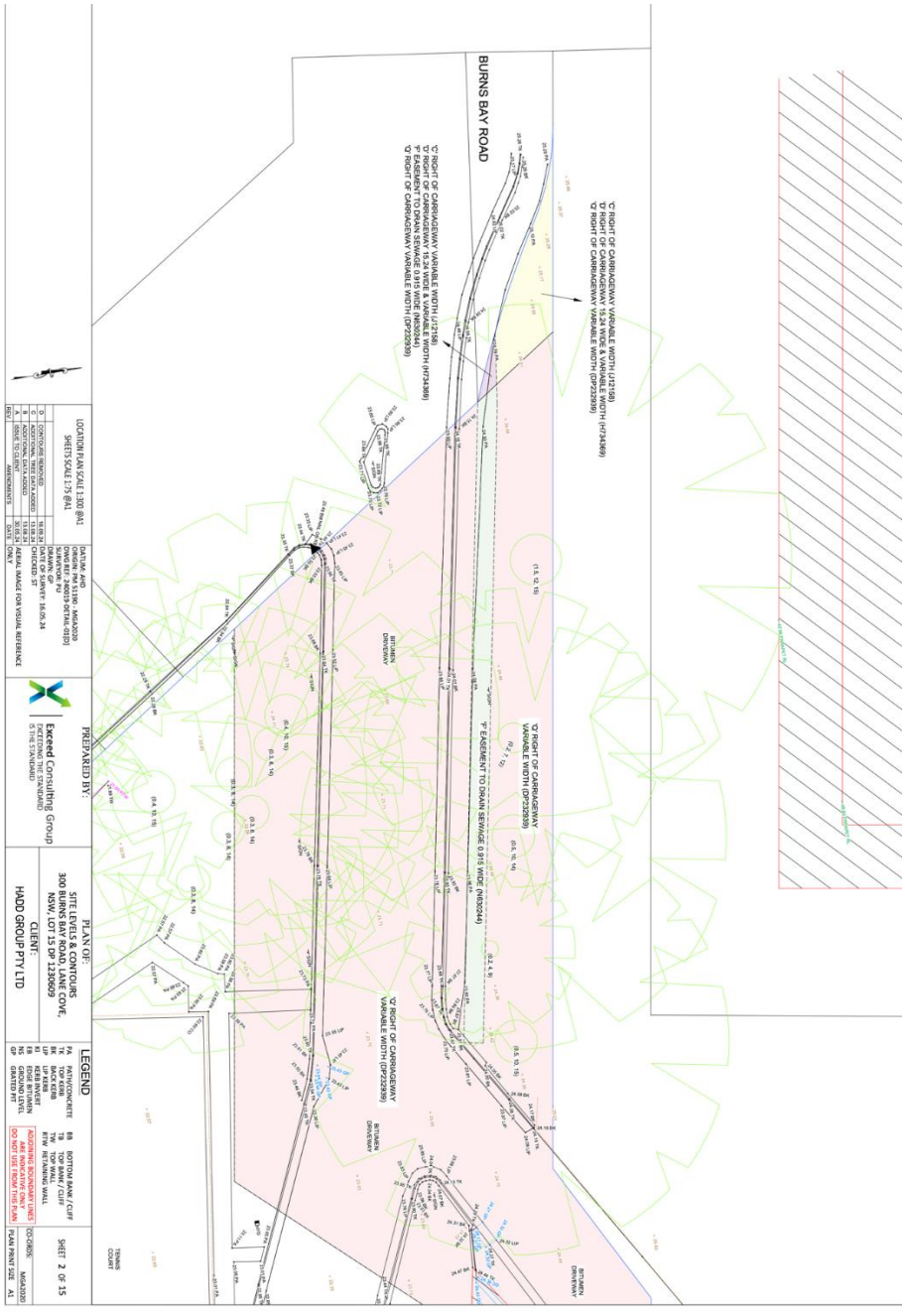


Figure A 1.1 Survey Plan – Sheet 1

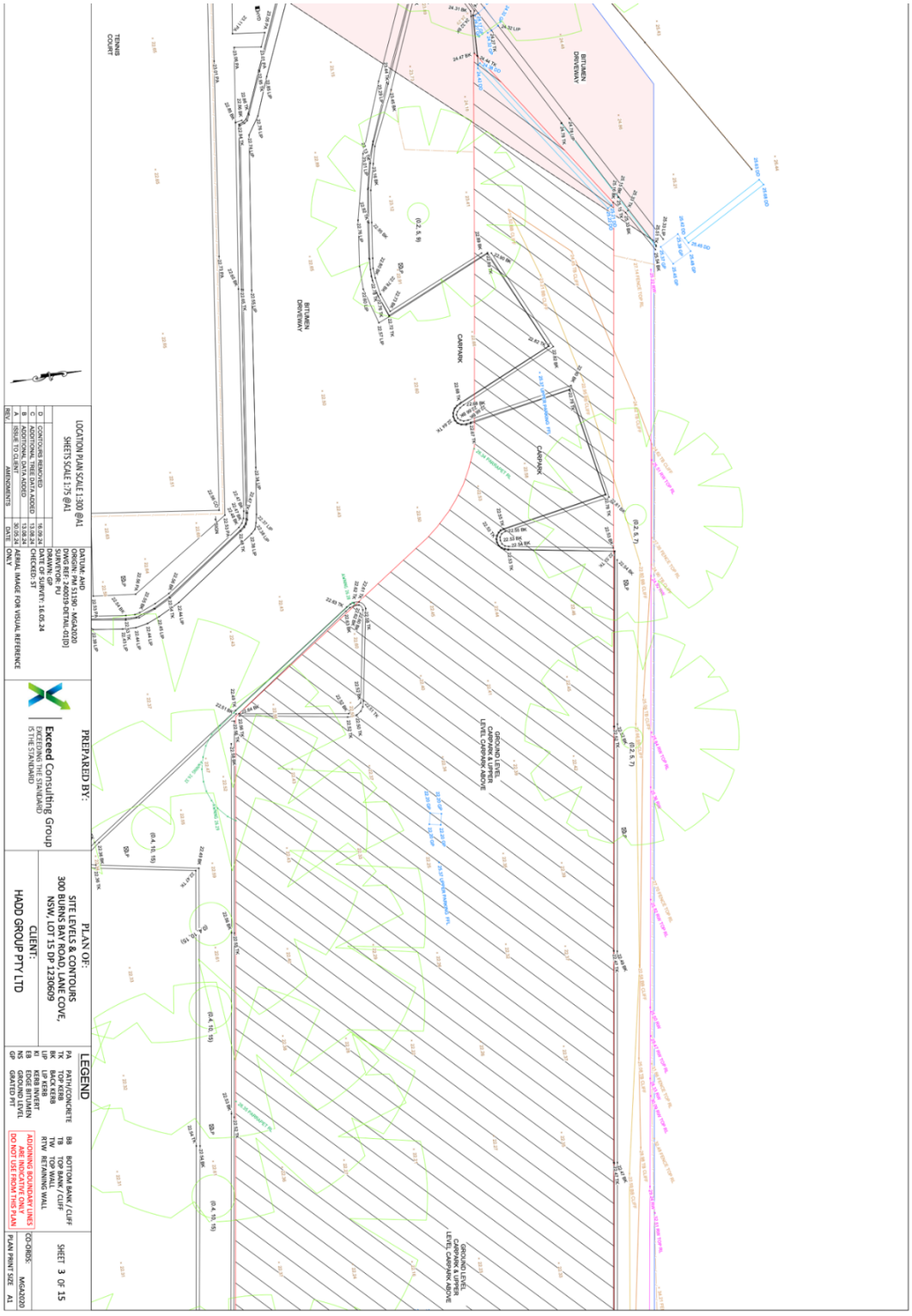


Figure A 1.2 Survey Plan – Sheet 2

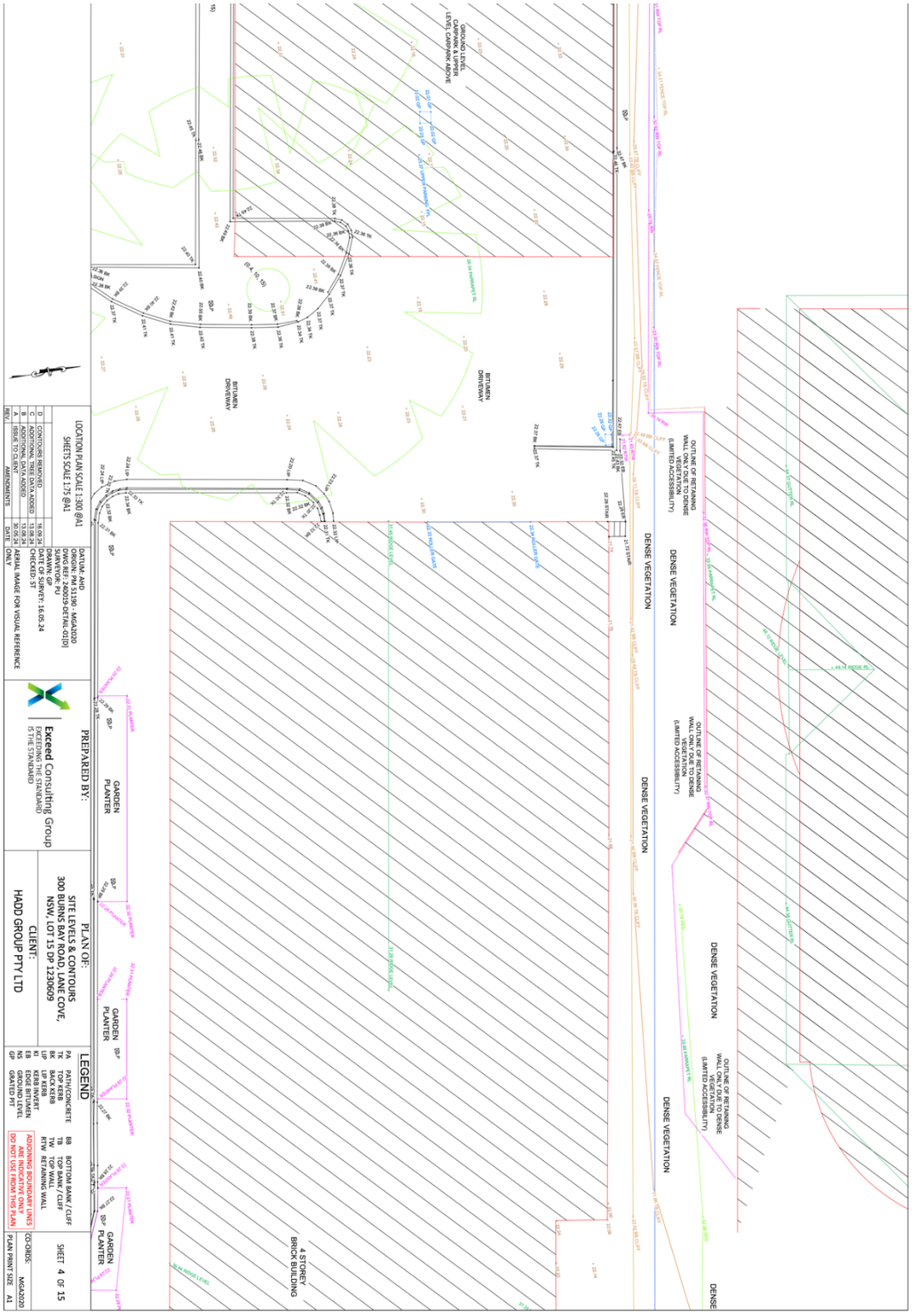


Figure A 1.3 Survey Plan – Sheet 3

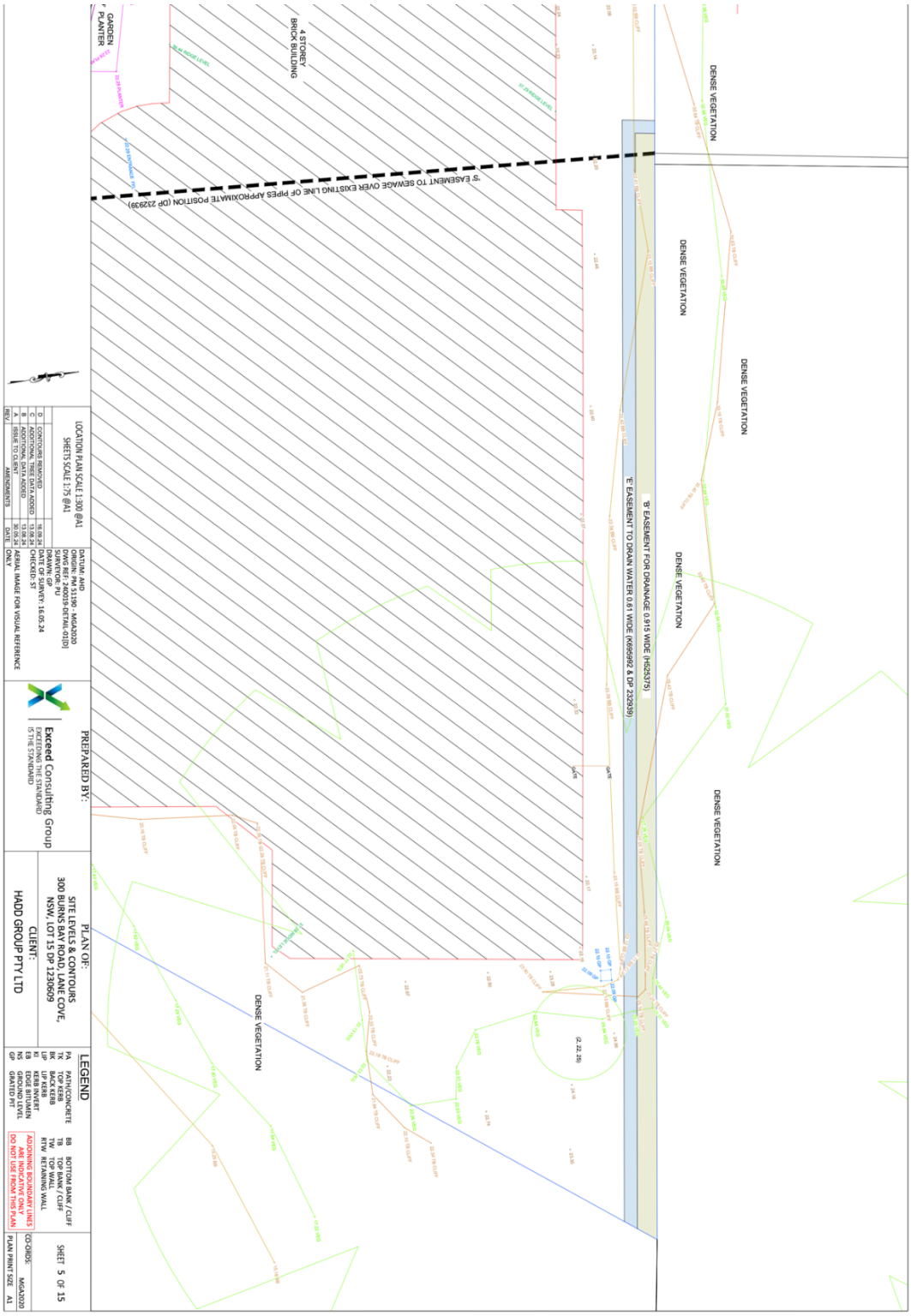


Figure A 1.4 Survey Plan – Sheet 4

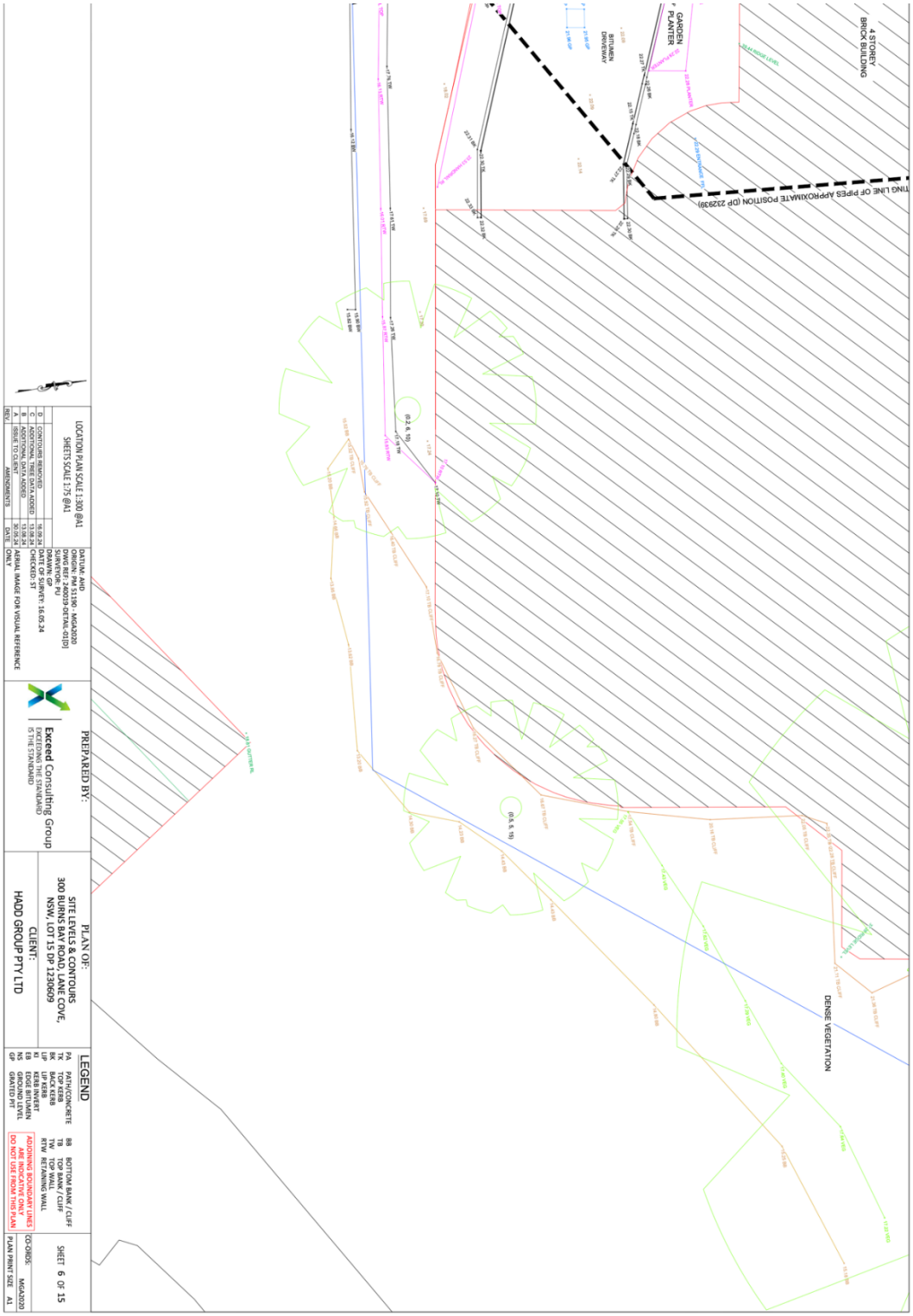


Figure A 1.5 Survey Plan – Sheet 5

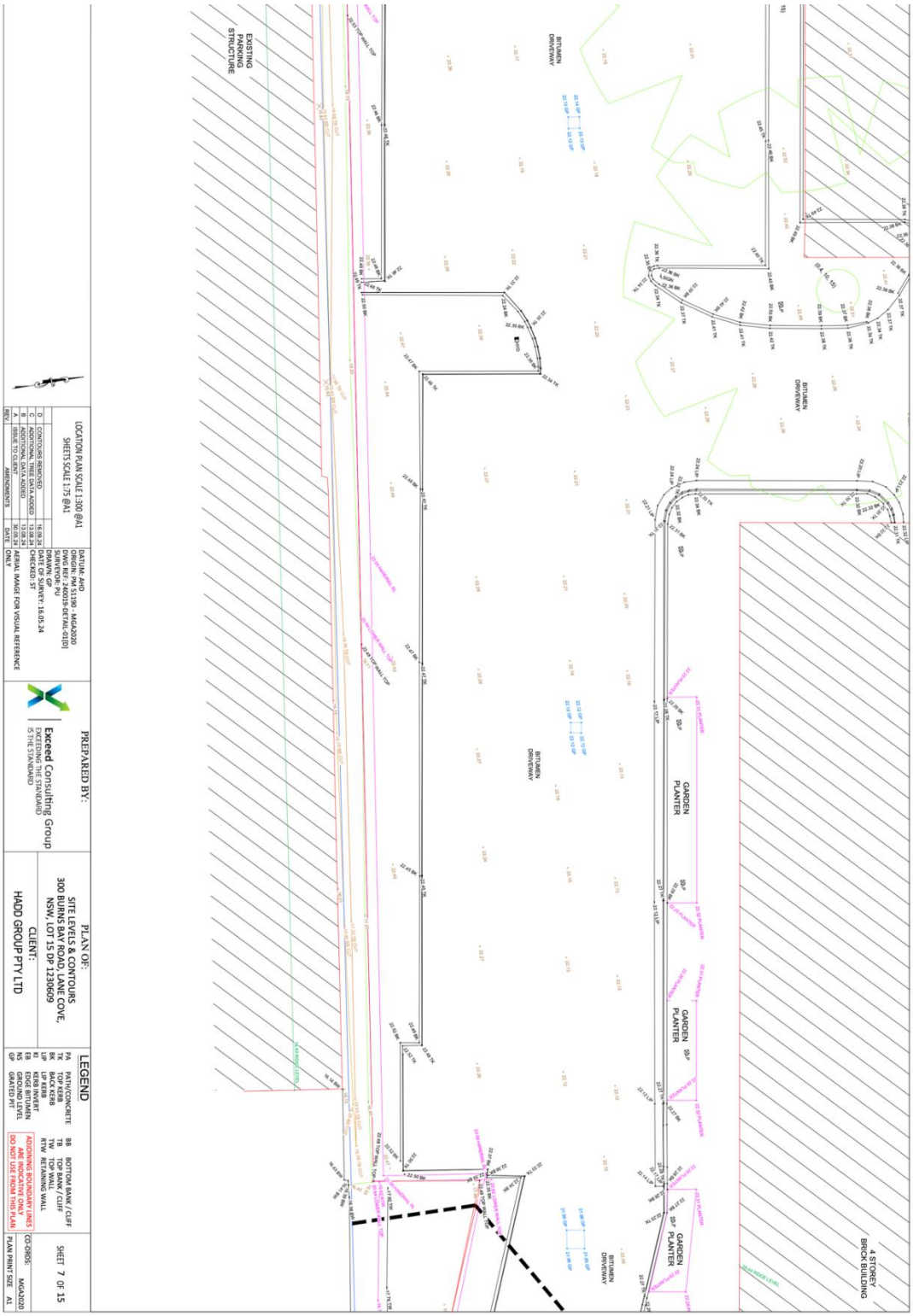


Figure A 1.6 Survey Plan – Sheet 6

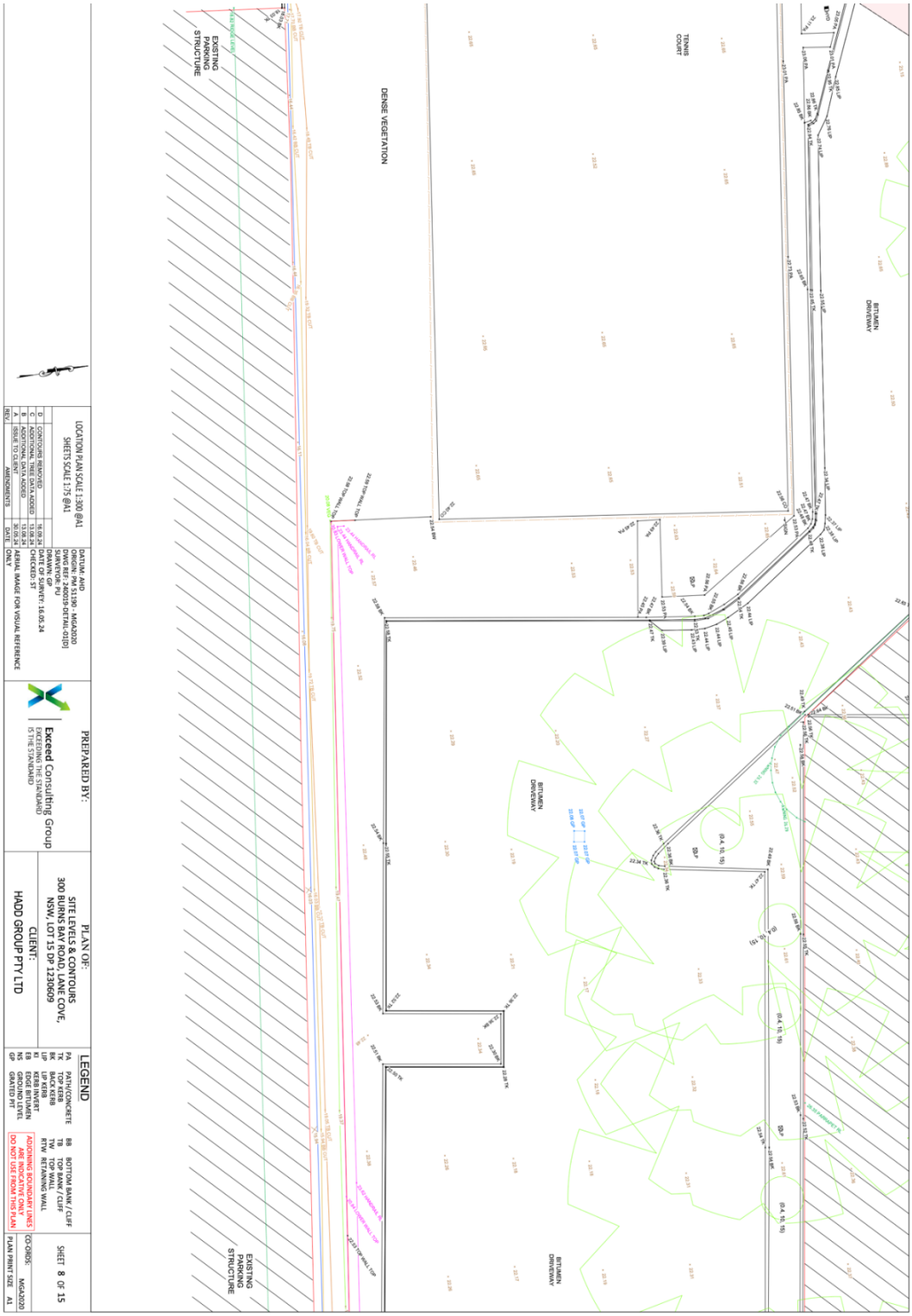


Figure A 1.7 Survey Plan – Sheet 7

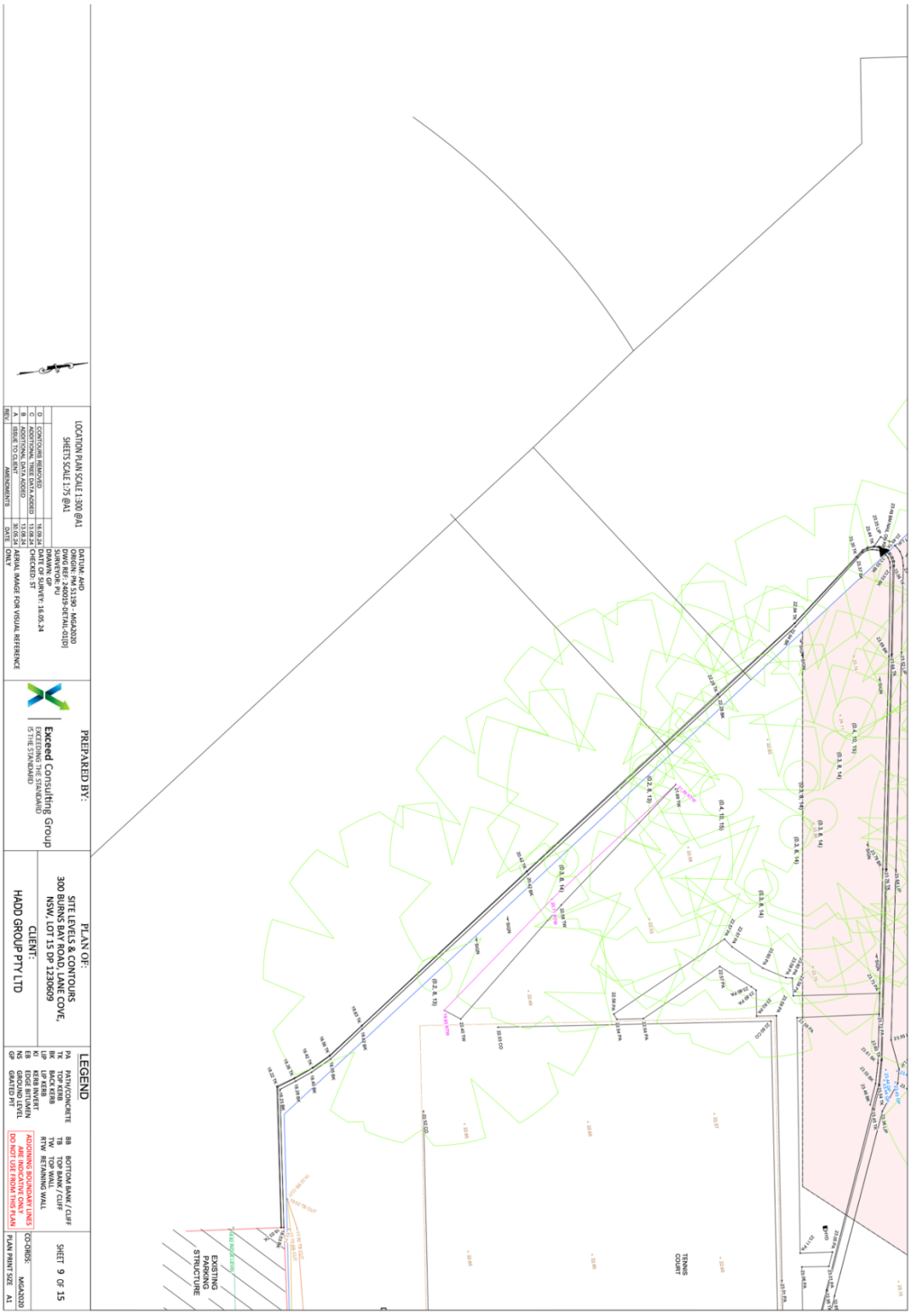


Figure A 1.8 Survey Plan – Sheet 8

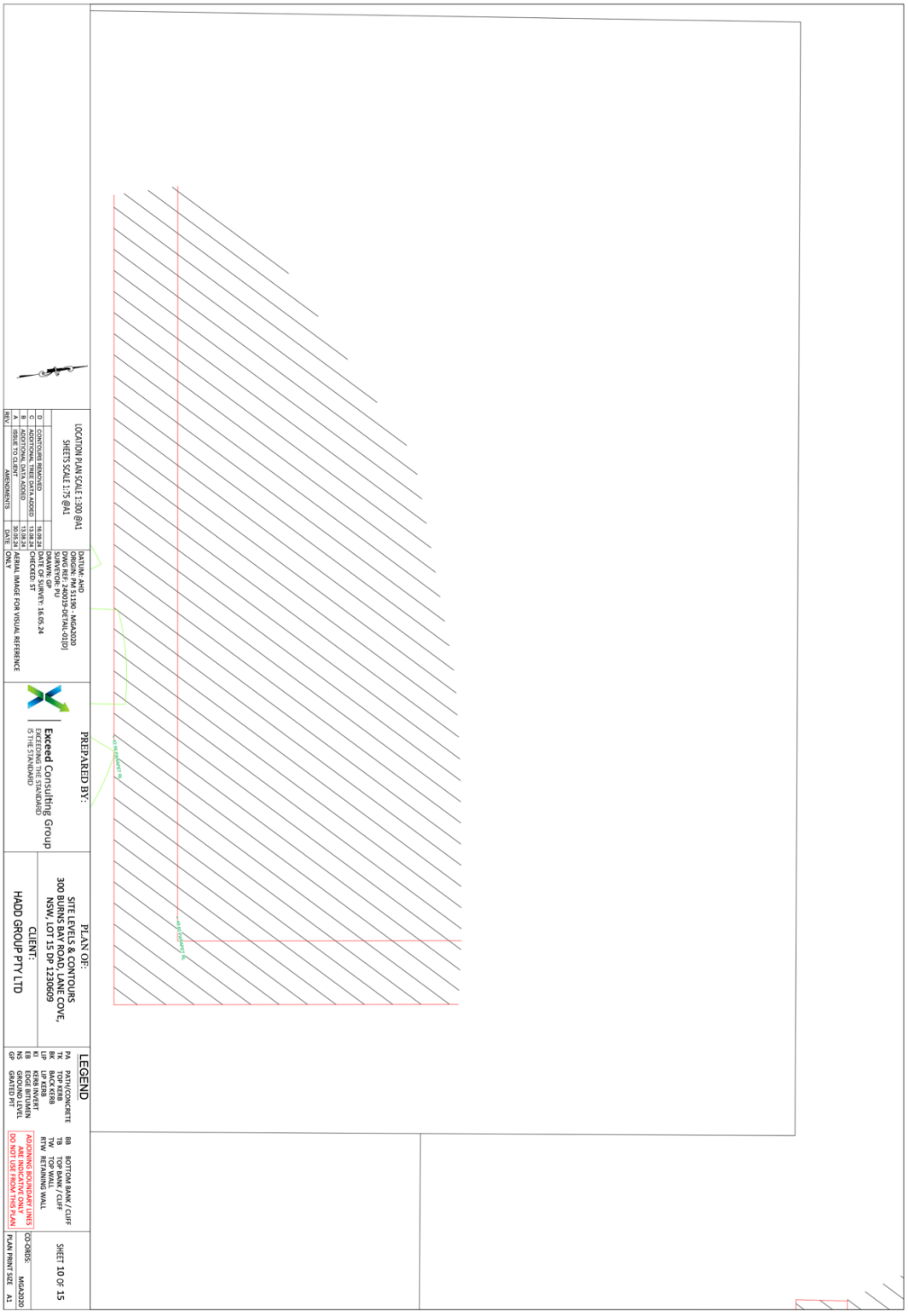


Figure A 1.9 Survey Plan – Sheet 9

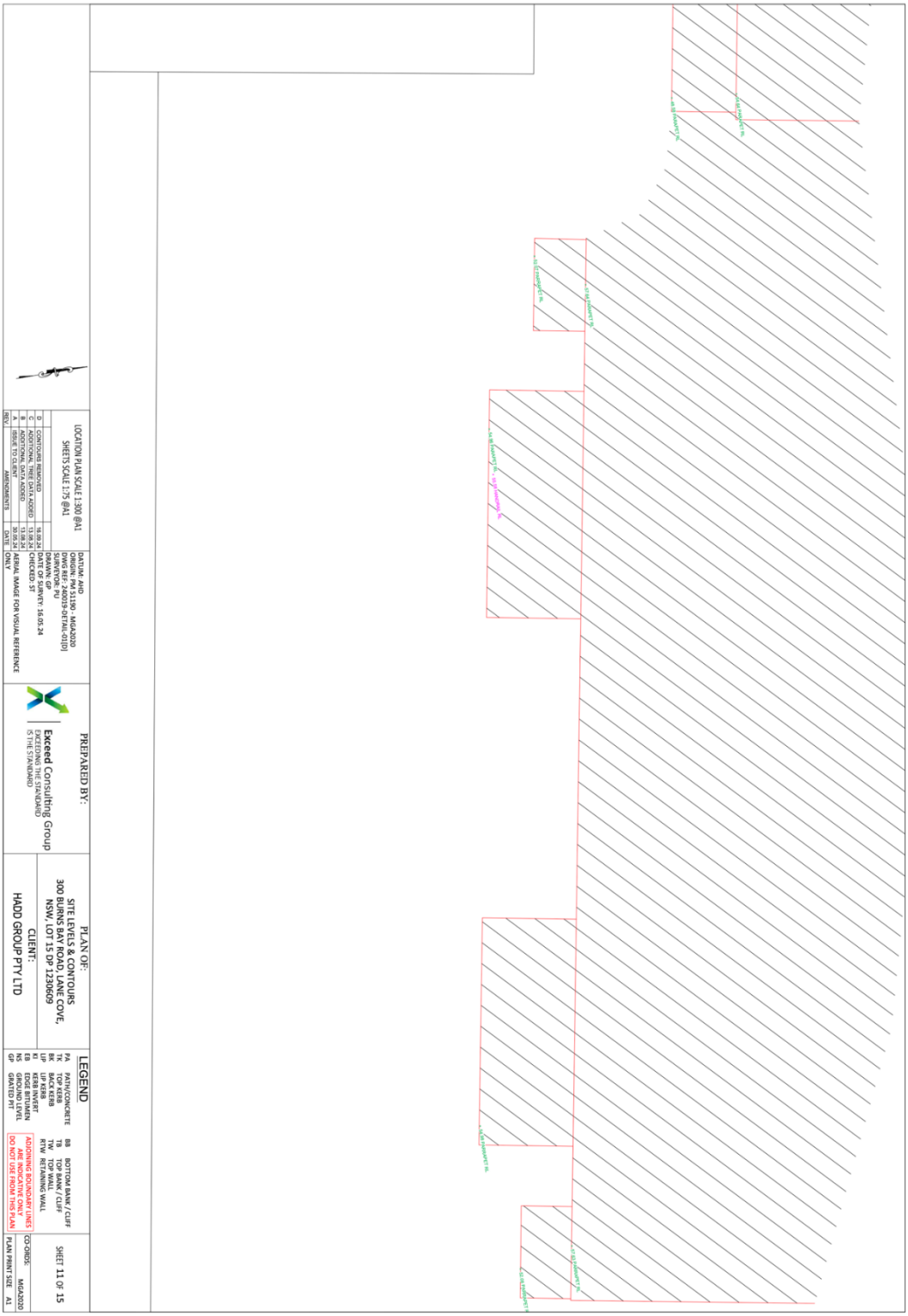


Figure A 1.10 Survey Plan – Sheet 10

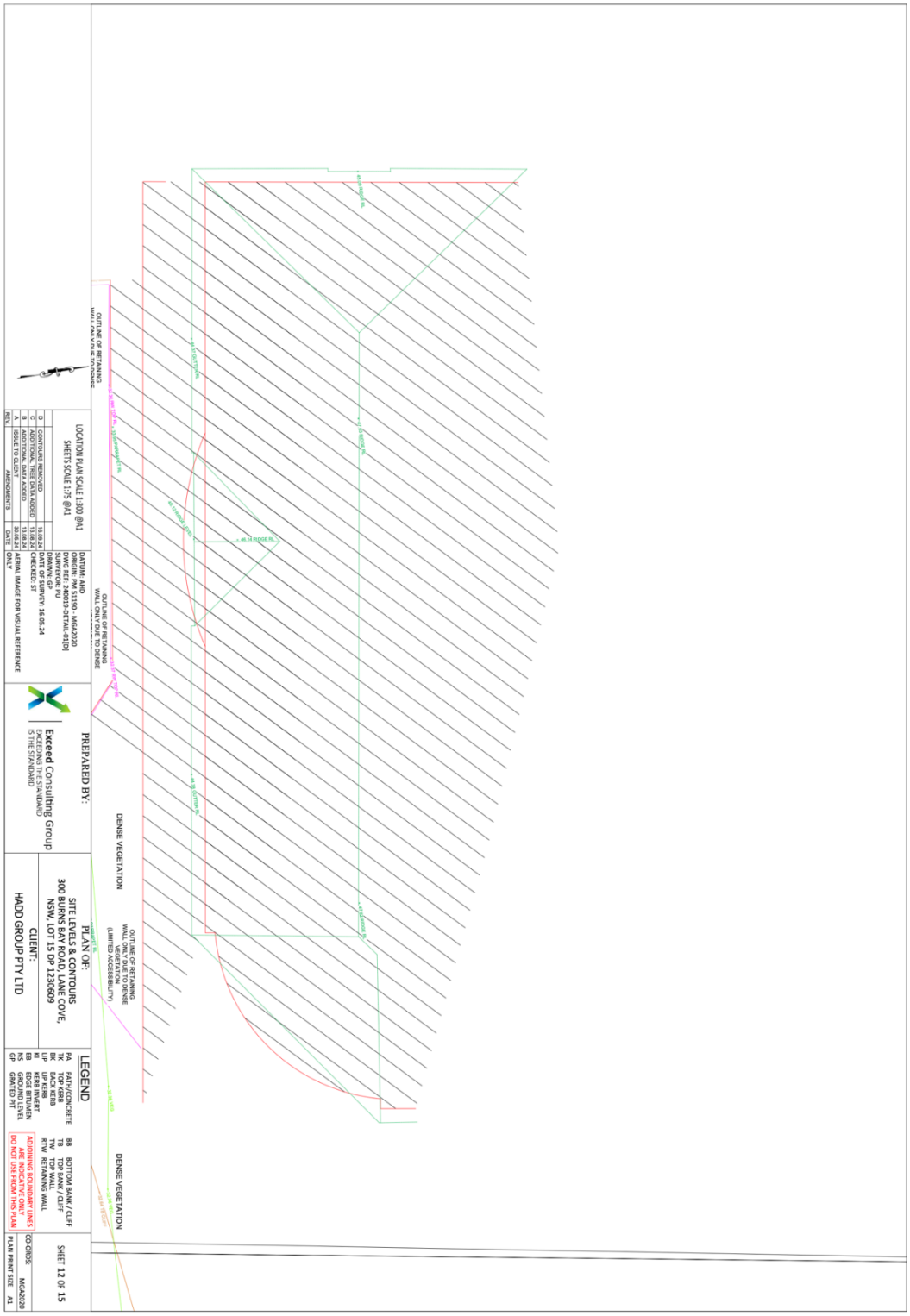


Figure A 1.11 Survey Plan – Sheet 11

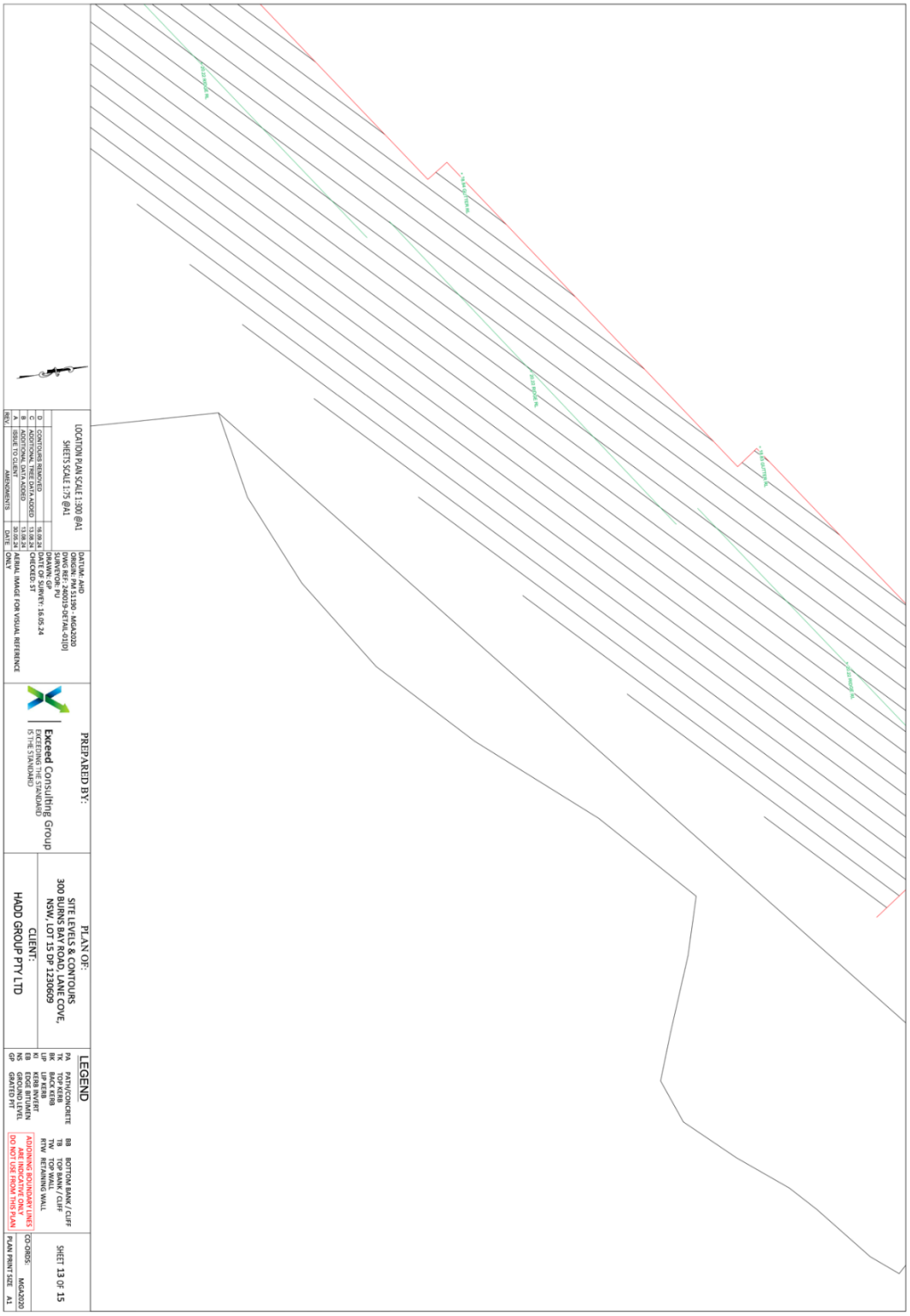


Figure A 1.12 Survey Plan – Sheet 12

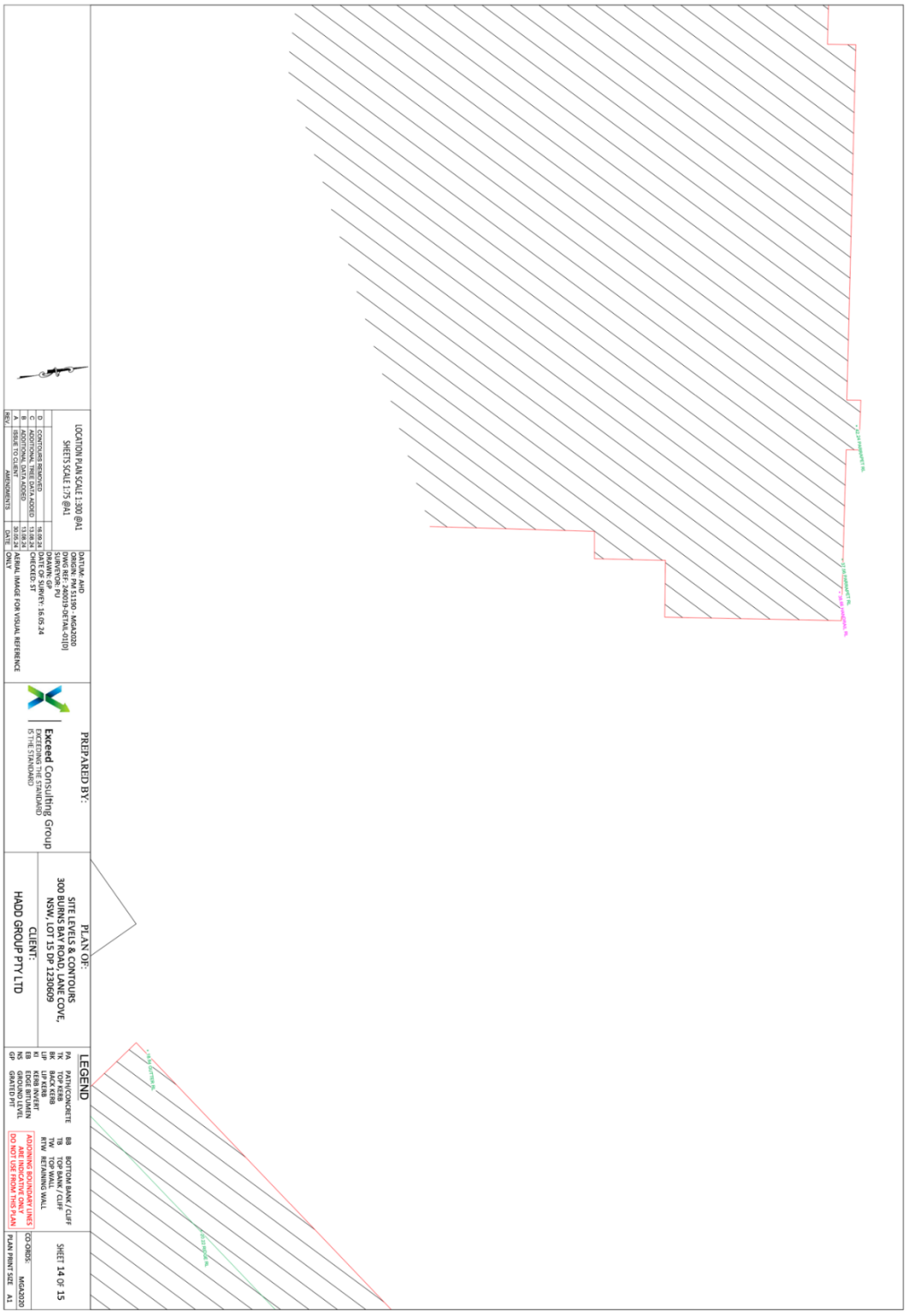


Figure A 1.13 Survey Plan – Sheet 13

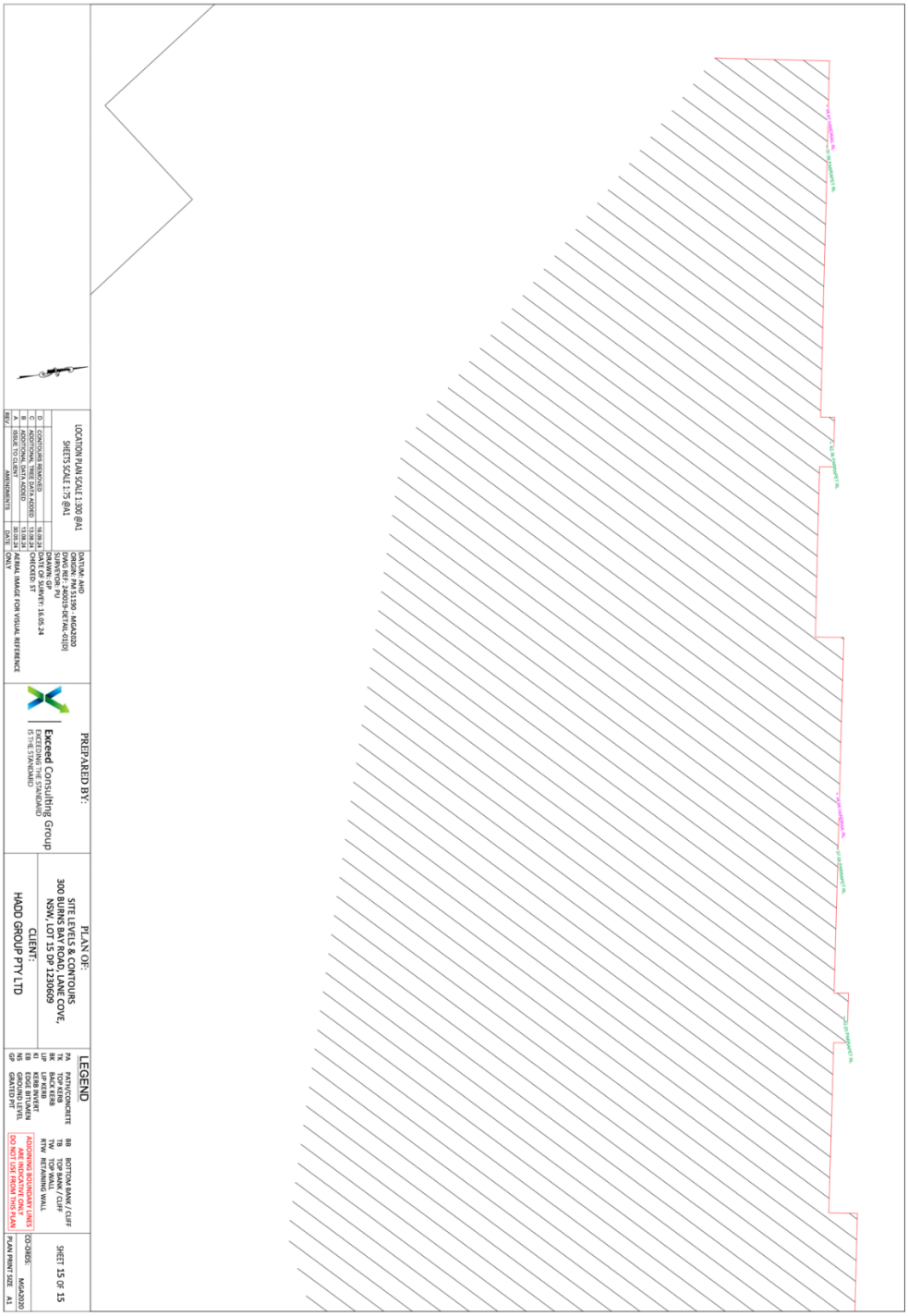


Figure A 1.14 Survey Plan – Sheet 14

A2 Appendix 2

Architectural Plans

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Figure A 2.1 Architectural Plan – Basement 02

Figure A 2.2 Architectural Plan – Basement 01

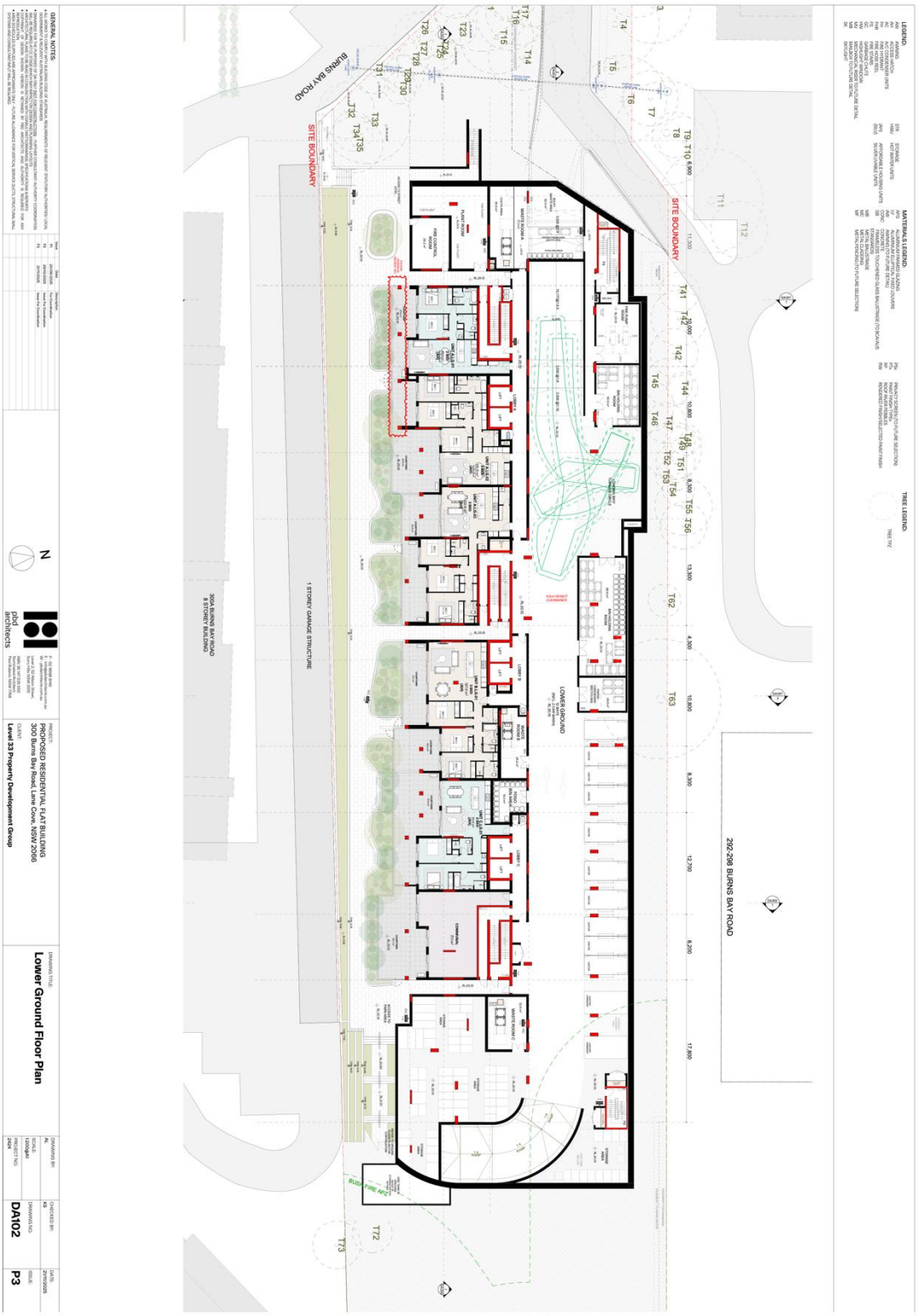

Figure A 2.3 Architectural Plan – Lower Ground Floor

Figure A 2.4 Architectural Plan – Ground Floor

Figure A 2.5 Architectural Plan – Level 08

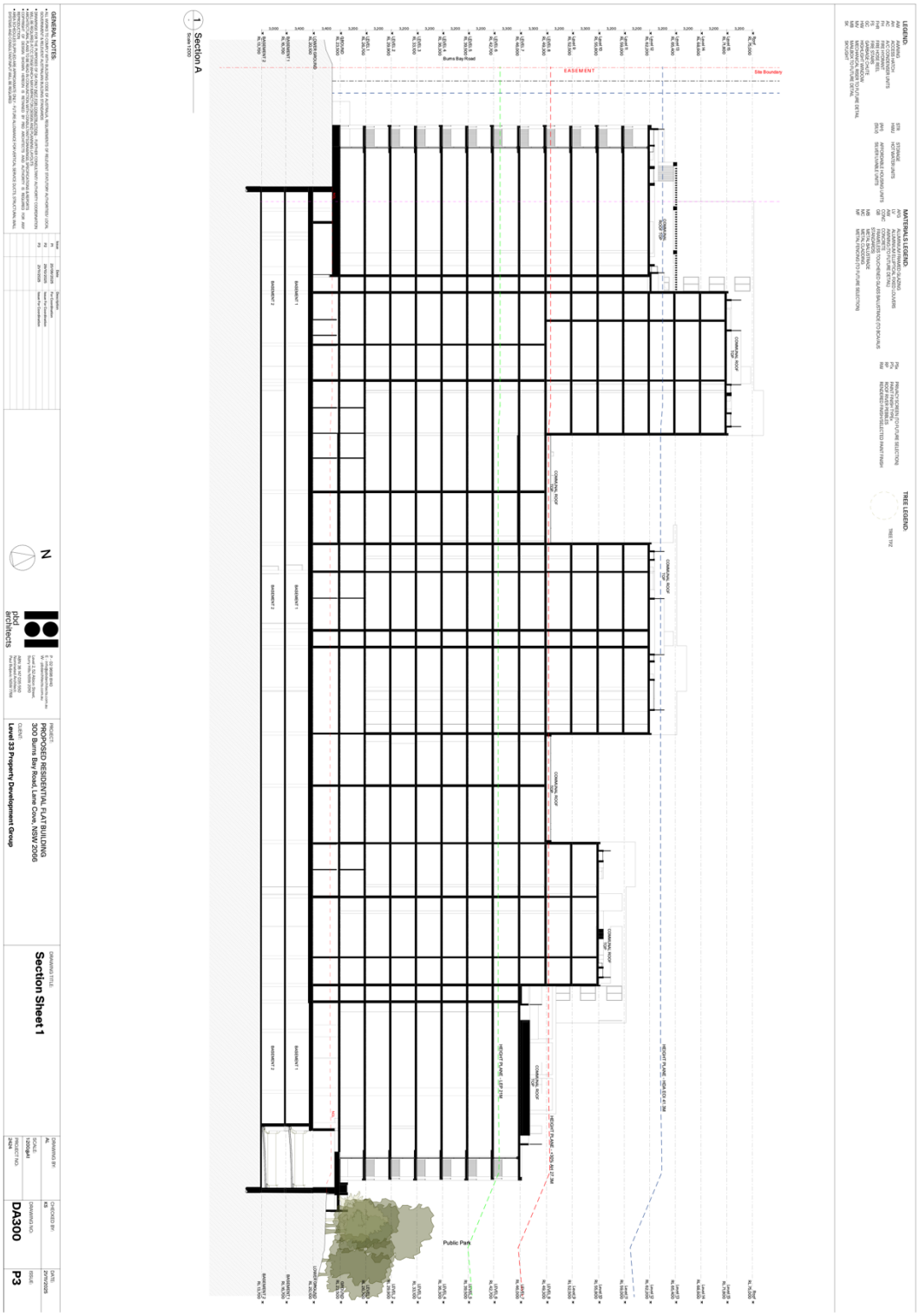

Figure A 2.6 Architectural Plan – Elevation

A3 Appendix 3

Stormwater Plans

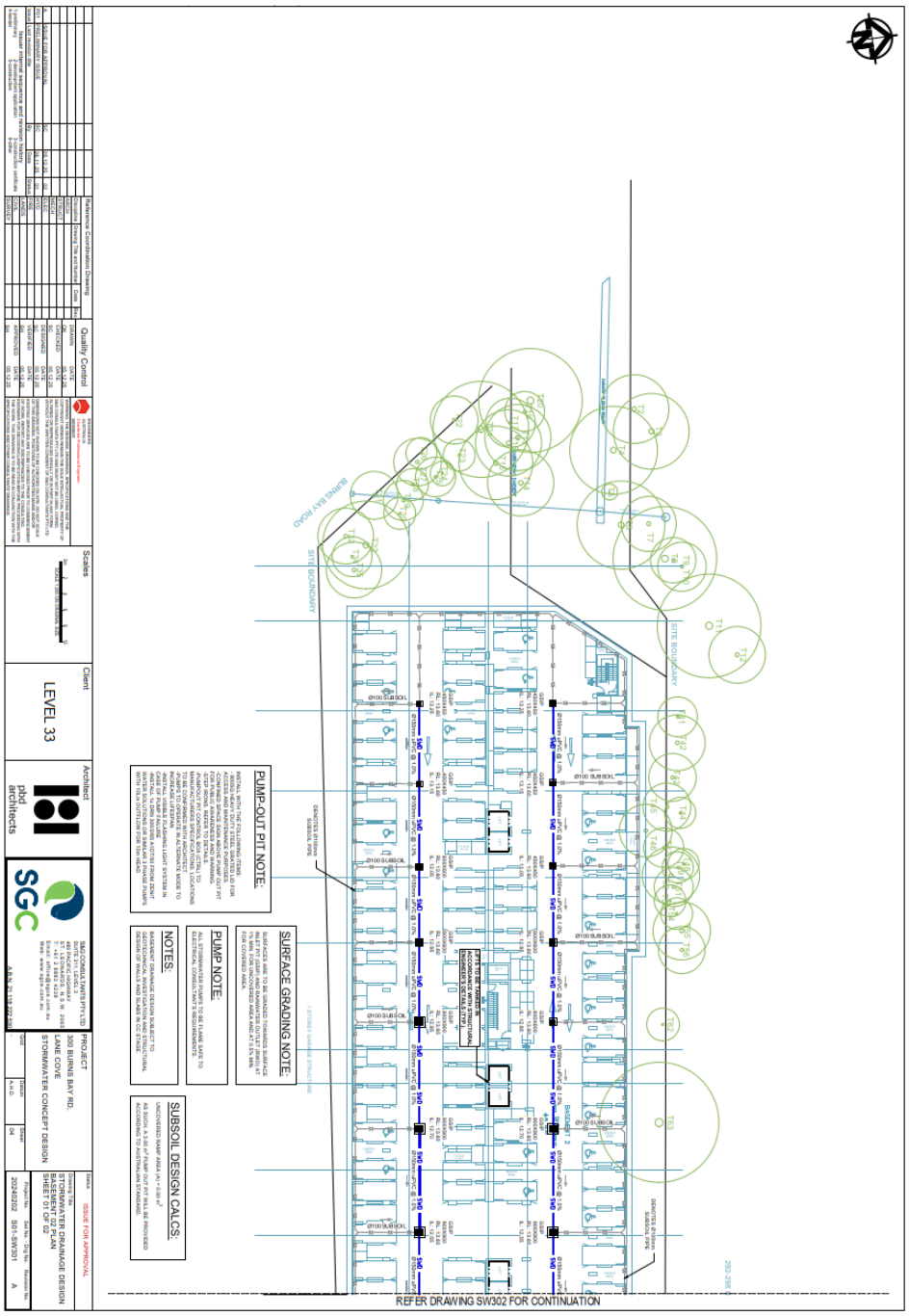

Figure A 3.1 Stormwater Plan – Basement 2 – Sheet 1

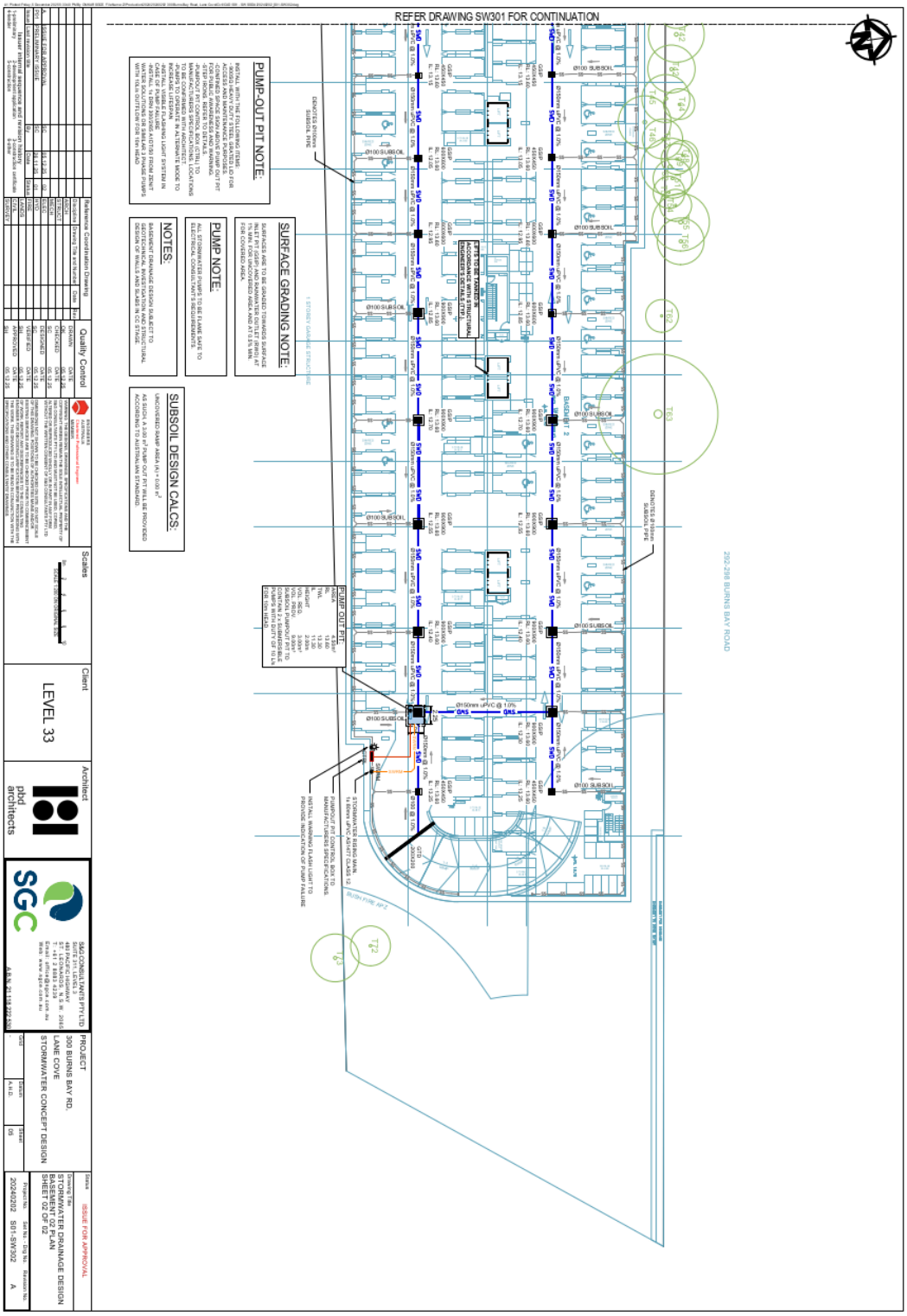

Figure A 3.2 Stormwater Plan – Basement 2 – Sheet 2

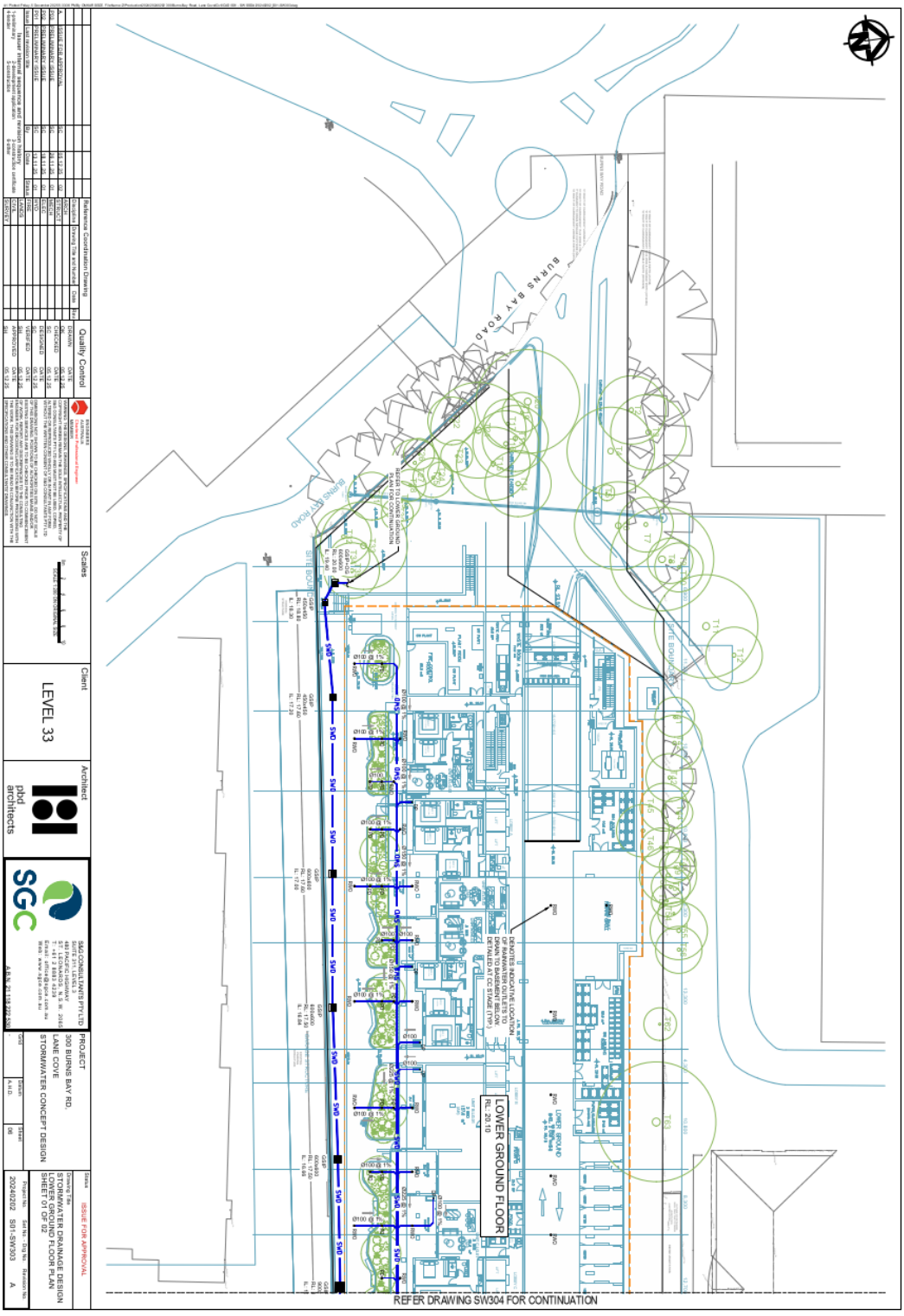

Figure A 3.3 Stormwater Plan – Lower Ground Floor – Sheet 1

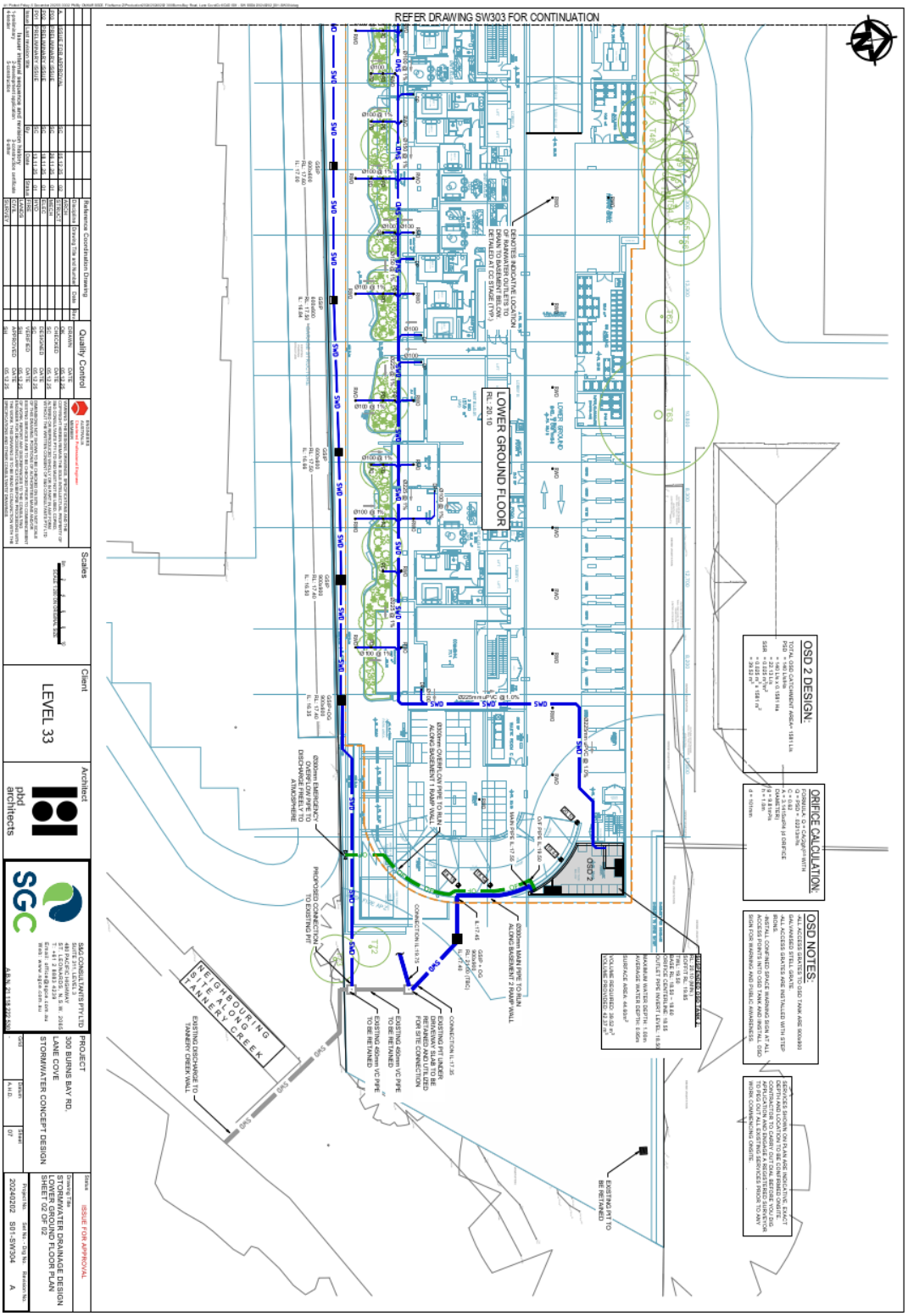

Figure A 3.4 Stormwater Plan – Lower Ground Floor – Sheet 2

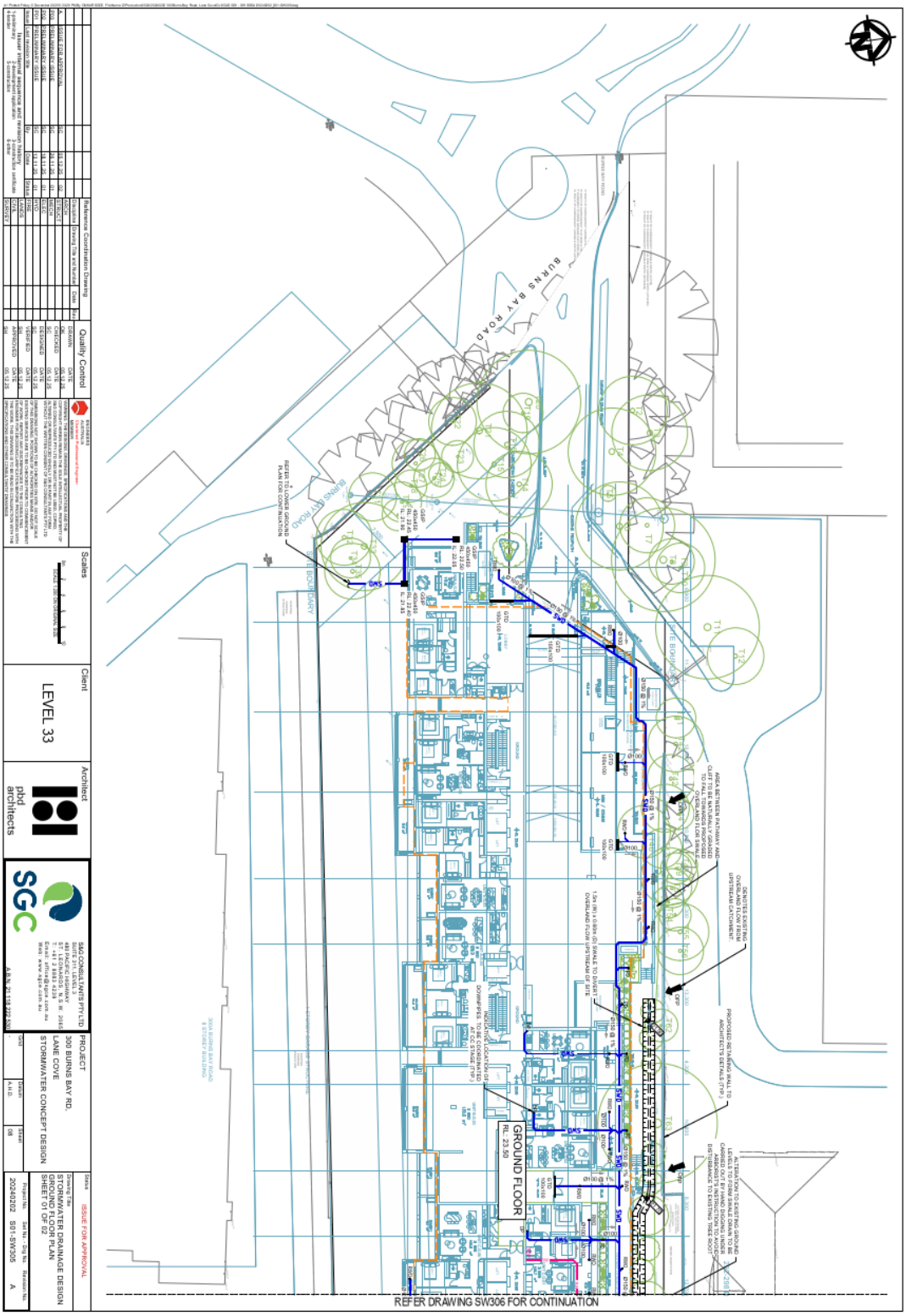

Figure A 3.5 Stormwater Plan – Ground Floor – Sheet 1

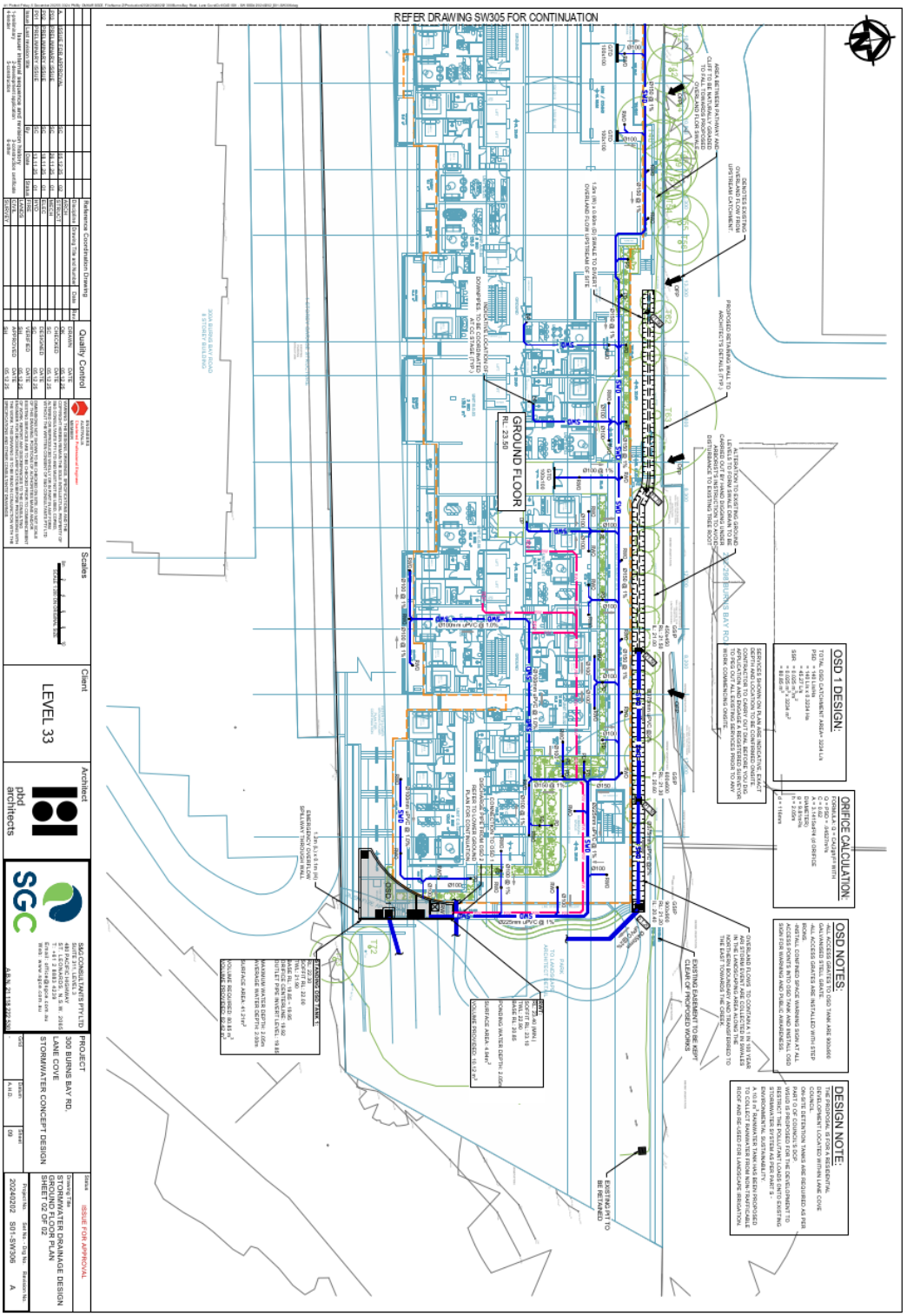

Figure A 3.6 Stormwater Plan – Ground Floor – Sheet 2

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