Camden Local Planning Panel

Electronic Determination
December 2021

CAMDEN LOCAL PLANNING PANEL

MATTER FOR DETERMINATION

CAMDEN LOCAL PLANNING PANEL

CLPP01

SUBJECT: **DA/2020/232 - ALTERATIONS AND ADDITIONS TO AN EXISTING HERITAGE BUILDING (GLEDSWOOD HOMESTEAD) AND USE AS A CENTRE BASED CHILD CARE CENTRE - 900A CAMDEN VALLEY WAY, GLEDSWOOD HILLS**

TRIM #: 21/618077

DA Number:	2020/232/1
Development:	Alterations and additions to an existing heritage building (Gledswood Homestead) and a change of use to a centre-based child care facility for 80 children and associated site works
Estimated Cost of Development:	$603,860
Site Address(es):	900A Camden Valley Way, Gledswood Hills
Applicant:	Mr Rocco Nasso
Owner(s):	Caldla Pty Ltd
Number of Submissions:	25 submission (24 objections and one letter of support)
Development Standard Contravention(s):	None
Classification:	Nominated Integrated development
Recommendation:	Approve with conditions
Panel Referral Criteria:	Partial demolition of a heritage item; and >10 submissions received
Report Prepared By:	Jessica Mesiti (Executive Planner)

PURPOSE OF SUPPLEMENTARY REPORT

The purpose of this supplementary report is to seek the Camden Local Planning Panel's (the Panel's) determination of a development application (DA) for alterations and additions to an existing heritage building (Gledswood Homestead) and a change of use to a centre-based child care facility for 84 children and associated site works at 900A Camden Valley Way, Gledswood Hills.

On 21 September 2021, Council staff reported this DA to the Panel for determination. The Panel deferred consideration of the DA and requested that the Applicant provide additional information. The Panel further resolved that subject to the outstanding matters being satisfactorily addressed the Panel would determine the application electronically.

This supplementary report provides an assessment of the Applicant's response to the additional information requested by the Panel.

SUMMARY OF RECOMMENDATION

That the Panel determine DA/2020/232/1 for a change of use to a centre-based child care facility for 84 children and associated site works pursuant to Section 4.16 of the *Environmental Planning and Assessment Act 1979* by granting deferred commencement consent subject to the recommended conditions **attached** to this supplementary report.

PANEL REQUEST FOR ADDITIONAL INFORMATION

At the Panel Meeting on 21 September 2021, the Panel requested additional information from the Applicant, including a remediation action plan; a hazardous materials survey; and an updated landscape plan.

The Applicant has provided the additional information to address the requirements of the Panel and an assessment has been undertaken by Council staff. A summary of additional information submitted in relation to the matters identified by the Panel is provided below.

1. *Contamination testing of the soils on each side of the buildings is to be undertaken in accordance with Section 5 of the Detailed Contamination Investigation prepared by Anderson Environmental, Job Number 2334, dated 17 February 2020, and a remediation action plan (RAP), prepared by a certified contaminated lands consultant.*

A Detailed Site Investigation was carried out on the site to HIL "A" Criteria. The laboratory results indicated HIL-A Exceedances for the Near Surface Samples 1-3 which were taken near the building and had lead exceedances for HIL-A. There was also an elevated level of arsenic at borehole 7 Sample 1 however this was below the HIL-A limit.

A Remediation Action Plan (RAP) prepared by a certified contamination land consultant has been submitted to Council which identified that further contamination testing has been undertaken and a total of 28 boreholes were undertaken with two samples at each borehole. Sampling involved targeted sampling to delineate the lateral and vertical extent of potential lead contamination around the building. Sampling was undertaken using a 50mm direct push percussion sampling tube. Samples from each borehole were undertaken at approximately 0.3m and 0.8m depth to delineate the potential vertical extent of the contamination. One borehole was undertaken approximately 0.5m from the building with a secondary borehole undertaken at 1.5m from the building in order to delineate the potential lateral extent of the lead contamination.

The assessment of the site for contamination indicated that the lead exceedances above the HIL-A thresholds occurred at relatively shallow depths with the depth of sampling being 0.3 metres where the exceedances occurred. Four of the boreholes had lead exceedances 0.5 metres from the building with three other boreholes at 1.0 metre from the other borehole had lead exceedances. In some areas the lead contamination extends with exceedances to at least 1.5 metres from the building.

Council staff are satisfied the site can be made suitable for the proposed use subject to the implementation of the remedial strategies contained in the RAP as follows:

- The depth of soil to be removed is to 0.8 metres in depth where the contamination was found and with a distance of 2 metres in all directions of the sample point;

- Validation is required to determine that all the lead contamination has been removed and there should be 2 samples on the bottom of each pit and 2 samples from the side of the pits at 0.3m depth parallel to the building and two samples at the perpendicular from the building at 0.3m depth at the extent of the excavation furthest from the building. If exceedances are still found after the validation samples are taken, then additional remediation by the removal of additional soil will be required along with additional validation; and

- TCLP testing for waste classification will be required of the material being removed to determine its waste classification.

Conditions of consent are recommended to ensure compliance with the RAP and to ensure the site is made suitable for the proposed use.

A copy of the RAP is **attached** to this report.

2. *A hazardous materials survey report on the internal fabric of the buildings and any works required to make the buildings suitable for their intended purpose.*

A hazardous materials survey report on the internal fabric of the buildings has been undertaken and submitted to Council. The report identifies that there is asbestos, lead paint and synthetic mineral fibres (SMF) found within the premises. A risk assessment of the hazardous materials has been undertaken which nominates the materials of be of low risk. Management strategies are recommended in the report for the removal of hazardous materials.

Council's Specialist Environmental Health Officer is satisfied with the results of the hazardous materials survey report and recommended a condition to ensure the proposed works are carried out in accordance with the report. A condition is also recommended which requires a certificate of compliance certifying that any works carried out on the premises complies with the audit report and is required to be submitted to the certifying authority prior to the issue of an Occupation Certificate.

A copy of the hazardous materials survey report is **attached** to this report.

3. *Updated landscape plans that fully accord with the architectural plans and provide a landscape detail that is informed by the 2005 Clive Lucas, Stapleton & Partners Landscape Conservation Management Plan (CMP) as well as the Gledswood CMP 2011, prepared by GML, and in consultation with Heritage NSW.*

An updated landscape plan has been submitted which provides an amended landscape schedule to align with the landscape detail that is informed by the 2005 Clive Lucas *Stapleton & Partners Landscape Conservation Management Plan (CMP).* The shade structures have been retained on the landscape plans to provide additional landscape features and shade for children.

The updated landscape plans are included in the full set of architectural plans **attached** to this report.

The deferred commencement conditions, imposed by Heritage NSW, require further consultation and endorsement of the final landscape schedule and shade structures by the Heritage Council prior to the consent becoming operational.

Given the above the updated landscape plan is considered satisfactory subject to the recommended conditions.

CONCLUSION

Following the Panel meeting on 21 September 2021, the Applicant has provided a satisfactory response to the matters raised by the Panel. The DA is recommended for approval (by way of a deferred commencement consent) subject to the recommended conditions **attached** to this supplementary report.

RECOMMENDED

That the Panel approve DA/2020/232/1 for a change of use to a centre-based child care facility for 84 children and associated site works at 900A Camden Valley Way, Gledswood Hills subject to the recommended conditions attached to this supplementary report.

REASONS FOR DETERMINATION

1. The development is consistent with the objectives of the applicable environmental planning instruments, being State Environmental Planning Policy (Educational Establishments and Child Care Facilities) 2017; Camden Local Environmental Plan 2010; State Environmental Planning Policy (Infrastructure) 2007; and Sydney Regional Environmental Plan No 20 - Hawkesbury-Nepean River.

2. The development is an appropriate adaptive re-use of a heritage listed building and is consistent with the Gledswood Conservation Management Plan, prepared by GML, dated September 2011.

3. The Heritage Council of NSW have raised no objection to the development and have issued general terms of approval.

4. The development is consistent with the objectives of Camden Development Control Plan 2019.

5. The development is considered to be of an appropriate scale and form for the site and the character of the locality.

6. The development is unlikely to have any unreasonable adverse impacts on the natural or built environment.

7. In consideration of the aforementioned reasons, the development is a suitable and planned use of the site and its approval is in the public interest.

ATTACHMENTS

1. Recommended Conditions
2. Remediation Action Plan
3. Hazmat Report
4. Architectural Plans

RECOMMENDED CONDITIONS

Deferred Commencement Consent

This deferred commencement consent shall not operate until the applicant satisfies Council, in accordance with the *Environmental Planning and Assessment Regulation 2000*, in relation to the matters listed in the Schedule A condition, within 5 years of the date of this determination. Upon Council being satisfied as to the matters listed in the Schedule A condition, Council will notify the applicant in writing that the consent has been made operative subject to the conditions listed in Schedule B.

Should Council not be satisfied as to the matters listed in the Schedule A condition within the specified timeframe, this deferred commencement consent will be rendered permanently inoperative.

Schedule A Condition

(1) **Deferred Commencement** - The following matters must be complied with to the satisfaction of Council:

1. Amended plans must be submitted to Council that address the following matters to Council's satisfaction:

   (a) Details and amendments accepted by the Heritage Council of NSW in satisfaction of its general terms of approval for the development dated 7 September 2021.

   (b) Adequate space for conducting required food activities within the designated kitchen in accordance with Section 2.1.3 of AS 4674-2004 - "Design, construction and fit-out of food premises".

   (c) Washing and sanitising facilities in accordance with Section 4 of AS 4674-2004 - "Design, construction and fit-out of food premises". The minimum requirements within the kitchen include:
   - a double bowl sink; or
   - a dishwasher and single bowl sink (where all the food contact equipment will fit in the dishwasher); or
   - a double bowl sink and a dishwasher, and
   - space for loading, draining, and drying of equipment and utensils.
   - The sinks are to be supplied with hot and cold water through a common spout.

   (d) Pest proofing of the external openings (doors) of the kitchen.

Schedule B Conditions

1.0 - General Conditions of Consent

The following conditions of consent are general conditions applying to the development.

(1) **National Construction Code - Building Code of Australia (BCA)** - All building work shall be carried out in accordance with the BCA. In this condition, a reference to the BCA is a reference to that Code as in force on the date the application for the relevant Construction Certificate is made.

(2) **Engineering Specifications** - The entire development shall be designed and constructed in accordance with Council's Engineering Specifications.

(3) **General Terms of Approval/Requirements of State Authorities** - The general terms of approval/requirements from state authorities shall be complied with prior to, during, and at the completion of the development.

The general terms of approval/requirements are:

1. NSW Rural Fire Service Letter, Ref DA2020519001723, dated 1 December 2020.

2. Endeavour Energy Letter, dated 21 May 2020.

3. Heritage Council of NSW Letter, dated 7 September 2021.

(4) **Approved Plans and Documents** - The development must be carried out in accordance with the following plans and documents, and all recommendations made therein, except where amended by the conditions of this development consent:

Plan Reference/ Drawing No.	Name of Plan	Prepared by	Date
01 Issue B	Site Analysis	Architex	3 August 2021
02 Issue B	Site Plan	Architex	3 August 2021
03 Issue B	Existing Ground Level	Architex	3 August 2021
04 Issue B	Proposed Ground Level (with modified openings)	Architex	3 August 2021
05 Issue B	Existing Ground Level	Architex	3 August 2021
06 Issue B	Proposed Ground Level	Architex	3 August 2021
07 Issue B	Roof Plan	Architex	3 August 2021
08 Issue B	Elevations 1-4	Architex	3 August 2021
09 Issue B	Elevations 5-8	Architex	3 August 2021
10 Issue B	Elevations 9-12	Architex	3 August 2021
11 Issue B	Play Room Area	Architex	3 August 2021
12 Issue B	Kitchen Details	Architex	3 August 2021
13 Issue B	Waste Management and Access	Architex	3 August 2021

14 Issue B	Evacuation Plan	Architex	3 August 2021
7005/508 Sheet 1 of 2	Plan of the Gledswood Estate, Gledswood Hills, Being Lot 1202 in DP 1187381, Camden LGA	YSCO Geomatics	29 April 2019
7005/508 Sheet 2 of 2	Plan of the Gledswood Estate, Gledswood Hills, Being Lot 1202 in DP 1187381, Camden LGA	YSCO Geomatics	29 April 2019
15 Issue B	Proposed Shade Areas	Architex	3 August 2021
D00 Rev B	Cover Sheet, Legend and Drawing Schedule	LOKA Consulting Engineering	18 December 2020
D01 Rev C	Ground Floor/ Site Stormwater Drainage Plan	LOKA Consulting Engineering	18 December 2020
D03 Rev B	MUSIC Result and Details	LOKA Consulting Engineering	18 December 2020
D04 Rev B	MUSIC Link Report	LOKA Consulting Engineering	18 December 2020
D05 Rev B	Erosion and Sediment Control Plan and Details	LOKA Consulting Engineering	22 December 2020
19-4070 L01 Rev A	Landscape Plan	Zenith Landscape Designs	12 October 2021
19-4070 L02 Rev A	Landscape Plan	Zenith Landscape Designs	12 October 2021
19-4070 L03 Rev A	Landscape Plan	Zenith Landscape Designs	12 October 2021

Document Title	Prepared by	Date
Historical Heritage Assessment and Heritage Impact Statement	Virtus Heritage	August 2015
Heritage Impact Statement	Weir Philips Heritage & Planning	April 2020
Gledswood Conservation Management Plan	GML Heritage	September 2011

Historical Archaeology Impact Assessment Prepared as Addendum to Gledswood Estate, Historical Heritage Assessment and Heritage Impact Statement (August 2015)	Cosmos Archaeology Pty Ltd	24 December 2020
Due Diligence Aboriginal Archeaological Assessment	Virtus Heritage	August 2015
Bushfire Hazard Assessment Report	Control Line Consulting	18 August 2020
Detailed Site Investigation and Salinity Assessment for Proposed Development at 900 Camden Valley Way Gledswood Hills V1	Anderson Environmental	17 February 2020
Remedial Action Plan 900 Camden Valley Way Gledswod Hills	Anderson Environmental	22 November 2021
Hazardous Materials Audit Report	CETEC Professional Scientific Solutions	2 November 2021
Child Care Acoustic Assessment	Acouras Consultancy	9 December 2019
BCA & Access 2019 A1 Indicative Compliance Report for DA Lodgement	Building Innovations Australia	28 August 2020
Access Review Report for 900 Camden Valley Way Gledswood Hills	Loka Consulting Engineers	18 March 2020
Waste Management Plan	Dickens Solutions	April 2020

These approved plans and documents are subject to any amendments in any plans or documents accepted by Council in satisfaction of the Schedule A condition of this development consent.

(5) **Modified Documents and Plans** - The development shall be modified as follows:

a) Amend Drawing 6 Issue B, Proposed Ground Level, prepared by Architex, dated 3 August 2021 to match Drawing 4 Issue B, Proposed Ground Level, prepared by Architex, dated 3 August 2021 to ensure the amended door openings are amended in Drawing 6.

Amended plans or documentation demonstrating compliance shall be provided to the certifier and Council prior to the issue of a Construction Certificate.

(6) **Separate Approval for Signs** - A separate development application for any proposed signs shall be provided to and approved by Council prior to the erection or display of those signs (unless the erection or display of those signs is exempt or complying development pursuant to State Environmental Planning Policy (Exempt and Complying Development Codes) 2008.

(7) **Connection to Sewer** - The development shall be connected to sewage mains infrastructure. Where a gravity connection is unable to be achieved a pump to sewer

system approved by Council under Section 68 of the *Local Government Act 1993* will need to be obtained.

2.0 - Prior to Issue of a Construction Certificate

The following conditions of consent shall be complied with prior to the issue of a Construction Certificate.

(1) **Heritage Council of NSW** - The nominated heritage consultant engaged for this project (in accordance with the General Terms of Approval (GTAs) issued by the Heritage Council of NSW, dated 7 September 2021) must review and endorse all plans and documents submitted as part of the Construction Certificate application to ensure the proposed works are in accordance with the conditions of this consent (including the GTAs issued by Heritage NSW).

(2) **Acoustic Report** - The development shall be constructed in accordance with the "Childcare Centre Acoustic Assessment, prepared by Acouras Consultancy, dated 9 December 2019, Section 3". Details demonstrating compliance shall be provided to the certifier with the Construction Certificate application.

(3) **Upgrade in Accordance with the BCA** - Pursuant to Clause 93 and 94 of the EP&A Regulation 2000, the existing building is to be upgraded in the following manner to bring the building into compliance with the BCA:

a. The recommendations of the 'Indicative Compliance Report' prepared by Building Innovations Australia dated 28/08/2020 Project No. PRO-05441-W3V2.

Details demonstrating compliance shall be provided to the certifier with the Construction Certificate application.

(4) **Food Premises** - The design, construction, fit-out, use and ongoing operation of the food premises and/or food storage area shall comply with all applicable Acts, Regulation, codes and standards including:

a) the *Food Act 2003;*
b) the Food Regulation 2015;
c) Food Standards Australia and New Zealand – Food Standards Code 2003;
d) AS 1668.1-2015 and 1668.2-2012;
e) the BCA; and
f) AS 4674-2004 Design, construction and fit-out of food premises.

Details demonstrating compliance shall be provided to the certifier with the Construction Certificate application.

(5) **Amended Plans Bottle Preparation Room** - The plans provided for the proposed Bottle Preparation Room do not comply with Council and legislative requirements in the following manner:

a) The bottle preparation room must include:

i) a minimum double bowl (wash/rinse) sink (where bottles are washed and sanitised on site) or a single bowl sink (where bottles are washed and sanitised by carers at home) and,

ii) a separate dedicated hand washing basin.

b) Sinks and handwashing basins are to be supplied with hot and cold water through a common spout and an adequate supply of single use towels and liquid soap.

c) A fridge must be provided for the storage of milk and food for children only.

Details demonstrating compliance shall be provided to the certifier with the Construction Certificate application.

(6) **Mechanical Ventilation** - Any room or area not provided with natural ventilation in accordance with the relevant requirements of the Building Code of Australia must be provided with a system of mechanical ventilation that complies with the requirements of Australian Standard 1668, Parts 1 & 2. Details demonstrating compliance shall be provided to the certifier with the Construction Certificate application.

(7) **Civil Engineering Plans** - Civil engineering plans shall be prepared in accordance with the approved plans and Council's Engineering Design and Construction Specifications. Details demonstrating compliance shall be provided to the certifier with the Construction Certificate application.

(8) **Stormwater Quality** - A water quality system shall be provided for the site and designed in accordance with Council's Engineering Specifications. A detailed water quality report and water quality model reflecting the Construction Certificate plans shall be provided to the certifier with the Construction Certificate application. The water quality model must prove that the treatment train will result in water quality targets being achieved in accordance with Council's current specifications.

(9) **Soil, Erosion, Sediment and Water Management** - An erosion and sediment control plan shall be prepared in accordance with 'Managing Urban Stormwater – Soils and Construction ('the blue book'). Details demonstrating compliance shall be provided to the certifier with the Construction Certificate application.

(10) **Works in Road Reserves** - Where any works are proposed in a public road reservation, a Road Opening Permit shall be obtained from Council in accordance with Section 138 of the *Roads Act 1993*.

(11) **Services** - Certificates and/or relevant documents shall be obtained from the following service providers and provided to the certifier:

a) Energy supplier - Evidence demonstrating that satisfactory arrangements have been made with Endeavour Energy to service the approved development.

b) Water and sewerage supplier - Evidence demonstrating that satisfactory arrangements have been made with Sydney Water to service the approved development.

(12) **Long Service Levy** - In accordance with Section 34 of the *Building and Construction Industry Long Service Payments Act 1986*, the applicant shall pay a long service levy at the prescribed rate to either the Long Service Payments Corporation or Council for any building work that cost $25,000 or more.

(13) **Sydney Water Trade Waste** - The applicant shall contact the Commercial Trade Waste section of Sydney Water regarding the trade waste requirements. A written response from Sydney Water demonstrating compliance shall be provided to the certifier and Council.

(14) **Regulated System** - Where thermostatic mixing valves as defined under the provisions of the Public Health Act 2010 are proposed the system(s) shall be designed and installed in accordance with the relevant provisions of:

a) *Public Health Act 2010*;

b) the Public Health Regulation 2012; and

c) AS/NZS 3666 Air Handling and Water Systems of Buildings - Microbial Control.

Plans and Specifications for the design, installation, operation and maintenance of the regulated system(s), including details on the locations of all plant and equipment, shall be provided to the certifier with the Construction Certificate application.

3.0 - Prior to Commencement of Works

The following conditions of consent shall be complied with prior to any works commencing on the development site.

(1) **Decommissioning of On-Site Sewerage Management** - Written confirmation verifying that the existing on-site sewerage management facility has been decommissioned in accordance with the following, shall be provided to the principal certifier and Council:

Option 1: (Removal of system from site)

That the septic tank, disposal field and all associated drainage shall be decommissioned in accordance with the following:

a) The septic tank/holding well and grease trap shall be emptied by a liquid wastewater contractor and the contents disposed of at an approved wastewater depot. A copy of the receipt is to be provided to Council;

b) The sides, lid, baffle (if fitted) and square junctions of the tank should be hosed down as the waste is being removed; and

c) The inlets and outlets should be plugged and the tank should then be filled with clean water and disinfected to a minimum level of 5mg/l of free residual chlorine, with a one half hour contact time. The lid should be exposed to the chlorine solution. The chlorine should be allowed to dissipate naturally and not be neutralised. The contents of the tank/ and or well shall than be emptied by a liquid wastewater contractor.

The septic tank and any associated drainage and disposal field including materials and drainage pipes used in the construction and connection of the existing redundant transpiration beds/ absorption trenches/ irrigation fields shall be removed and disposed of at a suitably licensed landfill site. (i.e. aggregates, rubble, sand, concrete slabs and the like). A copy of the receipt for disposal of the waste materials shall be provided to Council.

The tank excavation /transpiration beds/ absorption trenches are to be backfilled with clean filling material and finished to the surrounding ground level.

Option 2: (decommissioning on site)

The septic tank system shall be de-commissioned in the following manner:

a) The septic tank/holding well and grease trap shall be emptied by a liquid wastewater contractor and the contents disposed of at an approved wastewater depot. A copy of the receipt is to be provided to Council;

b) the septic tank and holding well shall be thoroughly dusted with commercial grade agricultural lime;

c) the base(s) of the tank(s) is to be punctured (to prevent future holding of water), the lids broken in and the top edges broken down 300mm below ground level; and

d) the tanks are to be backfilled with clean filling material and finished to the surrounding ground level.

(2) **Soil Erosion and Sediment Control** - Soil erosion and sediment controls must be implemented prior to works commencing on the site in accordance with 'Managing Urban Stormwater – Soils and Construction ('the blue book') and any Sediment and Erosion plans approved with this development consent.

(3) **Site and Environmental Management Plans** - In accordance with the approved remediation action plan, an environmental management plan and occupational health and safety plan that addresses all relevant legislative requirements and environmental effects is required to be completed prior to the commencement of remediation works. The plan is to be provided by the remediation contractor and recognise all remediation requirements of the remediation action plan.

(4) **Public Liability Insurance** - The owner or contractor shall take out a Public Liability Insurance Policy with a minimum cover of $20 million in relation to the occupation of, and works within, public property (i.e. kerbs, gutters, footpaths, walkways, reserves, etc) for the full duration of the proposed works. Evidence of this Policy shall be provided to Council and the certifier.

(5) **Notice of Principal Certifier** - Notice shall be given to Council at least two (2) days prior to subdivision and/or building works commencing in accordance with Clause 103 of the EP&A Regulation 2000. The notice shall include:

a) a description of the work to be carried out;

b) the address of the land on which the work is to be carried out;

c) the registered number and date of issue of the relevant development consent;

d) the name and address of the principal certifier, and of the person by whom the principal certifier was appointed;

e) the certifier's registration number, and a statement signed by the certifier consenting to being appointed as principal certifier; and

f) a telephone number on which the principal certifier may be contacted for business purposes.

(6) **Notice of Commencement of Work** - Notice shall be given to Council at least two (2) days prior to subdivision and/or building works commencing in accordance with Clause 104 of the EP&A Regulation 2000. The notice shall include:

a) the name and address of the person by whom the notice is being given;

b) a description of the work to be carried out;

c) the address of the land on which the work is to be carried out;

d) the registered number and date of issue of the relevant development consent and construction certificate;

e) a statement signed by or on behalf of the principal certifier (only where no principal certifier is required) to the effect that all conditions of the consent that are required to be satisfied prior to the work commencing have been satisfied; and

f) the date on which the work is intended to commence.

(7) **Construction Certificate Required** - In accordance with the requirements of the *EP&A Act 1979,* building or subdivision works approved by this consent shall not commence until the following has been satisfied:

a) a Construction Certificate has been issued by a certifier;

b) a principal certifier has been appointed by the person having benefit of the development consent;

c) if Council is not the principal certifier, Council is notified of the appointed principal certifier at least two (2) days before building work commences;

d) the person having benefit of the development consent notifies Council of the intention to commence building work at least two (2) days before building work commences; and

e) the principal certifier is notified in writing of the name and contractor licence number of the owner/builder intending to carry out the approved works.

(8) **Sign of Principal Certifier and Contact Details** - A sign shall be erected in a prominent position on the site stating the following:

a) that unauthorised entry to the work site is prohibited;

b) the name of the principal contractor (or person in charge of the site) and a telephone number on which that person can be contacted at any time for business purposes and outside working hours; and

c) the name, address and telephone number of the principal certifier.

The sign shall be maintained while the work is being carried out and removed upon the completion of works.

(9) **Site is to be Secured** - The site shall be secured and fenced.

(10) **Sydney Water Approval** - The approved construction certificate plans must also be approved by Sydney Water to determine if sewer, water or stormwater mains or easements will be affected by any part of the development. Go to www.sydneywater.com/tapin to apply.

A copy of the approval receipt from Sydney Water must be submitted to the principal certifier.

(11) **Protection of Trees to be Retained** - Protection of trees to be retained shall be in accordance with Council's Engineering Specifications. The area beneath the canopies of the tree(s) to be retained shall be fenced. Tree protection signage is required to be attached to each tree protection zone and displayed in a prominent position.

(12) **Traffic Management Plan** - A traffic management plan shall be prepared in accordance with Council's Engineering Specifications and AS 1742.3. The plan must be submitted to the principal certifier.

(13) **Construction Management Plan** - A construction management plan that includes dust, soil and sediment and traffic management, prepared in accordance with Council's Engineering Design Specification, shall be provided to the principal certifier.

(14) **Environmental Management Plan** - An environmental management plan (EMP) prepared in accordance with Council's Engineering Design Specification shall be provided to the principal certifier.

The EMP shall address the manner in which site operations are to be conducted and monitored to ensure that adjoining land uses and the natural environment are not unacceptably impacted upon by the proposal. The EMP shall include but not be necessarily limited to the following measures:

a) measures to control noise emissions from the site;

b) measures to suppress odours and dust emissions;

c) soil and sediment control measures;

d) measures to control air emissions that includes odour;

e) measures and procedures for the removal of hazardous materials that includes waste and their disposal;

f) any other recognised environmental impact;

g) work, health and safety; and

h) community consultation.

(15) **Construction Noise Management Plan** - A construction noise management plan shall be provided to the principal certifier and include the following:

a) noise mitigation measures;

b) noise and/or vibration monitoring;

c) use of respite periods;

d) complaints handling; and

e) community liaison and consultation.

(16) **Construction Waste Management Plan** - A construction waste management plan must be prepared for all construction work on the site. The plan must incorporate the concept of recycling and reuse where practicable, include the requirement to dispose of material not suitable for reuse or recycling at a licenced waste facility. The plan must be kept on site for compliance until the completion of all construction works.

4.0 - During Works

The following conditions of consent shall be complied with during the construction phase of the development.

(1) **Site Management** - The following practices are to be implemented during construction:

a) stockpiles of topsoil, sand, aggregate, spoil or other material shall be kept clear of any drainage path, easement, natural watercourse, kerb or road surface and shall have measures in place to prevent the movement of such material off site;

b) builder's operations such as brick cutting, washing tools, concreting and bricklaying shall be confined to the building allotment. All pollutants from these activities shall be contained on site and disposed of in an appropriate manner;

c) waste shall not be burnt or buried on site or any other properties, nor shall wind-blown rubbish be allowed to leave the site. All waste shall be disposed of at a licenced waste disposal facility;

d) a waste storage area shall be located on the site;

e) all building materials, plant, equipment and waste control containers shall be placed on the building site. Building materials, plant and equipment (including water closets), shall not to be placed on public property (footpaths, roadways, public reserves, etc);

f) toilet facilities shall be provided at, or in the vicinity of, the work site at the rate of 1 toilet for every 20 persons or part thereof employed at the site. Each toilet shall:

i) be a standard flushing toilet connected to a public sewer; or

ii) have an on-site effluent disposal system approved under the *Local Government Act 1993*; or

iii) be a temporary chemical closet approved under the *Local Government Act 1993*.

(2) **Vehicles Leaving the Site** - The construction supervisor must ensure that:

- all vehicles transporting material from the site cover such material so as to minimise sediment transfer;

- the wheels of vehicles leaving the site:

- do not track soil and other waste material onto any public road adjoining the site; and
- fully traverse the site's stabilised access point.

(3) **Removal of Waste Materials** - Where there is a need to remove any identified materials from the site that contain fill/rubbish/asbestos, the waste material shall be assessed and classified in accordance with the NSW EPA Waste Classification Guidelines 2014 (refer to: www.epa.nsw.gov.au/wasteregulation/classify-guidelines.htm)

Once assessed, the materials shall be disposed of to a licensed waste facility suitable for that particular classification of waste. Copies of tipping dockets shall be retained and supplied to Council upon request.

(4) **Noise During Work** - Noise levels emitted during works shall be restricted to comply with the construction noise control guidelines set out in Chapter 171 of the NSW Environment Protection authority's Environmental Noise Control Manual.

Noise levels emitted during works shall be restricted to comply with the construction noise control guidelines set out in Chapter 171 of the NSW Environment Protection Authority's Environmental Noise Control Manual.

Noise levels emitted during works must comply with:

- Construction period of 4 weeks and under:

  The LAeq level measured over a period of not less than 15 minutes when the construction site is in operation must not exceed the background level by more than 20 dB(A).

- Construction period greater than 4 weeks and not exceeding 26 weeks:

  The LAeq level measured over a period of not less than 15 minutes when the construction site is in operation must not exceed the background level by more than 10 dB(A).

- Construction period greater than 26 weeks:

  The LAeq level measured over a period of not less than 15 minutes when the construction site is in operation must not exceed the background level by more than 5 dB(A).

Alternatively, noise levels emitted during works shall be restricted to comply with the NSW Environment Protection Authority Interim Construction Noise Guidelines.

(5) **Offensive Noise, Dust, Odour and Vibration** - All work shall not give rise to offensive noise, dust, odour or vibration as defined in the *Protection of the Environment Operations Act 1997* when measured at the property boundary.

(6) **Erosion and Sedimentation Control** - Soil erosion and sedimentation controls are required to be maintained for the duration of the works. The controls must be undertaken in accordance with version 4 of the Soils and Construction – Managing Urban Stormwater manual (Blue Book).

Soil erosion and sediment control measures shall only be removed upon completion of the works when all landscaping and disturbed surfaces have been stabilised (for example, with site turfing, paving or re-vegetation).

(7) **Unexpected Finds Contingency (General)** - Should any suspect materials (identified by unusual staining, odour, discolouration or inclusions such as building rubble, asbestos, ash material, etc.) be encountered during any stage of works (including earthworks, site preparation or construction works, etc.), such works shall cease immediately until a certified contaminated land consultant has be contacted and conducted a thorough assessment.

In the event that contamination is identified as a result of this assessment and if remediation is required, all works shall cease in the vicinity of the contamination and Council shall be notified immediately.

Where remediation work is required, the applicant will be required to obtain consent for the remediation works.

(8) **Remediation Action Plan -** All approved remediation works that include excavation, stockpiling, on-site and off-site disposal, cut, backfilling, compaction, monitoring, validation, site management and security and work health and safety must be carried out in accordance with the approved remediation action plan titled "Remedial Action Plan 900 Camden Valley Way Gledswod Hills, prepared by Anderson Environmental, version 1, dated 22/11/2021" except where amended by other conditions of this development consent.

Any variation to the approved remediation action plan will require this development consent to be modified or a separate development consent to be obtained.

(9) **Remediation Works Inspections** - A certified contaminated land consultant must frequently inspect the remediation works to confirm compliance with the remediation action plan including all health and safety requirements.

(10) **Work Hours** - All work (including delivery of materials) shall be:

- restricted to between the hours of 7am to 5pm Monday to Saturday (inclusive), and
- not carried out on Sundays or public holidays,

unless approved in writing by Council.

(11) **Compliance with BCA** - All building work shall be carried out in accordance with the requirements of the BCA.

(12) **Protection for Existing Trees** – The protection of existing trees (on-site and street trees) must be carried out as specified by AS 4970 Protection of Trees on Development Sites.

(13) **Excavations and Backfilling** - All excavations and backfilling associated with this development consent shall be executed safely, and be properly guarded and protected to prevent them from being dangerous to life or property, and in accordance with the design of a suitably qualified structural engineer.

If an excavation extends below the level of the base of the footings of a building on an adjoining allotment, the person causing the excavation shall:

a) preserve and protect the building from damage;

b) if necessary, underpin and support the building in an approved manner; and

c) give at least seven (7) days notice to the adjoining owner before excavating, of the intention to excavate.

The principal contractor, owner builder or any person who needs to excavate and undertake building work, shall contact "Dial Before You Dig" prior to works commencing, and allow a reasonable period of time for the utilities to provide locations of their underground assets.

This condition does not apply if the person having the benefit of the development consent owns the adjoining land or the owner of the adjoining land has given consent in writing to that condition not applying.

(14) **Traffic Management Plan Implementation** - All traffic management procedures and systems identified in the approved traffic management plan shall be introduced and maintained during construction of the development to ensure safety and to minimise the effect on adjoining pedestrian and traffic systems.

(15) **Site Signage** - A sign shall be erected at all entrances to the site and be maintained until the development has been completed. The sign shall be constructed of durable materials, be a minimum of 1200mm x 900mm, and read as follows:

"WARNING UP TO $8,000 FINE. It is illegal to allow soil, cement slurry or other building materials to enter, drain or be pumped into the stormwater system. Camden Council (02 4654 7777) – Solution to Pollution."

The wording shall be a minimum of 120mm high and the remainder a minimum of 60mm high. The warning and fine details shall be in red bold capitals and the remaining words in dark coloured lower case letters on a white background, surrounded by a red border.

(16) **Relics Discovery During Works** – If any relic surviving from the past is uncovered during the work that could have historical significance (but is not an aboriginal object):

- all work must stop immediately in that area;
- Heritage NSW must be advised of the discovery in writing in accordance with Section 146 of the *Heritage Act 1977,* and
- any requirements of Heritage NSW must be implemented.

(17) **Aboriginal Objects Discovered During Works** – If any Aboriginal object (including evidence of habitation or remains) is discovered during the work:

- all excavation or disturbance of the area must stop immediately in that area,
- Heritage NSW must be advised of the discovery in writing in accordance with Section 89A of the *National Parks and Wildlife Act 1974,* and

- any requirements of Heritage NSW must be implemented.

5.0 - Prior to Issue of an Occupation Certificate

The following conditions of consent shall be complied with prior to the issue of an Occupation Certificate.

(1) **Occupation Certificate Required** - An Occupation Certificate shall be obtained prior to any use or occupation of the development.

(2) **Compliance with Acoustic Requirements** - Documentary evidence shall be provided to the principal certifier confirming the building/s has been constructed in accordance with the approved acoustic report "Childcare Centre Acoustic Assessment, prepared by Acouras Consultancy, dated 9 December 2019, Section 3".

(3) **Acoustic Compliance Report** - A report shall be prepared by an independent acoustic consultant and be submitted to the principal certifier certifying that noise levels from the mechanical plant will comply with the following criteria when measured at the most affected point within 30m of the nearest residence:

- 45 dB(A) 7am - 6pm;
- 43 dB(A) 6pm - 10pm; and
- 36 dB(A) 10pm - 7am.

All noise attenuation materials and structures used for the mitigation and control of noise must be compliant with the conditions of this development consent.

For any non-compliance, the report must make recommendations for compliance or further attenuation of noise sources and these recommendations will be enforced by Council at the cost of the owner/occupier.

The owner/occupier must then provide a supplementary acoustic report to the principal certifier certifying that all compliance works have been completed and that noise levels comply with the above criteria.

(4) **Childcare Noise Management Plan** - In accordance with Section 3.4 of the acoustic report prepared by Acouras Consultancy, dated 9 December 2019, a Noise Management Plan must be submitted to an approved by Camden Council and implemented into the operation of the centre. The Plan must consider managerial practices to be implemented to further limit the impact of children activity noise.

(5) **Fire Safety Certificates** - A Fire Safety Certificate shall be provided to the principal certifier in accordance with the requirements of the EP&A Regulation 2000.

(6) **Mechanical Exhaust System** - A Certificate of Compliance prepared by a suitably qualified engineer confirming that the mechanical exhaust systems have been designed, constructed and installed in accordance with the relevant requirements of Clause F4.12 of the BCA and AS1668 Parts 1 and 2, shall be provided to the principal certifier. Certification shall be provided that the air handling system as installed has been tested and complies with the approved plans and specifications, including ventilation requirements and fire precautions.

(7) **Food Premises** - The following notifications shall occur:

a) Council shall be notified that the premises is being used for the preparation, manufacture or storage of food for sale and an inspection of the completed fit out is to be conducted. A 'Food Business Registration' form can be found on Council's website; and

(8) **Food Premises Inspection** - An inspection of the kitchen and bottle preparation facilities is to be carried out by Council prior to occupation.

(9) **Waste Management Plan** - The principal certifier shall ensure that all works have been completed in accordance with the approved waste management plan referred to in this development consent.

(10) **Waste Collection Contract** - The building owner shall ensure that there is a contract with a licensed contractor for the removal of all waste. A copy of the contract is to be held on the premises at all times.

(11) **Regulated System Thermostatic Mixing Valve(s)** - Evidence of commissioning of the regulated system is to be provided by a suitably qualified person in accordance with the *Public Health Act 2010* and the Public Health Regulation 2012 and AS/NZS 3666. A detailed report from the person who commissioned the regulated system is to be provided to the principal certifier.

The owner or occupier of the premises shall apply to Council to notify the regulated system – thermostatic mixing valve on the premises. A "Notification of Microbial Control" form can be found on Council's website. Council is to conduct an inspection of the completed fit out.

(12) **Services** - Certificates and/or relevant documents shall be obtained from the following service providers and provided to the principal certifier:

a) Energy supplier - A Notice of Arrangement for the provision of distribution of electricity from Endeavour Energy to service the proposed development;

b) Water supplier - A Section 73 Compliance Certificate demonstrating that satisfactory arrangements have been made with a water supply provider to service the proposed development.

The assessment will determine the availability of water and sewer services, which may require extension, adjustment or connection to Sydney Water mains. Sydney Water will assess the development and if required will issue a Notice of Requirements letter detailing all requirements that must be met. Applications can be made either directly to Sydney Water or through a Sydney Water accredited Water Servicing Coordinator (WSC). Go to www.sydneywater.com.au/section73 or phone 1300 082 746 to learn more about applying through an authorised WSC or Sydney Water.

(13) **Completion of Landscape Works** - All landscape works, including the removal of noxious weed species, are to be undertaken in accordance with the approved landscape plan and conditions of this development consent.

(14) **Flood Warning Signage** - Appropriate flood warning sign/s is/are required to be erected along the access road into the site with a message stating not to drive across the flood waters.

(15) **Catering Contract** - A copy of the catering contract for outsourcing meals must be

be provided to Council prior to commencement of the proposed kitchen.

(16) **Gledswood Homestead Conservation Work** – All necessary conservation work to the homestead and associated grounds / gardens are to be completed in accordance with the Gledswood Conservation Management Plan, prepared by GML, dated September 2011. The nominated heritage consultant engaged for this project (in accordance with the General Terms of Approval (GTAs) issued by the Heritage Council of NSW, dated 7 September 2021) must certify that the works have been satisfactorily completed prior to the issue of any Occupation Certificate.

(17) **Hazardous Materials Certificate** - That any works proposed to be carried out on the premises shall be undertaken in accordance with the Hazardous Material Audit Report prepared by CETEC Professional Scientific Solutions dated 2/11/2021 version 1.0. A certificate of compliance certifying that any works carried out on the premises complies with the Audit report and shall be provided to the Principal Certifying authority prior to the issue of Occupation Certificate.

(18) **Validation Report** - A validation report endorsed by a certified contaminated land consultant shall be provided to the principal certifier within 30 days of completion of the remediation works, and prior to the issue of a Subdivision Certificate, which demonstrates:

a) compliance with objectives of the approved RAP;

b) that the remediation acceptance criteria (in the approved RAP) has been fully complied with;

c) that all remediation works comply with the contaminated lands planning guidelines, *Contaminated Lands Management Act 1997* and SEPP 55;

and includes:

d) Works-As-Executed Plan(s) that identify the extent of the remediation works undertaken (that includes any encapsulation work) prepared by a registered surveyor;

e) a "notice of completion of remediation work" as required under Clause 18 of SEPP 55; and

f) a statement confirming that the site following remediation of contamination is suitable for the intended use.

(19) **Remediated Land Delineation -** A map that delineates the extent of the remediated land, as identified by the validation report / Site Audit Statement required by this development consent, must be provided to Council for integration into Council's mapping system. The map must be provided in digital GIS format (ESRI Shape, .dxf or .dwg) and the data projection coordinate must be in GDA94 / MGA Zone 56.

6.0 - Ongoing Use

The following conditions of consent are operational conditions applying to the development.

(1) **Offensive Noise and Noise Compliance** - The use and occupation of the premises including all plant and equipment shall not give rise to any offensive noise within the

meaning of the *Protection of the Environment Operations Act 1997*. Noise must also comply with the NSW Noise Policy for Industry 2017.

(2) **Maintenance of Landscaping** - Landscaping shall be maintained in accordance with the approved landscape plan.

(3) **Number of Employees** - The number of people working on the premises shall not exceed 13 at any given time.

(4) **Hours of Operation** - The property is only to be open for business and used for the purpose approved within the following hours:

Day	Hours of Operation
Monday	7:00am to 6.00pm
Tuesday	7:00am to 6.00pm
Wednesday	7:00am to 6.00pm
Thursday	7:00am to 6.00pm
Friday	7:00am to 6.00pm
Saturday	No operation
Sunday and Public Holidays	No operation

(5) **Number of Children** - The centre is approved to accommodate a maximum of 80 children. However, this maximum number shall be reduced to any lower number of children that is separately approved for the centre by the Department of Education.

(6) **Department of Education Approval** - The centre must comply with all requirements of the Department of Education. A letter from the Department of Education which details the approved number and age of children to be accommodated at the centre, and any operational conditions, must be submitted to Council prior to the centre becoming operational.

Should the Department of Education approval be subsequently amended at any time the operator of the centre must submit a copy of the amended approval to Council.

(7) **No Waste to Be Stored Outside of the Site** - No waste is to be placed on any public land (eg. footpaths, roadways, plazas, reserves, etc.) or any other properties at any time.

(8) **Manoeuvring of Vehicles** - All vehicles shall enter and exit the site in a forward direction.

(9) **Commercial Delivery and Waste Collection Vehicle** - In accordance with the acoustic report prepared by Acouras consultancy dated 9 December 2019, delivery and waste collection vehicles to the site shall only occur during the between the hours of 7.00am – 8.00pm Monday to Friday and 8.00am – 8.00pm Saturday Sunday and Public Holidays.

(10) **Limitation of Food Handling Activities** - On-site food handling activities shall be limited to:

a) preparation of bottles for baby / infant consumption; and

b) storage and service of commercially pre-prepared meals only.

All meals provided at the premises shall be prepared off site by a contractor in an approved commercial kitchen and food handling on site shall be limited to heating of pre-prepared meals, cutting of ready to eat food and the service of food.

Documentary evidence of the supply of pre-prepared meals from approved commercial kitchens shall be maintained on site and be available for review upon Council request.

(11) **Catering Contract Records** - A copy of receipts of payment to the catering contractor shall be kept on site for 12 months and be produced to Council upon request.

(12) **Gledswood Homestead Conservation** - The homestead and surrounding grounds/gardens must be maintained/used in accordance with the Gledswood Conservation Management Plan, prepared by GML, dated September 2011.

CLPP01

Attachment 2

REMEDIAL ACTION PLAN
900 CAMDEN VALLEY WAY
GLEDSWOOD HILLS

THE CITY OF CAMPBELLTOWN COUNCIL
LOCAL GOVERNMENT AREA

Job number: 2334

Anderson Environmental Pty Ltd
Suite 19, 103 George Street, Parramatta 2150
Phone 1300 302 507, 0413 040394
Email: jason@andersonenvironmental.com.au
www.andenviro.com.au
ABN 87 164 830 728

CLPP01

Attachment 2

Version 1

Version	Date drafted	Drafted by
1	10/11/2021	Jason Anderson
Version	**Date reviewed**	**Reviewed by**
1	22/11/2021	Jason Anderson
Approved by		**Date**
Jason Anderson (Director)		22/11/2021

Executive Summary

Anderson Environmental was engaged to conduct a Remedial Action Plan for a proposed Childcare Development at 900 Camden Valley Way, Gledswood Hills in The City of Campbelltown Council Local Government Area (LGA), referred to hereafter as the subject site. A previous Detailed Site Investigation by Anderson Environmental Pty Ltd detected Lead contamination in excess of HIL-A Guidelines. This report should be read in conjunction with the previous DSI. A summary of the results of the DSI are shown below. These samples were undertaken within 0.5 metres of the building.

The physical results from the 7 Boreholes indicate the soil represents what appears to be a natural soil profile. The laboratory results indicated HIL-A Exceedances for Lead for the Near Surface Samples 1-3 which were taken near to the building. The limit for Lead for HIL-A is 300mg/kg.

Sample	HIL-A Limit (Lead) mg/kg	Laboratory Results mg/kg
Near Surface Sample 1	300	470 (Exceedance of HIL-A)
Near Surface Sample 2	300	760 (Exceedance of HIL-A)
Near Surface Sample 3	300	1900 (Exceedance of HIL-A)

The type of use proposed conforms to HIL A under NEPM Table 1A. HIL A - residential with garden/accessible soil (home grown produce <10% fruit and vegetable intake, (no poultry), also includes children's day care centres, preschools and primary schools.

Methodology

Fieldwork for was conducted by Bo Davidson (M Environment – Macquarie University) on 27th of October 2021. A total of 28 boreholes were undertaken with two samples at each borehole. Sampling involved targeted sampling to delineate the lateral and vertical extent of potential lead contamination around the building. Lead contamination around older buildings is quite common from the accumulation of Lead based paint flaking off the building over the years and contaminating the soil.

Sampling was undertaken using a 50mm direct push percussion sampling tube. Samples from each borehole were undertaken at approximately 0.3m and 0.8m depth to delineate the potential vertical extent of the contamination. From experience Lead contamination from Lead based paints generally occurs close to the building and as such one borehole was undertaken approximately 0.5m from the building with a secondary borehole undertaken at 1.5m from the building thus providing two sampling locations for each "nest" of samples in order to delineate the potential lateral extent of the Lead contamination.

Samples were placed in laboratory supplied collection jars/bottles/plastic bags, labelled with the sample number, date and time, depth and sampler. Following collection samples were stored in a laboratory supplied cooler with ice. Samples are then taken directly to the laboratory or kept refrigerated until delivery to the testing laboratory.

Samples were delivered to the National Association of Testing Authorities (NATA) accredited SGS Australia testing laboratory at Alexandria.

Results

The limit for Lead for HIL-A is 300mg/kg. The confidence limit of most of the samples was ±10% so samples which were close to the 300mg/kg limit for HIL-A were included as a potential exceedance. The exceedances from the sampling are provided below.

Borhole Number	Sample	Sampling Depth in Metres	Lateral Distance from Building in Metres	Result Lead (mg/kg)
1	S1	0.3	0.5	270
2	S3	0.3	1.5	290
7	S13	0.3	0.5	1200
8	S15	0.3	1.5	640
15	S29	0.3	0.5	460
17	S33	0.3	0.5	280
18	S35	0.3	1.5	380

The results above indicate that all of the samples with exceedances occurred at a shallow depth. No exceedances were found at the secondary sample from each borehole which was undertaken at a depth of 0.8 metres.

The assessment of the site for contamination indicated that the Lead exceedances above the HIL-A thresholds occurred at relatively shallow depths with the depth of sampling being 0.3 metres where the exceedances occurred. Four of the boreholes had Lead exceedances 0.5 metres from the building with three other boreholes (representing the "nested borehole" pair of these locations) at 1.0 metre from the other borehole had Lead exceedances. Thus in some areas the lead contamination extends with exceedances to at least 1.5 metres from the building.

Conclusion and Recommendations

It is recommended that due to the particularly sensitive use of the site for a Child Care Centre (in accordance with HIL-A guidelines for Lead) that;

- the depth of soil which should be removed is to 0.8 metres in depth where the contamination was found and with a distance of 2 metres in all directions of the sample point.

- validation is then required to determine that all the Lead contamination has been removed and there should be 2 samples on the bottom of each pit and 2 samples from the side of the pits at 0.3m depth parallel to the building and two samples at the perpendicular from the building at 0.3m depth at the extent of the excavation furthest from the building. If exceedances are still found after the validation samples are taken then additional remediation by the removal of additional soil will be required along with additional validation.

- TCLP testing for waste classification will be required of the material being removed to determine its waste classification.

It is deemed that the site can be made suitable for the proposed use in accordance with HIL-A as the Lead was found to be quite limited in its extent and Lead is not a particularly mobile contaminant in this location.

CLPP01

Attachment 2

Contents

1. Introduction

1.1 Background

Anderson Environmental was engaged to conduct a Remedial Action Plan for a proposed Childcare Development at 900 Camden Valley Way, Gledswood Hills in The City of Campbelltown Council Local Government Area (LGA), referred to hereafter as the subject site. A previous Detailed Site Investigation by Anderson Environmental Pty Ltd detected Lead contamination in excess of HIL-A Guidelines. This report should be read in conjunction with the previous DSI. A summary of the results of the DSI are shown below. These samples were undertaken within 0.5 metres of the building.

The physical results from the 7 Boreholes indicate the soil represents what appears to be a natural soil profile. The laboratory results indicated HIL-A Exceedances for Lead for the Near Surface Samples 1-3 which were taken near to the building. The limit for Lead for HIL-A is 300mg/kg.

Sample	HIL-A Limit (Lead) mg/kg	Laboratory Results mg/kg
Near Surface Sample 1	300	470 (Exceedance of HIL-A)
Near Surface Sample 2	300	760 (Exceedance of HIL-A)
Near Surface Sample 3	300	1900 (Exceedance of HIL-A)

The type of use proposed conforms to HIL A under NEPM Table 1A. HIL A - residential with garden/accessible soil (home grown produce <10% fruit and vegetable intake, (no poultry), also includes children's day care centres, preschools and primary schools.

A historic home the site has been in the same condition and use for the past approximately 100 years. There were no records of any items of concern as listed in the ASC NEPM Field Checklist for the site information portion of the site. The surrounding environment represents cleared and maintained mown lawns and gardens forming the larger part of the site outside the proposed development area.

1.2 Aim, Scope and Objectives and Sampling Methodology undertaken for this Remedial Action Plan

The aim of this RAP was to determine the potential extent of Lead contamination on the site both vertically and laterally and determine the extent of potential remediation required. All remediation plans devise the best method for the removal of contamination on a site however validation is an important aspect of any remediation.

The type of use proposed conforms to HIL A under NEPM Table 1A. HIL A - residential with garden/accessible soil (home grown produce <10% fruit and vegetable intake, (no poultry), also includes children's day care centres, preschools and primary schools.

Fieldwork for was conducted by Bo Davidson (M Environment – Macquarie University on 27th of October 2021. A total of 28 boreholes were undertaken with two samples at each borehole. Sampling involved targeted sampling to delineate the lateral and vertical extent of potential lead contamination around the building. Lead contamination around older buildings is quite common from the accumulation of Lead based paint flaking off the building over the years and contaminating the soil.

Sampling was undertaken using a 50mm direct push percussion sampling tube. Samples from each borehole were undertaken at approximately 0.3m and 0.8m depth to delineate the potential vertical extent of the contamination. From experience Lead contamination from Lead based paints generally occurs close to the building and as such one borehole was undertaken approximately 0.5m from the building with a secondary borehole undertaken at 1.5m from the building thus providing two sampling locations for each "nest" of samples in order to delineate the potential lateral extent of the Lead contamination.

Samples were placed in laboratory supplied collection jars/bottles/plastic bags, labelled with the sample number, date and time, depth and sampler. Following collection samples were stored in a laboratory supplied cooler with ice. Samples are then taken directly to the laboratory or kept refrigerated until delivery to the testing laboratory.

Samples were delivered to the National Association of Testing Authorities (NATA) accredited SGS Australia testing laboratory at Alexandria.

1.3 Site - Location

The subject site is shown below in **Figure 1.1 and Figure 1.2**.

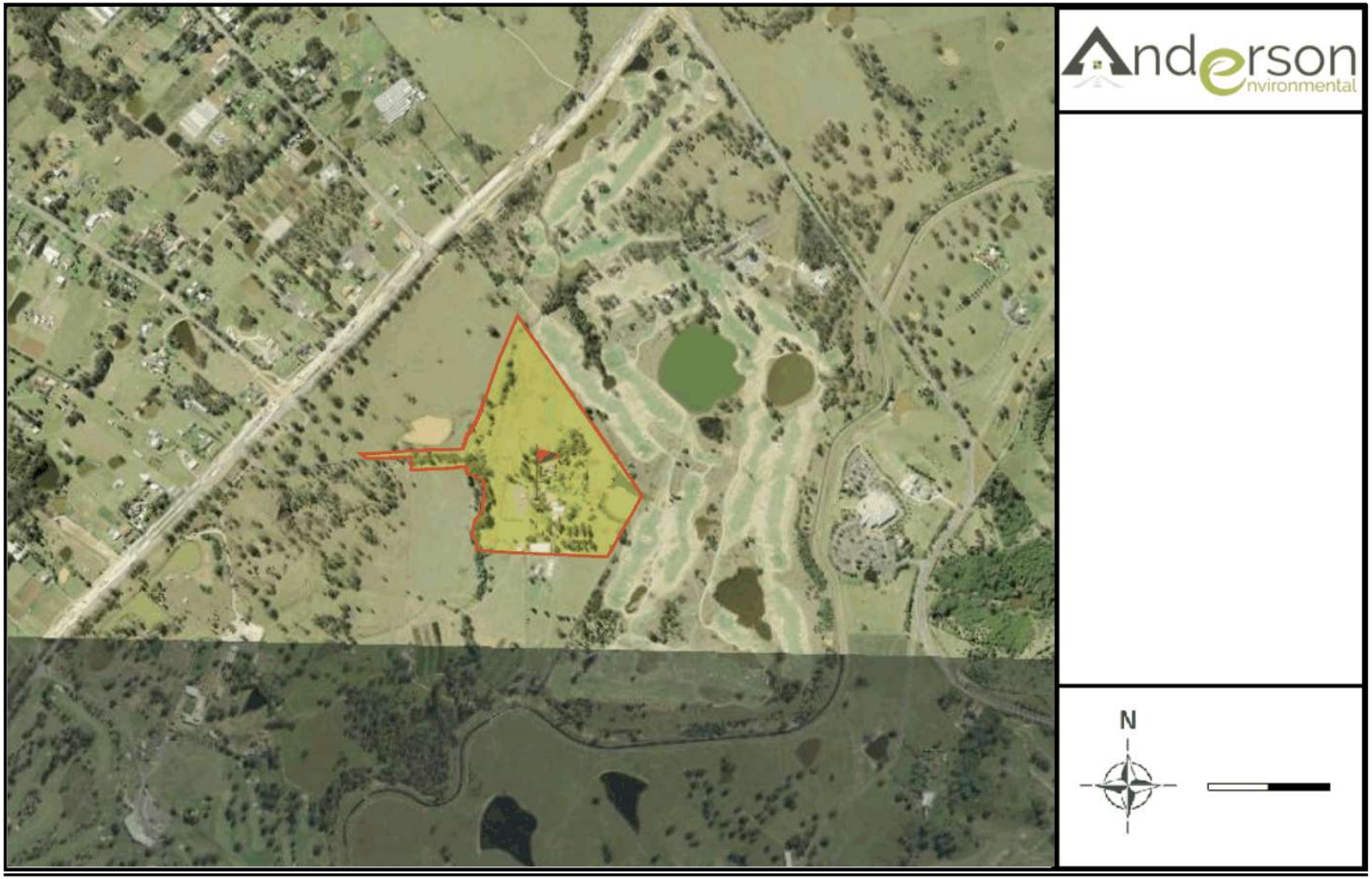

Figure 1.1: Aerial Photo of the subject site showing local context

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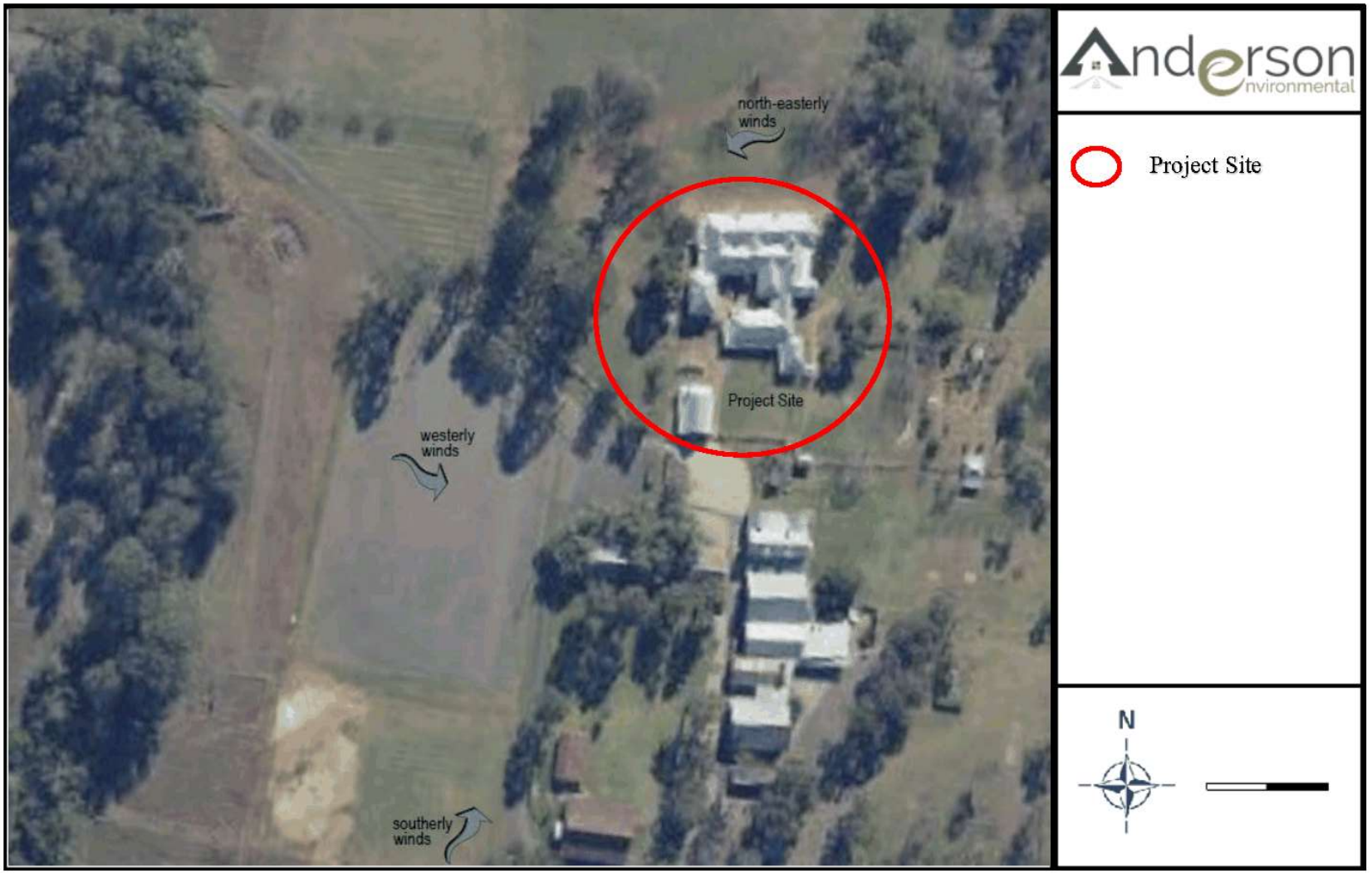

Figure 1.2: Aerial Photo of the subject site showing project site

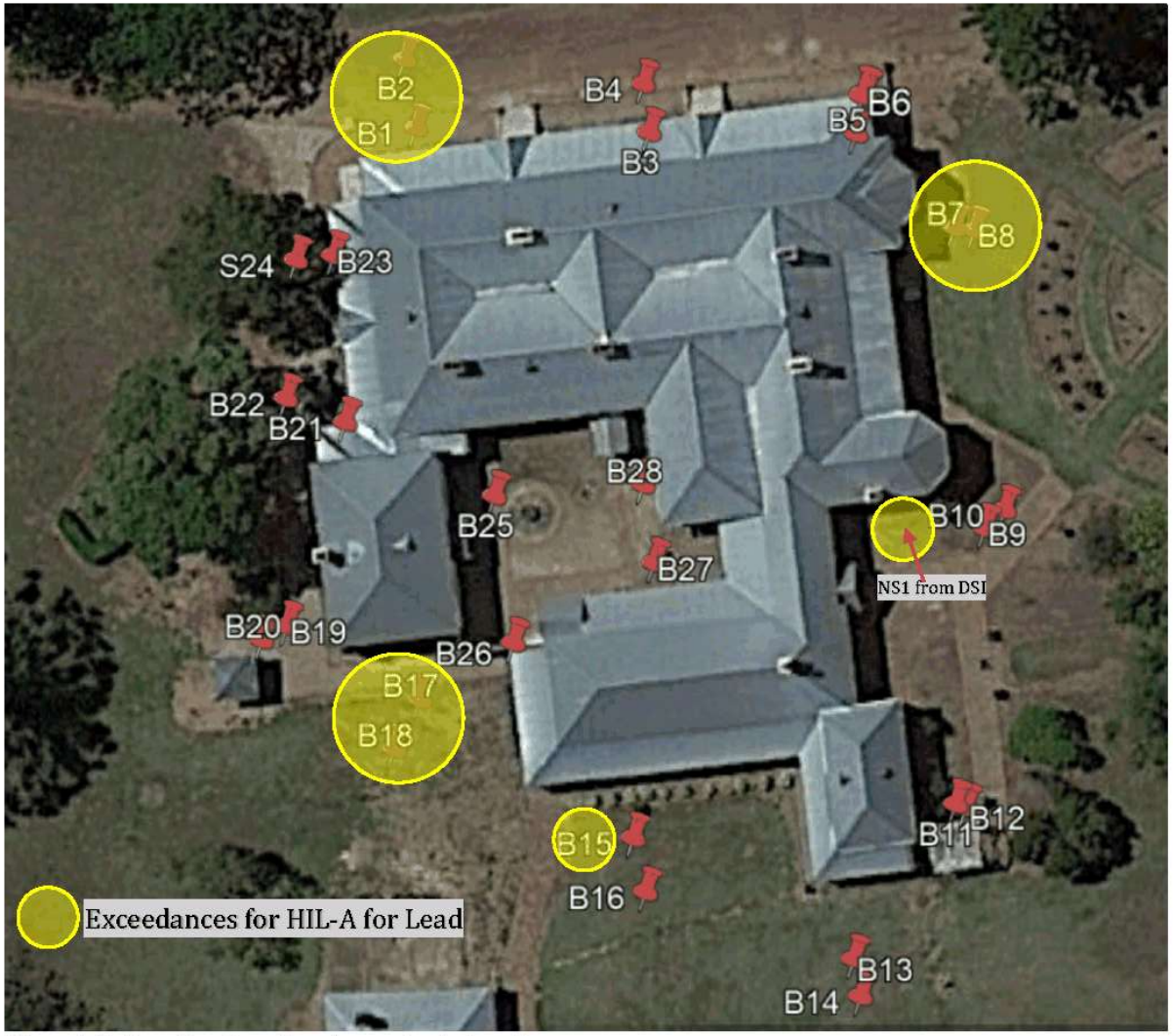

Figure 1.3: Sampling Locations Approximate Locations

2. Results

The results of the sampling to delineate the extent of the Lead Contamination revealed that the following locations exceeded the limit for Lead for HIL-A being 300mg/kg. The confidence limit of most of the samples was ±10% so samples which were close to the 300mg/kg limit for HIL-A were included as a potential exceedance. The exceedances from the sampling are provided below.

Borhole Number	Sample	Sampling Depth in Metres	Lateral Distance from Building in Metres	Result Lead (mg/kg)
1	S1	0.3	0.5	270
2	S3	0.3	1.5	290
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18	S35	0.3	1.5	380

The results above indicate that all of the samples with exceedances occurred at a shallow depth. No exceedances were found at the secondary sample from each borehole which was undertaken at a depth of 0.8 metres.

The assessment of the site for contamination indicated that the Lead exceedances above the HIL-A thresholds occurred at relatively shallow depths with the depth of sampling being 0.3 metres where the exceedances occurred. Four of the boreholes had Lead exceedances 0.5 metres from the building with three other boreholes (representing the "nested borehole" pair of these locations) at 1.0 metre from the other borehole had Lead exceedances. Thus in some areas the lead contamination extends with exceedances to at least 1.5 metres from the building.

3. Remediation Options

3.1 Remediation Procedures

The recommendation for the remediation of the site is for the removal of the Lead contaminated soil in the locations where Boreholes 1, 2, 7, 8, 15, 17 and 18 including NS1 found the Lead contamination to be above or near to HIL-A levels. The contaminated soil would then be disposed of at an approved waste disposal facility after it has been TCLP tested as part of the waste classification for the removal of the soil.

The depth of soil which should be removed is to 0.8 metres in depth where the contamination was found and with a distance of 2 metres in all directions of the sample point.

Validation is then required to determine that all the Lead contamination has been removed and there should be 2 samples on the bottom of each pit and 2 samples from the side of the pits at 0.3m depth parallel to the building and two samples at the perpendicular from the building at 0.3m depth at the extent of the excavation furthest from the building. If exceedances are still found after the validation samples are taken then additional remediation by the removal of additional soil will be required along with additional validation.

This remediation procedure would involve the fencing off the areas to be remediated. The ground outside the area where the soil is being removed should be covered with impermeable plastic so to contain any accidental spills from the excavator. Any soil not being removed immediately should be covered with plastic to contain prevent any wind blown soil or wash from rain while the soil is awaiting removal from the site. This would include containing the soil with plastic to prevent contact with the ground.

A formal work health and safety plan should be prepared with the contractors removing the contamination after an on-site meeting before the commencement of the on-site works.. The main risk from this type of contamination is from wind borne dust through inhalation. As such it would be good practice to have the soil moist before removal and to be wearing protective disposable overalls, dual filter P100 masks and gloves for all persons working around the soil. A temporary wheel wash bay with containment is not considered necessary if care is taken by the excavator operator and no spillages occur. Only minor spillages may occur if care is taken and these could be cleaned up by hand using sweeping into dustpans.

The hours of operation would be from 8am-5pm and due to the relatively small amount of contaminated soil to be removed these hours are considered reasonable. Any soil removed and not immediately removed from the site should be placed on plastic sheeting and covered with plastic sheeting to avoid any wind blown or rain washed soil migrating. An odour control and noise control plan is not considered necessary for this RAP due to the type of contaminant not having an odour and the site being well removed from any neighbours in relation to noise.

4. Conclusions and Recommendations

It is recommended that due to the particularly sensitive use of the site for a Child Care Centre (in accordance with HIL-A guidelines for Lead) that;

- the depth of soil which should be removed is to 0.8 metres in depth where the contamination was found and with a distance of 2 metres in all directions of the sample point.

- validation is then required to determine that all the Lead contamination has been removed and there should be 2 samples on the bottom of each pit and 2 samples from the side of the pits at 0.3m depth parallel to the building and two samples at the perpendicular from the building at 0.3m depth at the extent of the excavation furthest from the building. If exceedances are still found after the validation samples are taken then additional remediation by the removal of additional soil will be required along with additional validation.

- TCLP testing for waste classification will be required of the material being removed to determine its waste classification.

It is deemed that the site can be made suitable for the proposed use in accordance with HIL-A as the Lead was found to be quite limited in its extent and Lead is not a particularly mobile contaminant in this location. Anderson Environmental Pty Ltd has experience undertaking previous projects where Lead contamination has been found around older buildings in the soil.

5. References

Australian and New Zealand Guideline for the Assessment and Management of Contaminated Sites, published by Australian and New Zealand Environment and Conservation Council (ANZECC) and the National Health and Medical Research Council (NHMRC), January 1992

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6. Appendix 1: Disclaimer and Limitation of Liability

The use of this report is for the client only and is based on an assessment of the site at the point in time of assessment. The material in this report reflects the judgement of Anderson Environmental Pty Ltd in light of background information and site conditions at the time of assessment and we take no responsibility for any database inaccuracies or other inaccuracies in background and or other information. The report is not to be reproduced or released to any other party, in whole or in part, without the express written consent of Anderson Environmental Pty Ltd. This report is Copyright protected and is not to be reproduced in part or whole or used by a third party without the express written permission of Anderson Environmental Pty Ltd. If you are not the client who commissioned this report or a local government authority for which approval is being sought as part of the formal DA process and are in possession of this report you are in breach of the law and we reserve the right to recover damages from any individuals, companies or other parties as a result of such breaches. Any use, which a third party makes of this report, or any reliance or discussions based on it, is the responsibility of such Third Parties and as outlined above is in breach of the law. Anderson Environmental and its staff accepts no responsibility for damages, if any, suffered by any third party because of decisions made or actions taken based on this report and reserves the right to recover damages from the third party from breaches as outlined above.

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7. Appendix 2: Standard parameter thresholds (NEPM 2013)

Table 1A(1) Health investigation levels for soil contaminants

Chemical	Health-based investigation levels (mg/kg)			
	Residential[1] A	Residential[1] B	Recreational[1] C	Commercial/ industrial[1] D
Metals and Inorganics				
Arsenic[2]	100	500	300	3 000
Beryllium	60	90	90	500
Boron	4500	40 000	20 000	300 000
Cadmium	20	150	90	900
Chromium (VI)	100	500	300	3600
Cobalt	100	600	300	4000
Copper	6000	30 000	17 000	240 000
Lead[3]	300	1200	600	1 500
Manganese	3800	14 000	19 000	60 000
Mercury (inorganic)[5]	40	120	80	730
Methyl mercury[4]	10	30	13	180
Nickel	400	1200	1200	6 000
Selenium	200	1400	700	10 000
Zinc	7400	60 000	30 000	400 000
Cyanide (free)	250	300	240	1 500
Polycyclic Aromatic Hydrocarbons (PAHs)				
Carcinogenic PAHs (as BaP TEQ)[6]	3	4	3	40
Total PAHs[7]	300	400	300	4000
Phenols				
Phenol	3000	45 000	40 000	240 000
Pentachlorophenol	100	130	120	660
Cresols	400	4 700	4 000	25 000
Organochlorine Pesticides				
DDT+DDE+DDD	240	600	400	3600
Aldrin and dieldrin	6	10	10	45
Chlordane	50	90	70	530
Endosulfan	270	400	340	2000
Endrin	10	20	20	100
Heptachlor	6	10	10	50
HCB	10	15	10	80
Methoxychlor	300	500	400	2500
Mirex	10	20	20	100
Toxaphene	20	30	30	160
Herbicides				
2,4,5-T	600	900	800	5000
2,4-D	900	1600	1300	9000
MCPA	600	900	800	5000

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Chemical	Health-based investigation levels (mg/kg)			
	Residential[1] A	Residential[1] B	Recreational[1] C	Commercial/ industrial[1] D
MCPB	600	900	800	5000
Mecoprop	600	900	800	5000
Picloram	4500	6600	5700	35000
Other Pesticides				
Atrazine	320	470	400	2500
Chlorpyrifos	160	340	250	2000
Bifenthrin	600	840	730	4500
Other Organics				
PCBs[8]	1	1	1	7
PBDE Flame Retardants (Br1–Br9)	1	2	2	10

Notes:

(1) Generic land uses are described in detail in Schedule B7 Section 3

HIL A – Residential with garden/accessible soil (home grown produce <10% fruit and vegetable intake (no poultry), also includes childcare centres, preschools and primary schools.

HIL B – Residential with minimal opportunities for soil access; includes dwellings with fully and permanently paved yard space such as high-rise buildings and apartments.

HIL C – Public open space such as parks, playgrounds, playing fields (e.g. ovals), secondary schools and footpaths. This does not include undeveloped public open space where the potential for exposure is lower and where a site-specific assessment may be more appropriate.

HIL D – Commercial/industrial, includes premises such as shops, offices, factories and industrial sites.

(2) Arsenic: HIL assumes 70% oral bioavailability. Site-specific bioavailability may be important and should be considered where appropriate (refer Schedule B7).

(3) Lead: HIL is based on blood lead models (IEUBK for HILs A, B and C and adult lead model for HIL D where 50% oral bioavailability has been considered. Site-specific bioavailability may be important and should be considered where appropriate.

(4) Methyl mercury: assessment of methyl mercury should only occur where there is evidence of its potential source. It may be associated with inorganic mercury and anaerobic microorganism activity in aquatic environments. In addition the reliability and quality of sampling/analysis should be considered.

(5) Elemental mercury: HIL does not address elemental mercury. A site-specific assessment should be considered if elemental mercury is present, or suspected to be present,

(6) Carcinogenic PAHs: HIL is based on the 8 carcinogenic PAHs and their TEFs (potency relative to B(a)P) adopted by CCME 2008 (refer Schedule B7). The B(a)P TEQ is calculated by multiplying the concentration of each carcinogenic PAH in the sample by its B(a)P TEF, given below, and summing these products.

PAH species	TEF	PAH species	TEF
Benzo(a)anthracene	0.1	Benzo(g,h,i)perylene	0.01
Benzo(a)pyrene	1	Chrysene	0.01
Benzo(b+j)fluoranthene	0.1	Dibenz(a,h)anthracene	1
Benzo(k)fluoranthene	0.1	Indeno(1,2,3-c,d)pyrene	0.1

Where the B(a)P occurs in bitumen fragments it is relatively immobile and does not represent a significant health risk.

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(7) Total PAHs: HIL is based on the sum of the 16 PAHs most commonly reported for contaminated sites (WHO 1998). The application of the total PAH HIL should consider the presence of carcinogenic PAHs and naphthalene (the most volatile PAH). Carcinogenic PAHs reported in the total PAHs should meet the B(a)P TEQ HIL. Naphthalene reported in the total PAHs should meet the relevant HSL.

(8) PCBs: HIL relates to non-dioxin-like PCBs only. Where a PCB source is known, or suspected, to be present at a site, a site-specific assessment of exposure to all PCBs (including dioxin-like PCBs) should be undertaken.

Table 1A(3) Soil HSLs for vapour intrusion (mg/kg)

	HSL A & HSL B Low – high density residential				HSL C recreational / open space				HSL D Commercial / Industrial				
CHEMICAL	0 m to <1 m	1 m to <2 m	2 m to <4m	4 m+	0 m to <1 m	1 m to <2 m	2 m to <4 m	4 m+	0 m to <1 m	1 m to <2 m	2 m to <4 m	4 m+	Soil saturation concentration (Csat)
SAND													
Toluene	160	220	310	540	NL	NL	NL	NL	NL	NL	NL	NL	560
Ethylbenzene	55	NL	NL	NL	NL	NL	NL	NL	NL	NL	NL	NL	64
Xylenes	40	60	95	170	NL	NL	NL	NL	230	NL	NL	NL	300
Naphthalene	3	NL	NL	NL	NL	NL	NL	NL	NL	NL	NL	NL	9
Benzene	0.5	0.5	0.5	0.5	NL	NL	NL	NL	3	3	3	3	360
F1[9]	45	70	110	200	NL	NL	NL	NL	260	370	630	NL	950
F2[10]	110	240	440	NL	NL	NL	NL	NL	NL	NL	NL	NL	560
SILT													
Toluene	390	NL	NL	NL	NL	NL	NL	NL	NL	NL	NL	NL	640
Ethylbenzene	NL	NL	NL	NL	NL	NL	NL	NL	NL	NL	NL	NL	69
Xylenes	95	210	NL	NL	NL	NL	NL	NL	NL	NL	NL	NL	330

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	HSL A & HSL B Low – high density residential				HSL C recreational / open space				HSL D Commercial / Industrial				
Naphthalene	4	NL	NL	NL	NL	NL	NL	NL	NL	NL	NL	NL	10
Benzene	0.6	0.7	1	2	NL	NL	NL	NL	4	4	6	10	440
F1[9]	40	65	100	190	NL	NL	NL	NL	250	360	590	NL	910
F2[10]	230	NL	NL	NL	NL	NL	NL	NL	NL	NL	NL	NL	570
CLAY													
Toluene	480	NL	NL	NL	NL	NL	NL	NL	NL	NL	NL	NL	630
Ethylbenzene	NL	NL	NL	NL	NL	NL	NL	NL	NL	NL	NL	NL	68
Xylenes	110	310	NL	NL	NL	NL	NL	NL	NL	NL	NL	NL	330
Naphthalene	5	NL	NL	NL	NL	NL	NL	NL	NL	NL	NL	NL	10
Benzene	0.7	1	2	3	NL	NL	NL	NL	4	6	9	20	430
F1[9]	50	90	150	290	NL	NL	NL	NL	310	480	NL	NL	850
F2[10]	280	NL	NL	NL	NL	NL	NL	NL	NL	NL	NL	NL	560

Notes:

(1) Land use settings are equivalent to those described in Table 1A(1) Footnote 1 and Schedule B7. HSLs for vapour intrusion for high density residential assume residential occupation of the ground floor. If communal car parks or commercial properties occupy the ground floor, HSL D should be used,

(2) The key limitations of the HSLs should be referred to prior to application and are presented in Friebel and Nadebaum (2011b and 2011d).

(3) Detailed assumptions in the derivation of the HSLs and information on how to apply the HSLs are presented in Friebel and Nadebaum (2011a and 2011b).

(4) Soil HSLs for vapour inhalation incorporate an adjustment factor of 10 applied to the vapour phase partitioning to reflect the differences observed between theoretical estimates of soil vapour partitioning and field measurements. Refer Friebel & Nadebaum (2011a) for further information.

(5) The soil saturation concentration (Csat) is defined as the soil concentration at which the porewater phase cannot dissolve any more of an individual chemical. The soil vapour that is in equilibrium with the porewater will be at its maximum. If the derived soil HSL exceeds Csat, a soil vapour source concentration for a petroleum mixture could not exceed a level that would result in the maximum allowable vapour risk for the given scenario. For these scenarios, no HSL is presented for these chemicals and the HSL is shown as 'not limiting' or 'NL'.

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Figure A4.2: Soil Health safety levels for vapour intrusion (mg/kg)

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Table 1B(6) ESLs for TPH fractions F1 – F4, BTEX and benzo(a)pyrene in soil

CHEMICAL	Soil texture	ESLs (mg/kg dry soil)		
		Areas of ecological significance	Urban residential and public open space	Commercial and industrial
F1 C_6-C_{10}	*Coarse/ Fine*	125*	180*	215*
F2 >C_{10}-C_{16}	*Coarse/ Fine*	25*	120*	170*
F3 >C_{16}-C_{34}	*Coarse*	-	300	1700
	Fine	-	1300	2500
F4 >C_{34}-C_{40}	*Coarse*	-	2800	3300
	Fine	-	5600	6600
Benzene	*Coarse*	10	50	75
	Fine	10	65	95
Toluene	*Coarse*	10	85	135
	Fine	65	105	135
Ethylbenzene	*Coarse*	1.5	70	165
	Fine	40	125	185
Xylenes	*Coarse*	10	105	180
	Fine	1.6	45	95
Benzo(a)pyrene	*Coarse*	0.7	0.7	0.7
	Fine	0.7	0.7	0.7

Notes:

(1) ESLs are of low reliability except where indicated by * which indicates that the ESL is of moderate reliability.

(2) '-' indicates that insufficient data was available to derive a value.

(3) To obtain F1, subtract the sum of BTEX concentrations from C_6-C_{10} fraction and subtract naphthalene from >C_{10}-C_{16} to obtain F2.

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Figure A4.3: Ecological Screening Levels for hydrocarbon fractions and BTEX (mg/kg)

8. Appendix 3: Borehole Logs

Project: 900 Camden Valley Way	Project number:	Client:	Boring no. 001	
Address, City, State: 900 Camden Valley Way, Gledswood NSW 2557		Drilling contractor: Anderson Environmental	Drill rig type: Christie hand core driver	
Logged by: Bo Davidson	Started: 08:20	Bit type: Corer	Diameter: 50 mm	
Date: 27/10/2021	Completed: 08:30	Auger type: Corer		
	Backfilled: Yes	Hammer weight: N/A	Hammer drop: N/A	
	Groundwater depth: N/A	Elevation: 175	Total depth of boring: 1.1 m	

Depth (m)	Sample type	Sample number	Graphic log	Soil description	Munsel colour	Additional test
0.0-0.3	Soil	S1		Brown black clay loam. Fragments < 5%. Sample at 0.3 m		
0.3-0.4	-	-		Black-grey sandy clay loam. Frags <5%		
0.4-0.8	-	-		Orange-black clay. Fragments < 5%		
0.8-1.1	Soil	S2		Grey-orange clay. Frags <5%. Sample at 80cm		

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Project: 900 Camden Valley Way	Project number:	Client:	Boring no. 002	
Address, City, State: 900 Camden Valley Way, Gledswood NSW 2557		Drilling contractor: Anderson Environmental	Drill rig type: Christie hand core driver	
Logged by: Bo Davidson	Started: 08:30	Bit type: Corer	Diameter: 50 mm	
Date: 27/10/2021	Completed: 08:40	Auger type: Corer		
	Backfilled: Yes	Hammer weight: N/A	Hammer drop: N/A	
	Groundwater depth: N/A	Elevation: 175	Total depth of boring: 0.8 m	

Depth (m)	Sample type	Sample number	Graphic log	Soil description	Munsel colour	Additional test
0.0-0.3	Soil	S3		Yellow-black sandy loam. Fragments < 5%. Sample at 0.3 m		
0.3-0.8	Soil	S4		Orange-black clay. Frags <5%. Sample at 0.8m		

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Project: 900 Camden Valley Way	Project number:	Client:	Boring no. 003	
Address, City, State: 900 Camden Valley Way, Gledswood NSW 2557		Drilling contractor: Anderson Environmental	Drill rig type: Christie hand core driver	
Logged by: Bo Davidson	Started: 08:40	Bit type: Corer	Diameter: 50 mm	
Date: 27/10/2021	Completed: 08:50	Auger type: Corer		
	Backfilled: Yes	Hammer weight: N/A	Hammer drop: N/A	
	Groundwater depth: N/A	Elevation: 175	Total depth of boring: 0.9 m	

Depth (m)	Sample type	Sample number	Graphic log	Soil description	Munsel colour	Additional test
0.0-0.2	-	-		Yellow-brown sandy loam. Fragments < 5%. Sample at 0.3 m		
0.2-0.6	Soil	S5		Yellow-brown sandy clay loam. Fragments <5%. Sample at 0.3m		
0.6-0.9	Soil	S6		Yellow-brown clay. Fragments <5%. Sample at 0.8m		

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Project: 900 Camden Valley Way	Project number:	Client:	Boring no. 004	
Address, City, State: 900 Camden Valley Way, Gledswood NSW 2557		Drilling contractor: Anderson Environmental	Drill rig type: Christie hand core driver	
Logged by: Bo Davidson	Started: 08:50	Bit type: Corer	Diameter: 50 mm	
Date: 27/10/2021	Completed: 09:00	Auger type: Corer		
	Backfilled: Yes	Hammer weight: N/A	Hammer drop: N/A	
	Groundwater depth: N/A	Elevation: 175	Total depth of boring: 1.0 m	

Depth (m)	Sample type	Sample number	Graphic log	Soil description	Munsel colour	Additional test
0.0-0.3	Soil	S7		Yellow-brown sandy loam. Fragments < 5%. Sample at 0.3 m		
0.3-0.4	-	-		Brown-red sandy loamy clay. Fragments <5%		
0.4-1.0	Soil	S8		Orange-grey clay. Fragments <5%. Sample at 0.8m		

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Project: 900 Camden Valley Way	Project number:	Client:	Boring no. 005	
Address, City, State: 900 Camden Valley Way, Gledswood NSW 2557		Drilling contractor: Anderson Environmental	Drill rig type: Christie hand core driver	
Logged by: Bo Davidson	Started: 09:00	Bit type: Corer	Diameter: 50 mm	
Date: 27/10/2021	Completed: 09:10	Auger type: Corer		
	Backfilled: Yes	Hammer weight: N/A	Hammer drop: N/A	
	Groundwater depth: N/A	Elevation: 175	Total depth of boring: 0.9 m	

Depth (m)	Sample type	Sample number	Graphic log	Soil description	Munsel colour	Additional test
0.0-0.5	Soil	S9		Yellow-brown sandy loam. Fragments < 5%. Sample at 0.3 m		
0.5-0.8	Soil	S10		Red-brown loamy clay. Fragments <5%. Sample at 0.8		
0.8-0.9	-	-		Red clay. Fragments <5%		

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Project: 900 Camden Valley Way	Project number:	Client:	Boring no. 006	
Address, City, State: 900 Camden Valley Way, Gledswood NSW 2557		Drilling contractor: Anderson Environmental	Drill rig type: Christie hand core driver	
Logged by: Bo Davidson	Started: 09:10	Bit type: Corer	Diameter: 50 mm	
Date: 27/10/2021	Completed: 09:20	Auger type: Corer		
	Backfilled: Yes	Hammer weight: N/A	Hammer drop: N/A	
	Groundwater depth: N/A	Elevation: 175	Total depth of boring: 0.9 m	

Depth (m)	Sample type	Sample number	Graphic log	Soil description	Munsel colour	Additional test
0.0-0.3	Soil	S11		Yellow-brown sandy clay loam. Fragments < 5%. Sample at 0.3 m		
0.3-0.6	-	-		Yellow-brown loamy clay. Fragments <5%		
0.6-0.9	Soil	S12		Red-brown clay. Fragments <5%. Sample at 0.8m		

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Project: 900 Camden Valley Way	Project number:	Client:	Boring no. 007	
Address, City, State: 900 Camden Valley Way, Gledswood NSW 2557		Drilling contractor: Anderson Environmental	Drill rig type: Christie hand core driver	
Logged by: Bo Davidson	Started: 09:20	Bit type: Corer	Diameter: 50 mm	
Date: 27/10/2021	Completed: 09:30	Auger type: Corer		
	Backfilled: Yes	Hammer weight: N/A	Hammer drop: N/A	
	Groundwater depth: N/A	Elevation: 175	Total depth of boring: 1.0 m	

Depth (m)	Sample type	Sample number	Graphic log	Soil description	Munsel colour	Additional test
0.0-0.3	Soil	S13		Yellow-brown sandy clay loam. Fragments < 5%. Sample at 0.3 m		
0.3-0.6	-	-		Orange-brown loamy clay. Fragments <5%		
0.6-1.0	Soil	S14		Orange clay. Fragments <5%. Sample at 0.8m		

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Project: 900 Camden Valley Way	Project number:	Client:	Boring no. 008	
Address, City, State: 900 Camden Valley Way, Gledswood NSW 2557		Drilling contractor: Anderson Environmental	Drill rig type: Christie hand core driver	
Logged by: Bo Davidson	Started: 09:30	Bit type: Corer	Diameter: 50 mm	
Date: 27/10/2021	Completed: 09:40	Auger type: Corer		
	Backfilled: Yes	Hammer weight: N/A	Hammer drop: N/A	
	Groundwater depth: N/A	Elevation: 175	Total depth of boring: 0.8 m	

Depth (m)	Sample type	Sample number	Graphic log	Soil description	Munsel colour	Additional test
0.0-0.3	-	-		Yellow-brown sandy clay loam. Fragments < 5%		
0.3-0.4	Soil	S15		Red-white clay. Fragments <5%, tree roots. Sample at 0.3m		
0.4-0.7	-	-		Orange-brown clay. Fragments <5%		
0.7-0.8	Soil	S16		Red-grey clay. Fragments <5%. Coring stopped by shale fragment Sample at 0.8m		

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Project: 900 Camden Valley Way	Project number:	Client:	Boring no. 009	
Address, City, State: 900 Camden Valley Way, Gledswood NSW 2557		Drilling contractor: Anderson Environmental	Drill rig type: Christie hand core driver	
Logged by: Bo Davidson	Started: 09:40	Bit type: Corer	Diameter: 50 mm	
Date: 27/10/2021	Completed: 09:50	Auger type: Corer		
	Backfilled: Yes	Hammer weight: N/A	Hammer drop: N/A	
	Groundwater depth: N/A	Elevation: 175	Total depth of boring: 1.0 m	

Depth (m)	Sample type	Sample number	Graphic log	Soil description	Munsel colour	Additional test
0.0-0.4	Soil	S17		Black loamy clay. Fragments < 5%. Sample at 0.3 m		
0.4-1.0	Soil	S18		Grey-red clay. Fragments <5%. Sample at 0.8m		

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Project: 900 Camden Valley Way	Project number:	Client:	Boring no. 010	
Address, City, State: 900 Camden Valley Way, Gledswood NSW 2557		Drilling contractor: Anderson Environmental	Drill rig type: Christie hand core driver	
Logged by: Bo Davidson	Started: 09:50	Bit type: Corer	Diameter: 50 mm	
Date: 27/10/2021	Completed: 10:00	Auger type: Corer		
	Backfilled: Yes	Hammer weight: N/A	Hammer drop: N/A	
	Groundwater depth: N/A	Elevation: 175	Total depth of boring: 1.0 m	

Depth (m)	Sample type	Sample number	Graphic log	Soil description	Munsel colour	Additional test
0.0-0.5	Soil	S19		Black loamy clay. Fragments < 5%, brick fragment at 0.2m. Sample at 0.3 m		
0.5-1.0	Soil	S20		Grey-red clay. Fragments <5%. Sample at 0.8m		

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Project: 900 Camden Valley Way	Project number:	Client:	Boring no. 011	
Address, City, State: 900 Camden Valley Way, Gledswood NSW 2557		Drilling contractor: Anderson Environmental	Drill rig type: Christie hand core driver	
Logged by: Bo Davidson	Started: 10:00	Bit type: Corer	Diameter: 50 mm	
Date: 27/10/2021	Completed: 10:10	Auger type: Corer		
	Backfilled: Yes	Hammer weight: N/A	Hammer drop: N/A	
	Groundwater depth: N/A	Elevation: 175	Total depth of boring: 0.9 m	

Depth (m)	Sample type	Sample number	Graphic log	Soil description	Munsel colour	Additional test
0.0-0.3	Soil	S21		Yellow-brown clay loam. Fragments < 5%. Sample at 0.3 m		
0.3-0.9	Soil	S22		Brown-black loamy clay. Fragments <5%. Sample at 0.8m		

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Project: 900 Camden Valley Way	Project number:	Client:	Boring no. 012	
Address, City, State: 900 Camden Valley Way, Gledswood NSW 2557		Drilling contractor: Anderson Environmental	Drill rig type: Christie hand core driver	
Logged by: Bo Davidson	Started: 10:10	Bit type: Corer	Diameter: 50 mm	
Date: 27/10/2021	Completed: 10:20	Auger type: Corer		
	Backfilled: Yes	Hammer weight: N/A	Hammer drop: N/A	
	Groundwater depth: N/A	Elevation: 175	Total depth of boring: 1.1 m	

Depth (m)	Sample type	Sample number	Graphic log	Soil description	Munsel colour	Additional test
0.0-0.3	Soil	S23		Yellow-brown clay loam. Fragments < 5%. Sample at 0.3 m		
0.3-0.6	-	-		Brown-grey loamy clay. Fragments <5%		
0.6-1.1	Soil	S24		Red-grey clay. Fragments <5%. Sample at 0.8m		

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Project: 900 Camden Valley Way	Project number:	Client:	Boring no. 013	
Address, City, State: 900 Camden Valley Way, Gledswood NSW 2557		Drilling contractor: Anderson Environmental	Drill rig type: Christie hand core driver	
Logged by: Bo Davidson	Started: 10:20	Bit type: Corer	Diameter: 50 mm	
Date: 27/10/2021	Completed: 10:30	Auger type: Corer		
	Backfilled: Yes	Hammer weight: N/A	Hammer drop: N/A	
	Groundwater depth: N/A	Elevation: 175	Total depth of boring: 0.8 m	

Depth (m)	Sample type	Sample number	Graphic log	Soil description	Munsel colour	Additional test
0.0-0.1	-	-		Brown-black clay loam. Fragments < 5%		
0.1-0.4	Soil	S25		Brown loamy clay. Fragments <5%, large shale fragment. Sample at 0.3m		
0.4-0.6	-	-		Red-grey clay. Fragments <5%		
0.6-0.8	Soil	S26		Brown-orange clay. Fragments <5%. Sample at 0.8m		

Anderson Environmental Pty Ltd Boring Log: Sheet 13 of 28

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Attachment 2

Project: 900 Camden Valley Way	Project number:	Client:	Boring no. 014	
Address, City, State: 900 Camden Valley Way, Gledswood NSW 2557		Drilling contractor: Anderson Environmental	Drill rig type: Christie hand core driver	
Logged by: Bo Davidson	Started: 10:30	Bit type: Corer	Diameter: 50 mm	
Date: 27/10/2021	Completed: 10:40	Auger type: Corer		
	Backfilled: Yes	Hammer weight: N/A	Hammer drop: N/A	
	Groundwater depth: N/A	Elevation: 175	Total depth of boring: 1.1 m	

Depth (m)	Sample type	Sample number	Graphic log	Soil description	Munsel colour	Additional test
0.0-0.1	-	-		Brown-black clay loam. Fragments < 5%		
0.1-0.4	Soil	S27		Brown loamy clay. Fragments <5%, charcoal at 0.4m. Sample at 0.3m		
0.4-0.8	Soil	S28		Red-brown clay. Fragments <5%. Sample at 0.8m		
0.8-1.1	-	-		Red-grey clay. Fragments <5%		

Anderson Environmental Pty Ltd Boring Log: Sheet 14 of 28

Project: 900 Camden Valley Way	Project number:	Client:	Boring no. 015	
Address, City, State: 900 Camden Valley Way, Gledswood NSW 2557		Drilling contractor: Anderson Environmental	Drill rig type: Christie hand core driver	
Logged by: Bo Davidson	Started: 10:40	Bit type: Corer	Diameter: 50 mm	
Date: 27/10/2021	Completed: 10:50	Auger type: Corer		
	Backfilled: Yes	Hammer weight: N/A	Hammer drop: N/A	
	Groundwater depth: N/A	Elevation: 175	Total depth of boring: 1.0 m	

Depth (m)	Sample type	Sample number	Graphic log	Soil description	Munsel colour	Additional test
0.0-0.1	-	-		Brown-black clay loam. Fragments < 5%		
0.1-0.4	Soil	S29		Red-grey sandy loamy clay. Fragments <5%, gravel layer at 0.2. Sample at 0.3m		
0.4-1.0	Soil	S30		Orange clay. Fragments <5%. Sample at 0.8m		

Anderson Environmental Pty Ltd Boring Log: Sheet 15 of 28

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Attachment 2

Project: 900 Camden Valley Way	Project number:	Client:	Boring no. 016	
Address, City, State: 900 Camden Valley Way, Gledswood NSW 2557		Drilling contractor: Anderson Environmental	Drill rig type: Christie hand core driver	
Logged by: Bo Davidson	Started: 10:50	Bit type: Corer	Diameter: 50 mm	
Date: 27/10/2021	Completed: 11:00	Auger type: Corer		
	Backfilled: Yes	Hammer weight: N/A	Hammer drop: N/A	
	Groundwater depth: N/A	Elevation: 175	Total depth of boring: 1.0 m	

Depth (m)	Sample type	Sample number	Graphic log	Soil description	Munsel colour	Additional test
0.0-0.1	-	-		Brown-black clay loam. Fragments < 5%		
0.1-0.4	Soil	S31		Orange-brown loamy clay. Fragments <5%. Sample at 0.3m		
0.4-0.8	Soil	S32		Orange clay. Fragments <5%, charcoal at 0.5m. Sample at 0.8m		
0.8-1.0	-	-		Yellow-grey clay. Fragments <5%. Sample at 0.8m		

Anderson Environmental Pty Ltd Boring Log: Sheet 16 of 28

Project: 900 Camden Valley Way	Project number:	Client:	Boring no. 017	
Address, City, State: 900 Camden Valley Way, Gledswood NSW 2557		Drilling contractor: Anderson Environmental	Drill rig type: Christie hand core driver	
Logged by: Bo Davidson	Started: 11:00	Bit type: Corer	Diameter: 50 mm	
Date: 27/10/2021	Completed: 11:10	Auger type: Corer		
	Backfilled: Yes	Hammer weight: N/A	Hammer drop: N/A	
	Groundwater depth: N/A	Elevation: 175	Total depth of boring: 1.1 m	

Depth (m)	Sample type	Sample number	Graphic log	Soil description	Munsel colour	Additional test
0.0-0.2	-	-		Black clay loam. Fragments < 5%		
0.2-0.6	Soil	S33		Brown-red clay. Fragments <5%. Sample at 0.3m		
0.6-1.1	Soil	S34		Red-white clay. Fragments <5%. Sample at 0.8m		

Anderson Environmental Pty Ltd Boring Log: Sheet 17 of 28

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Attachment 2

Project: 900 Camden Valley Way	Project number:	Client:	Boring no. 018	
Address, City, State: 900 Camden Valley Way, Gledswood NSW 2557		Drilling contractor: Anderson Environmental	Drill rig type: Christie hand core driver	
Logged by: Bo Davidson	Started: 11:10	Bit type: Corer	Diameter: 50 mm	
Date: 27/10/2021	Completed: 11:20	Auger type: Corer		
	Backfilled: Yes	Hammer weight: N/A	Hammer drop: N/A	
	Groundwater depth: N/A	Elevation: 175	Total depth of boring: 1.0 m	

Depth (m)	Sample type	Sample number	Graphic log	Soil description	Munsel colour	Additional test
0.0-0.2	-	-		Red-brown loamy clay. Fragments < 5%		
0.2-0.3	-	-		Red brick fragment		
0.3-0.6	Soil	S35		Brown orange clay. Fragments <5%		
0.6-1.0	Soil	S36		Red-grey clay. Fragments <5%. Sample at 0.8m		

Anderson Environmental Pty Ltd Boring Log: Sheet 18 of 28

Project: 900 Camden Valley Way	Project number:	Client:	Boring no. 019	
Address, City, State: 900 Camden Valley Way, Gledswood NSW 2557		Drilling contractor: Anderson Environmental	Drill rig type: Christie hand core driver	
Logged by: Bo Davidson	Started: 11:20	Bit type: Corer	Diameter: 50 mm	
Date: 27/10/2021	Completed: 11:30	Auger type: Corer		
	Backfilled: Yes	Hammer weight: N/A	Hammer drop: N/A	
	Groundwater depth: N/A	Elevation: 175	Total depth of boring: 1.0 m	

Depth (m)	Sample type	Sample number	Graphic log	Soil description	Munsel colour	Additional test
0.0-0.2	-	-		Black-brown loamy clay. Fragments ~ 10%		
0.2-1.0	Soil	S37, S38		Red-grey clay. Fragments <5%, Sample at 0.3, sample at 0.8m		

Anderson Environmental Pty Ltd Boring Log: Sheet 19 of 28

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Project: 900 Camden Valley Way	Project number:	Client:	Boring no. 020	
Address, City, State: 900 Camden Valley Way, Gledswood NSW 2557		Drilling contractor: Anderson Environmental	Drill rig type: Christie hand core driver	
Logged by: Bo Davidson	Started: 11:30	Bit type: Corer	Diameter: 50 mm	
Date: 27/10/2021	Completed: 11:40	Auger type: Corer		
	Backfilled: Yes	Hammer weight: N/A	Hammer drop: N/A	
	Groundwater depth: N/A	Elevation: 175	Total depth of boring: 1.1 m	

Depth (m)	Sample type	Sample number	Graphic log	Soil description	Munsel colour	Additional test
0.0-0.1	-	-		Brown-black loamy clay. Fragments <5%		
0.1-0.6	Soil	S39		Orange-red clay. Fragments <5%. Sample at 0.3m		
0.6-1.1	Soil	S40		Red-grey clay. Fragments <5%, Sample at 0.3, sample at 0.8m		

Anderson Environmental Pty Ltd Boring Log: Sheet 20 of 28

Project: 900 Camden Valley Way	Project number:	Client:	Boring no. 021	
Address, City, State: 900 Camden Valley Way, Gledswood NSW 2557		Drilling contractor: Anderson Environmental	Drill rig type: Christie hand core driver	
Logged by: Bo Davidson	Started: 11:40	Bit type: Corer	Diameter: 50 mm	
Date: 27/10/2021	Completed: 11:50	Auger type: Corer		
	Backfilled: Yes	Hammer weight: N/A	Hammer drop: N/A	
	Groundwater depth: N/A	Elevation: 175	Total depth of boring: 1.0 m	

Depth (m)	Sample type	Sample number	Graphic log	Soil description	Munsel colour	Additional test
0.0-0.2	-	-		Yellow-brown clay loam. Fragments <5%		
0.2-1.0	Soil	S41, S42		Red-grey clay. Fragments <5%. Sample at 0.3m and 0.8m		

Anderson Environmental Pty Ltd Boring Log: Sheet 21 of 28

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Attachment 2

Project: 900 Camden Valley Way	Project number:	Client:	Boring no. 022	
Address, City, State: 900 Camden Valley Way, Gledswood NSW 2557		Drilling contractor: Anderson Environmental	Drill rig type: Christie hand core driver	
Logged by: Bo Davidson	Started: 11:50	Bit type: Corer	Diameter: 50 mm	
Date: 27/10/2021	Completed: 12:00	Auger type: Corer		
	Backfilled: Yes	Hammer weight: N/A	Hammer drop: N/A	
	Groundwater depth: N/A	Elevation: 175	Total depth of boring: 1.0 m	

Depth (m)	Sample type	Sample number	Graphic log	Soil description	Munsel colour	Additional test
0.0-0.2	-	-		Grey-black clay loam. Fragments ~ 10%		
0.2-0.5	Soil	S43		Black-brown loamy clay. Fragments <5%. Sample at 0.3m		
0.5-1.0	Soil	S44		Red-grey clay. Fragments <5%. Sample at 0.8m		

Anderson Environmental Pty Ltd Boring Log: Sheet 22 of 28

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Attachment 2

Project: 900 Camden Valley Way	Project number:	Client:	Boring no. 023	
Address, City, State: 900 Camden Valley Way, Gledswood NSW 2557		Drilling contractor: Anderson Environmental	Drill rig type: Christie hand core driver	
Logged by: Bo Davidson	Started: 12:00	Bit type: Corer	Diameter: 50 mm	
Date: 27/10/2021	Completed: 12:10	Auger type: Corer		
	Backfilled: Yes	Hammer weight: N/A	Hammer drop: N/A	
	Groundwater depth: N/A	Elevation: 175	Total depth of boring: 1.0 m	

Depth (m)	Sample type	Sample number	Graphic log	Soil description	Munsel colour	Additional test
0.0-0.3	Soil	S45		Black-brown clay loam. Fragments < 5%, plant roots. Sample at 0.3m		
0.3-0.5	-	-		Black-brown clay. Fragments <5%		
0.5-1.0	Soil	S46		Red-grey clay. Fragments <5%. Sample at 0.8m		

Anderson Environmental Pty Ltd Boring Log: Sheet 23 of 28

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Attachment 2

Project: 900 Camden Valley Way	Project number:	Client:	Boring no. 024	
Address, City, State: 900 Camden Valley Way, Gledswood NSW 2557		Drilling contractor: Anderson Environmental	Drill rig type: Christie hand core driver	
Logged by: Bo Davidson	Started: 13:00	Bit type: Corer	Diameter: 50 mm	
Date: 27/10/2021	Completed: 13:10	Auger type: Corer		
	Backfilled: Yes	Hammer weight: N/A	Hammer drop: N/A	
	Groundwater depth: N/A	Elevation: 175	Total depth of boring: 1.0 m	

Depth (m)	Sample type	Sample number	Graphic log	Soil description	Munsel colour	Additional test
0.0-0.2	-	-		Grey-black clay loam. Fragments < 5%		
0.2-0.4	Soil	S47		Grey-red clay. Fragments <5%. Sample at 0.3m		
0.4-1.0	Soil	S48		Orange-yellow clay. Fragments <5%. Sample at 0.8m		

Anderson Environmental Pty Ltd Boring Log: Sheet 24 of 28

Project: 900 Camden Valley Way	Project number:	Client:	Boring no. 025	
Address, City, State: 900 Camden Valley Way, Gledswood NSW 2557		Drilling contractor: Anderson Environmental	Drill rig type: Christie hand core driver	
Logged by: Bo Davidson	Started: 13:30	Bit type: Corer	Diameter: 50 mm	
Date: 27/10/2021	Completed: 13:40	Auger type: Corer		
	Backfilled: Yes	Hammer weight: N/A	Hammer drop: N/A	
	Groundwater depth: N/A	Elevation: 175	Total depth of boring: 1.0 m	

Depth (m)	Sample type	Sample number	Graphic log	Soil description	Munsel colour	Additional test
0.0-0.1	-	-		Black-brown sandy clay loam. Fragments < 5%		
0.1-0.2	-	-		Fractured brick		
0.2-0.4	Soil	S49		Grey-red clay. Fragments <5%. Sample at 0.3m		
0.4-1.0	Soil	S50		Grey-yellow clay. Fragments <5%. Sample at 0.8m		

Anderson Environmental Pty Ltd Boring Log: Sheet 25 of 28

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Attachment 2

Project: 900 Camden Valley Way	Project number:	Client:	Boring no. 026	
Address, City, State: 900 Camden Valley Way, Gledswood NSW 2557		Drilling contractor: Anderson Environmental	Drill rig type: Christie hand core driver	
Logged by: Bo Davidson	Started: 13:50	Bit type: Corer	Diameter: 50 mm	
Date: 27/10/2021	Completed: 14:00	Auger type: Corer		
	Backfilled: Yes	Hammer weight: N/A	Hammer drop: N/A	
	Groundwater depth: N/A	Elevation: 175	Total depth of boring: 1.0 m	

Depth (m)	Sample type	Sample number	Graphic log	Soil description	Munsel colour	Additional test
0.0-0.3	Soil	S51		Yellow-brown clay loam. Fragments < 5%. Sample at 0.3m		
0.3-0.6	-	-		Grey-red clay. Fragments <5%		
0.6-1.0	Soil	S52		Grey-yellow clay. Fragments <5%. Sample at 0.8m		

Anderson Environmental Pty Ltd Boring Log: Sheet 26 of 28

Project: 900 Camden Valley Way	Project number:	Client:	Boring no. 027	
Address, City, State: 900 Camden Valley Way, Gledswood NSW 2557		Drilling contractor: Anderson Environmental	Drill rig type: Christie hand core driver	
Logged by: Bo Davidson	Started: 13:50	Bit type: Corer	Diameter: 50 mm	
Date: 27/10/2021	Completed: 14:00	Auger type: Corer		
	Backfilled: Yes	Hammer weight: N/A	Hammer drop: N/A	
	Groundwater depth: N/A	Elevation: 175	Total depth of boring: 1.1 m	

Depth (m)	Sample type	Sample number	Graphic log	Soil description	Munsel colour	Additional test
0.0-0.5	Soil	S53		Yellow-brown clay loam. Fragments < 5%. Sample at 0.3m		
0.5-1.1	Soil	S54		Grey-red clay. Fragments <5%. Sample at 0.8m		

Anderson Environmental Pty Ltd Boring Log: Sheet 27 of 28

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Attachment 2

Project: 900 Camden Valley Way	Project number:	Client:	Boring no. 028	
Address, City, State: 900 Camden Valley Way, Gledswood NSW 2557		Drilling contractor: Anderson Environmental	Drill rig type: Christie hand core driver	
Logged by: Bo Davidson	Started: 14:20	Bit type: Corer	Diameter: 50 mm	
Date: 27/10/2021	Completed: 14:30	Auger type: Corer		
	Backfilled: Yes	Hammer weight: N/A	Hammer drop: N/A	
	Groundwater depth: N/A	Elevation: 175	Total depth of boring: 1.0 m	

Depth (m)	Sample type	Sample number	Graphic log	Soil description	Munsel colour	Additional test
0.0-0.3	Soil	S55		Grey-brown sandy clay loam. Fragments ~ 50% (gravels). Sample at 0.3m		
0.3-0.4	-	-		Brown clay. Fragments <5%		
0.4-1.0	Soil	S56		Orange clay. Fragments <5%. Sample at 0.8m		

Anderson Environmental Pty Ltd **Boring Log: Sheet 28 of 28**

9. Appendix 4: Laboratory Results

SGS

ANALYTICAL REPORT

ilac-MRA NATA

Accreditation No. 2562

CLIENT DETAILS		LABORATORY DETAILS	
Contact	Jason Anderson	Manager	Huong Crawford
Client	ANDERSON ENVIRONMENTAL PTY LTD	Laboratory	SGS Alexandria Environmental
Address	SUITE 19 103 GEORGE STREET PARRAMATTA NSW 2150	Address	Unit 16, 33 Maddox St Alexandria NSW 2015
Telephone	61 1300302507	Telephone	+61 2 8594 0400
Facsimile	(Not specified)	Facsimile	+61 2 8594 0499
Email	JASON@ANDERSONENVIRONMENTAL.COM.AU	Email	au.environmental.sydney@sgs.com
Project	**900 Camden Valley Way**	SGS Reference	**SE225212 R0**
Order Number	(Not specified)	Date Received	29 Oct 2021
Samples	56	Date Reported	05 Nov 2021

COMMENTS

Accredited for compliance with ISO/IEC 17025 - Testing. NATA accredited laboratory 2562(4354).

GUIDELINE OBJECTIVES

When the traffic light is green, a comparison of the results and the guideline limit and warn values suggest no exceedances.
When the traffic light is amber, a comparison of the results and guideline warning values suggests one or more warnings.
When the traffic signal is red, a comparison of results and guideline values suggests one or more guideline exceedances.
If all lights are out, no comparison of results and guideline values was performed.
In all cases, closer inspection of results is recommended.

The Guideline Objectives traffic signal device serves to highlight variations between results and guideline values (limit and warn).
As a guide, where the result ± MU indicates no exceedance (result + MU < guideline) or an exceedance (result - MU > guideline).

SIGNATORIES

[redacted]

Bennet LO
Senior Chemist

[redacted]

Shane MCDERMOTT
Inorganic/Metals Chemist

CLPP01

Attachment 2

SGS

ANALYTICAL REPORT SE225212 R0

Sample Number		SE225212.001	SE225212.002	SE225212.003	SE225212.004	SE225212.005	SE225212.006
Sample Matrix		Soil	Soil	Soil	Soil	Soil	Soil
Sample Depth		-	-	-	-	-	-
Sample Date		27/10/21 9:00	27/10/21 9:00	27/10/21 9:10	27/10/21 9:10	27/10/21 9:20	27/10/21 9:20
Guideline		The Excavated Natural Material	The Excavated Natural Material	The Excavated Natural Material	The Excavated Natural Material	The Excavated Natural Material	The Excavated Natural Material
Sample Name		S1	S2	S3	S4	S5	S6

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES Method: AN040/AN320 Tested: 3/11/2021

Parameter	Units	LOR		SE225212.001	SE225212.002	SE225212.003	SE225212.004	SE225212.005	SE225212.006
Lead, Pb	mg/kg	1	Result	270 ±9.8%	12 ±9.8%	290 ±9.8%	60 ±9.8%	26 ±9.8%	16 ±9.8%
			Warn	50	50	50	50	50	50
			Limit	100	100	100	100	100	100

Moisture Content Method: AN002 Tested: 3/11/2021

Parameter	Units	LOR		SE225212.001	SE225212.002	SE225212.003	SE225212.004	SE225212.005	SE225212.006
% Moisture	%w/w	1	Result	10.1	16.8	18.0	15.8	11.3	16.2
			Warn	-	-	-	-	-	-
			Limit	-	-	-	-	-	-

Sample Number		SE225212.007	SE225212.008	SE225212.009	SE225212.010	SE225212.011	SE225212.012
Sample Matrix		Soil	Soil	Soil	Soil	Soil	Soil
Sample Depth		-	-	-	-	-	-
Sample Date		27/10/21 9:30	27/10/21 9:30	27/10/21 9:40	27/10/21 9:40	27/10/21 9:50	27/10/21 9:50
Guideline		The Excavated Natural Material	The Excavated Natural Material	The Excavated Natural Material	The Excavated Natural Material	The Excavated Natural Material	The Excavated Natural Material
Sample Name		S7	S8	S9	S10	S11	S12

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES Method: AN040/AN320 Tested: 3/11/2021

Parameter	Units	LOR		SE225212.007	SE225212.008	SE225212.009	SE225212.010	SE225212.011	SE225212.012
Lead, Pb	mg/kg	1	Result	20 ±9.8%	15 ±9.8%	16 ±9.8%	18 ±9.8%	150 ±9.8%	21 ±9.8%
			Warn	50	50	50	50	50	50
			Limit	100	100	100	100	100	100

Moisture Content Method: AN002 Tested: 3/11/2021

Parameter	Units	LOR		SE225212.007	SE225212.008	SE225212.009	SE225212.010	SE225212.011	SE225212.012
% Moisture	%w/w	1	Result	13.3	17.6	7.4	13.4	9.0	12.8
			Warn	-	-	-	-	-	-
			Limit	-	-	-	-	-	-

Sample Number		SE225212.013	SE225212.014	SE225212.015	SE225212.016	SE225212.017	SE225212.018
Sample Matrix		Soil	Soil	Soil	Soil	Soil	Soil
Sample Depth		-	-	-	-	-	-
Sample Date		27/10/21 10:00	27/10/21 10:00	27/10/21 10:20	27/10/21 10:20	27/10/21 10:40	27/10/21 10:40
Guideline		The Excavated Natural Material	The Excavated Natural Material	The Excavated Natural Material	The Excavated Natural Material	The Excavated Natural Material	The Excavated Natural Material
Sample Name		S13	S14	S15	S16	S17	S18

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES Method: AN040/AN320 Tested: 3/11/2021

Parameter	Units	LOR		SE225212.013	SE225212.014	SE225212.015	SE225212.016	SE225212.017	SE225212.018
Lead, Pb	mg/kg	1	Result	1200 ±9.8%	13 ±9.8%	640 ±9.8%	150 ±9.8%	58 ±9.8%	61 ±9.8%
			Warn	50	50	50	50	50	50
			Limit	100	100	100	100	100	100

Moisture Content Method: AN002 Tested: 3/11/2021

Parameter	Units	LOR		SE225212.013	SE225212.014	SE225212.015	SE225212.016	SE225212.017	SE225212.018
% Moisture	%w/w	1	Result	10.1	15.0	10.5	7.7	20.4	22.6
			Warn	-	-	-	-	-	-
			Limit	-	-	-	-	-	-

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SGS

ANALYTICAL REPORT SE225212 R0

	Sample Number	SE225212.019	SE225212.020	SE225212.021	SE225212.022	SE225212.023	SE225212.024
	Sample Matrix	Soil	Soil	Soil	Soil	Soil	Soil
	Sample Depth	-	-	-	-	-	-
	Sample Date	27/10/21 10:50	27/10/21 0:50	27/10/21 11:00	27/10/21 11:00	27/10/21 11:20	27/10/21 1:20
	Guideline	The Excavated Natural Material	The Excavated Natural Material	The Excavated Natural Material	The Excavated Natural Material	The Excavated Natural Material	The Excavated Natural Material
	Sample Name	S19	S20	S21	S22	S23	S24

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES Method: AN040/AN320 Tested: 3/11/2021

Parameter	Units	LOR		SE225212.019	SE225212.020	SE225212.021	SE225212.022	SE225212.023	SE225212.024
Lead, Pb	mg/kg	1	Result	68 ±9.8%	24 ±9.8%	140 ±9.8%	37 ±9.8%	97 ±9.8%	12 ±9.8%
			Warn	50	50	50	50	50	50
			Limit	100	100	100	100	100	100

Moisture Content Method: AN002 Tested: 3/11/2021

Parameter	Units	LOR		SE225212.019	SE225212.020	SE225212.021	SE225212.022	SE225212.023	SE225212.024
% Moisture	%w/w	1	Result	19.4	21.9	14.3	17.8	12.2	19.1
			Warn	-	-	-	-	-	-
			Limit	-	-	-	-	-	-

	Sample Number	SE225212.025	SE225212.026	SE225212.027	SE225212.028	SE225212.029	SE225212.030
	Sample Matrix	Soil	Soil	Soil	Soil	Soil	Soil
	Sample Depth	-	-	-	-	-	-
	Sample Date	27/10/21 11:30	27/10/21 11:30	27/10/21 11:30	27/10/21 11:40	27/10/21 11:40	27/10/21 11:50
	Guideline	The Excavated Natural Material	The Excavated Natural Material	The Excavated Natural Material	The Excavated Natural Material	The Excavated Natural Material	The Excavated Natural Material
	Sample Name	S25	S26	S27	S28	S29	S30

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES Method: AN040/AN320 Tested: 3/11/2021

Parameter	Units	LOR		SE225212.025	SE225212.026	SE225212.027	SE225212.028	SE225212.029	SE225212.030
Lead, Pb	mg/kg	1	Result	93 ±9.8%	22 ±9.8%	160 ±9.8%	21 ±9.8%	460 ±9.8%	16 ±9.8%
			Warn	50	50	50	50	50	50
			Limit	100	100	100	100	100	100

Moisture Content Method: AN002 Tested: 3/11/2021

Parameter	Units	LOR		SE225212.025	SE225212.026	SE225212.027	SE225212.028	SE225212.029	SE225212.030
% Moisture	%w/w	1	Result	16.9	22.6	18.2	17.6	12.6	20.2
			Warn	-	-	-	-	-	-
			Limit	-	-	-	-	-	-

	Sample Number	SE225212.031	SE225212.032	SE225212.033	SE225212.034	SE225212.035	SE225212.036
	Sample Matrix	Soil	Soil	Soil	Soil	Soil	Soil
	Sample Depth	-	-	-	-	-	-
	Sample Date	27/10/21 11:50	27/10/21 12:00	27/10/21 12:10	27/10/21 12:10	27/10/21 12:20	27/10/21 12:20
	Guideline	The Excavated Natural Material	The Excavated Natural Material	The Excavated Natural Material	The Excavated Natural Material	The Excavated Natural Material	The Excavated Natural Material
	Sample Name	S31	S32	S33	S34	S35	S36

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES Method: AN040/AN320 Tested: 3/11/2021

Parameter	Units	LOR		SE225212.031	SE225212.032	SE225212.033	SE225212.034	SE225212.035	SE225212.036
Lead, Pb	mg/kg	1	Result	240 ±9.8%	21 ±9.8%	280 ±9.8%	17 ±9.8%	380 ±9.8%	9 ±9.8%
			Warn	50	50	50	50	50	50
			Limit	100	100	100	100	100	100

Moisture Content Method: AN002 Tested: 3/11/2021

Parameter	Units	LOR		SE225212.031	SE225212.032	SE225212.033	SE225212.034	SE225212.035	SE225212.036
% Moisture	%w/w	1	Result	16.4	16.4	17.3	17.5	18.9	18.2
			Warn	-	-	-	-	-	-
			Limit	-	-	-	-	-	-

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ANALYTICAL REPORT SE225212 R0

Sample Number		SE225212.037	SE225212.038	SE225212.039	SE225212.040	SE225212.041	SE225212.042
Sample Matrix		Soil	Soil	Soil	Soil	Soil	Soil
Sample Depth		-	-	-	-	-	-
Sample Date		27/10/21 12:30	27/10/21 12:30	27/10/21 12:40	27/10/21 13:00	27/10/21 13:10	27/10/21 13:10
Guideline		The Excavated Natural Material	The Excavated Natural Material	The Excavated Natural Material	The Excavated Natural Material	The Excavated Natural Material	The Excavated Natural Material
Sample Name		S37	S38	S39	S40	S41	S42

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES Method: AN040/AN320 Tested: 3/11/2021

Parameter	Units	LOR		SE225212.037	SE225212.038	SE225212.039	SE225212.040	SE225212.041	SE225212.042
Lead, Pb	mg/kg	1	Result	30 ±9.8%	15 ±9.8%	100 ±9.8%	11 ±9.8%	24 ±9.8%	12 ±9.8%
			Warn	50	50	50	50	50	50
			Limit	100	100	100	100	100	100

Moisture Content Method: AN002 Tested: 3/11/2021

Parameter	Units	LOR		SE225212.037	SE225212.038	SE225212.039	SE225212.040	SE225212.041	SE225212.042
% Moisture	%w/w	1	Result	18.9	16.2	16.3	21.0	17.4	16.8
			Warn	-	-	-	-	-	-
			Limit	-	-	-	-	-	-

Sample Number		SE225212.043	SE225212.044	SE225212.045	SE225212.046	SE225212.047	SE225212.048
Sample Matrix		Soil	Soil	Soil	Soil	Soil	Soil
Sample Depth		-	-	-	-	-	-
Sample Date		27/10/21 13:30	27/10/21 13:30	27/10/21 13:50	27/10/21 13:50	27/10/21 14:00	27/10/21 14:00
Guideline		The Excavated Natural Material	The Excavated Natural Material	The Excavated Natural Material	The Excavated Natural Material	The Excavated Natural Material	The Excavated Natural Material
Sample Name		S43	S44	S45	S46	S47	S48

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES Method: AN040/AN320 Tested: 3/11/2021

Parameter	Units	LOR		SE225212.043	SE225212.044	SE225212.045	SE225212.046	SE225212.047	SE225212.048
Lead, Pb	mg/kg	1	Result	21 ±9.8%	11 ±9.8%	31 ±9.8%	11 ±9.8%	42 ±9.8%	14 ±9.8%
			Warn	50	50	50	50	50	50
			Limit	100	100	100	100	100	100

Moisture Content Method: AN002 Tested: 3/11/2021

Parameter	Units	LOR		SE225212.043	SE225212.044	SE225212.045	SE225212.046	SE225212.047	SE225212.048
% Moisture	%w/w	1	Result	17.6	18.5	14.1	16.9	15.3	16.4
			Warn	-	-	-	-	-	-
			Limit	-	-	-	-	-	-

Sample Number		SE225212.049	SE225212.050	SE225212.051	SE225212.052	SE225212.053	SE225212.054
Sample Matrix		Soil	Soil	Soil	Soil	Soil	Soil
Sample Depth		-	-	-	-	-	-
Sample Date		27/10/21 16:10	27/10/21 16:10	27/10/21 16:20	27/10/21 16:20	27/10/21 16:40	27/10/21 16:50
Guideline		The Excavated Natural Material	The Excavated Natural Material	The Excavated Natural Material	The Excavated Natural Material	The Excavated Natural Material	The Excavated Natural Material
Sample Name		S49	S50	S51	S52	S53	S54

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES Method: AN040/AN320 Tested: 3/11/2021

Parameter	Units	LOR		SE225212.049	SE225212.050	SE225212.051	SE225212.052	SE225212.053	SE225212.054
Lead, Pb	mg/kg	1	Result	130 ±9.8%	25 ±9.8%	210 ±9.8%	20 ±9.8%	47 ±9.8%	23 ±9.8%
			Warn	50	50	50	50	50	50
			Limit	100	100	100	100	100	100

Moisture Content Method: AN002 Tested: 3/11/2021

Parameter	Units	LOR		SE225212.049	SE225212.050	SE225212.051	SE225212.052	SE225212.053	SE225212.054
% Moisture	%w/w	1	Result	16.3	16.3	15.3	13.0	19.0	19.8
			Warn	-	-	-	-	-	-
			Limit	-	-	-	-	-	-

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SGS ANALYTICAL REPORT SE225212 R0

	Sample Number	SE225212.055	SE225212.056
	Sample Matrix	Soil	Soil
	Sample Depth	-	-
	Sample Date	27/10/21 16:50	27/10/21 16:55
	Guideline	The Excavated Natural Material	The Excavated Natural Material
	Sample Name	S55	S56

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES Method: AN040/AN320 Tested: 3/11/2021

Parameter	Units	LOR		SE225212.055	SE225212.056
Lead, Pb	mg/kg	1	Result	180 ±9.8%	15 ±9.8%
			Warn	50	50
			Limit	100	100

Moisture Content Method: AN002 Tested: 3/11/2021

Parameter	Units	LOR		SE225212.055	SE225212.056
% Moisture	%w/w	1	Result	15.1	20.7
			Warn	-	-
			Limit	-	-

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QC SUMMARY SE225212 R0

MB blank results are compared to the Limit of Reporting.
LCS and MS spike recoveries are measured as the percentage of analyte recovered from the sample compared the the amount of analyte spiked into the sample.
DUP and MSD relative percent differences are measured against their original counterpart samples according to the formula : *the absolute difference of the two results divided by the average of the two results as a percentage.* Where the DUP RPD is 'NA' , the results are less than the LOR and thus the RPD is not applicable.

Moisture Content Method: AN002

Parameter	QC Ref	Units	LOR	DUP %RPD
% Moisture	LB236248	%w/w	1	3 - 5%
	LB236249	%w/w	1	5 - 9%
	LB236250	%w/w	1	1 - 4%

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES Method: AN040/AN320

Parameter	QC Ref	Units	LOR	MB	DUP %RPD	LCS %REC	MS %REC
Lead, Pb	LB236261	mg/kg	1	<1	54%	102%	119%
	LB236262	mg/kg	1	<1	9 - 19%	109%	75%
	LB236263	mg/kg	1	<1	1 - 15%	103%	50%

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METHOD SUMMARY

SE225212 R0

METHOD	METHODOLOGY SUMMARY
AN002	The test is carried out by drying (at either 40°C or 105°C) a known mass of sample in a weighed evaporating basin. After fully dry the sample is re-weighed. Samples such as sludge and sediment having high percentages of moisture will take some time in a drying oven for complete removal of water.
AN040	A portion of sample is digested with Nitric acid to decompose organic matter and Hydrochloric acid to complete the digestion of metals and then filtered for analysis by ASS or ICP as per USEPA Method 200.8.
AN040/AN320	A portion of sample is digested with nitric acid to decompose organic matter and hydrochloric acid to complete the digestion of metals. The digest is then analysed by ICP OES with metals results reported on the dried sample basis. Based on USEPA method 200.8 and 6010C.

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FOOTNOTES SE225212 R0

FOOTNOTES

IS	Insufficient sample for analysis.	QFH	QC result is above the upper tolerance		
LNR	Sample listed, but not received.	QFL	QC result is below the lower tolerance		
*	NATA accreditation does not cover the performance of this service.	NA	The sample was not analysed for this analyte		
**	Indicative data, theoretical holding time exceeded.	HLimit	High Guideline Limit	Note: Some limits may not apply, depending on guideline. Results outside the HLimit or LLimit will be flagged red. Results outside the HWarn or LWarn, but inside the Limits will be flagged as warnings. Interpretation	
***	Indicates that both * and ** apply.	HWarn	High Guideline Warning Limit		
LOR	Limit of Reporting	LWarn	Low Guideline Warning Limit		
↑↓	Raised or lowered Limit of Reporting	LLimit	Low Guideline Limit		

Unless it is reported that sampling has been performed by SGS, the samples have been analysed as received.
Solid samples expressed on a dry weight basis.

Where "Total" analyte groups are reported (for example, Total PAHs, Total OC Pesticides) the total will be calculated as the sum of the individual analytes, with those analytes that are reported as <LOR being assumed to be zero. The summed (Total) limit of reporting is calculated by summing the individual analyte LORs and dividing by two. For example, where 16 individual analytes are being summed and each has an LOR of 0.1 mg/kg, the "Totals" LOR will be 1.6 / 2 (0.8 mg/kg). Where only 2 analytes are being summed, the "Total" LOR will be the sum of those two LORs.

Some totals may not appear to add up because the total is rounded after adding up the raw values.

If reported, measurement uncertainty follow the ± sign after the analytical result and is expressed as the expanded uncertainty calculated using a coverage factor of 2, providing a level of confidence of approximately 95%, unless stated otherwise in the comments section of this report.

Results reported for samples tested under test methods with codes starting with ARS-SOP, radionuclide or gross radioactivity concentrations are expressed in becquerel (Bq) per unit of mass or volume or per wipe as stated on the report. Becquerel is the SI unit for activity and equals one nuclear transformation per second.
Note that in terms of units of radioactivity:

a. 1 Bq is equivalent to 27 pCi
b. 37 MBq is equivalent to 1 mCi

For results reported for samples tested under test methods with codes starting with ARS-SOP, less than (<) values indicate the detection limit for each radionuclide or parameter for the measurement system used. The respective detection limits have been calculated in accordance with ISO 11929.

The QC and MU criteria are subject to internal review according to the SGS QAQC plan and may be provided on request or alternatively can be found here: www.sgs.com.au/en-gb/environment-health-and-safety

This document is issued by the Company under its General Conditions of Service accessible at www.sgs.com/en/Terms-and-Conditions.aspx. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein.

Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and

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STATEMENT OF QA/QC PERFORMANCE

SE225212 R0

CLIENT DETAILS		LABORATORY DETAILS	
Contact	Jason Anderson	Manager	Huong Crawford
Client	ANDERSON ENVIRONMENTAL PTY LTD	Laboratory	SGS Alexandria Environmental
Address	SUITE 19 103 GEORGE STREET PARRAMATTA NSW 2150	Address	Unit 16, 33 Maddox St Alexandria NSW 2015
Telephone	61 1300302507	Telephone	+61 2 8594 0400
Facsimile	(Not specified)	Facsimile	+61 2 8594 0499
Email	JASON@ANDERSONENVIRONMENTAL.COM.AU	Email	au.environmental.sydney@sgs.com
Project	**900 Camden Valley Way**	SGS Reference	**SE225212 R0**
Order Number	(Not specified)	Date Received	29 Oct 2021
Samples	56	Date Reported	05 Nov 2021

COMMENTS

All the laboratory data for each environmental matrix was compared to SGS' stated Data Quality Objectives (DQO). Comments arising from the comparison were made and are reported below.

The data relating to sampling was taken from the Chain of Custody document.
This QA/QC Statement must be read in conjunction with the referenced Analytical Report.
The Statement and the Analytical Report must not be reproduced except in full.

All Data Quality Objectives were met with the exception of the following.

Duplicate	Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES	1 item
Matrix Spike	Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES	1 item
	Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES	1 item

SAMPLE SUMMARY

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Member of the SGS Group

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HOLDING TIME SUMMARY

SE225212 R0

SGS holding time criteria are drawn from current regulations and are highly dependent on sample container preservation as specified in the SGS "Field Sampling Guide for Containers and Holding Time" (ref: GU-(AU)-ENV.001). Soil samples guidelines are derived from NEPM "Schedule B(3) Guideline on Laboratory Analysis of Potentially Contaminated Soils". Water sample guidelines are derived from "AS/NZS 5667.1 : 1998 Water Quality - sampling part 1" and APHA "Standard Methods for the Examination of Water and Wastewater" 21st edition 2005.

Extraction and analysis holding time due dates listed are calculated from the date sampled, although holding times may be extended after laboratory extraction for some analytes. The due dates are the suggested dates that samples may be held before extraction or analysis and still be considered valid.

Extraction and analysis dates are shown in Green when within suggested criteria or Red with an appended dagger symbol (†) when outside suggested criteria. If the

Moisture Content — Method: ME-(AU)-[ENV]AN002

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
S1	SE225212.001	LB236248	27 Oct 2021	29 Oct 2021	10 Nov 2021	03 Nov 2021	08 Nov 2021	05 Nov 2021
S2	SE225212.002	LB236248	27 Oct 2021	29 Oct 2021	10 Nov 2021	03 Nov 2021	08 Nov 2021	05 Nov 2021
S3	SE225212.003	LB236248	27 Oct 2021	29 Oct 2021	10 Nov 2021	03 Nov 2021	08 Nov 2021	05 Nov 2021
S4	SE225212.004	LB236248	27 Oct 2021	29 Oct 2021	10 Nov 2021	03 Nov 2021	08 Nov 2021	05 Nov 2021
S5	SE225212.005	LB236248	27 Oct 2021	29 Oct 2021	10 Nov 2021	03 Nov 2021	08 Nov 2021	05 Nov 2021
S6	SE225212.006	LB236248	27 Oct 2021	29 Oct 2021	10 Nov 2021	03 Nov 2021	08 Nov 2021	06 Nov 2021
S7	SE225212.007	LB236248	27 Oct 2021	29 Oct 2021	10 Nov 2021	03 Nov 2021	08 Nov 2021	06 Nov 2021
S8	SE225212.008	LB236248	27 Oct 2021	29 Oct 2021	10 Nov 2021	03 Nov 2021	08 Nov 2021	06 Nov 2021
S9	SE225212.009	LB236248	27 Oct 2021	29 Oct 2021	10 Nov 2021	03 Nov 2021	08 Nov 2021	05 Nov 2021
S10	SE225212.010	LB236248	27 Oct 2021	29 Oct 2021	10 Nov 2021	03 Nov 2021	08 Nov 2021	05 Nov 2021
S11	SE225212.011	LB236248	27 Oct 2021	29 Oct 2021	10 Nov 2021	03 Nov 2021	08 Nov 2021	05 Nov 2021
S12	SE225212.012	LB236248	27 Oct 2021	29 Oct 2021	10 Nov 2021	03 Nov 2021	08 Nov 2021	05 Nov 2021
S13	SE225212.013	LB236248	27 Oct 2021	29 Oct 2021	10 Nov 2021	03 Nov 2021	08 Nov 2021	05 Nov 2021
S14	SE225212.014	LB236248	27 Oct 2021	29 Oct 2021	10 Nov 2021	03 Nov 2021	08 Nov 2021	06 Nov 2021
S15	SE225212.015	LB236248	27 Oct 2021	29 Oct 2021	10 Nov 2021	03 Nov 2021	08 Nov 2021	06 Nov 2021
S16	SE225212.016	LB236248	27 Oct 2021	29 Oct 2021	10 Nov 2021	03 Nov 2021	08 Nov 2021	05 Nov 2021
S17	SE225212.017	LB236248	27 Oct 2021	29 Oct 2021	10 Nov 2021	03 Nov 2021	08 Nov 2021	05 Nov 2021
S18	SE225212.018	LB236248	27 Oct 2021	29 Oct 2021	10 Nov 2021	03 Nov 2021	08 Nov 2021	05 Nov 2021
S19	SE225212.019	LB236248	27 Oct 2021	29 Oct 2021	10 Nov 2021	03 Nov 2021	08 Nov 2021	05 Nov 2021
S20	SE225212.020	LB236249	27 Oct 2021	29 Oct 2021	10 Nov 2021	03 Nov 2021	08 Nov 2021	06 Nov 2021
S21	SE225212.021	LB236249	27 Oct 2021	29 Oct 2021	10 Nov 2021	03 Nov 2021	08 Nov 2021	06 Nov 2021
S22	SE225212.022	LB236249	27 Oct 2021	29 Oct 2021	10 Nov 2021	03 Nov 2021	08 Nov 2021	06 Nov 2021
S23	SE225212.023	LB236249	27 Oct 2021	29 Oct 2021	10 Nov 2021	03 Nov 2021	08 Nov 2021	06 Nov 2021
S24	SE225212.024	LB236249	27 Oct 2021	29 Oct 2021	10 Nov 2021	03 Nov 2021	08 Nov 2021	05 Nov 2021
S25	SE225212.025	LB236249	27 Oct 2021	29 Oct 2021	10 Nov 2021	03 Nov 2021	08 Nov 2021	05 Nov 2021
S26	SE225212.026	LB236249	27 Oct 2021	29 Oct 2021	10 Nov 2021	03 Nov 2021	08 Nov 2021	05 Nov 2021
S27	SE225212.027	LB236249	27 Oct 2021	29 Oct 2021	10 Nov 2021	03 Nov 2021	08 Nov 2021	05 Nov 2021
S28	SE225212.028	LB236249	27 Oct 2021	29 Oct 2021	10 Nov 2021	03 Nov 2021	08 Nov 2021	06 Nov 2021
S29	SE225212.029	LB236249	27 Oct 2021	29 Oct 2021	10 Nov 2021	03 Nov 2021	08 Nov 2021	06 Nov 2021
S30	SE225212.030	LB236249	27 Oct 2021	29 Oct 2021	10 Nov 2021	03 Nov 2021	08 Nov 2021	06 Nov 2021
S31	SE225212.031	LB236249	27 Oct 2021	29 Oct 2021	10 Nov 2021	03 Nov 2021	08 Nov 2021	05 Nov 2021
S32	SE225212.032	LB236249	27 Oct 2021	29 Oct 2021	10 Nov 2021	03 Nov 2021	08 Nov 2021	05 Nov 2021
S33	SE225212.033	LB236249	27 Oct 2021	29 Oct 2021	10 Nov 2021	03 Nov 2021	08 Nov 2021	05 Nov 2021
S34	SE225212.034	LB236249	27 Oct 2021	29 Oct 2021	10 Nov 2021	03 Nov 2021	08 Nov 2021	05 Nov 2021
S35	SE225212.035	LB236249	27 Oct 2021	29 Oct 2021	10 Nov 2021	03 Nov 2021	08 Nov 2021	05 Nov 2021
S36	SE225212.036	LB236249	27 Oct 2021	29 Oct 2021	10 Nov 2021	03 Nov 2021	08 Nov 2021	06 Nov 2021
S37	SE225212.037	LB236249	27 Oct 2021	29 Oct 2021	10 Nov 2021	03 Nov 2021	08 Nov 2021	06 Nov 2021
S38	SE225212.038	LB236249	27 Oct 2021	29 Oct 2021	10 Nov 2021	03 Nov 2021	08 Nov 2021	06 Nov 2021
S39	SE225212.039	LB236250	27 Oct 2021	29 Oct 2021	10 Nov 2021	03 Nov 2021	08 Nov 2021	05 Nov 2021
S40	SE225212.040	LB236250	27 Oct 2021	29 Oct 2021	10 Nov 2021	03 Nov 2021	08 Nov 2021	05 Nov 2021
S41	SE225212.041	LB236250	27 Oct 2021	29 Oct 2021	10 Nov 2021	03 Nov 2021	08 Nov 2021	05 Nov 2021
S42	SE225212.042	LB236250	27 Oct 2021	29 Oct 2021	10 Nov 2021	03 Nov 2021	08 Nov 2021	06 Nov 2021
S43	SE225212.043	LB236250	27 Oct 2021	29 Oct 2021	10 Nov 2021	03 Nov 2021	08 Nov 2021	06 Nov 2021
S44	SE225212.044	LB236250	27 Oct 2021	29 Oct 2021	10 Nov 2021	03 Nov 2021	08 Nov 2021	06 Nov 2021
S45	SE225212.045	LB236250	27 Oct 2021	29 Oct 2021	10 Nov 2021	03 Nov 2021	08 Nov 2021	06 Nov 2021
S46	SE225212.046	LB236250	27 Oct 2021	29 Oct 2021	10 Nov 2021	03 Nov 2021	08 Nov 2021	05 Nov 2021
S47	SE225212.047	LB236250	27 Oct 2021	29 Oct 2021	10 Nov 2021	03 Nov 2021	08 Nov 2021	05 Nov 2021
S48	SE225212.048	LB236250	27 Oct 2021	29 Oct 2021	10 Nov 2021	03 Nov 2021	08 Nov 2021	05 Nov 2021
S49	SE225212.049	LB236250	27 Oct 2021	29 Oct 2021	10 Nov 2021	03 Nov 2021	08 Nov 2021	05 Nov 2021
S50	SE225212.050	LB236250	27 Oct 2021	29 Oct 2021	10 Nov 2021	03 Nov 2021	08 Nov 2021	06 Nov 2021
S51	SE225212.051	LB236250	27 Oct 2021	29 Oct 2021	10 Nov 2021	03 Nov 2021	08 Nov 2021	06 Nov 2021
S52	SE225212.052	LB236250	27 Oct 2021	29 Oct 2021	10 Nov 2021	03 Nov 2021	08 Nov 2021	06 Nov 2021
S53	SE225212.053	LB236250	27 Oct 2021	29 Oct 2021	10 Nov 2021	03 Nov 2021	08 Nov 2021	06 Nov 2021
S54	SE225212.054	LB236250	27 Oct 2021	29 Oct 2021	10 Nov 2021	03 Nov 2021	08 Nov 2021	05 Nov 2021
S55	SE225212.055	LB236250	27 Oct 2021	29 Oct 2021	10 Nov 2021	03 Nov 2021	08 Nov 2021	05 Nov 2021
S56	SE225212.056	LB236250	27 Oct 2021	29 Oct 2021	10 Nov 2021	03 Nov 2021	08 Nov 2021	05 Nov 2021

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES — Method: ME-(AU)-[ENV]AN040/AN320

Sample Name	Sample No.	QC Ref

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HOLDING TIME SUMMARY

SE225212 R0

SGS holding time criteria are drawn from current regulations and are highly dependent on sample container preservation as specified in the SGS "Field Sampling Guide for Containers and Holding Time" (ref: GU-(AU)-ENV 001). Soil samples guidelines are derived from NEPM "Schedule B(3) Guideline on Laboratory Analysis of Potentially Contaminated Soils". Water sample guidelines are derived from "AS/NZS 5667.1 : 1998 Water Quality - sampling part 1" and APHA "Standard Methods for the Examination of Water and Wastewater" 21st edition 2005.

Extraction and analysis holding time due dates listed are calculated from the date sampled, although holding times may be extended after laboratory extraction for some analytes. The due dates are the suggested dates that samples may be held before extraction or analysis and still be considered valid.

Extraction and analysis dates are shown in Green when within suggested criteria or Red with an appended dagger symbol (†) when outside suggested criteria. If the

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES (continued) Method: ME-(AU)-[ENV]AN040/AN320

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
S1	SE226212.001	LB236261	27 Oct 2021	29 Oct 2021	26 Apr 2022	03 Nov 2021	26 Apr 2022	05 Nov 2021
S2	SE226212.002	LB236261	27 Oct 2021	29 Oct 2021	26 Apr 2022	03 Nov 2021	26 Apr 2022	05 Nov 2021
S3	SE226212.003	LB236261	27 Oct 2021	29 Oct 2021	26 Apr 2022	03 Nov 2021	26 Apr 2022	05 Nov 2021
S4	SE226212.004	LB236261	27 Oct 2021	29 Oct 2021	26 Apr 2022	03 Nov 2021	26 Apr 2022	05 Nov 2021
S5	SE226212.005	LB236261	27 Oct 2021	29 Oct 2021	26 Apr 2022	03 Nov 2021	26 Apr 2022	05 Nov 2021
S6	SE226212.006	LB236261	27 Oct 2021	29 Oct 2021	26 Apr 2022	03 Nov 2021	26 Apr 2022	05 Nov 2021
S7	SE226212.007	LB236261	27 Oct 2021	29 Oct 2021	26 Apr 2022	03 Nov 2021	26 Apr 2022	05 Nov 2021
S8	SE226212.008	LB236261	27 Oct 2021	29 Oct 2021	26 Apr 2022	03 Nov 2021	26 Apr 2022	05 Nov 2021
S9	SE226212.009	LB236261	27 Oct 2021	29 Oct 2021	26 Apr 2022	03 Nov 2021	26 Apr 2022	05 Nov 2021
S10	SE226212.010	LB236261	27 Oct 2021	29 Oct 2021	26 Apr 2022	03 Nov 2021	26 Apr 2022	05 Nov 2021
S11	SE226212.011	LB236261	27 Oct 2021	29 Oct 2021	26 Apr 2022	03 Nov 2021	26 Apr 2022	05 Nov 2021
S12	SE226212.012	LB236261	27 Oct 2021	29 Oct 2021	26 Apr 2022	03 Nov 2021	26 Apr 2022	05 Nov 2021
S13	SE226212.013	LB236261	27 Oct 2021	29 Oct 2021	26 Apr 2022	03 Nov 2021	26 Apr 2022	05 Nov 2021
S14	SE226212.014	LB236261	27 Oct 2021	29 Oct 2021	26 Apr 2022	03 Nov 2021	26 Apr 2022	05 Nov 2021
S15	SE226212.015	LB236261	27 Oct 2021	29 Oct 2021	26 Apr 2022	03 Nov 2021	26 Apr 2022	05 Nov 2021
S16	SE226212.016	LB236261	27 Oct 2021	29 Oct 2021	26 Apr 2022	03 Nov 2021	26 Apr 2022	05 Nov 2021
S17	SE226212.017	LB236261	27 Oct 2021	29 Oct 2021	26 Apr 2022	03 Nov 2021	26 Apr 2022	05 Nov 2021
S18	SE226212.018	LB236261	27 Oct 2021	29 Oct 2021	26 Apr 2022	03 Nov 2021	26 Apr 2022	05 Nov 2021
S19	SE226212.019	LB236261	27 Oct 2021	29 Oct 2021	26 Apr 2022	03 Nov 2021	26 Apr 2022	05 Nov 2021
S20	SE226212.020	LB236262	27 Oct 2021	29 Oct 2021	26 Apr 2022	03 Nov 2021	26 Apr 2022	05 Nov 2021
S21	SE226212.021	LB236262	27 Oct 2021	29 Oct 2021	26 Apr 2022	03 Nov 2021	26 Apr 2022	05 Nov 2021
S22	SE226212.022	LB236262	27 Oct 2021	29 Oct 2021	26 Apr 2022	03 Nov 2021	26 Apr 2022	05 Nov 2021
S23	SE226212.023	LB236262	27 Oct 2021	29 Oct 2021	26 Apr 2022	03 Nov 2021	26 Apr 2022	05 Nov 2021
S24	SE226212.024	LB236262	27 Oct 2021	29 Oct 2021	26 Apr 2022	03 Nov 2021	26 Apr 2022	05 Nov 2021
S25	SE226212.025	LB236262	27 Oct 2021	29 Oct 2021	26 Apr 2022	03 Nov 2021	26 Apr 2022	05 Nov 2021
S26	SE226212.026	LB236262	27 Oct 2021	29 Oct 2021	26 Apr 2022	03 Nov 2021	26 Apr 2022	05 Nov 2021
S27	SE226212.027	LB236262	27 Oct 2021	29 Oct 2021	26 Apr 2022	03 Nov 2021	26 Apr 2022	05 Nov 2021
S28	SE226212.028	LB236262	27 Oct 2021	29 Oct 2021	26 Apr 2022	03 Nov 2021	26 Apr 2022	05 Nov 2021
S29	SE226212.029	LB236262	27 Oct 2021	29 Oct 2021	26 Apr 2022	03 Nov 2021	26 Apr 2022	05 Nov 2021
S30	SE226212.030	LB236262	27 Oct 2021	29 Oct 2021	26 Apr 2022	03 Nov 2021	26 Apr 2022	05 Nov 2021
S31	SE226212.031	LB236262	27 Oct 2021	29 Oct 2021	26 Apr 2022	03 Nov 2021	26 Apr 2022	05 Nov 2021
S32	SE226212.032	LB236262	27 Oct 2021	29 Oct 2021	26 Apr 2022	03 Nov 2021	26 Apr 2022	05 Nov 2021
S33	SE226212.033	LB236262	27 Oct 2021	29 Oct 2021	26 Apr 2022	03 Nov 2021	26 Apr 2022	05 Nov 2021
S34	SE226212.034	LB236262	27 Oct 2021	29 Oct 2021	26 Apr 2022	03 Nov 2021	26 Apr 2022	05 Nov 2021
S35	SE226212.035	LB236262	27 Oct 2021	29 Oct 2021	26 Apr 2022	03 Nov 2021	26 Apr 2022	05 Nov 2021
S36	SE226212.036	LB236262	27 Oct 2021	29 Oct 2021	26 Apr 2022	03 Nov 2021	26 Apr 2022	05 Nov 2021
S37	SE226212.037	LB236262	27 Oct 2021	29 Oct 2021	26 Apr 2022	03 Nov 2021	26 Apr 2022	05 Nov 2021
S38	SE226212.038	LB236262	27 Oct 2021	29 Oct 2021	26 Apr 2022	03 Nov 2021	26 Apr 2022	05 Nov 2021
S39	SE226212.039	LB236263	27 Oct 2021	29 Oct 2021	26 Apr 2022	03 Nov 2021	26 Apr 2022	05 Nov 2021
S40	SE226212.040	LB236263	27 Oct 2021	29 Oct 2021	26 Apr 2022	03 Nov 2021	26 Apr 2022	05 Nov 2021
S41	SE226212.041	LB236253	27 Oct 2021	29 Oct 2021	25 Apr 2022	03 Nov 2021	25 Apr 2022	05 Nov 2021
S42	SE226212.042	LB236253	27 Oct 2021	29 Oct 2021	25 Apr 2022	03 Nov 2021	25 Apr 2022	05 Nov 2021
S43	SE226212.043	LB236263	27 Oct 2021	29 Oct 2021	26 Apr 2022	03 Nov 2021	26 Apr 2022	05 Nov 2021
S44	SE226212.044	LB236263	27 Oct 2021	29 Oct 2021	26 Apr 2022	03 Nov 2021	26 Apr 2022	05 Nov 2021
S45	SE226212.045	LB236253	27 Oct 2021	29 Oct 2021	25 Apr 2022	03 Nov 2021	25 Apr 2022	05 Nov 2021
S46	SE226212.046	LB236253	27 Oct 2021	29 Oct 2021	25 Apr 2022	03 Nov 2021	25 Apr 2022	05 Nov 2021
S47	SE226212.047	LB236263	27 Oct 2021	29 Oct 2021	26 Apr 2022	03 Nov 2021	26 Apr 2022	05 Nov 2021
S48	SE226212.048	LB236263	27 Oct 2021	29 Oct 2021	26 Apr 2022	03 Nov 2021	26 Apr 2022	05 Nov 2021
S49	SE226212.049	LB236253	27 Oct 2021	29 Oct 2021	25 Apr 2022	03 Nov 2021	25 Apr 2022	05 Nov 2021
S50	SE226212.050	LB236253	27 Oct 2021	29 Oct 2021	25 Apr 2022	03 Nov 2021	25 Apr 2022	05 Nov 2021
S51	SE226212.051	LB236263	27 Oct 2021	29 Oct 2021	26 Apr 2022	03 Nov 2021	26 Apr 2022	05 Nov 2021
S52	SE226212.052	LB236253	27 Oct 2021	29 Oct 2021	25 Apr 2022	03 Nov 2021	25 Apr 2022	05 Nov 2021
S53	SE226212.053	LB236253	27 Oct 2021	29 Oct 2021	25 Apr 2022	03 Nov 2021	25 Apr 2022	05 Nov 2021
S54	SE226212.054	LB236253	27 Oct 2021	29 Oct 2021	25 Apr 2022	03 Nov 2021	25 Apr 2022	05 Nov 2021
S55	SE226212.055	LB236253	27 Oct 2021	29 Oct 2021	25 Apr 2022	03 Nov 2021	25 Apr 2022	05 Nov 2021
S56	SE226212.056	LB236253	27 Oct 2021	29 Oct 2021	25 Apr 2022	03 Nov 2021	25 Apr 2022	05 Nov 2021

CLPP01

Attachment 2

SGS

SURROGATES

SE225212 R0

Surrogate results are evaluated against upper and lower limit criteria established in the SGS QA/QC plan (Ref: MP-(AU)-[ENV]QU-022). At least two of three routine level soil sample surrogate spike recoveries for BTEX/VOC are to be within 70-130% where control charts have not been developed and within the established control limits for charted surrogates. Matrix effects may void this as an acceptance criterion. Water sample surrogate spike recoveries are to be within 40-130%. The presence of emulsions, surfactants and particulates may void this as an acceptance criterion.

Result is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

No surrogates were required for this job.

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Attachment 2

SGS

METHOD BLANKS

SE225212 R0

Blank results are evaluated against the limit of reporting (LOR), for the chosen method and its associated instrumentation, typically 2.5 times the statistically determined method detection limit (MDL).

Result is shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria.

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES — Method: ME-(AU)-[ENV]AN040/AN320

Sample Number	Parameter	Units	LOR	Result
LB236251.001	Lead, Pb	mg/kg	1	<1
LB236252.001	Lead, Pb	mg/kg	1	<1
LB236253.001	Lead, Pb	mg/kg	1	<1

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Attachment 2

SGS

DUPLICATES

SE225212 R0

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / Mean

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula: MAD = 100 x SDL / Mean + LR

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

NOTE: The RPD reported is calculated from the unrounded data for the original and replicate result. Manual calculation of the RPD from the rounded data reported may

Moisture Content — Method: ME-(AU)-[ENV]AN002

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE225212.010	LB236248.011	% Moisture	%w/w	1	13.4	14.0	37	5
SE225212.019	LB236248.021	% Moisture	%w/w	1	19.4	18.9	36	3
SE225212.029	LB236249.011	% Moisture	%w/w	1	12.6	13.8	38	9
SE225212.038	LB236249.021	% Moisture	%w/w	1	18.2	19.2	36	5
SE225212.048	LB236250.011	% Moisture	%w/w	1	16.4	16.5	36	1
SE225212.056	LB236250.020	% Moisture	%w/w	1	20.7	19.9	36	4

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES — Method: ME-(AU)-[ENV]AN040/AN320

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE225212.010	LB236251.014	Lead, Pb	mg/kg	1	18	24	35	30
SE225212.019	LB236251.024	Lead, Pb	mg/kg	1	68	120	31	54 @
SE225212.029	LB236252.014	Lead, Pb	mg/kg	1	460	500	30	9
SE225212.038	LB236252.024	Lead, Pb	mg/kg	1	15	12	37	19
SE225212.048	LB236253.014	Lead, Pb	mg/kg	1	14	12	38	15
SE225212.056	LB236253.023	Lead, Pb	mg/kg	1	15	15	37	1

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SGS

LABORATORY CONTROL SAMPLES

SE225212 R0

Laboratory Control Standard (LCS) results are evaluated against an expected result, typically the concentration of analyte spiked into the control during the sample preparation stage, producing a percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA /QC plan (Ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

Recovery is shown in Green when within suggested criteria or Red with an appended dagger symbol (†) when outside suggested criteria.

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES — Method: ME-(AU)-[ENV]AN040/AN320

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB236251.002	Lead, Pb	mg/kg	1	91	89.9	80 - 120	102
LB236252.002	Lead, Pb	mg/kg	1	98	89.9	80 - 120	109
LB236253.002	Lead, Pb	mg/kg	1	93	89.9	80 - 120	103

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Attachment 2

SGS

MATRIX SPIKES

SE225212 R0

Matrix Spike (MS) results are evaluated as the percentage recovery of an expected result, typically the concentration of analyte spiked into a field sub-sample during the sample preparation stage. The original sample's result is subtracted from the sub-sample result before determining the percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA/QC plan (ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

Recovery is shown in Green when within suggested criteria or Red with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES

Method: ME-(AU)-[ENV]AN040/AN320

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE225212.001	LB236251.004	Lead, Pb	mg/kg	1	210	270	50	-119 ⊗
SE225212.020	LB236252.004	Lead, Pb	mg/kg	1	61	24	50	75
SE225212.039	LB236253.004	Lead, Pb	mg/kg	1	130	100	50	50 ⊗

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Attachment 2

SGS

MATRIX SPIKE DUPLICATES

SE225212 R0

Matrix spike duplicates are calculated as Relative Percent Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / Mean

The original result is the analyte concentration of the matrix spike. The Duplicate result is the analyte concentration of the matrix spike duplicate.

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula: MAD = 100 x SDL / Mean + LR

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the

No matrix spike duplicates were required for this job.

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SGS

FOOTNOTES

SE225212 R0

Samples analysed as received.

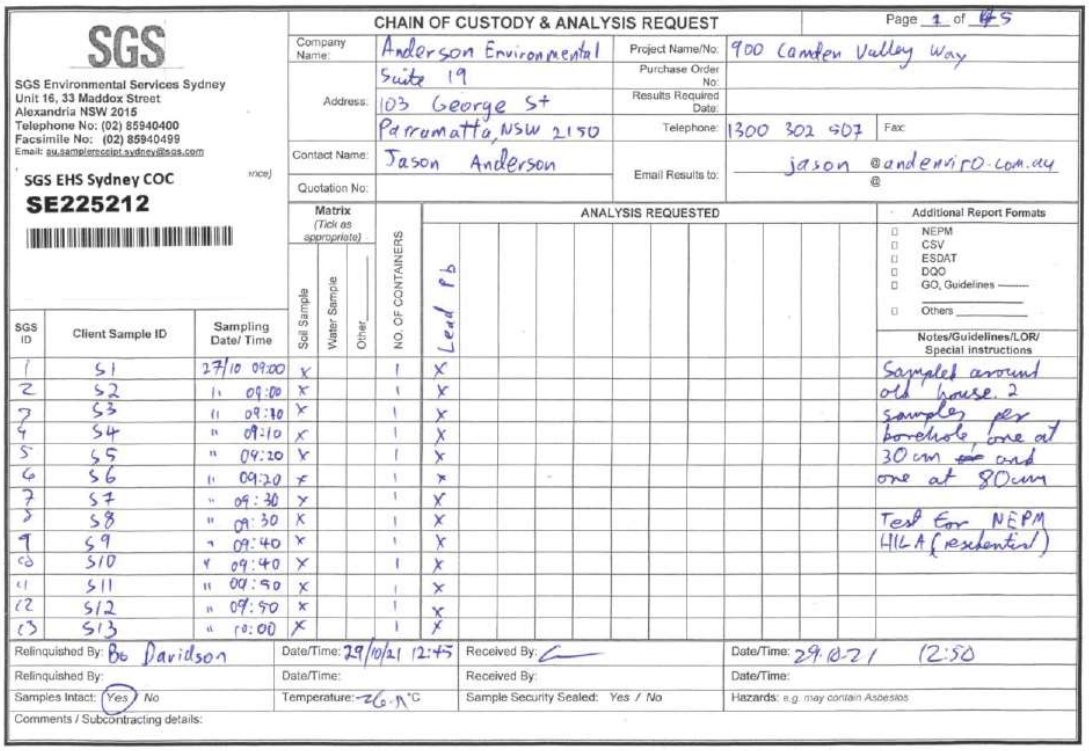
Solid samples expressed on a dry weight basis.

QC criteria are subject to internal review according to the SGS QA/QC plan and may be provided on request or alternatively can be found here: https://www.sgs.com.au/~/media/Local/Australia/Documents/Technical Documents/MP-AU-ENV-QU-022 QA QC Plan.pdf

*	NATA accreditation does not cover the performance of this service.
**	Indicative data, theoretical holding time exceeded.
***	Indicates that both * and ** apply.
-	Sample not analysed for this analyte.
IS	Insufficient sample for analysis.
LNR	Sample listed, but not received.
LOR	Limit of reporting.
QFH	QC result is above the upper tolerance.
QFL	QC result is below the lower tolerance.
①	At least 2 of 3 surrogates are within acceptance criteria.
②	RPD failed acceptance criteria due to sample heterogeneity.
③	Results less than 5 times LOR preclude acceptance criteria for RPD.
④	Recovery failed acceptance criteria due to matrix interference.
⑤	Recovery failed acceptance criteria due to the presence of significant concentration of analyte (i.e. the concentration of analyte exceeds the spike level).
⑥	LOR was raised due to sample matrix interference.
⑦	LOR was raised due to dilution of significantly high concentration of analyte in sample.
⑧	Reanalysis of sample in duplicate confirmed sample heterogeneity and inconsistency of results.
⑨	Recovery failed acceptance criteria due to sample heterogeneity.
⑩	LOR was raised due to high conductivity of the sample (required dilution).
†	Refer to relevant report comments for further information.

CLPP01

Attachment 2



SGS

SGS Environmental Services Sydney
Unit 16, 33 Maddox Street
Alexandria NSW 2015
Telephone No: (02) 85940400
Facsimile No: (02) 85940499
Email: au.samplereceipt.sydney@sgs.com

SGS EHS Sydney COC
SE225212

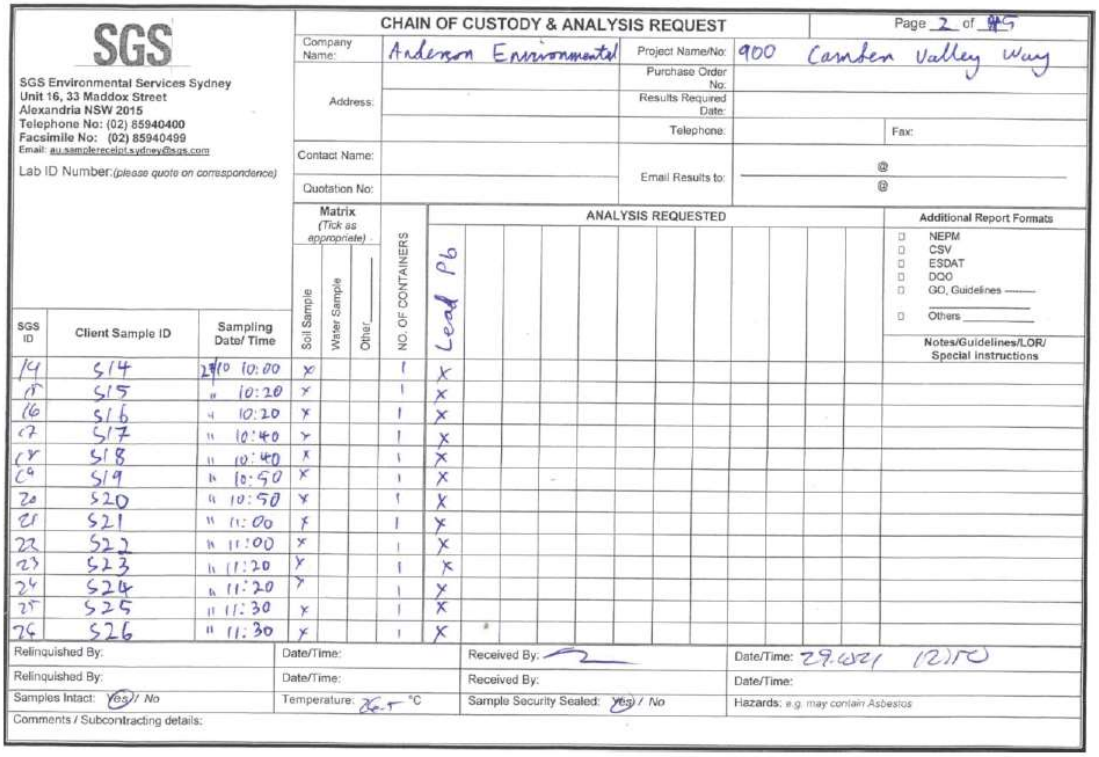
CHAIN OF CUSTODY & ANALYSIS REQUEST — Page 1 of 2

Company Name: Anderson Environmental — Project Name/No: 900 Camden Valley Way
Address: Suite 19, 103 George St, Parramatta, NSW 2150 — Purchase Order No: — Results Required Date:
Telephone: 1300 302 607 — Fax:
Contact Name: Jason Anderson — Email Results to: jason@andenviro.com.au
Quotation No:

SGS ID	Client Sample ID	Sampling Date/ Time	Matrix: Soil Sample	Matrix: Water Sample	Matrix: Other	NO. OF CONTAINERS	ANALYSIS REQUESTED: Lead Pb	Notes/Guidelines/LOR/ Special instructions
1	S1	27/10 09:00	X			1	X	Samples around old house. 2 samples per borehole, one at 30cm ~~and~~ and one at 80cm
2	S2	" 09:00	X			1	X	
3	S3	" 09:10	X			1	X	
4	S4	" 09:10	X			1	X	
5	S5	" 09:20	X			1	X	
6	S6	" 09:20	X			1	X	
7	S7	" 09:30	X			1	X	
8	S8	" 09:30	X			1	X	Test For NEPM HIL A (residential)
9	S9	" 09:40	X			1	X	
10	S10	" 09:40	X			1	X	
11	S11	" 09:50	X			1	X	
12	S12	" 09:50	X			1	X	
13	S13	" 10:00	X			1	X	

Additional Report Formats: ☐ NEPM ☐ CSV ☐ ESDAT ☐ DQO ☐ GO, Guidelines ——— ☐ Others ———

Relinquished By: Bo Davidson — Date/Time: 29/10/21 12:45 — Received By: — Date/Time: 29.10.21 12:50
Relinquished By: — Date/Time: — Received By: — Date/Time:
Samples Intact: (Yes) / No — Temperature: -26.1 °C — Sample Security Sealed: Yes / No — Hazards: e.g. may contain Asbestos
Comments / Subcontracting details:



SGS

SGS Environmental Services Sydney
Unit 16, 33 Maddox Street
Alexandria NSW 2015
Telephone No: (02) 85940400
Facsimile No: (02) 85940499
Email: au.samplereceipt.sydney@sgs.com
Lab ID Number: (please quote on correspondence)

CHAIN OF CUSTODY & ANALYSIS REQUEST — Page 2 of 2

Company Name: Anderson Environmental — Project Name/No: 900 Camden Valley Way
Address: — Purchase Order No: — Results Required Date:
Telephone: — Fax:
Contact Name: — Email Results to: @
Quotation No: @

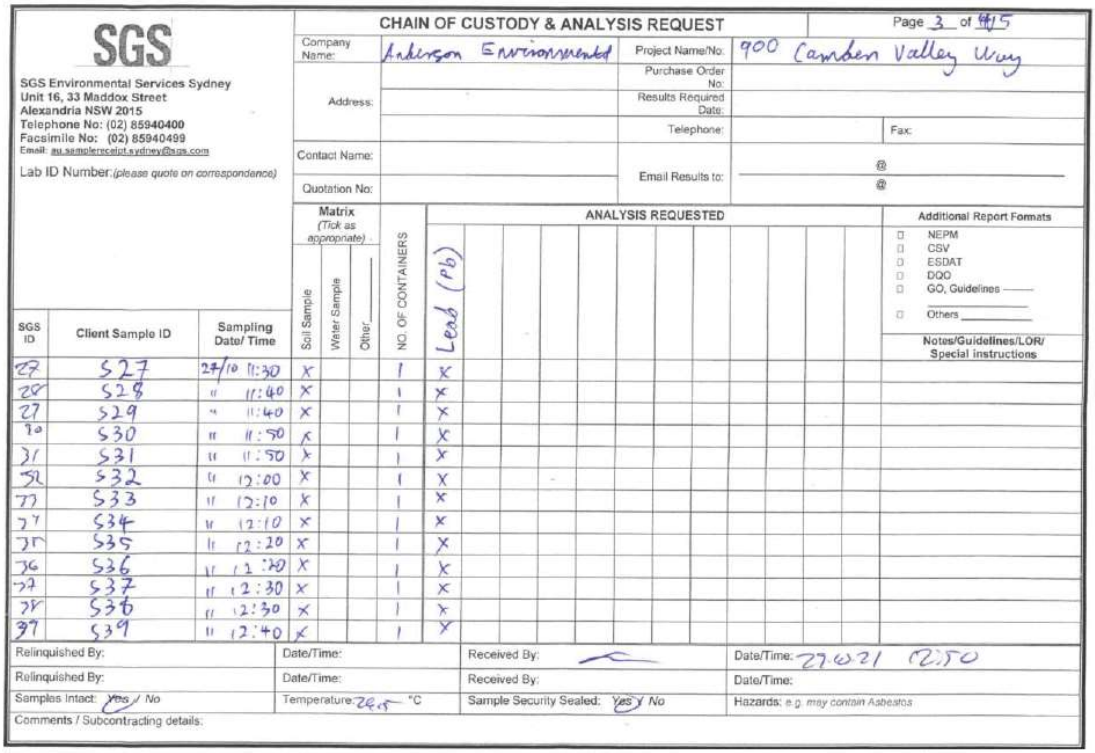
SGS ID	Client Sample ID	Sampling Date/ Time	Matrix: Soil Sample	Matrix: Water Sample	Matrix: Other	NO. OF CONTAINERS	ANALYSIS REQUESTED: Lead Pb	Notes/Guidelines/LOR/ Special instructions
14	S14	27/10 10:00	X			1	X	
15	S15	" 10:20	X			1	X	
16	S16	" 10:20	X			1	X	
17	S17	" 10:40	X			1	X	
18	S18	" 10:40	X			1	X	
19	S19	" 10:50	X			1	X	
20	S20	" 10:50	X			1	X	
21	S21	" 11:00	X			1	X	
22	S22	" 11:00	X			1	X	
23	S23	" 11:20	X			1	X	
24	S24	" 11:20	X			1	X	
25	S25	" 11:30	X			1	X	
26	S26	" 11:30	X			1	X	

Additional Report Formats: ☐ NEPM ☐ CSV ☐ ESDAT ☐ DQO ☐ GO, Guidelines ——— ☐ Others ———

Relinquished By: — Date/Time: — Received By: — Date/Time: 29.10.21 12:50
Relinquished By: — Date/Time: — Received By: — Date/Time:
Samples Intact: (Yes) / No — Temperature: 26.5 °C — Sample Security Sealed: (Yes) / No — Hazards: e.g. may contain Asbestos
Comments / Subcontracting details:

CLPP01

Attachment 2



SGS

SGS Environmental Services Sydney
Unit 16, 33 Maddox Street
Alexandria NSW 2015
Telephone No: (02) 85940400
Facsimile No: (02) 85940499
Email: au.samplereceipt.sydney@sgs.com

Lab ID Number: (please quote on correspondence)

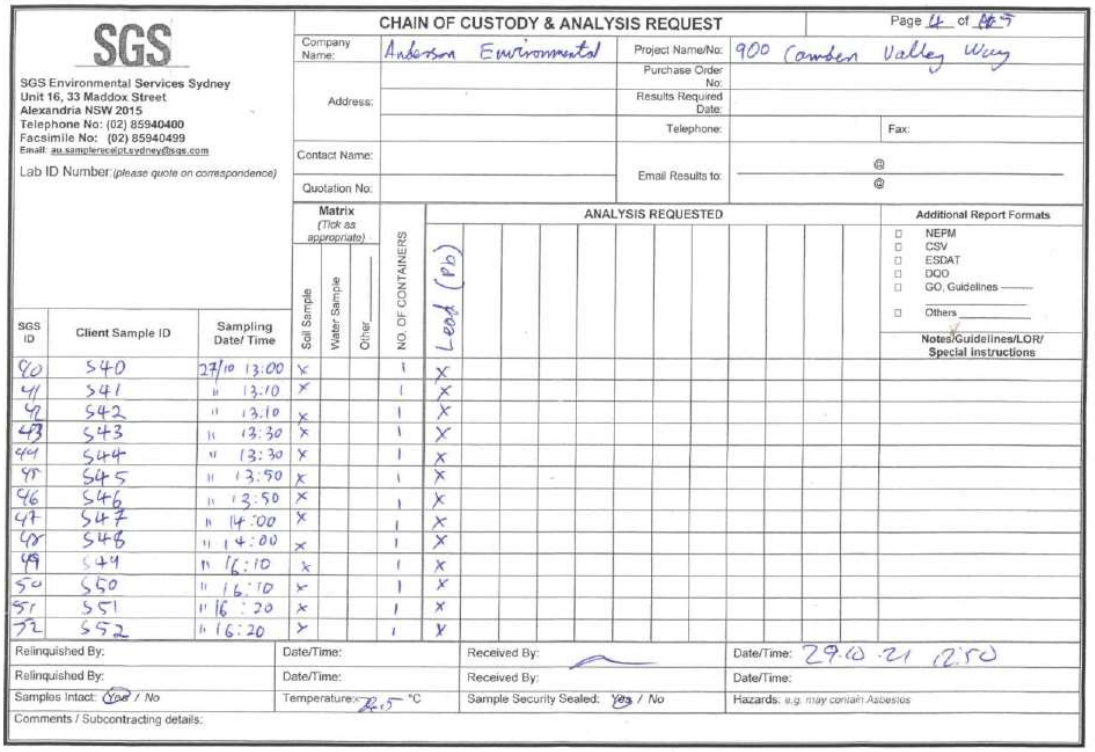
CHAIN OF CUSTODY & ANALYSIS REQUEST — Page 3 of 5

Company Name: Anderson Environmental
Address:
Contact Name:
Quotation No:
Project Name/No: 900 Camden Valley Way
Purchase Order No:
Results Required Date:
Telephone: Fax:
Email Results to: @ @

SGS ID	Client Sample ID	Sampling Date/ Time	Matrix: Soil Sample	Matrix: Water Sample	Matrix: Other	NO. OF CONTAINERS	ANALYSIS REQUESTED: Lead (Pb)
27	S27	27/10 11:30	X			1	X
28	S28	" 11:40	X			1	X
29	S29	" 11:40	X			1	X
30	S30	" 11:50	X			1	X
31	S31	" 11:50	X			1	X
32	S32	" 12:00	X			1	X
33	S33	" 12:10	X			1	X
34	S34	" 12:10	X			1	X
35	S35	" 12:20	X			1	X
36	S36	" 12:20	X			1	X
37	S37	" 12:30	X			1	X
38	S38	" 12:30	X			1	X
39	S39	" 12:40	X			1	X

Additional Report Formats: ☐ NEPM ☐ CSV ☐ ESDAT ☐ DQO ☐ GO, Guidelines ☐ Others
Notes/Guidelines/LOR/ Special instructions

Relinquished By: Date/Time: Received By: Date/Time: 29.10.21 12:50
Relinquished By: Date/Time: Received By: Date/Time:
Samples Intact: Yes / No Temperature: 20.5 °C Sample Security Sealed: Yes / No Hazards: e.g. may contain Asbestos
Comments / Subcontracting details:



SGS

SGS Environmental Services Sydney
Unit 16, 33 Maddox Street
Alexandria NSW 2015
Telephone No: (02) 85940400
Facsimile No: (02) 85940499
Email: au.samplereceipt.sydney@sgs.com

Lab ID Number: (please quote on correspondence)

CHAIN OF CUSTODY & ANALYSIS REQUEST — Page 4 of 5

Company Name: Anderson Environmental
Address:
Contact Name:
Quotation No:
Project Name/No: 900 Camden Valley Way
Purchase Order No:
Results Required Date:
Telephone: Fax:
Email Results to: @ @

SGS ID	Client Sample ID	Sampling Date/ Time	Matrix: Soil Sample	Matrix: Water Sample	Matrix: Other	NO. OF CONTAINERS	ANALYSIS REQUESTED: Lead (Pb)
40	S40	27/10 13:00	X			1	X
41	S41	" 13:10	X			1	X
42	S42	" 13:10	X			1	X
43	S43	" 13:30	X			1	X
44	S44	" 13:30	X			1	X
45	S45	" 13:50	X			1	X
46	S46	" 13:50	X			1	X
47	S47	" 14:00	X			1	X
48	S48	" 14:00	X			1	X
49	S49	" 16:10	X			1	X
50	S50	" 16:10	X			1	X
51	S51	" 16:20	X			1	X
52	S52	" 16:20	X			1	X

Additional Report Formats: ☐ NEPM ☐ CSV ☐ ESDAT ☐ DQO ☐ GO, Guidelines ☐ Others
Notes/Guidelines/LOR/ Special instructions

Relinquished By: Date/Time: Received By: Date/Time: 29.10.21 12:50
Relinquished By: Date/Time: Received By: Date/Time:
Samples Intact: Yes / No Temperature: 22.5 °C Sample Security Sealed: Yes / No Hazards: e.g. may contain Asbestos
Comments / Subcontracting details:

CLPP01

Attachment 2

SGS

SGS Environmental Services Sydney
Unit 16, 33 Maddox Street
Alexandria NSW 2015
Telephone No: (02) 85940400
Facsimile No: (02) 85940499
Email: au.samplereceipt.sydney@sgs.com

Lab ID Number: *(please quote on correspondence)*

CHAIN OF CUSTODY & ANALYSIS REQUEST

Page 4 of 5

Company Name:	Anderson Environmental	Project Name/No:	900 Camden Valley Way
Address:		Purchase Order No:	
		Results Required Date:	
		Telephone:	Fax:
Contact Name:		Email Results to:	@
Quotation No:			@

SGS ID	Client Sample ID	Sampling Date/ Time	Matrix (Tick as appropriate) Soil Sample	Water Sample	Other	NO. OF CONTAINERS	ANALYSIS REQUESTED Lead (Pb)
53	SS3	29/10 16:45	X			1	X
54	SS4	" 16:50	X			1	X
55	SS5	" 16:50	X			1	X
56	SS6	" 16:55	X			1	X

Additional Report Formats
- ☐ NEPM
- ☐ CSV
- ☐ ESDAT
- ☐ DQO
- ☐ GO, Guidelines ---------
- ☐ Others _____

Notes/Guidelines/LOR/ Special instructions

Relinquished By:	Date/Time:	Received By:	Date/Time: 29.10.21 (215
Relinquished By:	Date/Time:	Received By:	Date/Time:
Samples Intact: Yes / No	Temperature: 26.5 °C	Sample Security Sealed: Yes / No	Hazards: *e.g. may contain Asbestos*
Comments / Subcontracting details:			

CLPP01

Attachment 3

OHS & Environmental Care
Sustainability
Advanced Laboratory/Analytical Services
Technology & Innovation

CETEC
Professional Scientific Solutions

Client: Gledswood Heritage Pty Ltd

Project Reference: N2110032

Date: 02/11/2021

Version: V1.0

Hazardous Materials Audit Report

900 Camden Valley Way, Gledswood Hills NSW 2557

Surveyed By:

[redacted]

Luke Meadows
BSc (Environ) Lic. Asbestos Assessor (#001348)
NABERS Accredited Assessor, WELL PTA
Senior Consultant

[redacted]

Patrick Cobb
BSc (Geoscience), WELL PTA
Consultant

Reviewed By:

[redacted]

Andrew Bellamy
BSc, ISIAQ, Lic Asbestos Assessor (#000111)
Principal Consultant

[redacted]

Dr Vyt Garnys
PhD, B.Sc. (Hons), ISIAQ, ACA, AIRAH, FMA
Principal Consultant & Managing Director

CETEC
Professional Scientific Solutions

CONTENTS

CETEC
Professional Scientific Solutions

1 AUDIT DETAILS

Site Details

Address	900 Camden Valley Way, Gledswood Hills NSW 2557
Building Type	Homestay
Approximate age:	Approximately 100 Years old
Building Description:	Single story building with multiple room types

Audit Details

Scope of audit:	Create hazardous materials register for the site
Commissioned by:	Gledswood Heritage Pty Ltd
Inspection by:	Luke Meadows (Licensed Asbestos Assessor #001348)
Reviewed by:	Andrew Bellamy (Licensed Asbestos Assessor #000111)
Date of inspection:	19/10/2021

Previous Hazardous materials Report/Register

Compiled by :	-

2 SURVEY LIMITATIONS

Under this scope of works CETEC has as far as practicable identified hazardous materials fixed or installed in the buildings structure and fit out including; asbestos containing materials (ACM), lead paint, synthetic mineral fibres (SMF), polychlorinated biphenyls (PCB), mercury and ozone depleting substances (ODS). The materials assessed were limited to those present at the time of the inspection, located in areas within the scope and located in areas readily and safely accessible. Hazardous materials that are not fixed or installed in the buildings structure or fit out (e.g. hazardous substances used by occupants) were not within the scope of this audit and hence are not documented in this report. Sub surface investigation was not assessed as part of this inspection.

An audit of this nature is limited due to difficulties in obtaining access to all areas or to take samples from all materials without substantial damage to building components or compromising the safety of the surveyor or building occupants. In addition, building practices may involve the use of materials during construction that appear to be similar, but are different, and thus our survey cannot guarantee to be totally representative. Therefore, it is not possible to provide an absolute guarantee that every hazardous material has been identified.

It was not practicable to inspect materials in deep cavities, hidden under or behind other surfaces, contained inside equipment or electrical installations, inside ductwork or pipe-work or underground. Fuse boards and other electrical equipment were inspected where safety or normal prohibitions on access were not compromised.

If any asbestos containing materials not documented in this report are discovered at the site it is recommended that the unexpected finds procedure in Appendix C is followed.

Responsibility cannot be accepted for damage to the building etc. arising from inspections, nor for any hazardous materials not indicated within this report that are found at a later date. The quantities contained in this report are estimates obtained by visual observation only and are not intended for use as a specification of works.

This report and the associated services performed by CETEC are in accordance with the scope of services set out in the contract between CETEC and Gledswood Heritage Pty Ltd. The scope of services was defined by the requests of Gledswood Heritage Pty Ltd, by the time and budgetary constraints imposed by Gledswood Heritage Pty Ltd, and by the availability of access to the site.

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3 ASBESTOS CONTAINING MATERIALS (ACM)

3.1 Legislative Compliance

The register of asbestos containing materials contained in this report has been developed in accordance with the ***Work Health and Safety Regulation 2017 (Part 8.3 and 8.6)*** and the ***How to Manage and Control Asbestos in the Work Place: Code of Practice (WorkSafe 2020).***

The risk assessments contained within this report pertain to the proposed demolition work to be undertaken at the site. However, if previously inaccessible areas become accessible or if other materials are found unexpectedly during renovation works this report may be inadequate and revisions may be required from time to time. Asbestos containing materials should be removed prior to demolition in accordance with ***How to Safely Remove Asbestos – Code of Practice (WorkSafe 2020).***

3.2 Asbestos Containing Materials Register

Client:	Gledswood Heritage Pty Ltd	**Date of Inspection:**	19/10/2021
Report Reference	900 Camden Valley Way, Gledswood Hills NSW 2557	**Register Compilation Date:**	02/11/2021
Project Reference / Job No.:	N2110032	**Register Review Date:**	After renovation or demolition works

Sample Number	Primary Location	Specific Location	Material application	Material type	Quantity	Laboratory analysis result (Asbestos type)	Friable / Non-Friable	Sealed / Unsealed / Enclosed	Condition	Activities that may lead to further damage/ deterioration	Risk assessment	Control of risk	Comment	Photo Number
146263	Exterior - Ground	All windows to perimeter	Window sealant	Mastic	>50 Windows	No Asbestos Detected	-	-	-	-	Not required	-	-	-
146264	Interior - Ground	Throughout building - Ceiling cavity	Lagging to hot water pipes	Fiberous lagging	NQ	No Asbestos Detected	-	-	-	-	Not required	-	-	-
146265	Interior - Ground	Kitchen - Wall panel behind stove	Wall lining	FCS	3m²	**Chrysotile Asbestos Detected**	Non-friable	Sealed/Unsealed in wall cavity	Low damage	Renovations or demolition	**Low**	Remove ACM prior to any renovations or demolition	Licensed asbestos removalist required to remove ACM materials.	1
146266	Interior - Ground	South Kitchen - Floor	Floor covering	Vinyl tile (Pale green)	10m²	No Asbestos Detected	-	-	-	-	Not required	-	-	-
146267	Interior - Ground	Semi-detached bathroom (Behind bedroom 6) - Walls	Wall lining	FCS	10m²	**Chrysotile, Amosite & Crocidolite Asbestos Detected**	Non-friable	Sealed/Unsealed in wall cavity	Low damage	Renovations or demolition	**Low**	Remove ACM prior to any renovations or demolition	Licensed asbestos removalist required to remove ACM materials.	2-5
146268 (A)	Interior - Ground	East Kitchen - Floor	Floor covering	Vinyl sheeting	8m²	No Asbestos Detected	-	-	-	-	Not required	-	-	-

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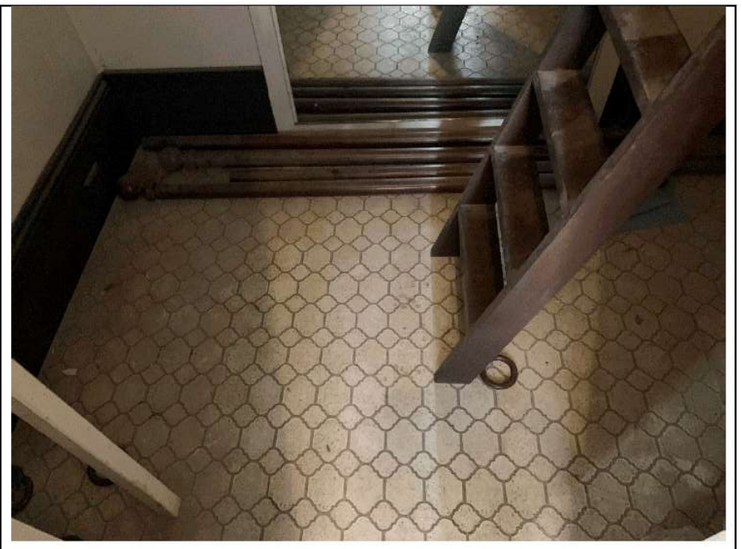
Sample Number	Primary Location	Specific Location	Material application	Material type	Quantity	Laboratory analysis result (Asbestos type)	Friable / Non-Friable	Sealed / Unsealed / Enclosed	Condition	Activities that may lead to further damage/ deterioration	Risk assessment	Control of risk	Comment	Photo Number
146268 (B)	Interior - Ground	East Kitchen - Floor	Floor covering/adhesive	Sub lining (Beige)	8m²	**Chrysotile Asbestos Detected**	Non-friable	Sealed below vinyl sheeting	Low damage	Renovations or demolition	**Low**	Remove ACM prior to any renovations or demolition	Licensed asbestos removalist required to remove ACM materials.	6-7
146269	Interior - Ground	Bed 5 - Floor	Carpet/underlay	Fiberous weaved material	25m²	No Asbestos Detected	-	-	-	-	Not required	-	-	-
146270	Interior - Ground	Hall, foyer & sitting room	Carpet/underlay	Fiberous weaved material	60m²	No Asbestos Detected	-	-	-	-	Not required	-	-	-
146271	Interior - Ground	Ceiling cavity - Bathroom (West of bed 2)	Hot water heater insulation	loose lagging	1 Hot water heater	No Asbestos Detected	-	-	-	-	Not required	-	-	-
146272 (A)	Interior - Ground	North Store (Next to Bed 3) - Floor	Floor covering	Vinyl sheeting (White)	10m²	**Chrysotile Asbestos Detected**	Non-friable	Enclosed	Low damage	Renovations or demolition	**Low**	Remove ACM prior to any renovations or demolition	Licensed asbestos removalist required to remove ACM materials.	8
146272 (B)	Interior - Ground	North Store (Next to Bed 3) - Floor	Floor covering	Vinyl sheeting (Brown)	10m²	No Asbestos Detected	-	-	-	-	Not required	-	-	-
146273	Interior - Ground	Sitting room - Walls	Floor covering	Vinyl sheeting	8m²	No Asbestos Detected	-	-	-	-	Not required	-	-	-

3.3 Photos of Identified Asbestos Containing Materials (ACM's)

		
Photo 1	Photo 2	Photo 3
		
Photo 4	Photo 5	Photo 6 (Adhesive to vinyl sheeting, below vinyl sheeting)

	
Photo 7 (Adhesive to vinyl sheeting, below vinyl sheeting)	Photo 8 (Adhesive to vinyl sheeting, below vinyl sheeting)

4 HAZARDOUS MATERIALS

4.1 Legislative Compliance

Legislative requirements, codes of practise and guidelines relating to the management and removal of hazardous materials include but are not limited to:[1]

- Workplace Health and Safety Act and Regulation (2017)
- Safe Work Australia Demolition Work Code of Practice (2019)
- Adopted National Exposure Standards for Atmospheric Contaminants in the Occupational Environment [NOHSC:1003(1995)]
- National code of Practice for the Control of Workplace Hazardous Substances [NOHSC:2007(1994)]
- AS 4361.2 Guide to lead paint management - Residential and commercial buildings (1998)
- National Standard for the Control of Inorganic Lead at Work [NOHSC:1012(1994)]
- National Code of Practice for the Control and Safe Use of Inorganic Lead at Work [NOHSC:2015(1994)]
- National Standard for Synthetic Mineral Fibres [NOHSC:1004(1990)]
- National Code of Practice for the Safe Use of Synthetic Mineral Fibres [NOHSC:2006(1993)]
- Identification of PCB-Containing Capacitors (ANZECC 1997)
- Ozone Protection and Synthetic Greenhouse Gas Management Regulations 1995
- Ozone Protection and Synthetic Greenhouse Gas Management Amendment Regulation 2012 (No 1)
- Environmentally Hazardous Chemicals Act 1985
- Protection of the Environment Operations Act 1997

1 Users of this report should always refer to the most current versions of these documents to ensure compliance with government requirements and revisions over time

4.2 Hazardous Materials Register

Client:	Gledswood Heritage Pty Ltd	**Date of Inspection:**	19/10/2021
Report Reference	900 Camden Valley Way, Gledswood Hills NSW 2557	**Register Compilation Date:**	02/11/2021
Project Reference / Job No.:	N2110032	**Register Review Date:**	June 2026 or after renovation or demolition works.

4.2.1 Lead Paint Register

Sample number	Primary Location	Specific Location	Material Application	Colour	Quantity	Lead content analysis	Above action limit	Condition	Activities that may lead to worker exposure during demo and renovations	Risk Assessment	Control of risk	Comments	Photo Number
146274	Exterior - Ground	Throughout building - Walls	Wall covering	White	> 100m²	**5.0 %w/w**	**Yes**	Medium damage	Sanding, scrapping or other abrasive methods for removing lead based paints	**Low**	Remove with controls to prevent exposure of workers & contamination of the environment.	Refer section 3: Guide to hazardous paint management Part 2: Lead paint in residential, public and commercial buildings, AS/NZS 4361.2:2017	9-10
146275	Interior - Ground	Bed 6 - Walls	Wall covering	Cream	50m²	**0.15 %w/w**	**Yes**	Medium damage	Sanding, scrapping or other abrasive methods for removing lead based paints	**Low**	Remove with controls to prevent exposure of workers & contamination of the environment.	Refer section 3: Guide to hazardous paint management Part 2: Lead paint in residential, public and commercial buildings, AS/NZS 4361.2:2017	-
Same as 146275	Interior - Ground	Throughout building - Walls	Wall covering	Cream	> 100m²	**0.15 %w/w**	**Yes**	Medium damage	Sanding, scrapping or other abrasive methods for removing lead based paints	**Low**	Remove with controls to prevent exposure of workers & contamination of the environment.	Refer section 3: Guide to hazardous paint management Part 2: Lead paint in residential, public and commercial buildings, AS/NZS 4361.2:2017	11-12
146276	Interior - Ground	Dining - Walls	Wall covering	Blue	50m²	**0.2 %w/w**	**Yes**	Medium damage	Sanding, scrapping or other abrasive methods for removing lead based paints	**Low**	Remove with controls to prevent exposure of workers & contamination of the environment.	Refer section 3: Guide to hazardous paint management Part 2: Lead paint in residential, public and commercial buildings, AS/NZS 4361.2:2017	13
146277	Interior - Ground	Hallway - Walls	Wall covering	Light blue	60m²	**12 %w/w**	**Yes**	Medium damage	Sanding, scrapping or other abrasive methods for removing lead based paints	**Low**	Remove with controls to prevent exposure of workers & contamination of the environment.	Refer section 3: Guide to hazardous paint management Part 2: Lead paint in residential, public and commercial buildings, AS/NZS 4361.2:2017	14-15
146278	Interior - Ground	Store - Walls	Wall covering	Light & dark green	20m²	**10 %w/w**	**Yes**	Medium damage	Sanding, scrapping or other abrasive methods for removing lead based paints	**Low**	Remove with controls to prevent exposure of workers & contamination of the environment.	Refer section 3: Guide to hazardous paint management Part 2: Lead paint in residential, public and commercial buildings, AS/NZS 4361.2:2017	16
146279	Interior - Ground	Bed 4 - Ceiling	Ceiling covering	White	20m²	**7.2 %w/w**	**Yes**	Medium damage	Sanding, scrapping or other abrasive methods for removing lead based paints	**Low**	Remove with controls to prevent exposure of workers & contamination of the environment.	Refer section 3: Guide to hazardous paint management Part 2: Lead paint in residential, public and commercial buildings, AS/NZS 4361.2:2017	-

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Sample number	Primary Location	Specific Location	Material Application	Colour	Quantity	Lead content analysis	Above action limit	Condition	Activities that may lead to worker exposure during demo and renovations	Risk Assessment	Control of risk	Comments	Photo Number
Same as 146279	Interior - Ground	Throughout building - Ceiling	Ceiling covering	White	> 100m²	7.2 %w/w	Yes	Medium damage	Sanding, scrapping or other abrasive methods for removing lead based paints	**Low**	Remove with controls to prevent exposure of workers & contamination of the environment.	Refer section 3: Guide to hazardous paint management Part 2: Lead paint in residential, public and commercial buildings, AS/NZS 4361.2:2017	-
146280	Interior - Ground	Hallway - Ceiling	Ceiling covering	White	> 100m²	2.3 %w/w	Yes	Medium damage	Sanding, scrapping or other abrasive methods for removing lead based paints	**Low**	Remove with controls to prevent exposure of workers & contamination of the environment.	Refer section 3: Guide to hazardous paint management Part 2: Lead paint in residential, public and commercial buildings, AS/NZS 4361.2:2017	17
146281	Interior - Ground	Music room - Walls	Wall covering	White	100m²	0.18 %w/w	Yes	Medium damage	Sanding, scrapping or other abrasive methods for removing lead based paints	**Low**	Remove with controls to prevent exposure of workers & contamination of the environment.	Refer section 3: Guide to hazardous paint management Part 2: Lead paint in residential, public and commercial buildings, AS/NZS 4361.2:2017	-
146282	Interior - Ground	Sitting room - Walls	Wall covering	Cream	20m²	6.1 %w/w	Yes	Medium damage	Sanding, scrapping or other abrasive methods for removing lead based paints	**Low**	Remove with controls to prevent exposure of workers & contamination of the environment.	Refer section 3: Guide to hazardous paint management Part 2: Lead paint in residential, public and commercial buildings, AS/NZS 4361.2:2017	-
146283	Interior - Ground	South Store (Next to laundry) - Walls	Wall covering	Blue	15m²	0.14 %w/w	Yes	Medium damage	Sanding, scrapping or other abrasive methods for removing lead based paints	**Low**	Remove with controls to prevent exposure of workers & contamination of the environment.	Refer section 3: Guide to hazardous paint management Part 2: Lead paint in residential, public and commercial buildings, AS/NZS 4361.2:2017	-
146284	Interior - Ground	Throughout building - Ceiling cavity	Surface accumulated dust	-	NQ	16000 mg/kg	Yes	-	Renovation, demolition or any work in the ceiling cavities of the site.	**Low**	Remove with controls to prevent exposure of workers & contamination of the environment.	Lead containing dust to be removed prior to strip out work at the site. Lead containing dust must be removed by contractors trained in specific removal techniques & health monitoring for each individual conducted as per the WHS regulation.	-

4.2.2 SMF / ODS / PCB / Gases Register

Sample Number / Hazard type	Primary Location	Description/Specific Location	Material application	Quantity	Condition	Activities that may lead to further damage/ deterioration or exposure	Risk assessment	Control of risk	Comments	Photo #
SMF	Interior - Ground	Ceiling cavity - Bathroom (West of bed 2)	Hot water heater insulation	2 Hot water heaters	Low damage	Renovations or demolition	**Low**	Ensure current condition of SMF is maintained to reduce the potential risk of exposure to occupants.	Remove during general demolition with suitable controls to prevent exposure to dust.	18
SMF (146273)	Interior - Ground	Sitting room - Walls	Floor covering - Vinyl sheeting	~20m²	Low damage	Renovations or demolition	**Low**	Ensure current condition of SMF is maintained to reduce the potential risk of exposure to occupants.	Remove during general demolition with suitable controls to prevent exposure to dust.	-

4.3 Photos of Identified Hazardous Materials

Photo 9

Photo 10

Photo 11

Photo 12

Photo 13

Photo 14

Photo 15

Photo 16

Photo 17

Photo 18

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APPENDIX A: ASBESTOS IDENTIFICATION AUDIT METHODOLOGY

The methodology used for the risk assessment of asbestos containing materials (ACM) used in this report has been adapted from ***Asbestos: The Survey Guide - Second Edition (2012) issued by the Health and Safety Executive (UK)***. It is important to acknowledge that this risk assessment method is not necessarily applicable in all instances and expert judgement is often required. This risk assessment tool should only be used by suitably trained and qualified people.

Step (1) Material assessment – To indicate the potential for a material to release airborne fibres factors which influence the release of fibres are scored between 1 (low potential for fibre release) and 3 (high potential for fibre release).

Material Property	Score	Examples
Product Type	1	Asbestos-reinforced composites (plastics, resins, mastics, roofing felts, vinyl floor tiles, semi-rigid paints or decorative finishes, asbestos cement etc).
	2	AIB, millboards, other low-density insulation boards, asbestos textiles, gaskets, ropes and woven textiles, asbestos paper and felt.
	3	Thermal insulation (e.g. pipe and boiler lagging), sprayed asbestos, loose asbestos, asbestos mattresses and packing.
Condition	0	Good condition: no visible damage.
	1	Low damage: a few scratches or surface marks, broken edges on boards, tiles etc.
	2	Medium damage: significant breakage of materials or several small areas where material has been damaged revealing loose asbestos fibres.
	3	High damage or delamination of materials, sprays and thermal insulation. Visible asbestos debris.
Surface Treatment	0	Composite materials containing asbestos: reinforced plastics, resins, vinyl tiles
	1	Enclosed sprays and lagging, AIB (with exposed face painted or encapsulated) asbestos cement sheets etc.

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Material Property	Score	Examples
	2	Unsealed AIB, or encapsulated lagging and sprays.
	3	Unsealed lagging and sprays.

Step (2) Assessment of potential disturbance – To indicate the potential for a material to be disturbed, factors which influence disturbance of a material are scored between 1 (low potential of disturbance) and 3 (high potential of disturbance).

Material Property	Score	Examples
Extent of material / amount	1	Minor amount only in 1 or very few locations e.g. 1 gasket
	2	< 10m^2 of material
	3	>10m^2 of material
Accessibility (during normal building use)	0	Not accessible
	1	Access requires special authorisation and/or equipment and/or contact with material unlikely
	2	Accessible but contact with material infrequent
	3	Accessible and contact with material likely
Activities (during normal building use)	0	Sedentary or low impact activities only near material (e.g. office work)
	1	Low impact but high traffic areas (e.g. walk ways)
	2	Infrequent use of moving plant or power tools, vibration sources near material
	3	Frequent use of heavy machinery, moving plant or power tools, vibration sources near material
Time of occupancy	0	Never occupied

Material Property	Score	Examples
(during normal building use)	1	1 hour or less per week per person
	2	Greater than 1 hour per week less than 1 hour per day per person
	3	Greater than 1 hours per day per person

Step (3) Risk Assessment – ACMs are given a score between 2 and 21 by adding the scores from steps 1 and 2. The following table indicates the likely risk of exposure to occupants a score represents.

Score	Risk Rating	Significance	General Recommendation
20-21	Extreme	Immediate and significant exposure risk.	Evacuate area immediately and implement controls to isolate the area. Immediate removal of ACM recommended
17-19	High	Significant potential exposure risk.	Restrict access and implement controls to isolate the area. Immediate removal of ACM recommended
11-16	Medium	Potential exposure risk under some conditions.	Implement control measures to seal or enclose and label as required. Ongoing inspection and maintenance required. Remove as soon as practical.
0-10	Low	Unlikely to result in exposure in current condition and if not disturbed.	Implement control measures to seal or enclose and label as required. Ongoing inspection and maintenance required. Remove as soon as practical.

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APPENDIX B: RECOMMENDATIONS FOR REMOVING HAZARDOUS MATERIALS

A.1 Asbestos

If demolition is to take place at the above property, all asbestos that is likely to be disturbed by the demolition must be identified and, so far as is reasonably practicable, be removed before the demolition is started.

General requirements for conducting asbestos removal work are as follows:

- Asbestos should be removed in accordance with the WHS Regulation 2017 and How to Safely Remove Asbestos: Code of Practice (WorkSafe 2019).
- The planning, removal methodology, control measures, monitoring requirements and clearance procedures for the removal of asbestos must be determined in consultation with an occupational hygienist and documented in the Asbestos Removal Control Plan prior to commencing removal.
- An asbestos removal control plan should include as a minimum;
  - The method proposed to be used to remove the asbestos;
  - The approximate quantity and kind of asbestos to be removed;
  - The equipment proposed to be used to remove the asbestos, including any personal protective equipment;
  - Details of the proposed air monitoring and clearance procedures
  - Transportation and waste disposal requirements
- The person(s) removing asbestos must be a holder of an A classes asbestos removal license for friable asbestos and a B class asbestos removal license for non-friable asbestos.
- The person conducting air monitoring and clearance for asbestos removal must be a Licensed Asbestos Assessor (LAA) for friable asbestos or suitably qualified for non-friable asbestos.
- SafeWork NSW must be notified at least 5 days prior to any licensed asbestos removal.

A.2 Lead

The following precautions should be taken when demolishing materials containing lead (>0.1% w/w), lead contaminated dust (>150 mg/m^2) or for any works defined as a lead process in accordance with the WHS Regulation 2017:

- Inform workers of potential risks and provide training about preventing exposure to lead
- Conduct health monitoring of workers conducting work involving materials that contain lead
- Ensure lead contamination is confined to the lead process work area
  - Adopt methods that minimise the generation of lead dust and fumes
  - Conduct lead air monitoring and surface dust testing to validate controls are effective at preventing the spread of lead contamination for lead process work.
  - Occupational hygienist should review controls measures and revise as necessary.
- Clean work areas promptly and properly during and after work
- Prohibit eating, drinking, smoking and chewing gum in the lead process area
- Supply changing and washing facilities for workers
- Supply appropriate PPE as well as laundering or disposal facilities for contaminated PPE
- Notify SafeWork NSW of activities determined to be lead risk work within 7 days.

A.3 Synthetic Mineral Fibres (SMF)

Materials containing Synthetic Mineral Fibres may be removed during general demolition works. The precautions which should be taken when demolishing materials containing SMF include:

- PPE should be provided to workers and worn when insulation is being handled or removed
- Dust should be suppressed by damping down with water or PVA

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A.4 Polychlorinated Biphenyls (PCB)

Workers can be exposed to Polychlorinated Biphenyls (PCBs) when dismantling electrical capacitors and transformers or when cleaning up spills and leaks. Appropriate control measures should be implemented when handling damaged capacitors to ensure that any spillage does not contact workers and is appropriately cleaned up and disposed of.

Prior to demolition of buildings capacitors should be inspected to confirm if they are on the list of known PCB containing capacitors (Identification of PCB-Containing Capacitors (ANZECC 1997)).

PPE including gloves made of materials that are resistant to PCBs (for example polyethylene, nitrile rubber or neoprene), should be provided to workers and worn when there is any likelihood of exposure to PCBs.

A.5 Mercury in Fluorescent Lamps

Mercury is known to be present in fluorescent tubes (including compact fluorescent light globes) Mercury is extremely toxic and exposure should be avoided where possible. The best way to prevent mercury exposure from fluorescent lamps is to avoid breaking the lamps.

Disposal of fluorescent lamps to landfill is not recommended and if possible, they should be taken to a facility that can recover the mercury contained in the lamp.

A.6 Ozone Depleting Substances (ODS)

It is required that refrigerant gases deemed to be ODS are reclaimed from all parts of an air-conditioning or refrigeration system by a qualified and experienced person in such a way that prevents the gases release into the atmosphere. The person(s) conducting this work should use appropriate PPE and work methods to avoid exposure to the gas.

A.7 Storage and Disposal of Waste

Storage and disposal of hazardous materials waste and contaminated PPE must be conducted as follows:

- All waste must be contained (sealed) in suitable containers, waste bags or wrapped with 200 µm plastic.

- All waste must be labelled in accordance with the Globally Harmonized System of Classification and Labelling of Chemicals (GHS)
- All waste must be removed from the site as soon as practicable however if waste must be stored on-site it must be stored in a secure area in an environmentally friendly manner.
- All waste must be transported in an appropriately licensed and registered vehicle. Preferably one that is covered and leak-proof.
- All waste must be disposed of at a waste facility that can lawfully receive this waste.

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APPENDIX C: UNEXPECTED FINDS PROCEDURE

In the event that a suspected asbestos containing material that is not documented in this report is discovered at the site the following procedure should be applied:

- Stop work and vacate the area where the potential asbestos has been found
- Consult a competent person to assess the risk and test the material
- Restrict access to the area and install barricades and signage

Remove the asbestos materials or implement controls to make safe before continuing other works.

APPENDIX D: LABORATORY ANALYSIS CERTIFICATES

Can be supplied upon request.

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DISCLAIMER

CETEC has taken all reasonable care to ensure that the information contained in this report is accurate. The report is based on data and information collected by CETEC personnel during location visits and information accepted in good faith from various personnel associated with this work. However, no warranty or representation can be given that the information and materials contained in it are complete or free from errors or inaccuracies.

CETEC accepts no responsibility for any deficiency, misstatements or inaccuracies contained in this report as a result of omissions, misinterpretation or fraudulent acts of the persons interviewed or contacted.

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DEVELOPMENT APPLICATION
PROPOSED CHILD CARE CENTRE

CALCULATIONS

Site area (Total)	=	157888.8	sqm
Site area (Child Care Centre)	=	3174.7	sqm
Gross Floor Area (Child Care Centre)	=	603.7	sqm
Gross Floor Area (Adjoining Buildings)	=	2331.4	sqm
Outdoor Play Area	=	1417.9	sqm (80 Children)
Play Room Area	=	263.0	sqm (80 Children)

SPACE PROVISIONS

	Staff Car Spaces	Visitor Car Spaces	Accessible Car Spaces	TOTAL CAR SPACES
Basement Level	7	13	1	21

DRAWING LIST

Site Analysis	1:500	01
Site Plan	1:1000	02
Existing Ground Level	1:100	03
Proposed Ground Level	1:100	04
Existing Ground Level (1:200)	1:200	05
Proposed Ground Level (1:200)	1:200	06
Roof Plan	1:200	07
Elevations 1-4	1:100	08
Elevations 5-8	1:100	09
Elevations 9-12	as shown	10
Play Room Area	1:50	11
Kitchen Details	1:50	12
Waste Management And Access	1:100	13
Evacuation Plan	1:100	14

No. 900 Camden Valley Way, Gledswood Hills.

Client: Roy Nasso

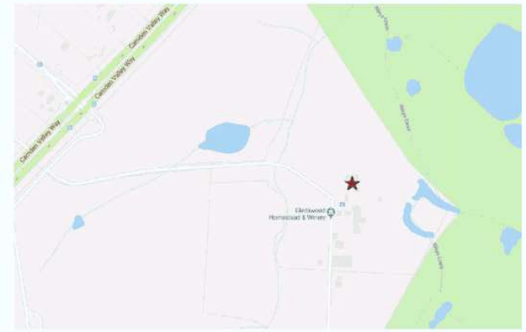
job no. 2434
architex
tel: 02 9633 5888 | mob: 0418 402 919 | Level 3, 7k parkes St. parramatta, 2150 | email@architex.com.au www.architex.com.au | ryleton pty ltd t/as architex abn 32 003 315 142

Site Analysis

0 5 20 25 m

True northpoint

Notes:
Do not scale, check and verify all dimensions before commencing new work, ground levels may vary due to site conditions.



Location Map
N.T.S.

NOTE:
- for more information regarding the site and its surrounds- refer to the written site analysis statement
- refer to ground floor plan and survey drawings for site dimensions and bearings

ARCHITECTURAL CHARACTER :
refer to written site analysis statement

B	Amendments to Address Council Issues	03-08-20
A	Development Application	16-04-19
Issue	description	Date

architex
Rylelon pty ltd t/as Architex abn 32 003 315 142
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M : 0418 402 919
Level 3, 7K Parkes Street Parramatta NSW 2150
email@architex.com.au
www.architex.com.au
Nominated Architect: Robert Del Piazo NSW Reg No. 3972

DEVELOPMENT APPLICATION

Project
Development Application
Proposed Child Care Centre

Project address
900 Camden Valley Way,
Gledswood Hills.

Client
Roy Nasso

Title
Site Analysis

Drawn	Scale	Checked
L.D.P.	1:500 @ A1	
Job No.	Drawing No.	Issue
2434	01	B

Site Plan

Issue	Issue description	Date
B	Amendments to Address Council Issues	03-08-20
A	Development Application	16-04-19

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www.architex.com.au
Nominated Architect: Robert Del Pizzo
NSW Reg No. 3972

DEVELOPMENT APPLICATION

Project: Development Application
Proposed Child Care Centre

Project address: 900 Camden Valley Way,
Gledswood Hills.

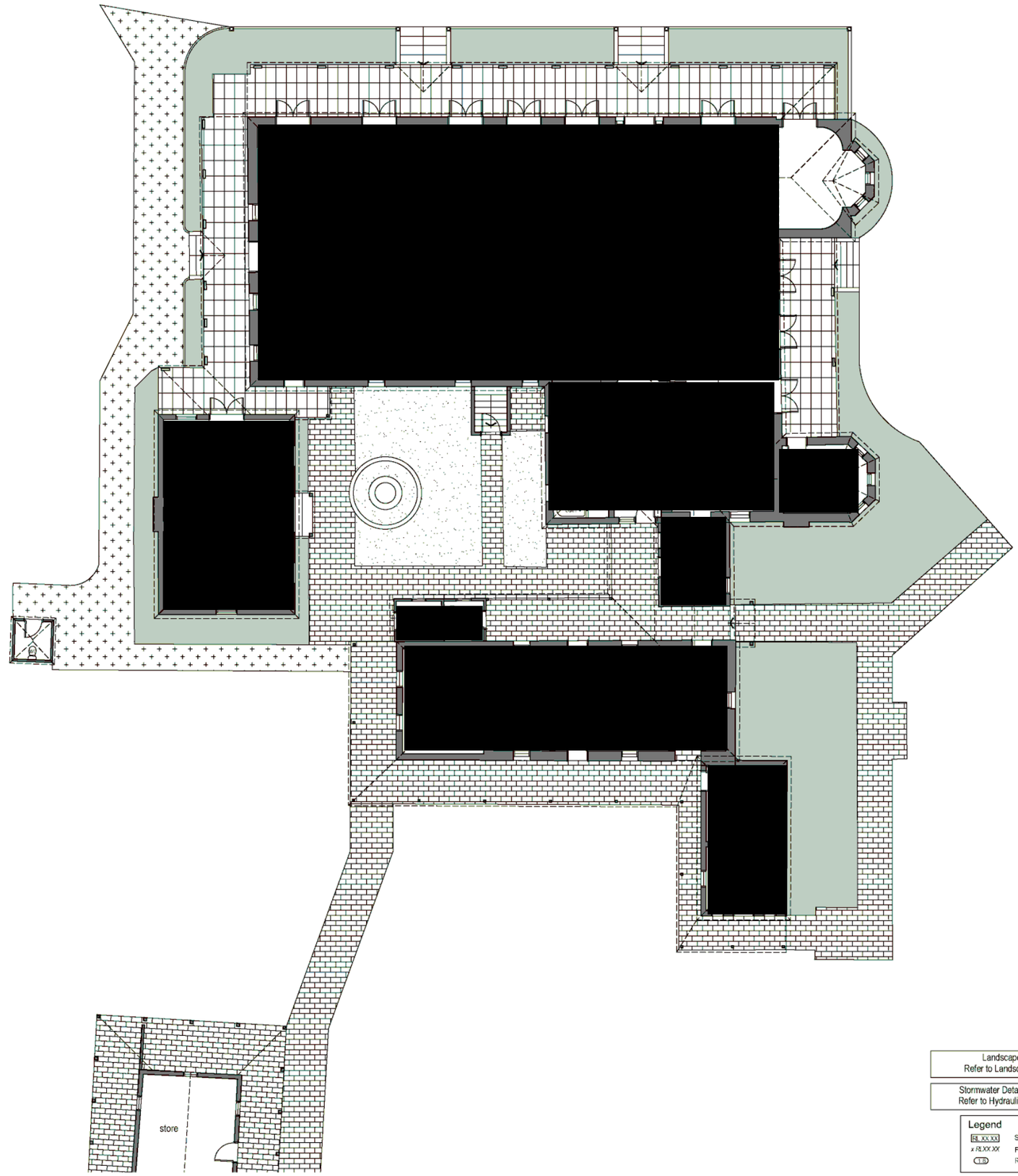
Client: Roy Nasso

Title: Site Plan

Drawn	Scale	Checked
L.D.P.	1:1000 @ A1	
Job No.	**Drawing No.**	**Issue**
2434	02	B

Attachment 4

CLPP01



0 1 2 5 m

True northpoint

Notes:
Do not scale, check and verify all dimensions before commencing new work, ground levels may vary due to site conditions.

B	Amendments to Address Council Issues	03-08-20
A	Development Application	16-04-19
Issue description		Date

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Nominated Architect: Robert Del Pizzo NSW Reg No. 3972

DEVELOPMENT APPLICATION

Project
Development Application
Proposed Child Care Centre

Project address
900 Camden Valley Way,
Gledswood Hills.

Client
Roy Nasso

Title
Existing
Ground Level

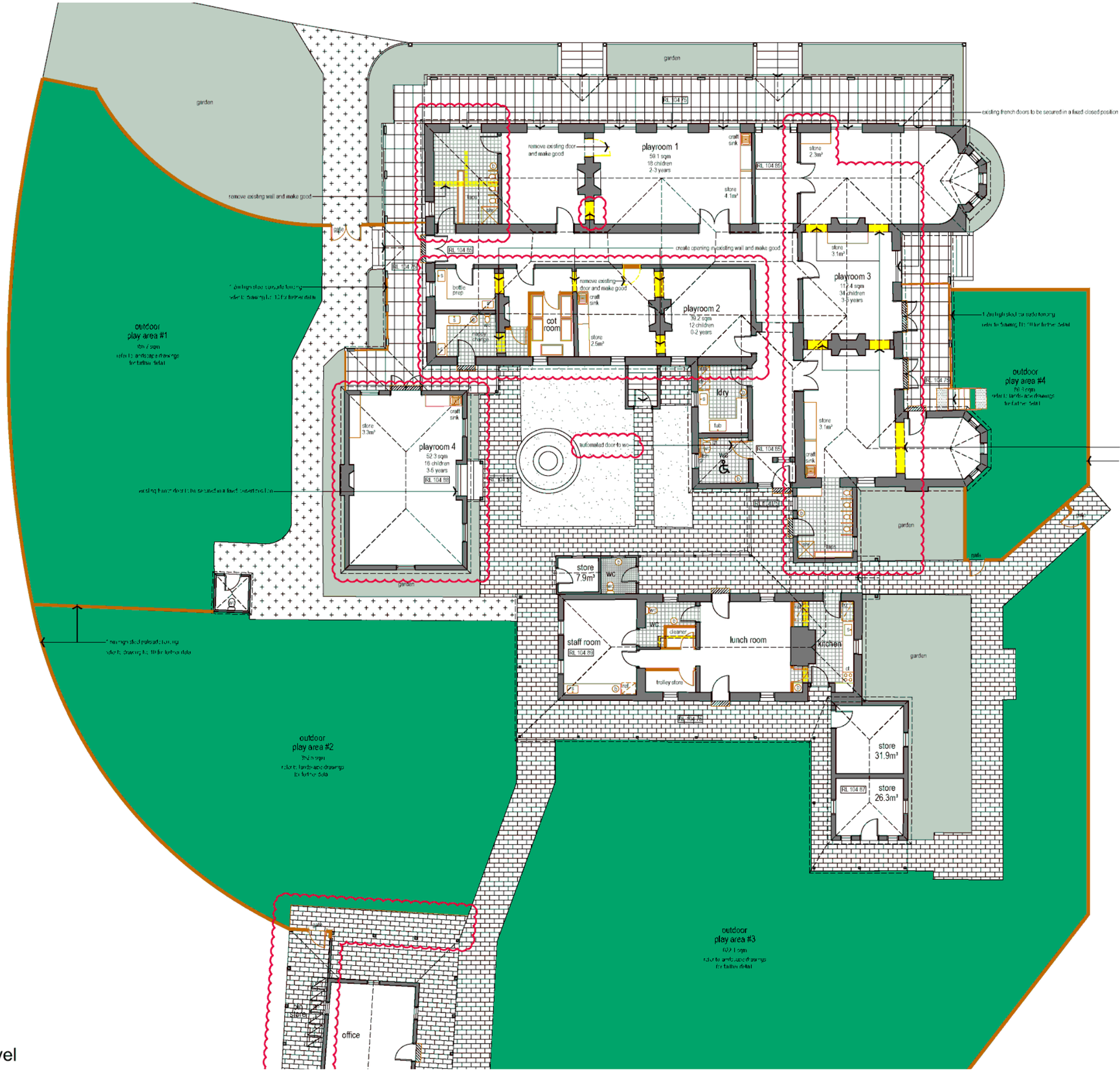
Drawn	Scale	Checked
L.D.P.	1:100 @ A1	
Job No.	Drawing No.	Issue
2434	03	B

Landscape Details:
Refer to Landscape Drawings

Stormwater Details + Site Levels:
Refer to Hydraulic Eng. Drawings

Legend
RL XX.XX Structural Floor Level
x RL XX.XX Finished Reduced Level
1:8 Ramp Up Gradient

Existing Ground Level



0 1 2 5 m

True northpoint

Notes:
Do not scale, check and verify all dimensions before commencing new work, ground levels may vary due to site conditions.

playroom #	age	area	children
1	2-3 years	59.1 sqm	18
2	0-2 years	39.2 sqm	12
3	3-5 years	112.4 sqm	34
4	3-5 years	52.3 sqm	16
TOTAL		263.0 sqm	80

total play room area - 263.0 sqm
= 80 children

Proposed Additions

Building Alterations

Landscape Details:
Refer to Landscape Drawings

Stormwater Details + Site Levels:
Refer to Hydraulic Eng. Drawings

Legend
RL XX.XX Structural Floor Level
x RL XX.XX Finished Reduced Level
1:10 Ramp Up Gradient

Note:
temporary under bench bin storage where relevant

B	Amendments to Address Council Issues	03-08-20
A	Development Application	16-04-19
Issue	description	Date

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Nominated Architect: Robert Del Pizzo
NSW Reg No. 3972

DEVELOPMENT APPLICATION

Project
Development Application
Proposed Child Care Centre

Project address
900 Camden Valley Way,
Gledswood Hills.

Client
Roy Nasso

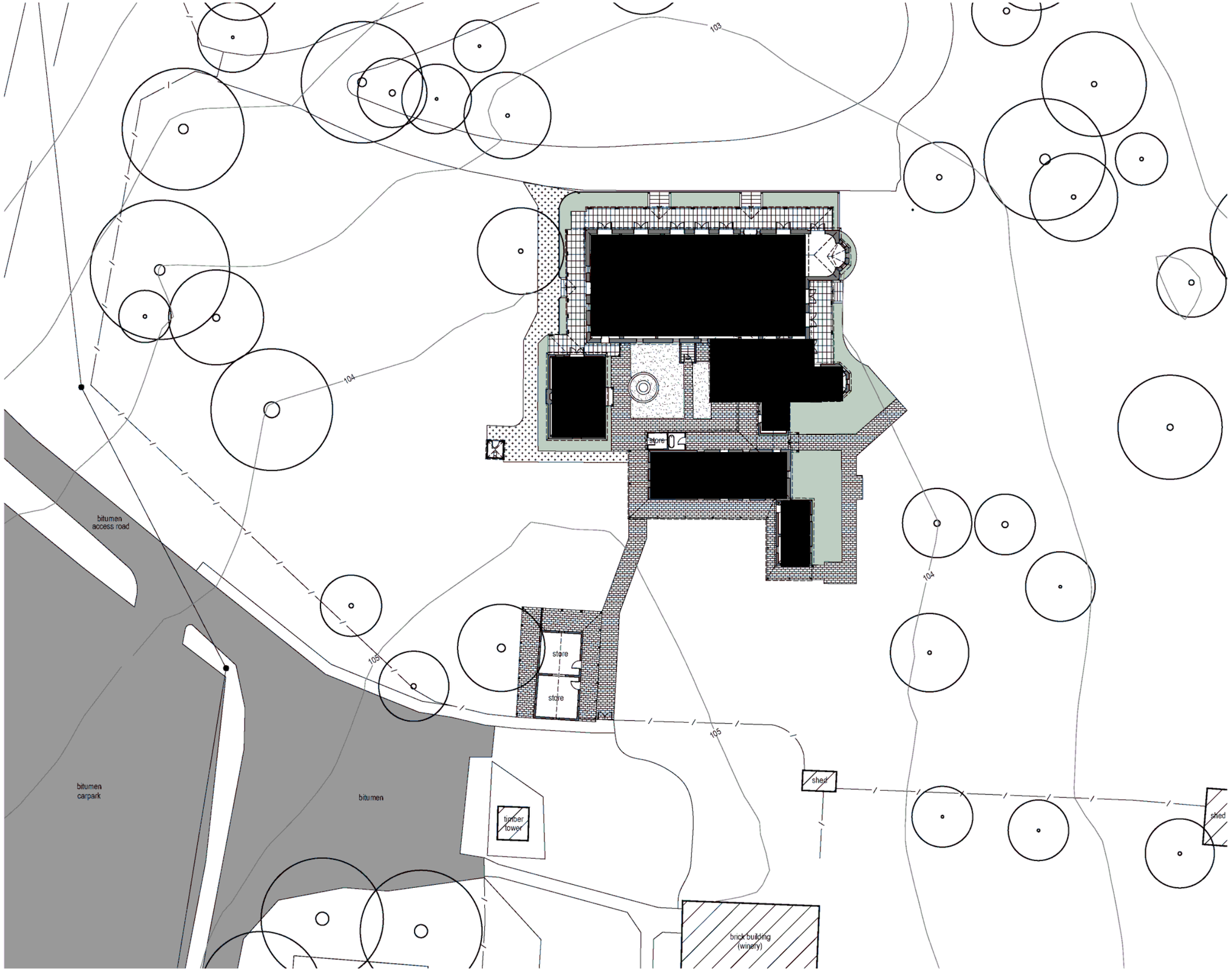
Title
Proposed
Ground Level

Drawn	Scale	Checked
L.D.P.	1:100 @ A1	
Job No.	Drawing No.	Issue
2434	04	B

Proposed
Ground Level

Attachment 4

CLPP01



Existing Ground Level

0 2 5 10 m

True northpoint

Notes:
Do not scale, check and verify all dimensions before commencing new work, ground levels may vary due to site conditions.

Landscape Details:
Refer to Landscape Drawings

Stormwater Details + Site Levels:
Refer to Hydraulic Eng. Drawings

Legend

RL XX.XX	Structural Floor Level
x RLXX.XX	Finished Reduced Level
1:16	Ramp Up Gradient

B	Amendments to Address Council Issues	03-08-20
A	Development Application	16-04-19
Issue description		Date

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DEVELOPMENT APPLICATION

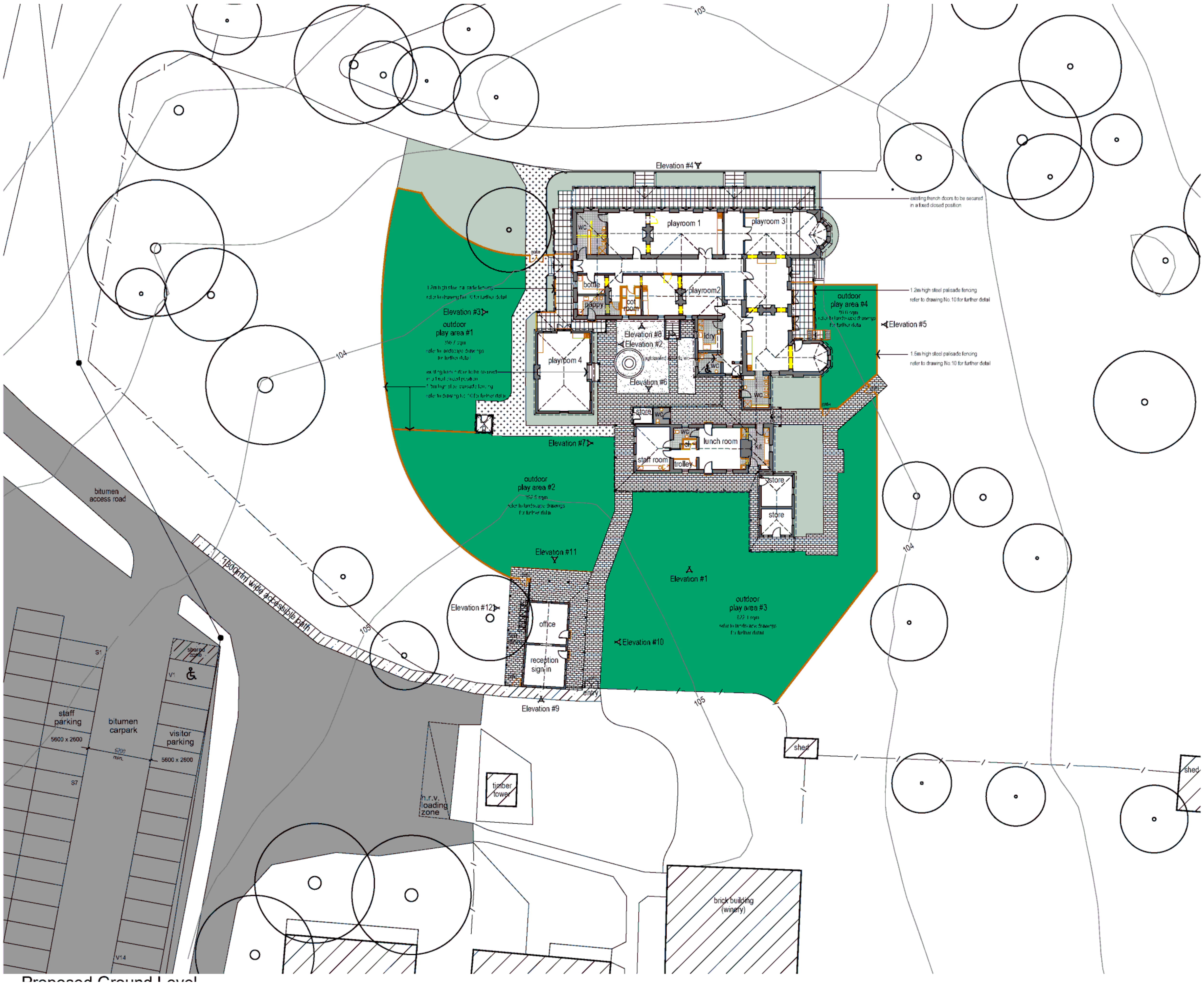
Project
Development Application
Proposed Child Care Centre

Project address
900 Camden Valley Way,
Gledswood Hills.

Client
Roy Nasso

Title
Existing
Ground Level

Drawn	Scale	Checked
L.D.P.	1:200 @ A1	
Job No.	Drawing No.	Issue
2434	05	B



Notes:
Do not scale, check and verify all dimensions before commencing new work.
ground levels may vary due to site conditions.

playroom #	age	area	children
1	2-3 years	58.1 sqm	18
2	0-2 years	39.2 sqm	12
3	3-5 years	112.4 sqm	34
4	3-5 years	52.3 sqm	16
TOTAL		263.0 sqm	80

total play room area - 263.0 sqm
= 80 children

Proposed Additions
Building Alterations

Landscape Details:
Refer to Landscape Drawings

Stormwater Details + Site Levels:
Refer to Hydraulic Eng. Drawings

Legend
RL XX.XX Structural Floor Level
x RLXX.XX Finished Reduced Level
1:8 Ramp Up Gradient

	Issue description	Date
B	Amendments to Address Council Issues	03-08-20
A	Development Application	16-04-19

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NSW Reg No. 3972

DEVELOPMENT APPLICATION

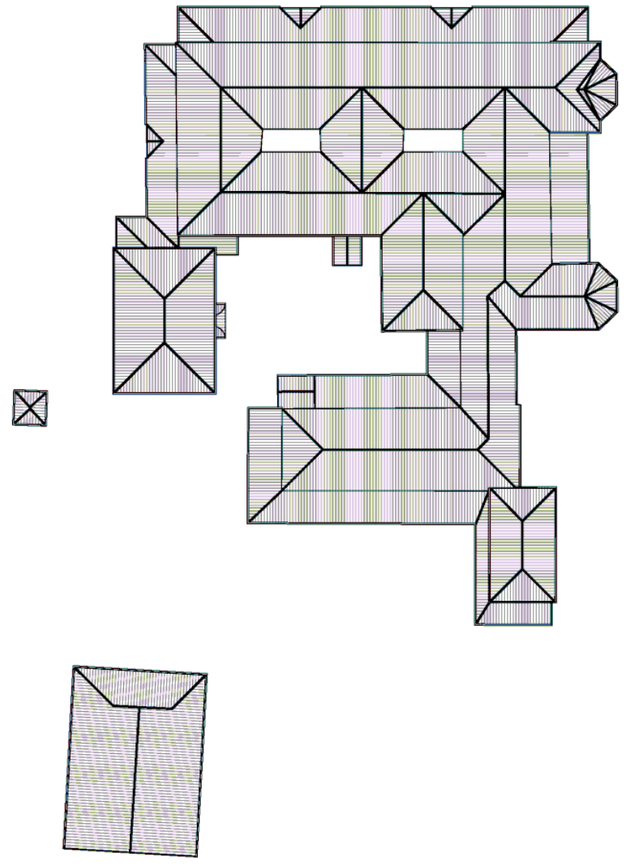
Project
Development Application
Proposed Child Care Centre

Project address
900 Camden Valley Way,
Gledswood Hills.

Client
Roy Nasso

Title
Proposed Ground Level

Drawn	Scale	Checked
L.D.P.	1:200 @ A1	
Job No.	**Drawing No.**	**Issue**
2434	06	B



0 2 5 10 m

True northpoint

Notes:
Do not scale, check and verify all dimensions before commencing new work.
ground levels may vary due to site conditions.

B	Amendments to Address Council Issues	03-08-20
A	Development Application	16-04-19
Issue	description	Date

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DEVELOPMENT APPLICATION

Project
Development Application
Proposed Child Care Centre

Project address
900 Camden Valley Way,
Gledswood Hills.

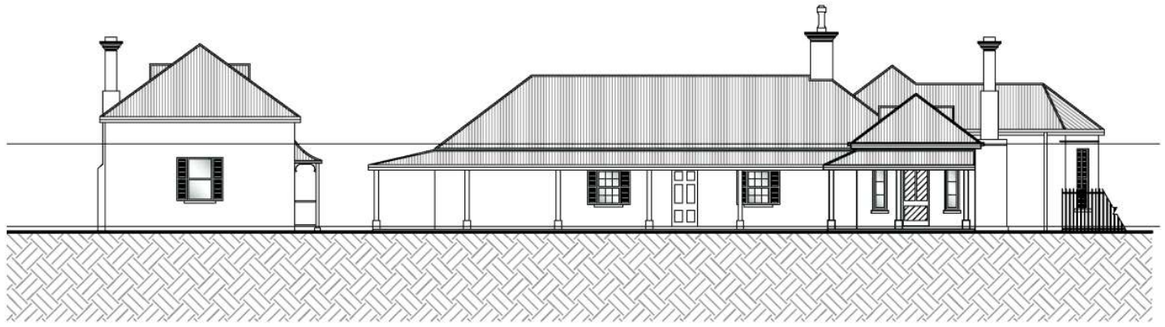
Client
Roy Nasso

Title
Roof Plan

Drawn	Scale	Checked
L.D.P.	1:200 @ A1	
Job No.	Drawing No.	Issue
2434	07	B

Roof Plan

0 1 2 5 m

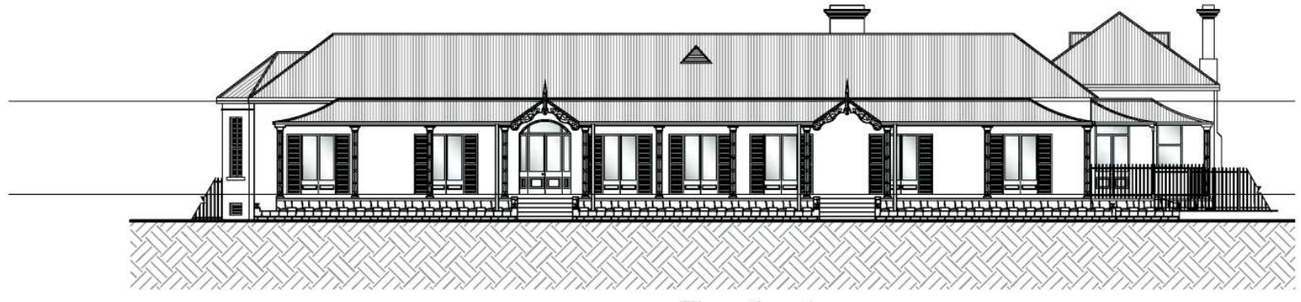


Elevation 1

Elevation 2

Notes:
Do not scale, check and verify all dimensions before commencing new work, ground levels may vary due to site conditions.

Elevation 3



Elevation 4

B	Amendments to Address Council Issues	03-08-20
A	Development Application	16-04-19
Issue	description	Date

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DEVELOPMENT APPLICATION

Project
Development Application
Proposed Child Care Centre

Project address
900 Camden Valley Way,
Gledswood Hills.

Client
Roy Nasso

Title
Elevations
1-4

Drawn	Scale	Checked
L.D.P.	1:100 @ A1	
Job No.	Drawing No.	Issue
2434	08	B

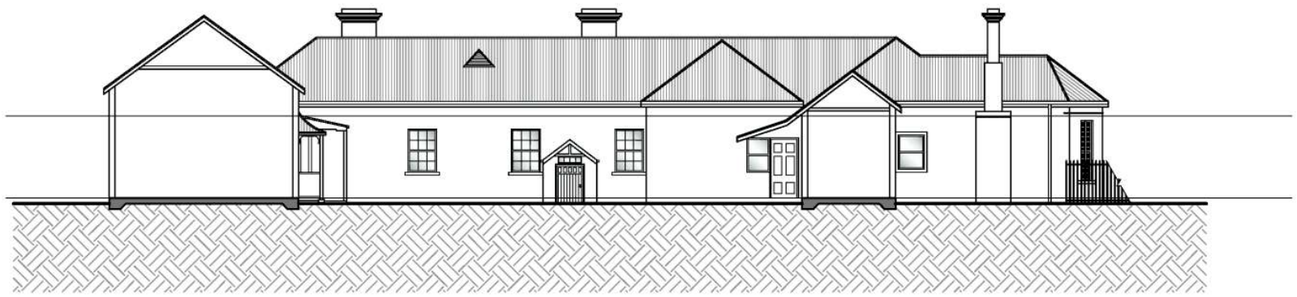
0 1 2 5 m

Notes:
Do not scale, check and verify all dimensions before commencing new work, ground levels may vary due to site conditions.

Elevation 5

Elevation 6

Elevation 7



Elevation 8

B	Amendments to Address Council Issues	03-08-20
A	Development Application	16-04-19
Issue description		Date

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Nominated Architect: Robert Del Pizzo NSW Reg No. 3972

DEVELOPMENT APPLICATION

Project
Development Application
Proposed Child Care Centre

Project address
900 Camden Valley Way,
Gledswood Hills.

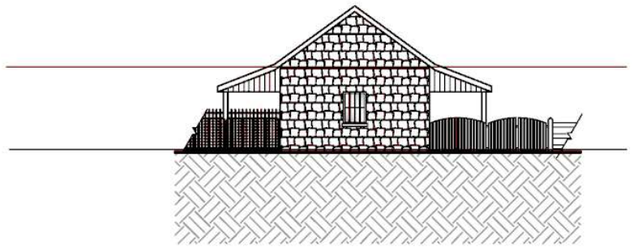
Client
Roy Nasso

Title
Elevations
5-8

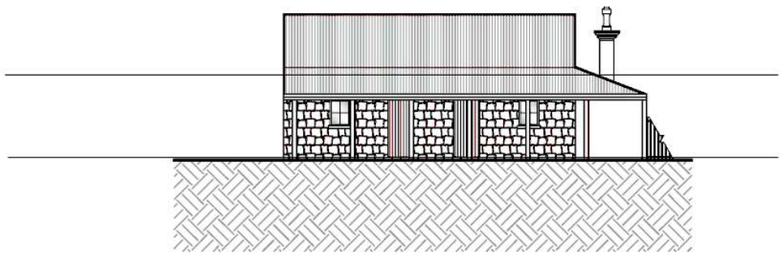
Drawn	Scale	Checked
L.D.P.	1:100 @ A1	
Job No.	Drawing No.	Issue
2434	09	B

0 1 2 5 m

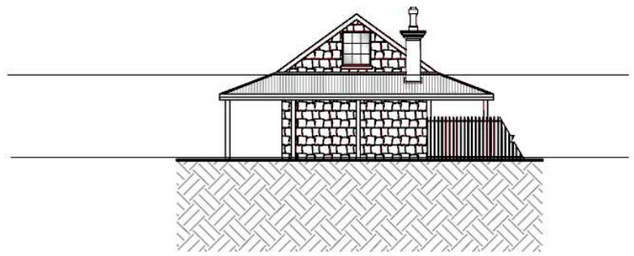
Notes:
Do not scale, check and verify all dimensions before commencing new work.
ground levels may vary due to site conditions.



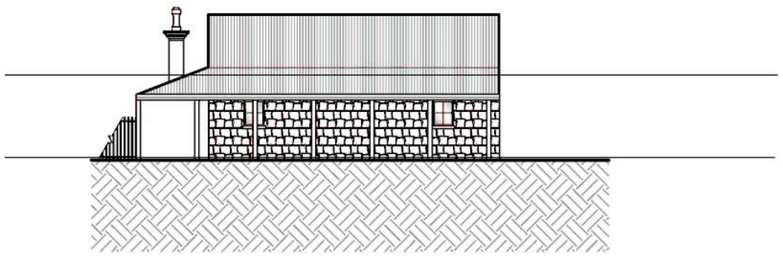
Elevation 9
scale 1:100



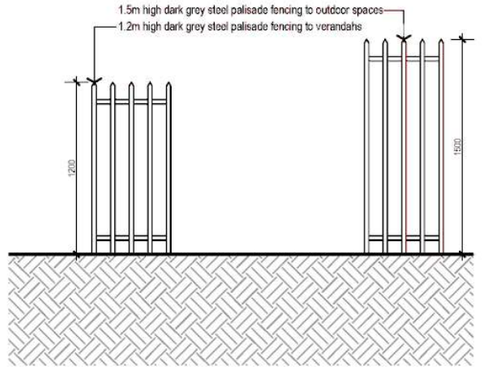
Elevation 10
scale 1:100



Elevation 11
scale 1:100



Elevation 12
scale 1:100



Fence Detail
scale 1:20

B	Amendments to Address Council Issues	03-06-20
A	Development Application	16-04-19
Issue	description	Date

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Nominated Architect: Robert Del Pizzo
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DEVELOPMENT APPLICATION

Project
Development Application
Proposed Child Care Centre

Project address
900 Camden Valley Way,
Gledswood Hills.

Client
Roy Nasso

Title
Elevations
9-12

Drawn	Scale	Checked
L.D.P.	as shown	
Job No.	Drawing No.	Issue
2434	10	B

Elevations 9-12

0 0.5 1 2.5 m

True northpoint

Notes:

Do not scale, check and verify all dimensions before commencing new work. ground levels may vary due to site conditions.

playroom #	age	area	children
1	2-3 years	59.1 sqm	18
2	0-2 years	39.2 sqm	12
3	3-5 years	112.4 sqm	34
4	3-5 years	52.3 sqm	16
TOTAL		263.0 sqm	80

total play room area - 263.0 sqm
= 80 children

Proposed Additions

Play Room Area

Landscape Details:
Refer to Landscape Drawings

Stormwater Details + Site Levels:
Refer to Hydraulic Eng. Drawings

Legend

RL XX.XX	Structural Floor Level
x RL XX.XX	Finished Reduced Level
T.B	Ramp Up Gradient

Note:
temporary under bench bin storage where relevant

B	Amendments to Address Council Issues	03-08-20
A	Development Application	16-04-19
Issue	description	Date

architex
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Nominated Architect:
Robert Del Pizzo
NSW Reg No. 3972

DEVELOPMENT APPLICATION

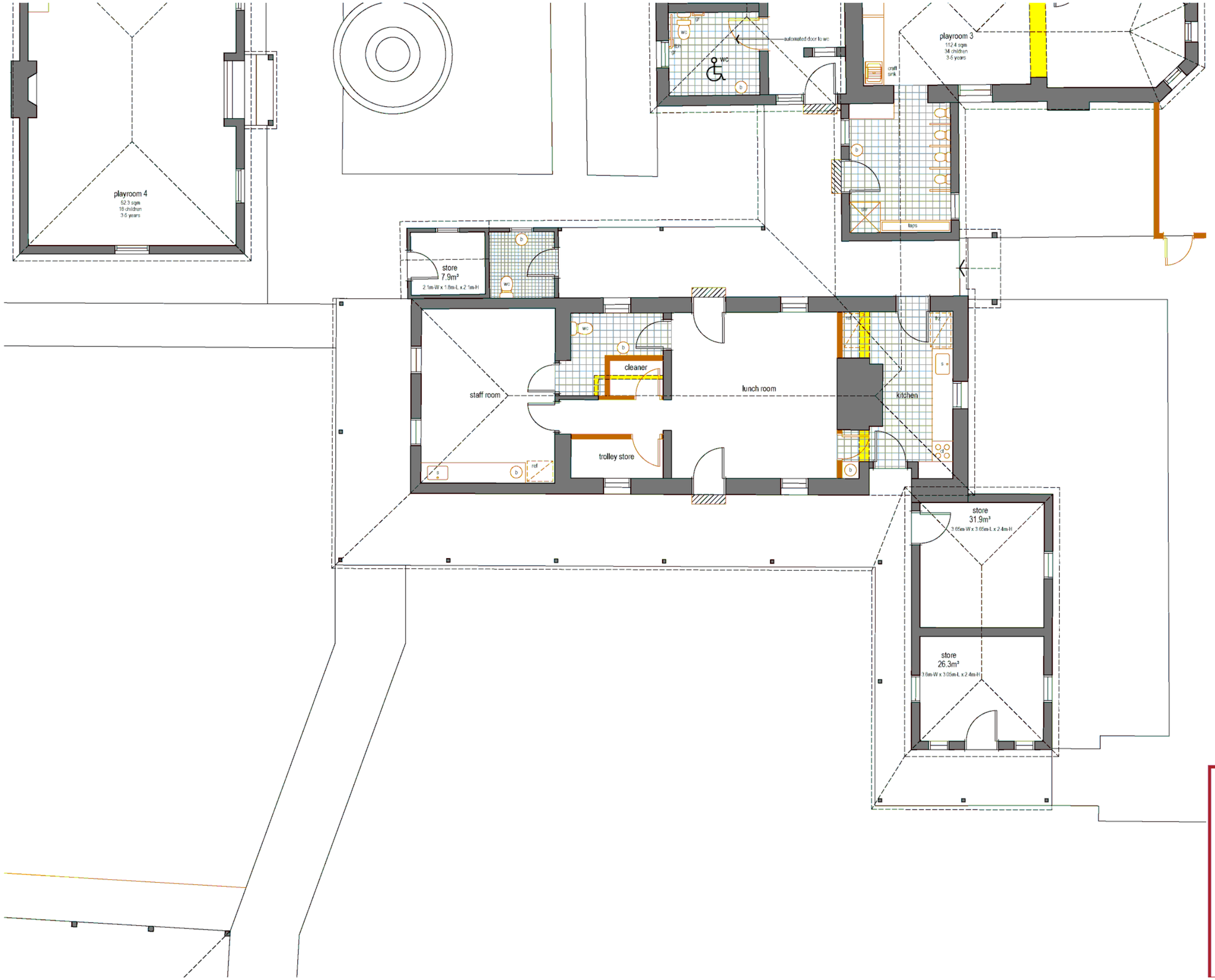
Project
Development Application
Proposed Child Care Centre

Project address
900 Camden Valley Way,
Gledswood Hills.

Client
Roy Nasso

Title
Play Room Area

Drawn	Scale	Checked
L.D.P.	1:50 @ A1	
Job No.	Drawing No.	Issue
2434	11	B



B	Amendments to Address Council Issues	03-08-20
A	Development Application	16-04-19
Issue	description	Date

architex
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Nominated Architect:
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NSW Reg No. 3972

DEVELOPMENT APPLICATION

Project
Development Application
Proposed Child Care Centre

Project address
900 Camden Valley Way,
Gledswood Hills.

Client
Roy Nasso

Title
Kitchen Details

Drawn	Scale	Checked
L.D.P.	1:50 @ A1	
Job No.	Drawing No.	Issue
2434	12	B

Bin Calculations

- = 3 x 240 lt. waste bins
- = 2 x 240 lt. recycle bins
- = 1 x 240 lt. sanitary waste bin

B	Amendments to Address Council Issues	03-08-20
A	Development Application	16-04-19
Issue description		Date

architex
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Nominated Architect: Robert Del Pizzo NSW Reg No. 3972

DEVELOPMENT APPLICATION

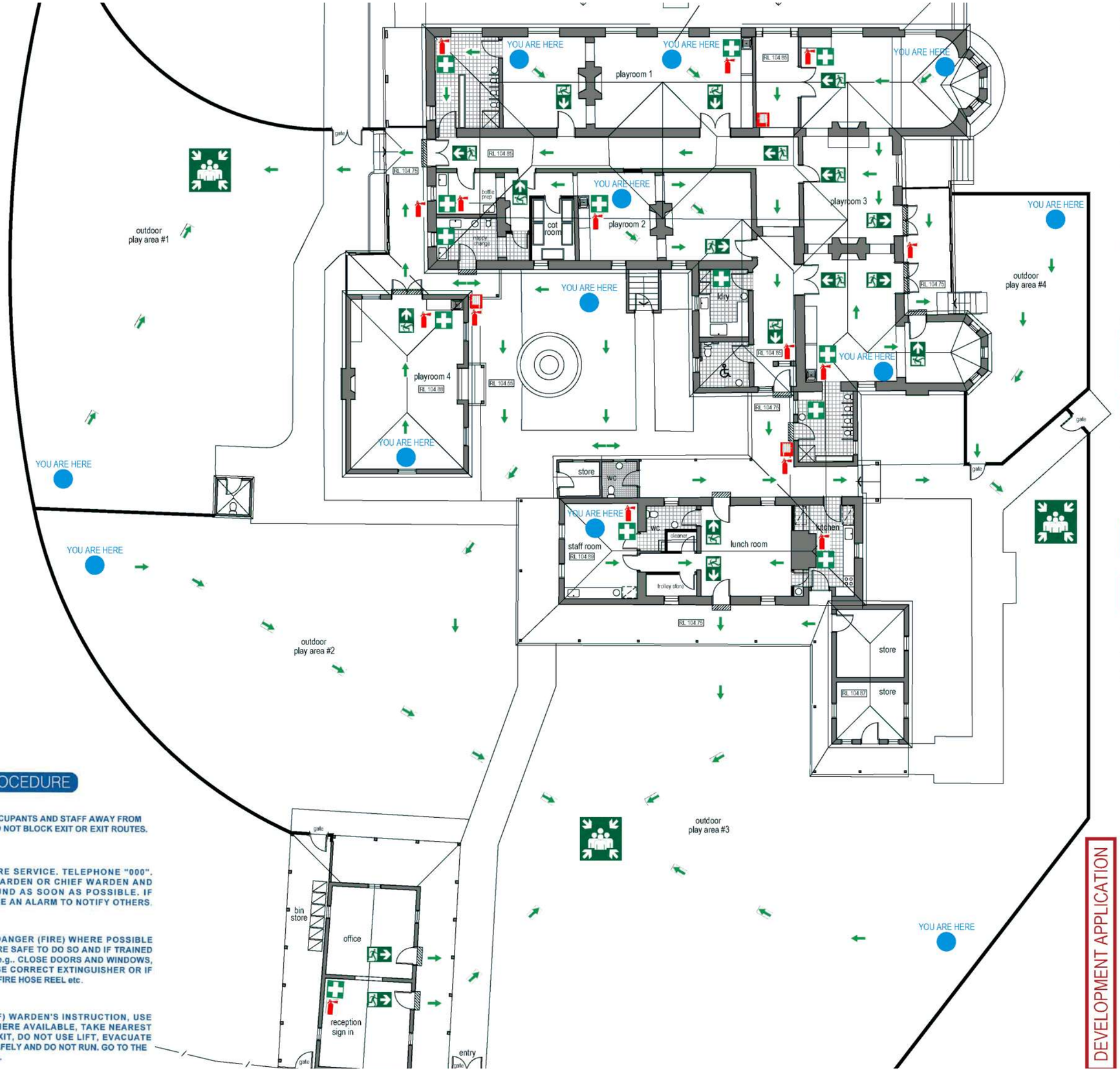
Project
Development Application
Proposed Child Care Centre

Project address
900 Camden Valley Way,
Gledswood Hills.

Client
Roy Nasso

Title
Waste Management And Access

Drawn	Scale	Checked
L.D.P.	1:100 @ A1	
Job No.	Drawing No.	Issue
2434	13	B



EVACUATION PROCEDURE

R REMOVE → REMOVE ALL OCCUPANTS AND STAFF AWAY FROM THE DANGER. DO NOT BLOCK EXIT OR EXIT ROUTES.

A ALERT → ALERT THE FIRE SERVICE. TELEPHONE "000". NOTIFY THE WARDEN OR CHIEF WARDEN AND PEOPLE AROUND AS SOON AS POSSIBLE. IF POSSIBLE RAISE AN ALARM TO NOTIFY OTHERS.

C CONTAIN → CONTAIN THE DANGER (FIRE) WHERE POSSIBLE TO DO SO, WHERE SAFE TO DO SO AND IF TRAINED TO DO SO. FOR e.g.. CLOSE DOORS AND WINDOWS, SELECT AND USE CORRECT EXTINGUISHER OR IF AVAILABLE USE FIRE HOSE REEL etc.

E EVACUATE → FOLLOW (CHIEF) WARDEN'S INSTRUCTION, USE FIRE STAIRS WHERE AVAILABLE, TAKE NEAREST AND SAFEST EXIT, DO NOT USE LIFT, EVACUATE IMMEDIATELY, SAFELY AND DO NOT RUN. GO TO THE ASSEMBLY AREA.

0 1 2 5 m

True northpoint

Notes:
Do not scale, check and verify all dimensions before commencing new work, ground levels may vary due to site conditions.

000 EMERGENCY

Legend

- Assembly Area
- Emergency Exit
- Evacuation Route
- Fire Extinguisher
- Fire Hose Reel
- First Aid Kit

Issue	Description	Date
B	Amendments to Address Council Issues	03-08-20
A	Development Application	16-04-19

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DEVELOPMENT APPLICATION

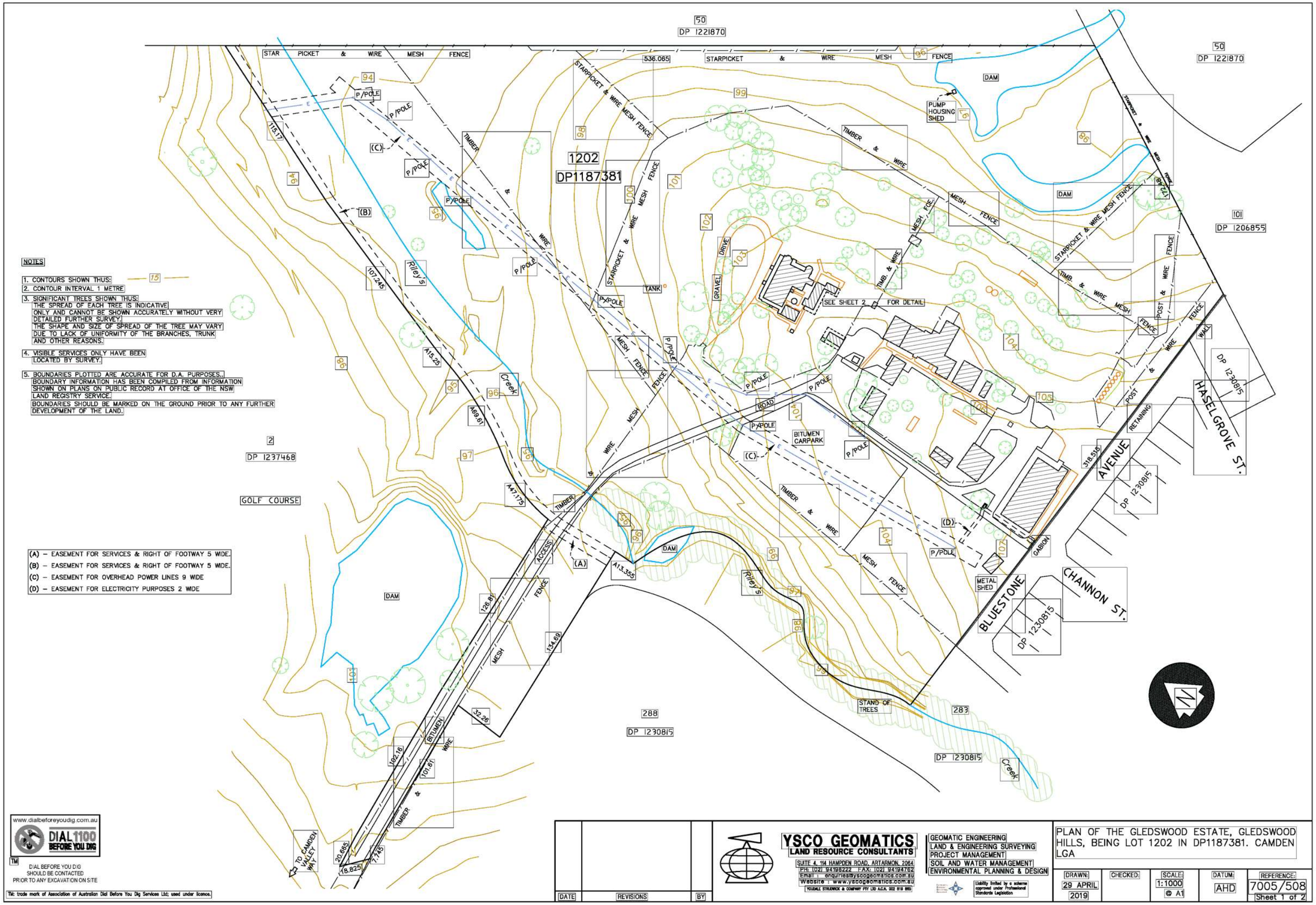
Project
Development Application
Proposed Child Care Centre

Project address
900 Camden Valley Way,
Gledswood Hills.

Client
Roy Nasso

Title
Evacuation Plan

Drawn	Scale	Checked
L.D.P.	1:100 @ A1	
Job No.	Drawing No.	Issue
2434	14	B



1202
DP1187381

AVENUE

BLUESTONE

(C) – EASEMENT FOR OVERHEAD POWER LINES 9 WIDE
(D) – EASEMENT FOR ELECTRICITY PURPOSES 2 WIDE

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DATE	REVISIONS	BY

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LAND RESOURCE CONSULTANTS
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PH: (02) 94191222 FAX: (02) 94194752
Email : enquiries@ysco-geomatics.com.au
Website : www.ysco-geomatics.com.au
YOUDALE STRUDWICK & COMPANY PTY LTD A.C.N. 002 819 865

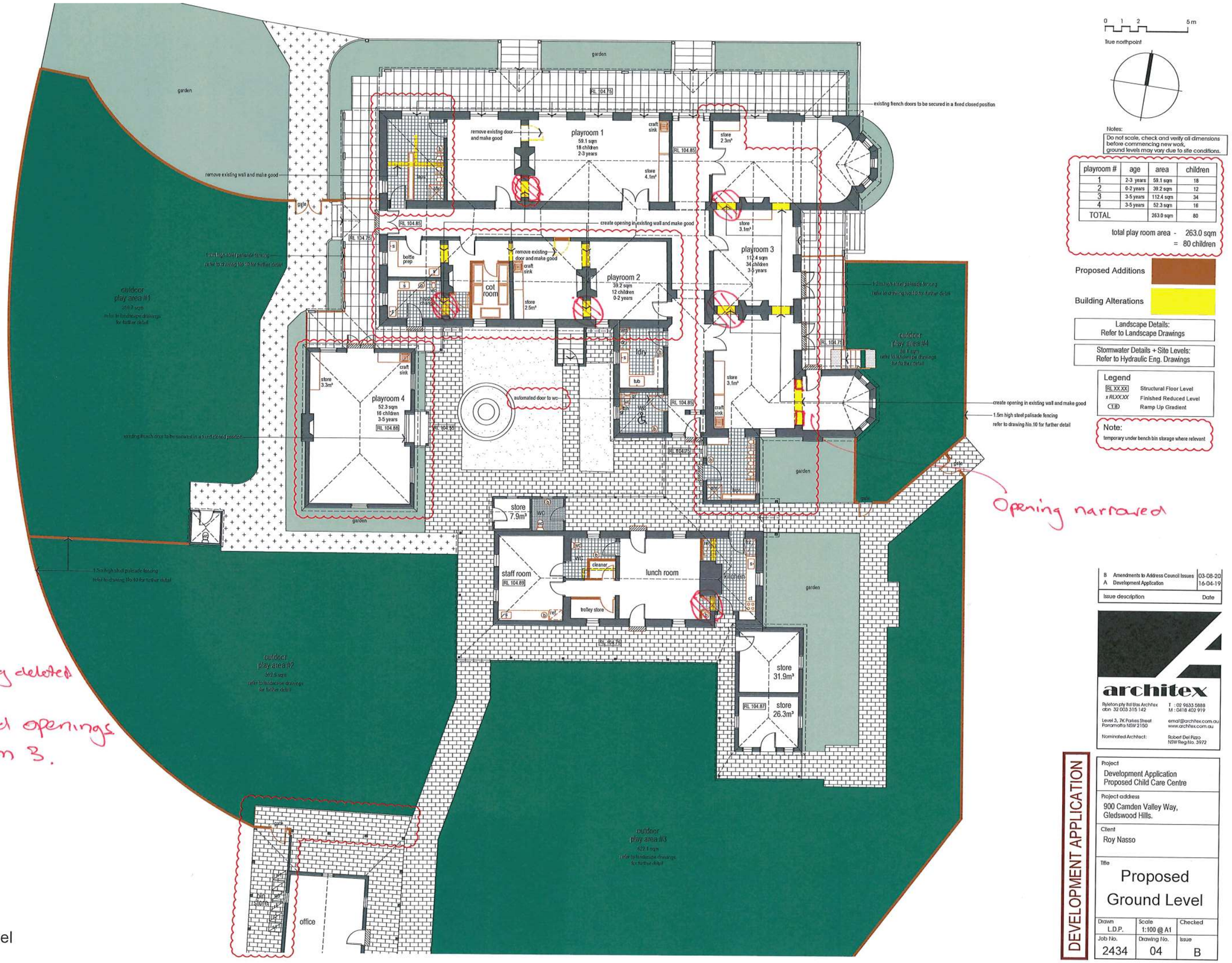
GEOMATIC ENGINEERING
LAND & ENGINEERING SURVEYING
PROJECT MANAGEMENT
SOIL AND WATER MANAGEMENT
ENVIRONMENTAL PLANNING & DESIGN

Liability limited by a scheme approved under Professional Standards Legislation

PLAN OF THE GLEDSWOOD ESTATE, GLEDSWOOD HILLS, BEING LOT 1202 IN DP1187381. CAMDEN LGA

DRAWN:	CHECKED:	SCALE:	DATUM:	REFERENCE:
29 APRIL 2019		1:400 @ A1	AHD	7005/508 Sheet 2 of 2

Attachment 4 **CLPP01**



B Amendments to Address Council Issues	03-08-20
A Development Application	16-04-19
Issue description	Date

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Robert Del Pizzo NSW Reg No. 3972

DEVELOPMENT APPLICATION

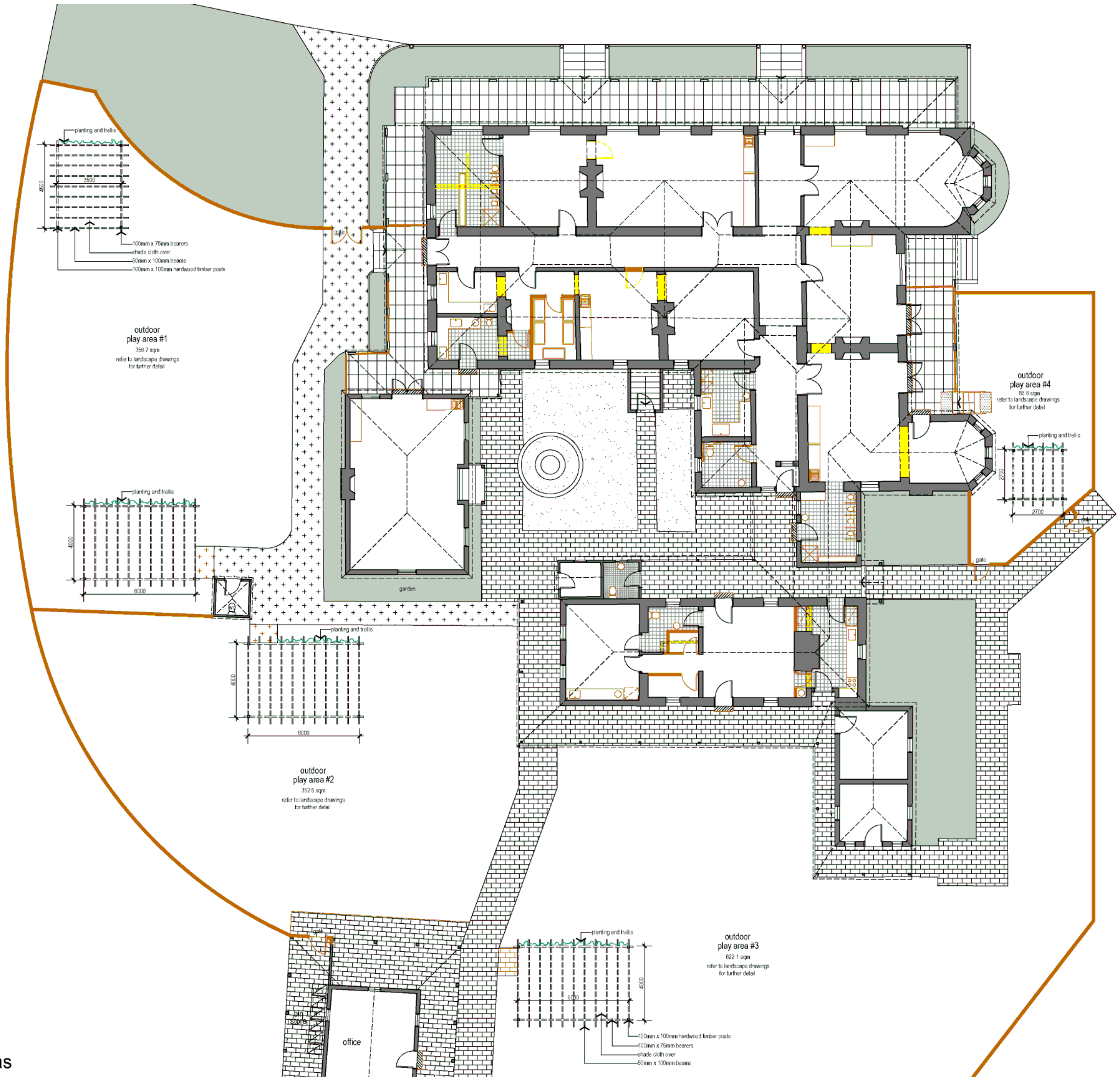
Project: Development Application Proposed Child Care Centre

Project address: 900 Camden Valley Way, Gledswood Hills.

Client: Roy Nasso

Title: Proposed Ground Level

Drawn	Scale	Checked
L.D.P.	1:100 @ A1	
Job No.	Drawing No.	Issue
2434	04	B



True northpoint

Notes:
Do not scale, check and verify all dimensions before commencing new work, ground levels may vary due to site conditions.

Issue	Issue description	Date
B	Amendments to Address Council Issues	03-08-20
A	Development Application	16-04-19

architex

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www.architex.com.au
Nominated Architect: Robert Del Pizzo NSW Reg No. 3972

DEVELOPMENT APPLICATION

Project
Development Application
Proposed Child Care Centre

Project address
900 Camden Valley Way,
Gledswood Hills.

Client
Roy Nasso

Title
Proposed Shade Areas

Drawn	Scale	Checked
L.D.P.	1:100 @ A1	
Job No.	**Drawing No.**	**Issue**
2434	15	B

Proposed
Shade Areas

Attachment 4

CLPP01

STORMWATER CONCEPT PLAN
AT 900 CAMDEN VALLEY WAY, GLEDSWOOD HILLS NSW

NOTE RE. SERVICES

APPROXIMATE LOCATIONS OF EXISTING SERVICES SHOWN ON LONGITUDINAL SECTION. EXACT LOCATIONS & DEPTHS TO BE ACURATELY LOCATED BY BUILDER CONTRACTOR BY CONTACTING THE RELEVANT AUTHORTIES BEFORE COMMENCEMENT OF ANY WORKS

DIAL 1100 BEFORE YOU DIG

GENERAL NOTES

1. ALL LINES ARE TO BE MIN. 100Ø UPVC @ MIN 1.0% GRADE UNLESS NOTED OTHERWISE.
2. IT IS THE CONTRACTORS RESPONSIBILITY TO LOCATE & LEVEL ALL EXISTING SERVICES PRIOR TO THE COMMENCEMENT OF ANY EARTHWORKS. ALL DESIGN LEVELS SHOWN ON PLAN SHALL BE VERIFIED ON SITE PRIOR TO THE COMMENCEMENT OF ANY WORK.
3. ALL PIPES TO HAVE MIN 200mm COVER IF LOCATED WITHIN PROPERTY (300mm IF LOCATED IN BLACKTOWN CITY COUNCIL)
4. ALL PITS IN DRIVEWAYS BE HEAVY DUTY GRATES. DIRECT SURFACE FLOW TO ALL GRATED SURFACE INLET PITS.
5. ALL WORK DO BE DONE IN ACCORDANCE WITH COUNCIL'S DCP AND TO COUNCIL'S SATISFACTION.
6. LOCATION OF DOWNPIPES & FLOOR WASTES ARE INDICATIVE ONLY. DOWNPIPE & FLOOR WASTE SIZE, LOCATION & QUANTITY TO BE DETERMINED BY BUILDER & IN ACCORDANCE WITH RELEVANT AUSTRALIAN STANDARDS.
7. THIS PLAN IS TO BE READ IN CONJUNCTION WITH THE ARCHITECTURAL, LANDSCAPE AND STRUCTURAL PLANS.
8. ANY DISCREPANCIES OR OMISSIONS SHALL BE REFERRED TO THE DESIGN ENGINEER AND COUNCIL ENGINEER FOR RESOLUTION.
9. ALL PITS OR GRATES IN TRAFFICABLE AREAS TO BE HEAVY DUTY.
10. ALL GUTTERS WILL BE FITTED WITH LEAF GUARDS AND SHOULD BE INSPECTED AND CLEANED TO ENSURE LEAF LITTER CANNOT ENTER THE DOWNPIPES
11. ALL PIT GRATES ON SITE MUST BE HINGED WITH J-BOLT LOCKDOWN SYSTEM.
12. PITS DEEPER THAN 1m REQUIRE STEP IRONS IN A STAGGERED MANNER. THE DEPTH OF ANY PIT IN EXCESS OF 2m SHALL BE STRUCTURALLY DESIGNED AND CERTIFIED BY A STRUCTURAL ENGINEER AND SUBMITTED TO COUNCIL FOR APPROVAL.
13. PROVIDE GRATED DRAIN IN ALL OPEN AREAS TO THE SKY INCLUDING STAIRS AND CONNECT TO NEAREST STORMWATER SYSTEM.
14. PROVIDE EMERGENCY SPITTERS TO ALL BALCONIES.
15. PROVIDE AGG PIPE IN ALL LANDSCAPE AREA AND CONNECT TO THE STORMWATER DRAINAGE SYSTEM.
16. PROVIDE AGG PIPE BEHIND THE RETAINING WALL AND CONNECT TO THE STORMWATER DRAINAGE SYSTEM.
17. TOP OF KERB AND INVERT OF GUTTER LEVELS & SERVICES ARE TO BE CHECKED ON SITE PRIOR ANY SITE WORK, INCLUDING CONSTRUCTION OF INTERNAL DRAINAGE SYSTEM. CONTACT ENGINEER IMMEDIATELY IF LEVEL VARIES FROM DESIGN DRAWING.
18. ALL RETAINING WALL FOR ABOVE GROUND OSD/BIORETENTION BASIN TO BE FULLY CONSTRUCTED WITHIN THE PROPERTY BOUNDARY.

SURFACE INLET PIT DIMENSION

DEPTH TO INVERT OF OUTLET		MINIMUM INTERNAL DIMENSIONS (mm)		
		RECTANGULAR		CIRCULAR
		WIDTH	LENGTH	DIAMETER
	≤450	350	350	-
>450	≤600	450	450	600
>600	≤900	600	600	900
>900	≤1200	600	900	1000
>1200		900	900	1000

DRAWING SCHEDULE

DRAWING No.	DRAWING TITLE
D00	COVER SHEET, LEGEND & DRAWING SCHEDULE
D01	GROUND FLOOR STORMWATER DRAINAGE PLAN
D02	NOT USE
D03	EROSION AND SEDIMENT CONTROL PLAN AND DETAILS
D04	MUSIC RESULTS AND DETAILS
D05	MUSIC LINK REPORT

SYMBOLS

F.F.L.	FINISHED FLOOR LEVEL
T.K.	TOP OF KERB
RL	PIT SURFACE LEVEL
IL	INVERT LEVEL
———	STORMWATER DRAINAGE PIPE
———	DOWNPIPE TO RAINWATER TANK
•DP	100Ø DOWN PIPE (U.N.O.)
• VD	VERTICAL DROP PIPE
• VR	VERTICAL RISER
• IO	INSPECTION OPENING
▨	MASONRY RETAINING WALL
• FW	FLOOR WASTE 300Ø
• RWO	RAINWATER OUTLET 150Ø
• DDO	DISH DRAIN OUTLET 100Ø
▣	GRATED INLET PIT
▥	GRATED DRAIN
⇦	OVERLAND FLOW PATH
▶SP	SPREADER
><ES	EMERGENCY SPITTER

ABBREVIATIONS

CL	CLEARANCE
DIA	DIAMETER
DDO	DISH DRAIN OUTLET
DP	DOWNPIPE
Ex.	EXISTING
FFL	FINISHED FLOOR LEVEL
GL	GROUND LEVEL
GMS	GALVANISED MILD STEEL
GSIP	GRADED SURFACE INLET PIT
GTD	GRATED TRENCH DRAIN
HL	HIGH LEVEL
IL	INVERT LEVEL
JP	JUNCTION PIT
KIP	KERB INLET PIT
IO	INSPECTION OPENING
LL	LOW LEVEL
O/F	OVERFLOW
PVC	POLYVINYLCHLORIDE
SL	SURFACE LEVEL
STW	STORMWATER
S/S	STAINLESS STELL
U/S	UNDER SIDE

NOTES: DRAINAGE LINES

DRAINAGE LINES SHOWN continuous ——— TO COLLECT SURFACE WATER

DRAINAGE LINES SHOWN DASHED —RWT— TO COLLECT ROOF WATER ONLY TO RAINWATER TANK

DP : 100Ø DOWN PIPE U.N.O.

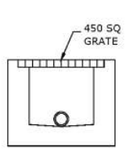
———: STORMWATER PIPE @1% MIN. U.N.O.

REFER TO AS.3500 PART 3 TABLE 7.2

P1 : 100Ø UPVC PIPE AT 1.0% MIN. GRADE
P2 : 150Ø UPVC PIPE AT 1.0% MIN. GRADE
P3 : 225Ø UPVC PIPE AT 0.5% MIN. GRADE
P4 : 300Ø UPVC PIPE AT 0.4% MIN. GRADE
P5 : 375Ø UPVC PIPE AT 0.4% MIN. GRADE
P6 : 450Ø RCP PIPE AT 0.4% MIN. GRADE

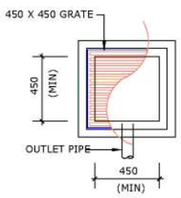
✳ NEW LEVEL
+ EXISTING LEVEL

PROVIDE 150mm GAP UNDER THE FENCE AND IF BLOCK WALL PROVIDED, THEN PROVIDE OPENING FOR EMERGENCY OVERFLOW.

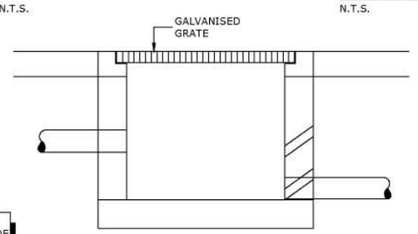


PIT

TYPICAL PIT SECTION
N.T.S.



STANDARD PIT
N.T.S.



TYPICAL PIT DETAIL
NTS

LOCALITY SKETCH
NOT TO SCALE

NOT FOR CONSTRUCTION

No	AMENDMENT	ENG	DRAFT	DATE
B	FOR D.A. APPROVAL	J.P.	J.P.	18-12-2020
A	FOR D.A. APPROVAL	J.P.	J.P.	19-03-2020

ARCHITECT: architex
Ryeton pty ltd t/as Architex abn 32 003 315 142
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Nominated Architect: Robert Del Rizzo NSW Reg No. 3972

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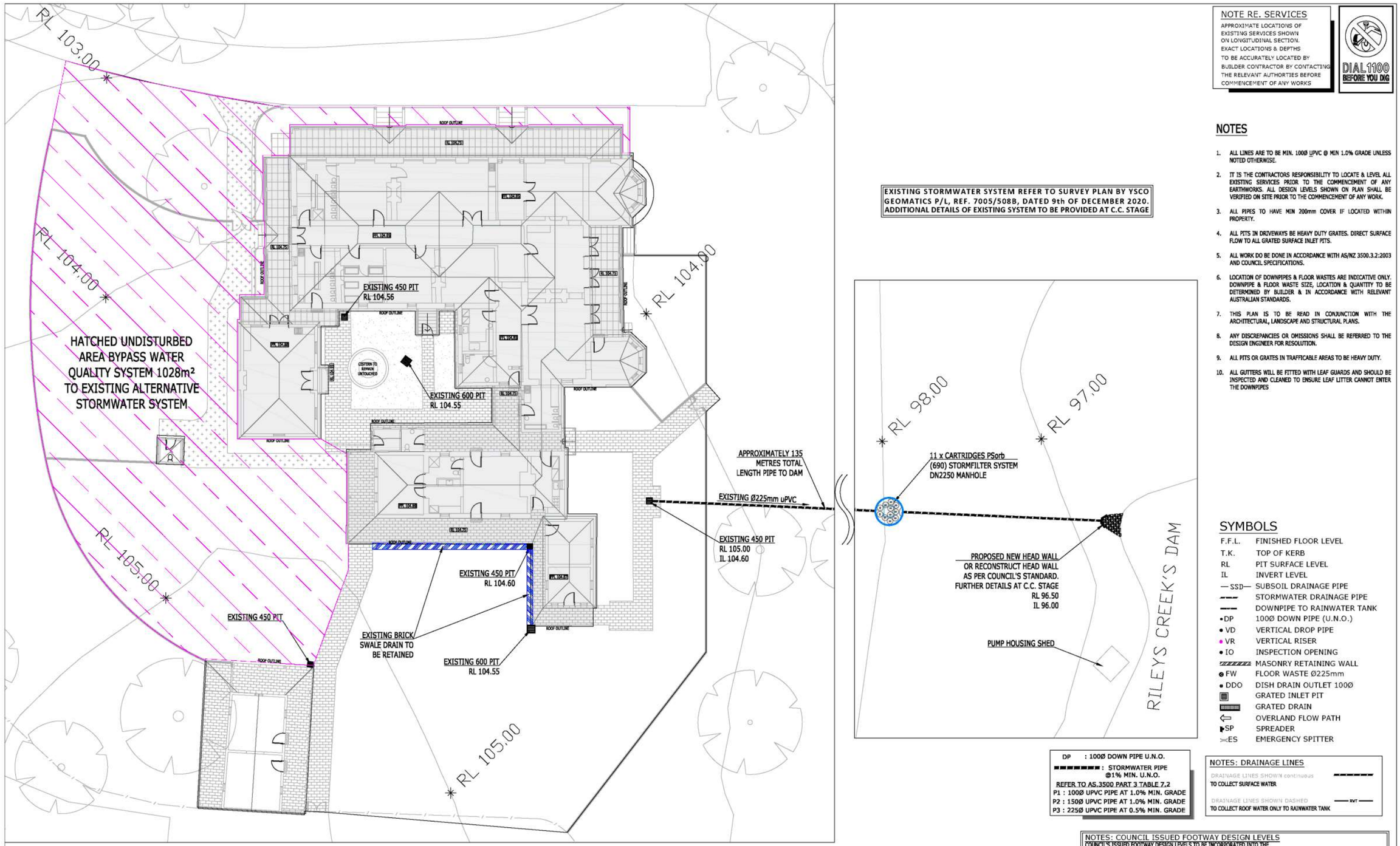
EMAIL: info@lt.ceng.com.au www.Lceng.com.au

PROJECT: PROPOSED ALTERATIONS & ADDITIONS 900 CAMDEN VALLEY WAY, GLEDSWOOD HILLS NSW

CONSENT AUTHORITY: CAMDEN COUNCIL

SHEET SUBJECT: COVER SHEET, LEGEND AND DRAWING SCHEDULE

PROJECT	900 CAMDEN VALLEY WAY, GLEDSWOOD HILLS NSW		
DATE: DEC 20	DRAWN: J.P.	DESIGNED: J.P.	CHECKED: N.L.
SCALE @ A1: N.T.S.		JOB No: 19NL178	
AUTHORISED: NERMEIN LOKA		DWG No: D00	REV: B



NOTE RE. SERVICES

APPROXIMATE LOCATIONS OF EXISTING SERVICES SHOWN ON LONGITUDINAL SECTION. EXACT LOCATIONS & DEPTHS TO BE ACCURATELY LOCATED BY BUILDER CONTRACTOR BY CONTACTING THE RELEVANT AUTHORITIES BEFORE COMMENCEMENT OF ANY WORKS

DIAL 1100 BEFORE YOU DIG

NOTES

1. ALL LINES ARE TO BE MIN. 100Ø UPVC @ MIN 1.0% GRADE UNLESS NOTED OTHERWISE.
2. IT IS THE CONTRACTORS RESPONSIBILITY TO LOCATE & LEVEL ALL EXISTING SERVICES PRIOR TO THE COMMENCEMENT OF ANY EARTHWORKS. ALL DESIGN LEVELS SHOWN ON PLAN SHALL BE VERIFIED ON SITE PRIOR TO THE COMMENCEMENT OF ANY WORK.
3. ALL PIPES TO HAVE MIN 200mm COVER IF LOCATED WITHIN PROPERTY.
4. ALL PITS IN DRIVEWAYS BE HEAVY DUTY GRATES. DIRECT SURFACE FLOW TO ALL GRATED SURFACE INLET PITS.
5. ALL WORK DO BE DONE IN ACCORDANCE WITH AS/NZ 3500.3.2:2003 AND COUNCIL SPECIFICATIONS.
6. LOCATION OF DOWNPIPES & FLOOR WASTES ARE INDICATIVE ONLY. DOWNPIPE & FLOOR WASTE SIZE, LOCATION & QUANTITY TO BE DETERMINED BY BUILDER & IN ACCORDANCE WITH RELEVANT AUSTRALIAN STANDARDS.
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SYMBOLS

F.F.L.	FINISHED FLOOR LEVEL
T.K.	TOP OF KERB
RL	PIT SURFACE LEVEL
IL	INVERT LEVEL
— SSD—	SUBSOIL DRAINAGE PIPE
———	STORMWATER DRAINAGE PIPE
———	DOWNPIPE TO RAINWATER TANK
•DP	100Ø DOWN PIPE (U.N.O.)
• VD	VERTICAL DROP PIPE
• VR	VERTICAL RISER
• IO	INSPECTION OPENING
	MASONRY RETAINING WALL
⊗ FW	FLOOR WASTE Ø225mm
• DDO	DISH DRAIN OUTLET 100Ø
	GRATED INLET PIT
	GRATED DRAIN
	OVERLAND FLOW PATH
▶SP	SPREADER
⋊ES	EMERGENCY SPITTER

DP : 100Ø DOWN PIPE U.N.O.
: STORMWATER PIPE @1% MIN. U.N.O.
REFER TO AS.3500 PART 3 TABLE 7.2
P1 : 100Ø UPVC PIPE AT 1.0% MIN. GRADE
P2 : 150Ø UPVC PIPE AT 1.0% MIN. GRADE
P3 : 225Ø UPVC PIPE AT 0.5% MIN. GRADE

NOTES: DRAINAGE LINES
DRAINAGE LINES SHOWN continuous ——— TO COLLECT SURFACE WATER
DRAINAGE LINES SHOWN DASHED —— RWT —— TO COLLECT ROOF WATER ONLY TO RAINWATER TANK

NOTES: COUNCIL ISSUED FOOTWAY DESIGN LEVELS
COUNCIL'S ISSUED FOOTWAY DESIGN LEVELS TO BE INCORPORATED INTO THE FINISHED LEVELS ONCE ISSUED BY COUNCIL.
NOTES: ROAD RESERVE & FOOTWAY DRAINAGE ELEMENTS
ALL STORMWATER DRAINAGE ELEMENTS PROPOSED WITHIN THE ROAD RESERVE AND FOOTWAY SHALL BE CONSTRUCTED UNDER THE SUPERVISION AND TO THE SATISFACTION OF COUNCIL'S ENGINEER.

GROUND FLOOR/SITE STORMWATER DRAINAGE PLAN

SCALE 1:150

1:150@A1

NOT FOR CONSTRUCTION

No	AMENDMENT	ENG	DRAFT	DATE
C	FOR D.A. APPROVAL	J.P.	J.P.	18-12-2020
B	FOR D.A. APPROVAL	J.P.	J.P.	19-03-2020
A	FOR D.A. APPROVAL	J.P.	J.P.	26-11-2019

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EMAIL: info@Lceng.com.au www.Lceng.com.au

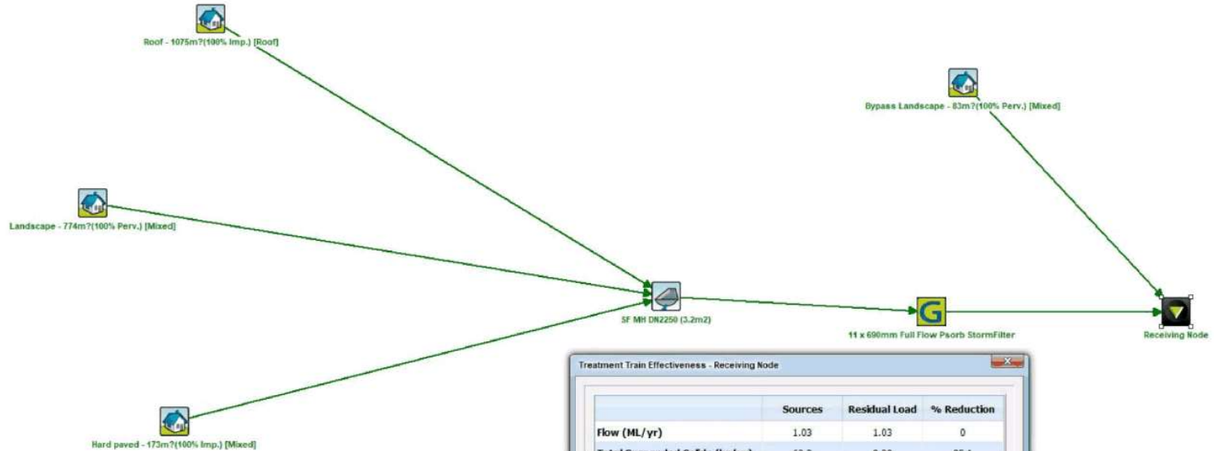
PROJECT
PROPOSED ALTERATIONS & ADDITIONS
900 CAMDEN VALLEY WAY, GLEDSWOOD HILLS NSW

CONSENT AUTHORITY: CAMDEN COUNCIL

N

SHEET SUBJECT
GROUND FLOOR / SITE STORMWATER DRAINAGE PLAN

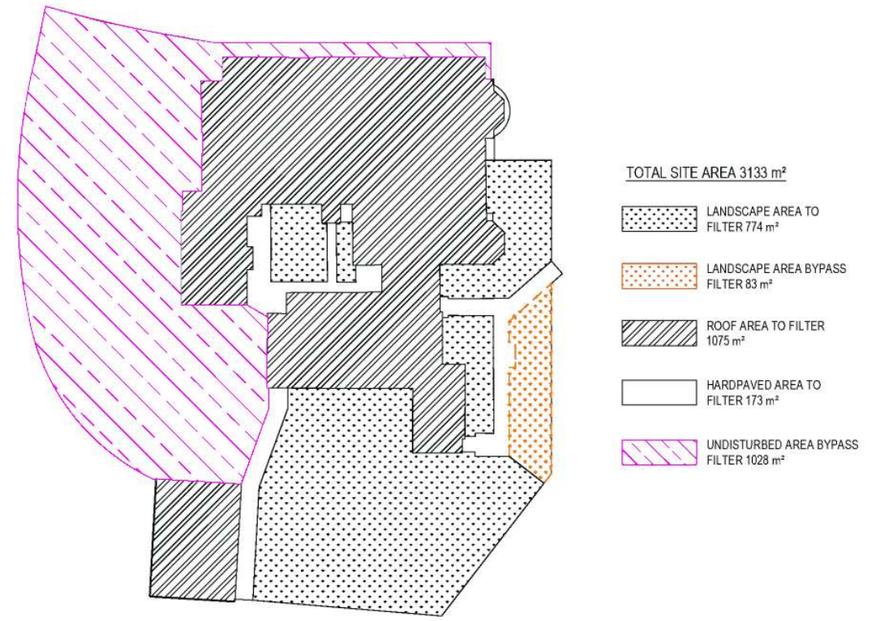
PROJECT	900 CAMDEN VALLEY WAY, GLEDSWOOD HILLS NSW		
DATE	DRAWN	DESIGNED	CHECKED
DEC 20	J.P.	J.P.	N.L.
SCALE @ A1		JOB No	
SCALE 1:150		19NL178	
AUTHORISED		DWG No	REV
NERMEIN LOKA		D01	C



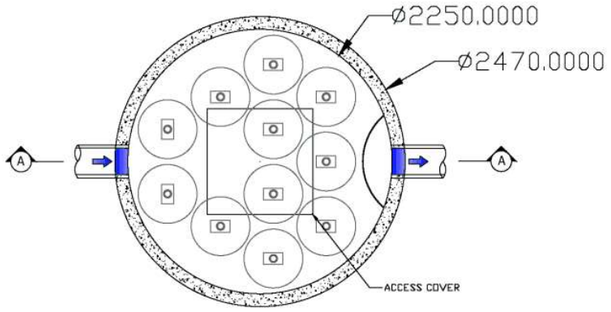
Treatment Train Effectiveness - Receiving Node

	Sources	Residual Load	% Reduction
Flow (ML/yr)	1.03	1.03	0
Total Suspended Solids (kg/yr)	63.2	9.38	85.1
Total Phosphorus (kg/yr)	0.21	0.0434	79.4
Total Nitrogen (kg/yr)	2.38	1.13	52.4
Gross Pollutants (kg/yr)	23.8	0	100

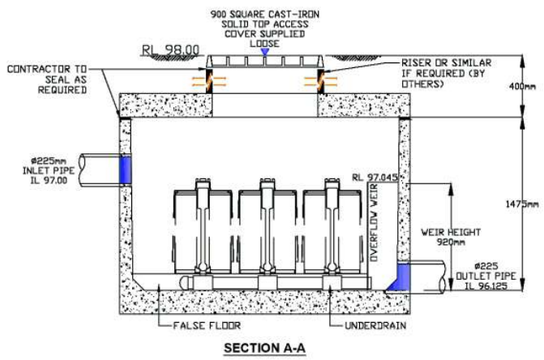
MUSIC MODELING RESULT



CATCHMENT AREA



PLAN



SECTION A-A

STORMWATER TREATMENT SUMMARY

SITE AREA = 3133m²

"MUSIC" HAS BEEN USED FOR WATER QUALITY TREATMENT ANALYSIS

THE CATCHMENT IN MUSIC IS MODELLED IN ACCORDANCE WITH THE FOLLOWING GUIDELINES & PARAMETERS:

- MUSIC VERSION 6.3.0.
- RAINFALL STATION 67035 LIVERPOOL(WHITLAM), 6 MINUTES TIME STEPS FROM 1985 TO 1994.
- CAMDEN COUNCIL'S SOURCE NODES ULTILIZING MODIFIED % IMPERVIOUS AREA, RAINFALL THRESHOLD, SOIL PROPERTIES & POLLUTANT CONCENTRATION
- NO DRAINAGE ROUTING BETWEEN NODES.

THE SYSTEM HAS BEEN MODELLED TO MEET THE CURRENT CAMDEN COUNCIL ENGINEERING DESIGN SPECIFICATION (APRIL 2009) TARGETS.

TSS: 85% REDUCTION
TP: 65% REDUCTION
TN: 45% REDUCTION
GPR: 90% REDUCTION

TREATMENT DEVICES:

- 11 x TALL(690) PSORB CARTRIDGE STORMFILTER SYSTEM WITHIN A STORMFILTER MANHOLE DN2250.

SUMMARY:

THE PROPOSED STORMWATER QUALITY TREATMENT TRAIN ARE COMPRISES OF 11-CARTRIDGES (690mm PSORB) STORMFILTER SYSTEM DN2250 MANHOLE TO REMOVE DIFFERENT SOURCE POLLUTANTS. IT IS OUR OPINION THAT IF THESE MEASURES ARE IMPLEMENTED, THE PROPOSED DEVELOPMENT WILL COMPLY WITH THE INTENT OF CAMNDEN COUNCIL REQUIREMENT. IN ADDITION, THE PROPOSED STORMWATER QUALITY TREATMENT TRAIN SHALL BE MAINTAINED AND SERVICES BY THE OWNERS OF THE PROPOSED DEVELOPMENT AT NO COST TO COUNCIL.

NOT FOR CONSTRUCTION

No	AMENDMENT	ENG	DRAFT	DATE
B	FOR D.A. APPROVAL	J.P.	J.P.	18-12-2020
A	FOR D.A. APPROVAL	J.P.	J.P.	19-03-2020

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www.architex.com.au
Nominated Architect: Robert Del Rizzo NSW Reg No. 3972

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F: +61 2 9745 8795/8065 9690
EMAIL: info@LCeng.com.au www.LCeng.com.au

PROJECT
PROPOSED ALTERATIONS & ADDITIONS
900 CAMDEN VALLEY WAY,
GLEDSWOOD HILLS NSW

CONSENT AUTHORITY:
CAMDEN COUNCIL

N

SHEET SUBJECT
MUSIC RESULT AND DETAILS

PROJECT	900 CAMDEN VALLEY WAY, GLEDSWOOD HILLS NSW		
DATE: DEC 20	DRAWN: J.P.	DESIGNED: J.P.	CHECKED: N.L.
SCALE @ A1: N.T.S.		JOB No: 19NL178	
AUTHORISED: NERMEIN LOKA		DWG No: D03	REV: B

MUSIC-*link* Report

Project Details		Company Details	
Project:	900 Camden Valley Way, Gledswood Hills	**Company:**	LOKA CONSULTING ENGINEERS PL
Report Export Date:	18/12/2020	**Contact:**	Jayden Pham
Catchment Name:	GLEDSWOOD HOMESTEAD Revision 2	**Address:**	14A/8 AVENUE OF THE AMERICAS, NEWINGTON
Catchment Area:	0.21ha	**Phone:**	02 9748 8742
Impervious Area*:	59.52%	**Email:**	CIVIL2@LCENG.COM.AU
Rainfall Station:	67035 LIVERPOOL (WHITLAM		
Modelling Time-step:	6 Minutes		
Modelling Period:	1/01/1985 - 31/12/1994 11:54:00 PM		
Mean Annual Rainfall:	783mm		
Evapotranspiration:	1261mm		
MUSIC Version:	6.3.0		
MUSIC-link data Version:	6.32		
Study Area:	Camden City Council		
Scenario:	Camden City Council		

* takes into account area from all source nodes that link to the chosen reporting node, excluding Import Data Nodes

Treatment Train Effectiveness		Treatment Nodes		Source Nodes	
Node: Receiving Node	**Reduction**	**Node Type**	**Number**	**Node Type**	**Number**
Flow	0.0019%	Sedimentation Basin Node	1	Urban Source Node	4
TSS	85.1%	Generic Node	1		
TP	79.4%				
TN	52.4%				
GP	100%				

Comments

11no. Psorb Cartridge StormFilter Manhole system, 2250DN, for Child Care Use.

NOTE: A successful self-validation check of your model does not constitute an approved model by Camden City Council MUSIC-*link* now in MUSIC by eWater – leading software for modelling stormwater solutions

1 of 3

Passing Parameters

Node Type	Node Name	Parameter	Min	Max	Actual
Receiving	Receiving Node	% Load Reduction	None	None	0.0019
Receiving	Receiving Node	GP % Load Reduction	90	None	100
Receiving	Receiving Node	TN % Load Reduction	45	None	52.4
Receiving	Receiving Node	TP % Load Reduction	65	None	79.4
Receiving	Receiving Node	TSS % Load Reduction	85	None	85.1
Sedimentation	SF MH DN2250 (3.2m2)	% Reuse Demand Met	None	None	0
Sedimentation	SF MH DN2250 (3.2m2)	High Flow Bypass Out (ML/yr)	None	None	0
Urban	Bypass Landscape - 83m◆ (100% Perv.)	Area Impervious (ha)	None	None	0
Urban	Bypass Landscape - 83m◆ (100% Perv.)	Area Pervious (ha)	None	None	0.008
Urban	Bypass Landscape - 83m◆ (100% Perv.)	Total Area (ha)	None	None	0.008
Urban	Hard paved - 173m◆ (100% Imp.)	Area Impervious (ha)	None	None	0.017
Urban	Hard paved - 173m◆ (100% Imp.)	Area Pervious (ha)	None	None	0
Urban	Hard paved - 173m◆ (100% Imp.)	Total Area (ha)	None	None	0.017
Urban	Landscape - 774m◆ (100% Perv.)	Area Impervious (ha)	None	None	0
Urban	Landscape - 774m◆ (100% Perv.)	Area Pervious (ha)	None	None	0.077
Urban	Landscape - 774m◆ (100% Perv.)	Total Area (ha)	None	None	0.077
Urban	Roof - 1075m◆ (100% Imp.)	Area Impervious (ha)	None	None	0.108
Urban	Roof - 1075m◆ (100% Imp.)	Area Pervious (ha)	None	None	0
Urban	Roof - 1075m◆ (100% Imp.)	Total Area (ha)	None	None	0.108

Only certain parameters are reported when they pass validation

NOTE: A successful self-validation check of your model does not constitute an approved model by Camden City Council MUSIC-*link* now in MUSIC by eWater – leading software for modelling stormwater solutions

2 of 3

Failing Parameters

Node Type	Node Name	Parameter	Min	Max	Actual
Sedimentation	SF MH DN2250 (3.2m2)	Notional Detention Time (hrs)	8	12	0.0327
Sedimentation	SF MH DN2250 (3.2m2)	Total Nitrogen - k (m/yr)	500	500	1
Sedimentation	SF MH DN2250 (3.2m2)	Total Phosphorus - k (m/yr)	6000	6000	1
Sedimentation	SF MH DN2250 (3.2m2)	Total Suspended Solids - k (m/yr)	8000	8000	1

Only certain parameters are reported when they pass validation

NOTE: A successful self-validation check of your model does not constitute an approved model by Camden City Council MUSIC-*link* now in MUSIC by eWater – leading software for modelling stormwater solutions

3 of 3

NOT FOR CONSTRUCTION

No	AMENDMENT	ENG	DRAFT	DATE	No	AMENDMENT	ENG	DRAFT	DATE
B	FOR D.A. APPROVAL	J.P.	J.P.	18-12-2020					
A	FOR D.A. APPROVAL	J.P.	J.P.	19-03-2020					

ARCHITECT: architex — Bylelon pty ltd t/as Architex abn 32 003 315 142 — level 2, 7K Parnell Street Parramatta NSW 2150 — T: (02) 9633 5888 M: 0418 402 016 — emma@architex.com.au www.architex.com.au — Nominated Architect: Robert Del Fitto NSW Reg No. 3972

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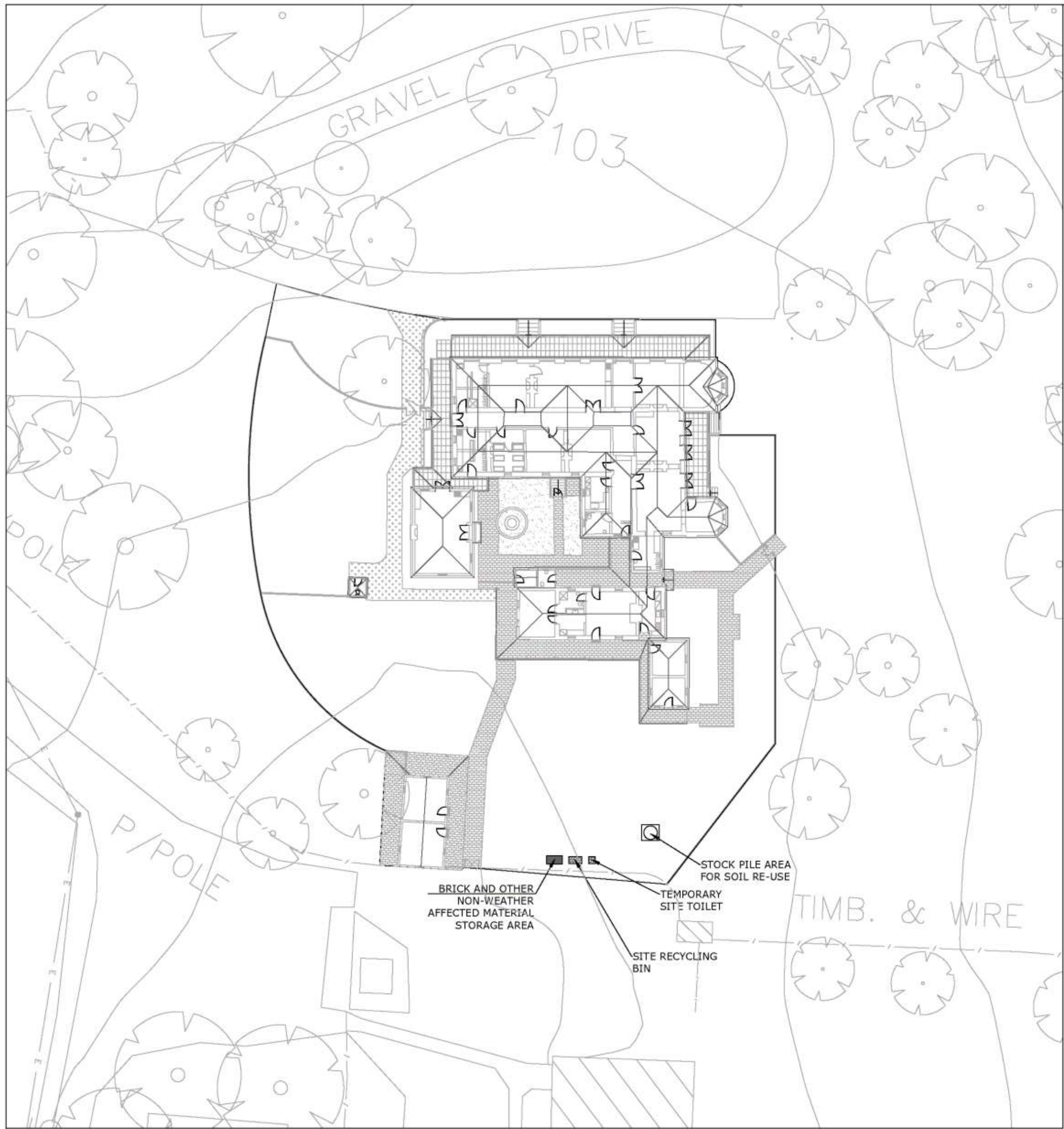
PROJECT: PROPOSED ALTERATIONS & ADDITIONS 900 CAMDEN VALLEY WAY, GLEDSWOOD HILLS NSW

CONSENT AUTHORITY: CAMDEN COUNCIL

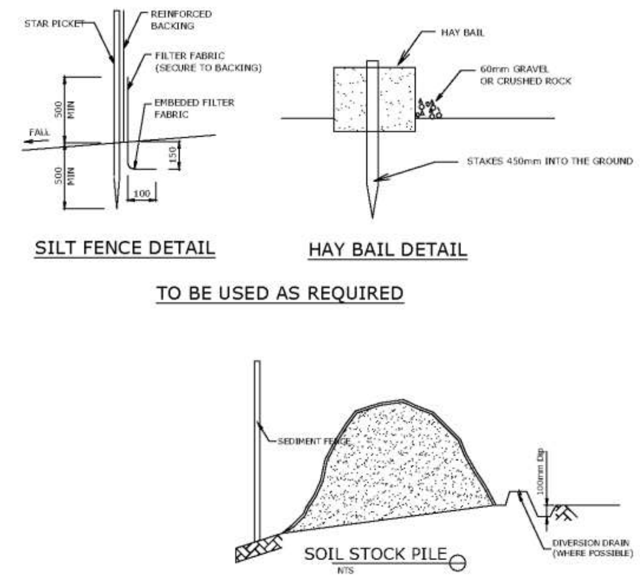
N

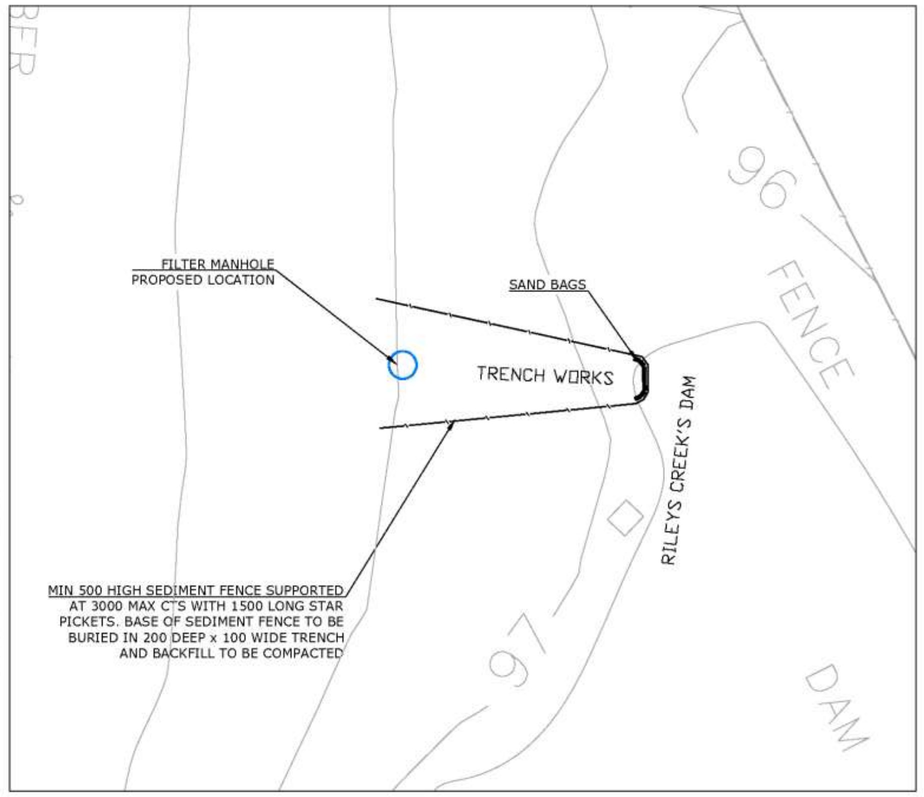
SHEET SUBJECT: MUSIC LINK REPORT

PROJECT	900 CAMDEN VALLEY WAY, GLEDSWOOD HILLS NSW		
DATE: DEC 20	DRAWN: J.P.	DESIGNED: J.P.	CHECKED: N.L.
SCALE @ A1: NTS		JOB No: 19NL178	
AUTHORISED: NERMEIN LOKA		DWG No: D04	REV: B



EROSION AND SEDIMENT CONTROL PLAN
SCALE 1:300





EROSION CONTROL NOTES

1. ALL EROSION & SEDIMENT CONTROL MEASURES ARE TO BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH 'MANAGING URBAN STORMWATER, 3RD EDITION' PRODUCED BY THE NSW DEPARTMENT OF HOUSING.
2. ALL EROSION AND SILTATION CONTROL DEVICES ARE TO BE PLACED PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION WORKS, AND ALL SILT TRAPS ARE TO HAVE DEPOSITED SILT REMOVED REGULARLY DURING CONSTRUCTION.
3. ALL TRESS ARE TO BE PRESERVED UNLESS INDICATED OTHERWISE ON THE ARCHITECT'S OR LANDSCAPE ARCHITECT'S DRAWINGS. EXISTING GRASS COVER SHALL BE MAINTAINED EXPECT IN AREAS CLEARED FOR BUILDINGS, PAVEMENTS, ETC.
4. STABILISE/REVEGATATE ALL DISTURBED AREAS PROGRESSIVELY WHERE PRACTICAL.
5. INSTALL TEMPORARY SEDIMENT BARRIERS TO ALL INLET PITS LIKELY TO COLLECT SILT LADEN WATER.
6. ADDITIONAL VEHICLES MUST PARK ON ROAD AND NOT FOOTPATH. PUBLIC FOOTPATH ADJACENT TO SITE MUST NOT BE OBSTRUCTED AND MUST BE SAFE FOR PEDESTRIAN ACCESS.
14. ENSURE FENCE IS KEYED AT BOTH ENDS INTO GROUND, WITH BASE TURNED UPSLOPE.
15. WHERE SEDIMENT FENCE IS NEAR STREET, ERECT FENCE WITHIN DEVELOPMENT SIDE OF TURF FILTER STRIPS AND PROPERTY BOUNDARY.
16. SEDIMENT FENCE FILTER CLOTH TO BE FASTENED SECURELY TO WIRE FENCE WITH TIES SPACED EVERY 600MM.OVERLAP ADJOINING FILTER CLOTH BY 150MM AND FOLDING OVER.
17. DIVERT UPSLOPE WATER AROUND WORK SITE AND STABILISE CHANNELS.
18. LAY KERB-SIDE TURF FILTER STRIP TO TRAP EXCESS SEDIMENT.
19. CONTAMINATED WATER WITH SEDIMENT FROM A SEDIMENT BASIN OR EXCAVATION PIT IS TO BE FLOCCULATED/ FILTERED TO LOWER SUSPENDED SOIL LOAD TO LESS THAN 50 MILLIGRAMS PER LITRE.
20. SOIL, SAND AND GRAVEL ARE NOT TO BE STOCKPILED ON ROADWAYS OR IN DRAINAGE AREAS.
21. WASH AREA MUST BE SLIGHTLY DEPRESSED TO COLLECT WASTE MATERIAL.
22. APPLY DUST CONTROL MEASURES TO REDUCE SURFACE AND AIRBORNE MOVEMENT OF SEDIMENT
23. NOT WITHSTANDING DETAILS SHOWN, IT IS THE CONTRACTORS SOLE RESPONSIBILITY TO ENSURE THAT ALL SITE ACTIVITIES COMPLY WITH THE REQUIREMENTS OF THE CLEAN WATERS ACT.

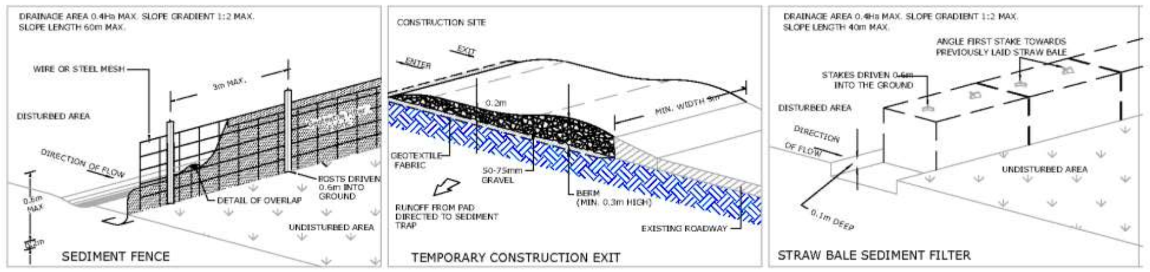
SYMBOLS

- EXISTING CONTOURS
- SILT FENCE
- WIRE MESH FENCE
- STABILISED SITE ACCESS
- Ø50 PUMP LINE

NOTES: SOIL & WATER MANAGEMENT

1. ALL EROSION AND SEDIMENT CONTROL MEASURES TO BE INSPECTED, MAINTAINED AND LOGGED DAILY BY SITE MANAGER.
2. MINIMISE DISTURBED AREAS.
3. ALL STOCKPILES TO BE CLEAR FROM DRAINS, GUTTERS AND FOOTPATHS.
4. NO MATERIAL TO BE STORED ON FOOTPATH.
5. STOCKPILE LASTING LONGER THAN 40 DAYS MUST BE COVERED.
6. DRAINAGE IS TO BE CONNECTED TO STORMWATER SYSTEM AS SOON AS POSSIBLE.
7. ROADS AND FOOTPATH TO BE SWEPT DAILY.
8. ENSURE NEIGHBOURING PROPERTY IS NOT FLOODED.
9. IF YOU DO NOT COMPLY, YOU MAY BE LIABLE TO A $1500 FINE.

NOTE:
EXISTING BUILDINGS TO BE RETAINED ON SITE.
EXISTING PITS TO BE COVERED DURING SITE-WORK.



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NOT FOR CONSTRUCTION

No	AMENDMENT	ENG	DRAFT	DATE	No	AMENDMENT	ENG	DRAFT	DATE
B	FOR D.A. APPROVAL	J.P.	J.P.	22-12-2020					
A	FOR D.A. APPROVAL	J.P.	J.P.	19-03-2020					

ARCHITECT
architex
Ryleton pty ltd t/as Architex abn 32 003 315 142
Level 3, 7K Parkes Street Parramatta NSW 2150
Nominated Architect: Robert Del Pizzo NSW Reg No. 3972
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email@architex.com.au www.architex.com.au

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T: +61 2 9748 8742/8065 9689 M: 0404 142 063
F: +61 2 9748 1290/8065 9690
EMAIL: info@Lceng.com.au www.Lceng.com.au

PROJECT: PROPOSED ALTERATIONS & ADDITIONS 900 CAMDEN VALLEY WAY, GLEDSWOOD HILLS NSW

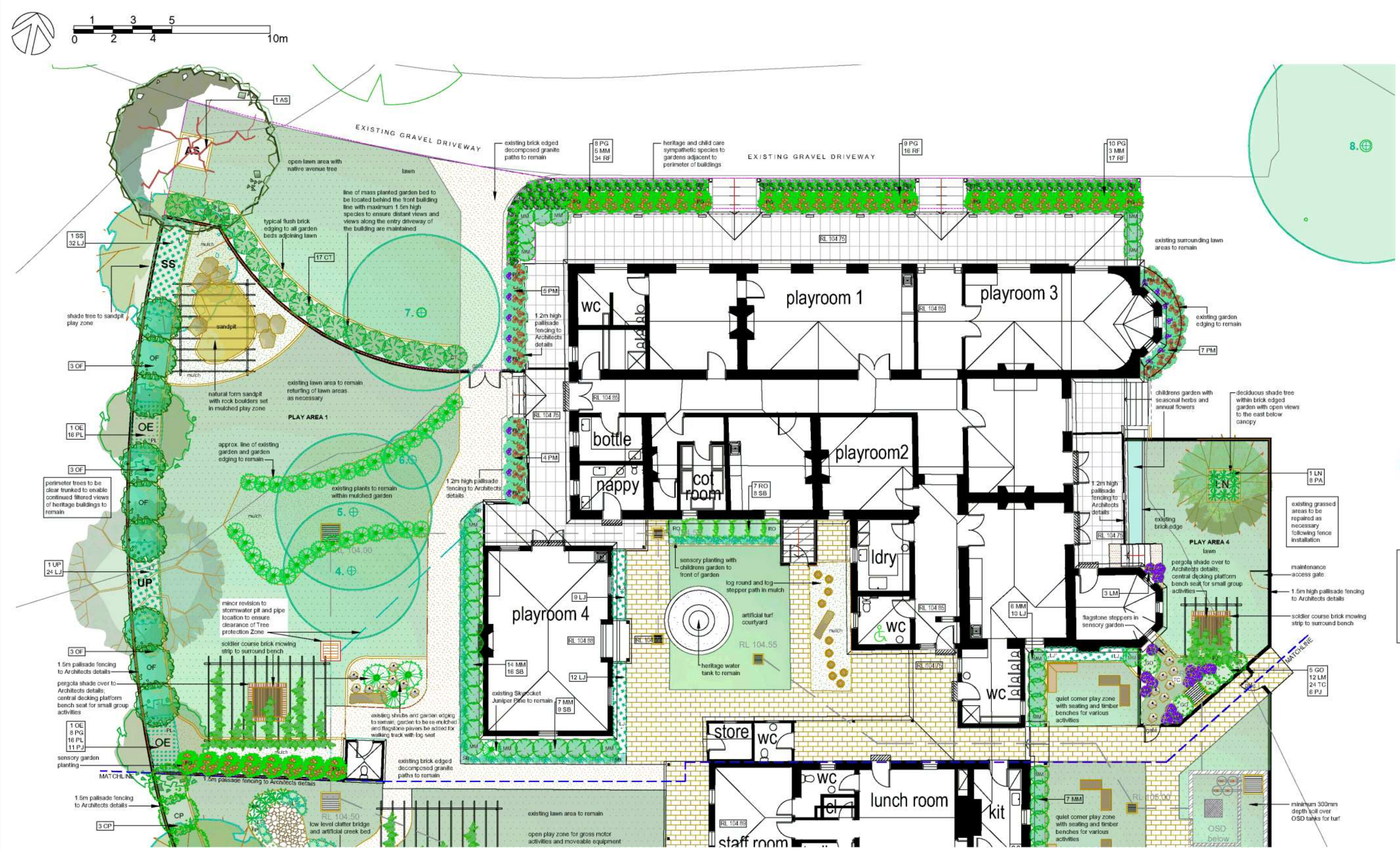
CONSENT AUTHORITY: CAMDEN COUNCIL

SHEET SUBJECT: EROSION AND SEDIMENT CONTROL PLAN AND DETAILS

PROJECT	900 CAMDEN VALLEY WAY, GLEDSWOOD HILLS NSW		
DATE: DEC 20	DRAWN: J.P.	DESIGNED: J.P.	CHECKED: N.L.
SCALE @ A1: SCALE 1:300		JOB No: 19NL178	
AUTHORISED: NERMEIN LOKA		DWG No: D05	REV: B

A1

DIAL 1100 BEFORE YOU DIG www.1100.com.au


0 1 2 3 4 5 10m
EXISTING GRAVEL DRIVEWAY
EXISTING GRAVEL DRIVEWAY
existing brick edged decomposed granite paths to remain
heritage and child care sympathetic species to gardens adjacent to perimeter of buildings
open lawn area with native avenue tree
lawn
line of mass planted garden bed to be located behind the front building line with maximum 1.5m high species to ensure distant views and views along the entry driveway of the building are maintained
typical flush brick edging to all garden beds adjoining lawn
sandpit
shade tree to sandpit play zone
natural form sandpit with rock boulders set in mulched play zone
existing lawn area to remain returfing of lawn areas as necessary
PLAY AREA 1
approx. line of existing garden and garden edging to remain
existing plants to remain within mulched garden
perimeter trees to be clear trunked to enable continued filtered views of heritage buildings to remain
minor revision to stormwater pit and pipe location to ensure clearance of Tree protection Zone
soldier course brick mowing strip to surround bench
1.5m palisade fencing to Architects details
pergola shade over to Architects details, central decking platform bench seat for small group activities
sensory garden planting
1.5m palisade fencing to Architects details
existing shrubs and garden edging to remain, garden to be re-mulched and flagstone pavers be added for walking track with log seat
existing brick edged decomposed granite paths to remain
low level clatter bridge and artificial creek bed
existing lawn area to remain
open play zone for gross motor activities and moveable equipment
1.2m high pallisade fencing to Architects details
playroom 1
playroom 3
playroom2
playroom 4
wc
bottle
nappy
cot room
ldry
wc
store
wc
lunch room
kit
staff room
sensory planting with childrens garden to front of garden
log round and log stepper path in mulch
artificial turf courtyard
heritage water tank to remain
existing Skyrocket Juniper Pine to remain
existing surrounding lawn areas to remain
existing garden edging to remain
childrens garden with seasonal herbs and annual flowers
deciduous shade tree within brick edged garden with open views to the east below canopy
existing grassed areas to be repaired as necessary following fence installation
PLAY AREA 4
lawn
pergola shade over to Architects details, central decking platform bench seat for small group activities
maintenance access gate
1.5m high pallisade fencing to Architects details
soldier course brick mowing strip to surround bench
flagstone steppers in sensory garden
quiet corner play zone with seating and timber benches for various activities
quiet corner play zone with seating and timber benches for various activities
minimum 300mm depth soil over OSD tanks for turf
MATCHLINE
MATCHLINE

PLANT CODES
(refer also to plant schedule)

AS	Angophora subvelutina
CP	Camelia 'Plantation Pink'
CT	Choisya ternata
EL	Eucalyptus leucoxylon 'Rosea'
GO	Gardenia 'Ocean Pearl'
LJ	Liriope muscari 'Just Right'
LM	Lavendula 'Munstead'
LN	Lagerstroemia indica 'Natchez'
LS	Lagerstroemia indica 'Sioux'
LT	Lomandra 'Tanika'
MM	Murraya paniculata 'Min A Min'
OE	Olea europaea
OF	Osmanthus fragrans
PA	Pennesetum alopecuroides 'Nafray'
PG	Pelargonium graveolens
PJ	Pandorea jasminoides
PL	Poa labillardieri 'Eskdale'
PM	Prostanthera 'Minty'
PP	Poa poiformis 'Kingsdale'
RF	Rosa hybrid 'Flower Carpet' - Apple Blossom
RO	Rosmarinus officinalis
SB	Stachys byzantina
SS	Stenocarpus sinuatus
TC	Thymus citriodora
UP	Ulmus parvifolia
VO	Viola odora

Legend

- mulched gardens and/or play areas
- Log and rock elements to gardens and/or play areas
- Flagstone stepping stones in garden
- Selected brick paving to Architects details
- Selected decomposed granite paths
- Turf
- Existing trees & shrubs to be retained
- Typical brick edge
- Stormwater lines and pits

IRRIGATION NOTE

1. Common mass planted beds will require a fully automated irrigation system which is to be designed and installed by an appropriately qualified irrigation consultant, Landscape Contractor or tradesperson prior to planting.
2. The irrigation system shall be designed and installed in accordance with all relevant Australian Standards and the current water restrictions that are in place at the time of construction.
3. The design of the irrigation system shall only be carried out after water pressure testing has been undertaken.
4. The irrigation system shall be installed and in full working order prior to any planting works taking place.
5. The site superintendent and all other relevant personnel shall be fully conversant with the operational requirements of the system prior to planting taking place.

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8. This plan is to be read in conjunction with the architectural and engineering plans
9. It is recommended that an approved root barrier be installed to manufacturers recommendations to all tree planting in the vicinity of structures, walls and hard pavement areas.

NOT FOR CONSTRUCTION

Rev. no.	Description	Date
A	REVISED ARCHITECTURALS & SPECIES	12.10.2021

ARBORIST:	
SURVEY:	YSCO GEOMATICS
HYDRAULIC:	LOKA ENGINEERING
ARCHITECT:	ARCHITEX
CLIENT:	ROY NASSO

ZENITH LANDSCAPE DESIGNS

Ph: 9545 5200 info@zenithlandscapes.com.au

900 CAMDEN VALLEY WAY
GLEDSWOOD HILLS

TITLE:	LANDSCAPE PLAN		
STATUS:	DA	SCALES:	1:100
DRAWN:	MAG	SHEET: 1 OF 3	REVISION:
CHECKED:	MFG	DRAWING No.: 19-4070 LO1	A
DATE:	21.02.2020		

LANDSCAPE PLAN - NORTH

sample project images

natural area sandpit | natural area sandpit | platform bench seat | log seat | timber steppers | flagstone steppers | low bridge | dry creek bed | play deck/stage | childrens gardens

Broad-leaved Apple | Red Flowered Yellow Gum | Firewheel Tree | Chinese Elm | European Olive | White Crepe Myrtle | Pink Crepe Myrtle | Pink Camellia | Sweet Olive | Mexican Orange Blossom | Rose Geranium | Mint Bush | Dwarf Jessamine | Rosemary | Munstead Lavender | Flower Carpet Roses | Giant Turf Lily | Eskdale Tussock Grass | Lemon Thyme | Sweet Violet | Bower Vine

Attachment 4

CLPP01

This is the report submitted to the Camden Local Planning Panel – Electronic Determination

Architectural Plans

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A1

PLANT SCHEDULE

SYMBOL	SPECIES	No.	Pot Size	Mat. Hgt.	Stake	COMMON NAME
AS	Angophora subvolutina	1	25ltr	12m+	yes	Broad-leaved Apple
EL	Eucalyptus leucoxylon 'Rosea'	1	25ltr	12m+	yes	Red Flowered Yellow Gum
SS	Stenocarpus sinuatus	3	75ltr	12m+	yes	Firewheel Tree
UP	Ulmus parvifolia	2	100ltr	12m+	yes	Chinese Elm
OE	Olea europaea	2	75ltr	8m+	yes	European Olive
LN	Lagerstroemia indica 'Natchez'	2	100ltr	6m+	yes	White Crepe Myrtle
LS	Lagerstroemia indica 'Sioux'	3	75ltr	5m+	no	Pink Crepe Myrtle
CP	Camellia 'Plantation Pink'	15	25ltr	4m+	no	Pink Camellia
OF	Osmanthus fragrans (hedged)	9	5ltr	2-3m	no	Sweet Olive
CT	Choisya ternata (hedged)	19	5ltr	1.5m	no	Mexican Orange Blossom
PG	Pelargonium gravoolens	38	5ltr	1.2m	no	Rose Geranium
PM	Prostanthera 'Minty' (hedged)	16	5ltr	1.2m	no	Mint Bush
GO	Gardenia 'Ocean Pearl'	5	5ltr	1m	no	Gardenia
MM	Murraya paniculata 'Min A Min'	42	5ltr	1m	no	Dwarf Jessamine
RO	Rosmarinus officinalis (hedged)	12	5ltr	1m	no	Rosemary
LM	Lavendula 'Munstead'	27	150mm	0.6m	no	Munstead Lavender
PA	Pennesetum alopecuroides 'Nafray'	52	150mm	0.6m	no	Native Foxtails
RF	Rosa hybrid 'Flower Carpet' 'Apple Blossom'	67	150mm	0.6m	no	Flower Carpet Roses
LJ	Liriope muscari 'Just Right'	111	150mm	0.5m	no	Giant Turf Lily
LT	Lomandra longifolia 'Tanika'	43	150mm	0.5m	no	Dwarf Mat Rush
PL	Poa labillardieri 'Eskdale'	81	150mm	0.5m	no	Eskdale Tussock Grass
PP	Poa poiformis 'Kingsdale'	27	150mm	0.45m	no	Kingsdale Tussock Grass
SB	Stachys byzantina	33	150mm	0.4m	no	Lambs Ears
TC	Thymus citriodora	24	150mm	g/cover	no	Lemon Thyme
VO	Viola odorata	24	150mm	g/cover	no	Sweet Violet
PJ	Pandorea jasminoides	39	25ltr	climber	trellis	Bower Vine
	Sapphire Buffalo Turf					

LANDSCAPE GUIDELINES

1. GENERAL
1.1 The Contractor shall familiarise themselves with the site prior to tender.
1.2 The Contractor will be held responsible for any damage to utility services, pipes, building structures, paving surfaces, fencing, footways, kerbs, roads and existing plant material.
1.3 The site is to be left in a clean and tidy condition at the completion of works to the satisfaction of the Superintendent.
1.4 No work involving an extra shall be undertaken unless approval is first obtained from the Superintendent.
1.5 No substitute of material shall be made unless approval is given by the Superintendent.
1.6 The Contractor shall continuously maintain all areas of the Contract during progress of the works specified.
2. SITE PREPARATION
2.1 Prepared sub-grade is to be free of stones larger than 100mm diameter, cement, rubbish and any other foreign matter that could hinder plant growth.
3. MASS PLANTED AREAS
3.1 Once clear of weed growth, grass and debris, sub-grade should be cultivated to a minimum depth of 150mm incorporating 'Dynamic Lifter' or equivalent at the manufacturers recommended rates.
3.2 Weeds shall be controlled by a combination of chemical and hand removal techniques.
4. PLANTING
4.1 All plant material is to be hardened off, disease and insect free and true to species, type and variety. Plants are to be well grown but not root bound and shall comply with Natspec - "Guide to Purchasing Landscape Trees".
4.2 All plants are to be removed from their containers prior to planting with as little disturbance to the root system as possible.
4.3 Planting shall not be carried out in dry soil or extreme weather conditions.
4.4 Plants should be planted at the same depth as the plants were in the containers and allow for a shallow saucer of soil to be formed around the plant to aid the penetration of water.
4.5 All plant material should be watered thoroughly immediately after planting.
4.6 The Contractor shall be responsible for the failure of plants during construction, except for acts of vandalism.
4.7 Labels shall be removed entirely from the plants.
5. STAKING
5.1 Ties should be firmly attached to the stakes, in a way to avoid damage to the stem while allowing a small degree of movement.
6. TURF AREAS
6.1 Turf areas should be cultivated before turfing by ripping or harrowing.
6.2 At the completion of turfing the whole area shall be thoroughly soaked and kept moist till the completion of landscape works.
7. MULCH
7.1 Mulch for all general mass planted beds shall be 'Droughtmaster' mulch as supplied by A.N.L. or similar.
SOIL MIXES
8.1 Soil mix for mass planted areas shall be 3 parts site soil to 1 part 'Organic Garden Mix' as supplied by A.N.L. or equivalent.

MAINTENANCE

1. These works shall be in addition to the construction contract.
2. The Contractor shall commence and fully implement the short term maintenance after Practical Completion has been confirmed by the Superintendent.
3. The Contractor shall carry out maintenance works for a minimum period of 26 weeks
4. Maintenance works shall include the following works :
   a. Mow lawns and trim edges each 10 days in summer and each 14 days in winter.
   b. Water all planting and lawn areas in order to ensure adequate soil moisture at all times.
   c. Remove any weed growth from all planting areas.
   d. Spray and control pests and diseases as required.
   e. Replace plants which fail with plants of similar size and quality as originally planted.
   f. Adjust ties to trees as necessary.
   g. Make good any erosion or soil subsidence which may occur.
   h. Maintain all mulched areas in a clean and tidy condition to the depth as originally specified.
   i. Make good any defects or faults arising from defective workmanship.

   Note: The Contractor is not to be held responsible for the theft or vandalism of any plants during the maintenance period.
5. Advanced trees shall be individually inspected at least once a month in order to determine their health and vigour. Should the trees exhibit any signs of disease, pest infestation or poor growth then a qualified arborist shall be consulted within 14 days in order to determine the most appropriate course of action. Recommended treatment shall then be commenced within 7 days and shall continue until the problem is eliminated.
6. When the maintenance period is completed the Contractor shall notify the Superintendent. The site shall then be inspected and if to the satisfaction of the Superintendent the responsibility will be handed over to the Client for on-going maintenance.

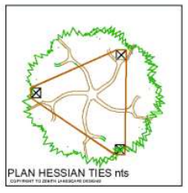
TREE PROTECTION GUIDELINES

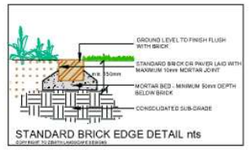
1. WORK NEAR TREES
GENERAL: All existing trees which are to remain undisturbed are indicated on the drawings and shall be adequately protected for the duration of the contract as specified by the client. Any variation from this specification or enquires regarding the protection/health of the trees to be retained must be referred to Council's Landscape Officer or Tree Preservation Officer for approval and/or advice.
REQUIREMENTS:Trees shall not be removed or lopped unless specific instruction is given in writing by the Superintendent. All tree protection works shall be carried out before excavation, grading and site works commence.

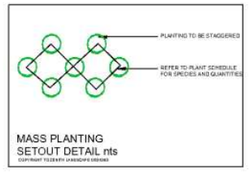
2. PROTECTION
Protect trees specified or shown to be retained from damage by ground works. Take necessary precautions, including the following:
2.1.Method: Fence off the root zones of all existing trees to be retained in accordance with the Tree Protection Detail. Protective fencing is to remain in place until the completion of all building and hard landscape construction. Fencing is to be located as shown on the Existing Tree Plan. A layer of organic mulch 100mm thick shall be placed over the protected area where existing garden beds are not already present. Where building works are required within the root zone of existing trees these works must be supervised by a qualified Arborist.
2.2.Harmful materials: Do not store or otherwise place bulk materials and harmful materials under or near trees. Do not place spoil from excavations against tree trunks. Prevent wind-blown materials such as cement from harming trees and plants. Prevent concrete wash or other substances from entering the protection zone.
2.3.Damage: Prevent damage to tree bark. Do not attach stays, guys and the like to trees
2.4.Work under trees: Do not add or remove topsoil within the drip line of the trees. If it is necessary to excavate within the drip line, use hand methods such that root systems are preserved intact and undamaged. Open up excavations under tree canopies for as short a period as possible.
2.5.Roots: Do not cut tree roots exceeding 50mm diameter unless undertaken by a qualified Arborist.

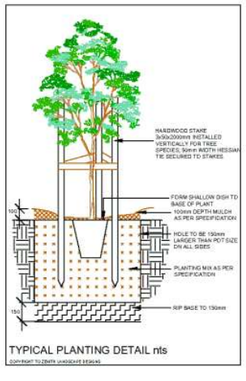
EXISTING TREE SCHEDULE

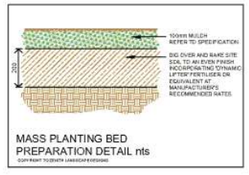
TREE No.	TREE	HGT. (m)	CAN. (m)	TNK. (m)	condition	retain/ remove	COMMENTS
1	Silky Oak	10	8	0.5	fair	RETAIN	maintain soil levels
2	Peppercorn Tree	6	8	0.8	fair	RETAIN	maintain soil levels
3	Peppercorn Tree	6	6	0.25	fair	RETAIN	maintain soil levels
4	Firewheel Tree	16	7	0.7	good	RETAIN	maintain soil levels
5	Olive Tree	7	8	multi	fair	RETAIN	maintain soil levels
6	Orange Jessamine	3	3	multi	fair	RETAIN	maintain soil levels
7	unidentified	8	8	0.5	poor	RETAIN	maintain soil levels
8	Bunya Pine	18	12	1.1	good	RETAIN	maintain soil levels
9	Tuckeroo	7	7	multi	fair	RETAIN	maintain soil levels

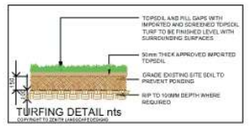


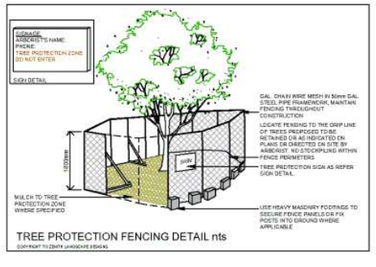












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NOT FOR CONSTRUCTION

Rev. no.	Description	Date
A	REVISED ARCHITECTURALS & SPECIES	12.10.2021
ARBORIST:		
SURVEY:	YSCO GEOMATICS	
HYDRAULIC:	LOKA ENGINEERING	
ARCHITECT:	ARCHITEX	
CLIENT:	ROY NASSO	

ZENITH LANDSCAPE DESIGNS
Ph: 9545 5200 info@zenithlandscapes.com.au

900 CAMDEN VALLEY WAY
GLEDSWOOD HILLS

TITLE:	LANDSCAPE PLAN		
STATUS:	DA	SCALES:	AS SPEC.
DRAWN:	MAG	SHEET: 3 OF 3	REVISION:
CHECKED:	MFG	DRAWING No. 19-4070 LO3	A
DATE:	21.02.2020		