LANDSCAPE WORK SPECIFICATION

PRELIMINARIES

1.01 GENERAL

The following general conditions should be considered prior to the commencement of landscape works: • The landscape plans should be read in conjunction with the architectural plans, hydraulic plans, service plans

and survey prepared for the proposed development. All services including existing drainage should be accurately located prior to the commencement of landscape

installation. Any proposed tree planting which falls close to services will be relocated on site under the instruction of the landscape architect. Installation of conduit for required irrigation, electrical and other services shall be completed prior to the

commencement of hardscape works and hardstand pours

All outdoor lighting specified by architect or client to be installed by qualified electrician

Anomalies that occur in these plans should be brought to our immediate attention. Where an Australian Standard applies for any landscape material testing or installation technique, that

standard shall be followed.

1.02 PROTECTION OF ADJACENT FINISHES

The Contractor shall take all precautions to prevent damage to all or any adjacent finishes by providing adequate protection to these areas / surfaces prior to the commencement of the Works

1.03 PROTECTION OF EXISTING TREES

Existing trees identified to be retained shall be done so in accordance with NATSPEC Guide 2 "A Guide to Assessing Tree Quality". Where general works are occurring around such trees, or pruning is required, a qualified Arborist shall be engaged to oversee such works and manage tree health. Existing trees designated on the drawing for retention shall be protected at all times during the construction period. Any

soil within the drip-line of existing trees shall be excavated and removed by hand only. No stockpiling shall occur within the root zone of existing trees to be retained

Any roots larger in diameter than 50mm shall only be severed under instruction by a qualified arborist. Roots smaller than

Temporary fencing shall be installed around the base of all trees to be retained prior to the commencement of landscape works. Where possible this fencing will be located around the drip line of these trees, or a minimum of 3m from the trunk.

1.04 EROSION & POLLUTION CONTROL

The fencing shall be maintained for the full construction period.

50mm diameter shall be cut cleanly with a saw.

The Contractor shall take all proper precautions to prevent the erosion of soil from the subject site. The contractor shall install erosion & sediment control barriers and as required by council, and maintain these barriers throughout the construction period. Note that the sediment control measures adopted should reflect the soil type and erosion characteristics of the site.

Erosion & pollution control measures shall incorporate the following:

- Construction of a sediment trap at the vehicle access point to the subject site. - Sediment fencing using a geotextile filter fabric in the location indicated on the erosion control plan or as instructed on

site by the landscape architect - Earth banks to prevent scour of stockpiles

- Sandbag kerb sediment traps - Straw bale & geotextile sediment filter

- Exposed banks shall be pegged with an approved Jute matting in preparation for mass planting

Refer to "Sitewise Reference Kit" as prepared by DLWC & WSROC (1997) for construction techniques

SOIL WORKS

2.01 MATERIALS

Specified Soil Conditioner (Generally to improve site soil)

The specified soil conditioner for site top-soil improvement shall be an organic mix, equal to "Botany Humus", as supplied by ANL. Note that for sites where soil testing indicates toxins or extremes in pH, or soils that are extremely poor, allow to excavate and supply 300mm of imported soil mix.

New garden and planting areas shall consist of a 50/50 mix of clean site soil (refer d) below) and imported "Organic Garden Mix" as supplied by ANL or approved equal. All mixes are to comply with AS 4419 Soils for landscaping & garden use, & AS 4454 Composts, Soil conditioners & mulches.

The specified soil mix for all turf areas shall be a min 75mm layer of imported soil mix consisting of 80% washed river sand (reasonably coarse), and 20% composted organic matter equivalent to mushroom compost or soil conditioner, or

other approved lawn top dress. Site topsoil is to be clean and free of unwanted matter such as gravel, clay lumps, grass, weeds, tree roots, sticks

rubbish and plastics, and any deleterious materials and materials toxic to plants. The topsoil must have a pH of between

2.02 INSTALLATION

All testing is to be conducted in accordance with AS 1289 Methods for testing soils for engineering purposes. Site soil shall be given a pH test prior to modifying to ensure conditions are appropriate for planting as stated above. Tests shall be taken in several areas where planting is proposed, and the pH shall be adjusted accordingly with sulphur or lime to

Note that a soil test conducted by the "Sydney Soil Lab" or approved equal shall be prepared for all commercial, industrial and multi-unit residential sites. The successful landscape contractor shall implement the recommendations of

b) Set Out of Individual Trees & Mass Planting Areas All individual tree planting positions and areas designated for mass planting shall be set out with stakes or another form

of marking, ready for inspection and approval. Locate all services.

c) Establishing Subgrade Levels

Subgrade levels are defined as the finished base levels prior to the placement of the specified material (i.e. soil conditioner). The following subgrade levels shall apply:

 Mass Planting Beds - 300mm below existing levels with specified imported soil mix. Turf areas - 100mm below finished surface level.

5.5 and 7. Use 100% imported soil mix when site when site topsoil runs out.

Note that all subgrades shall consist of a relatively free draining natural material, consisting of site topsoil placed previously by the Civil Contractor. No builders waste material shall be acceptable.

d) Subgrade Cultivation

Cultivate all subgrades to a minimum depth of 100mm in all planting beds and all turf areas, ensuring a thorough breakup of the subgrade into a reasonably coarse tilth. Grade subgrades to provide falls to surface and subsurface drains, prior to the placement of the final specified soil mix.

e) Drainage Works

Install surface and subsurface drainage where required and as detailed on the drawing. Drain subsurface drains to outlets provided, with a minimum fall of 1:100 to outlets and / or service pits.

f) Placement and Preparation of Specified Soil Conditioner & Mixes.

Trees in turf & beds - Holes shall be twice as wide as root ball and minimum 100mm deeper - backfill hole with 50/50 mix of clean site soil and imported "Organic Garden Mix" as supplied by ANL or approved equal.

Place the specified soil conditioner to the required compacted depth and use a rotary hoe to thoroughly mix the conditioner into the top 300mm of garden bed soil. Ensure thorough mixing and the preparation of a reasonably fine tilth and good growing medium in preparation for planting.

Mass Planting Beds - Install specified soil conditioner to a compacted depth of 100mm

 Turf Areas - Install specified soil mix to a minimum compacted depth of 75mm. Place the specified soil mix to the required compacted depth and grade to required finished soil levels, in preparation for

planting and turfing. PLANTING

3.01 MATERIALS

a) Quality and Size of Plant Material

All trees supplied above a 25L container size must be grown and planted in accordance with Clarke, R 1996 Purchasing Landscape Trees: A guide to assessing tree quality. Natspec Guide No. 2. Certification that trees have been grown to Natspec guidelines is to be provided upon request of Council's Tree Management Officer. Above - Ground Assessment:

The following plant quality assessment criteria should be followed: Plant true to type, Good vigour and health, free from pest & disease, free from injury, self-supporting, good stem taper,

has been pruned correctly, is apically dominant, has even crown symmetry, free from included bark & stem junctions, even trunk position in pot, good stem structure Below - Ground Assessment:

Good root division & direction, rootball occupancy, rootball depth, height of crown, non-suckering For further explanation and description of these assessment criteria, refer to Ross Clark's book.

All Plant material shall be to the type and size specified. No substitutions of plant material shall be permitted without written prior approval by the Landscape Architect. No plant shall be accepted which does not conform to the standards listed above.

Provide min. 3 No. Stakes and ties to all plants identified as trees in the plant schedule. Stakes shall be sound, unpainted,

straight hardwood, free of knots and pointed at one end. They shall be 2200mm x 50mm x 50mm Hardwood, or

b) Stakes and Ties

approved alternative. Ties shall be 50mm wide hessian webbing material

Fertilisers shall be approved slow release fertilisers suitable for the proposed planting types. Note that for native plants, specifically Proteaceae family plants including Grevillea species, low phosphorus fertilizers shall be used.

Mulch shall be an approved equal to "Forest Blend" as supplied by ANL. Mulch shall be completely free from any soil, weeds, rubbish or other debris.

Turf shall be "Sir Walter" Buffalo or equivalent (unless stated otherwise), free from any weeds and other grasses, and be in a healthy growing condition

a) Setting Out

3.02 INSTALLATION

All planting set out shall be in strict accordance with the drawings, or as directed. Note that proposed tree planting located near services should be adjusted at this stage. Notify Landscape Architect for inspection for approval prior to planting.

b) Planting

All plant material shall be planted as soon after delivery as possible. Planting holes for trees shall be excavated as detailed and specified. Plant containers shall be removed and discarded, and the outer roots gently teased from the soil mass. Immediately set plant in hole and backfill with specified soil mix, incorporating the approved quantity of fertiliser for each plant type. Ensure that plants are set plumb vertically and root balls set to the consolidated finished grades detailed on the drawings. Compact the backfilled soil and saturate by hand watering to expel any remaining air pockets immediately after planting.

c) Staking and Tying Staking and tying shall be in strict accordance with the drawings and shall occur immediately following plant placement and soil backfilling. All plants identified as "Trees" on the planting schedule shall be staked with a min. 3 stakes.

Mulch should be spread so that a compacted thickness of 75mm is achieved after settlement in all planting beds and around each individual plant. Apply immediately following planting and watering in, ensuring that a 50mm radius is maintained around the trunk of each plant. There shall be no mixing of soil and mulch material.

Moisten soil prior to the turf being laid. Turf shall be neatly butt jointed and true to grade to finish flush with adjacent surfaces. Incorporate a lawn fertilizer and thoroughly water in. Keep turf moist until roots have taken, and sods/rolls cannot be lifted. Keep all traffic off turf until this has occurred. Allow for top dressing of all turf areas. All turf shall be rolled immediately following installation

The Contractor shall install brick edging as detailed on the drawings, to all mass planting beds adjoining turf or gravel mulched areas, and where required. The resultant edge shall be true to line and flush with adjacent surfaces.

f) Brick edging

4.01 GENERAL

The Contractor shall undertake the installation of all hardscape works as detailed on the drawing, or where not detailed

by manufacturers specification. Paying - refer to typical details provided, and applicable Australian Standards, Permeable paying may be used as a suitable means of satisfying Council permeable surface requirements, while providing a useable,

hardwearing, practical surface. In most instances, the client shall nominate the appropriate paving material to Australian Standards shall be adhered to in relation to all concrete, masonry & metal work. Some details are typical and may vary on site. All hardscape works shall be setout as per the drawings, and inspected and approved by the Landscape Architect prior to installation. All workmanship shall be of the highest standard. Any queries or problems that arise from hardscape variations should be bought to the attention of the Landscape Architect

Your attention is directed to any obligations or responsibilities under the Dividing Fences Act, 1991 in respect of adjoining

property owner/s which may arise from this application. Any enquiries in this regard may be made to the Crown Lands

Division on (02) 8836 5332. **IRRIGATION WORKS**

5.01 GENERAL (PERFORMANCE SPECIFICATION)

standards and to maximise the efficient usage of water.

success of planting areas on terraces, over slabs and in Communal Open Spaces.

This is a general Irrigation Performance Specification only, as a guide for projects requiring irrigation systems as part of consent requirements or building contractual arrangements. An automated irrigation system is recommended for the effective establishment of new gardens, and to assist with the

The inclusion of this general specification is no guarantee that an irrigation system forms part of the landscape scope of works, which will be determined by the building contract. New irrigation systems to planting areas shall be a Commercial Grade Irrigation System conforming to all relevant

Australian standards, including AS 3500 & the Electrical Safety Act 2002, Workplace Health & Safety Act 1995, & the

An automated drip-irrigation system is to be installed to all gardens, planters and lawn areas in accordance with the approved Irrigation Design.

This system shall be designed and installed by a qualified and licensed irrigation specialist, to the highest industry

The Installer is required to obtain all approvals necessary for the completion of works in accordance with the Laws of Australia, Laws of the State of NSW, Northern Beaches Council By-Laws and Ordinances.

- The Landscape Contractor nominated Licensed Irrigation Specialist shall provide irrigation drawings for approval upon

Design Requirements:

- The irrigation system shall be installed prior to all planting works. It shall incorporate a commercially available irrigation system, with sub-surface dripper lines to irrigate all gardens, planters and lawn areas. - It shall incorporate a suitable back flow prevention device for the scale of works, an in-line filter, check valves, and

suitable high and low density poly hose fittings and PVC piping to achieve flow rates suitable for specified planting. - The irrigation application rate shall not exceed the infiltration rate of the soil or creates run-off. - The landscape contractor shall check the existing pressure available from the ring mains and size irrigation piping to suit. Supply shall be from local hose cock where available. - All piping and fittings shall be buried 50mm below the finished soil levels in garden and lawn areas, and secured in position at 500mm centres with galv wire pins.

- Size of pipes shall be selected to ensure the working pressure at the end of the line does not decrease by more than

Services Co-ordination: - Co-ordination required by Landscape Contractor or Project Manager to provide required conduit, pipe work and penetration through slabs and planter walls for water and power provisions. - The Landscape Contractor shall be engaged with the Irrigation Specialist to co-ordinate with the Project Manager to

identify the preferred service and conduit locations. Project Manager and Landscape Contractor to establish area suitable for irrigation control system with required area,

power provision and water supply.

Testing & Defects: Upon completion of installation, the system shall be tested, including: - Main Line Pressure Test: The main line is pressurised to test for leaks. All valves are shut and the pressure is taken

capacity or efficiency of the system decline during the agreed maintenance system, then these faults shall be

over a determined length of time. - Dripper Pressure Test: Measurement at flushing valves are taken and the pressure gauged to make sure it conforms to the manufacturer recommendations. The inlet pressure is then tested under the same conditions to check it does not exceed 300Kpa. - All components are to be satisfactorily functional and operational prior to approval. Should any defect develop, or the

Warranty: - A full 12 month warranty shall be included to cover labour and all parts.

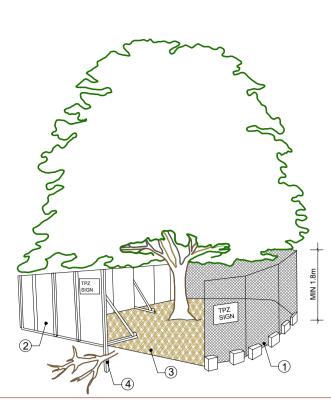
- On request, a detailed irrigation performance specification report can be issued. CONSOLIDATION AND MAINTENANCE

immediately rectified.

The consolidation and maintenance period shall be 12 months beginning from the approved completion of the specified construction work (Practical Completion). A qualified landscape maintenance contractor shall undertake the required landscape maintenance works. Consolidation and maintenance shall mean the care and maintenance of Contracted works by accepted landscaping or horticultural practices, ensuring that all plants are in optimum growing conditions and appearance at all times, as well as rectifying any defects that become apparent in the contracted works.

This shall include, but not be limited to, the following items where and as required:

- Watering all planting and lawn areas / irrigation maintenance.
- Clearing litter and other debris from landscaped areas. • Removing weeds, pruning and general plant maintenance.
- Replacement of damaged, stolen or unhealthy plants.
- Make good areas of soil subsidence or erosion. • Topping up of mulched areas
- Spray / treatment for Insect and disease control. Fertilizing with approved fertilizers at correct rates.
- Mowing lawns & trimming edges each 14 days in summer or 18 days in winter
- Adjusting ties to Stakes • Maintenance of all paving, retaining and hardscape elements.
- On the completion of the maintenance period, the landscape works shall be inspected and at the satisfaction of the superintendent or landscape architect, the responsibility will be signed over to the client.



1. CHAIN WIRE MESH PANELS WITH SHADE CLOTH (IF REQUIRED) ATTACHED, HELD IN PLACE WITH CONCRETE FEET

2. ALTERNATIVE PLYWOOD OR WOODEN PALING FENCE PANELS. THE FENCING MATERIAL ALSO PREVENTS BUILDING MATERIALS OR SOIL ENTERING THE TPZ

3. MULCH INSTALLATION ACROSS SURFACE OF TPZ (AT THE DISCRETION OF THE PROJECT ARBORIST). NO EXCAVATION, CONSTRUCTION ACTIVITY, GRADE CHANGES, SURFACE TREATMENT OR STORAGE OF MATERIALS OF ANY KIND IS PERMITTED WITHIN THE TPZ

4. BRACING IS PERMISSIBLE WITHIN THE TPZ. INSTALLATION OF SUPPORTS TO AVOID DAMAGING ROOTS

- 100mm DEPTH OF PINK DECO.

GRANITE COMPACTED TO 75mm

WITH 20% CEMENT ADDED TO

MIX TO PROVIDE STABILITY.

COMPACTED EARTH UNDER

SANSTONE BLOCK

TO INSIDE WALL WITH PROTECTION BOARD

LINE TO BASE OF BLUE METAL TRENCH WITH

DRAINAGE. UNDERTAKE WATER TEST PRIOR

PAVING

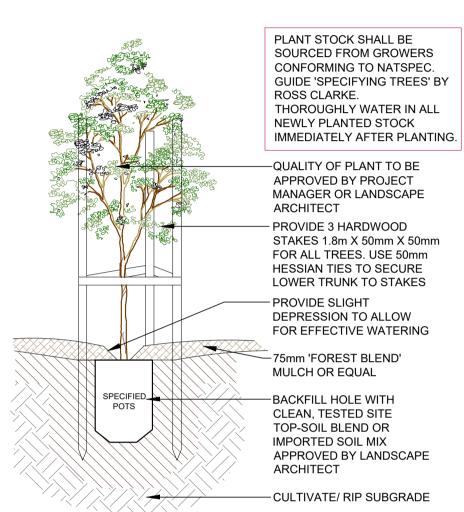
ALL FOOTINGS TO ENGINEERS DETAILS AND

TO INSTALLING SOIL MIX

PROVIDE FENCING AS DETAILED TO ALL TREES PROPOSED TO BE RETAINED ON THE SUBJECT SITE. FENCING TO BE LOCATED TO THE DRIP LINE OF TREES OR AS INDICATED ON PLANS OR DIRECTED ON-SITE BY ARBORIST. NO STOCKPILING WITHIN FENCE PERIMETERS.

TREE PROTECTION ZONE

N.T.S



TREE PLANTING DETAIL

SCALE: 1:10

SELECTED BRICK EDGING-

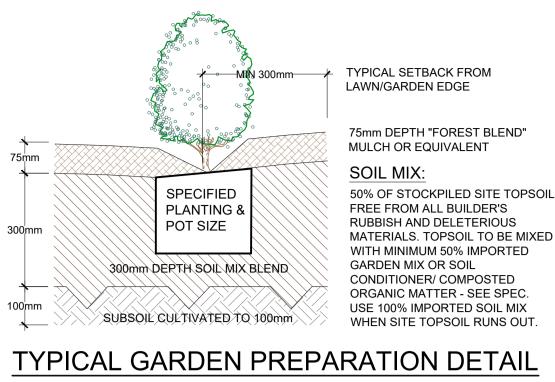
NOM. BY CLIENT ON

REFER GARDEN BED

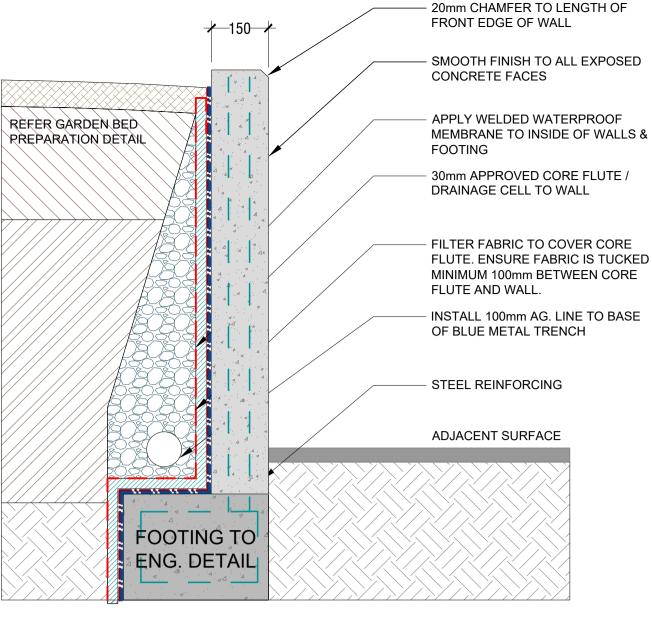
REPARATION DETAI

ANDSCAPE ARCHITEC

MORTAR BASE TO SUIT

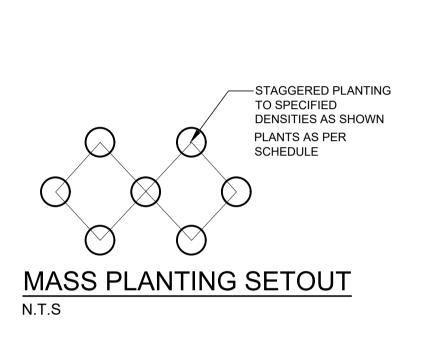


TYPICAL GARDEN PREPARATION DETAIL **SCALE 1:10**

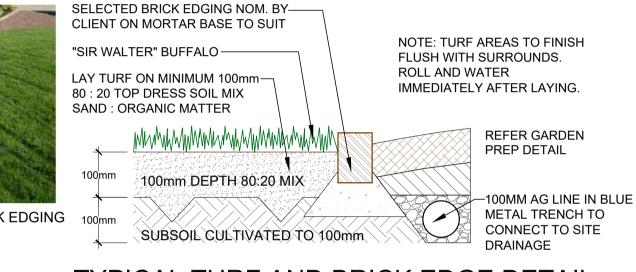


TYPICAL IN SITU RETAINING WALL DETAIL

SCALE 1:10



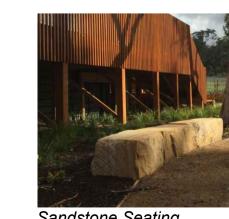




TYPICAL TURF AND BRICK EDGE DETAIL **SCALE: 1:10**



Sandstone Block





APPROVED WATER PROOF SPECIFIED LINER TO REAR OF WALL WITH 50mm SETDOWN BELOW BASE OF NEW WALLS IN BLU WALL HEIGHT NEW SUMPS / PITS AS SANDSTONE SPECIFIED BY HYDRAULIC BLOCK RETAINING AG-LINE SHALL BE IN APPROVE "SOCK" OR WRAPPED IN FILTER FABRIC TO PREVENT SILTING ALL FOOTINGS TO ENGINEER'S DETAILS.

SLEEPER STEPS DETAIL

TYPICAL SANDSTONE BLOCK RETAINING WALL DETAIL

NAIL TO SUIT

CLEAN FREE DRAINING

REAR OF WALL.

CONSOLIDATED MATERIAL TO

GENERAL NOTE:

site. PDF'd plans may vary slightly in Scale for that indicated on plans. Report any whether special, consequential, direct or indirect, suffered by assessment process if such payments are not made following



BARRY RUSH & ASSOCIATES



(retaining below 500mm) SCALE 1:10

–500mm–

Suit 101, 506 Miller Street. hone: 9922 5312 Mob: 0413 861 351 www.conzept.net.au

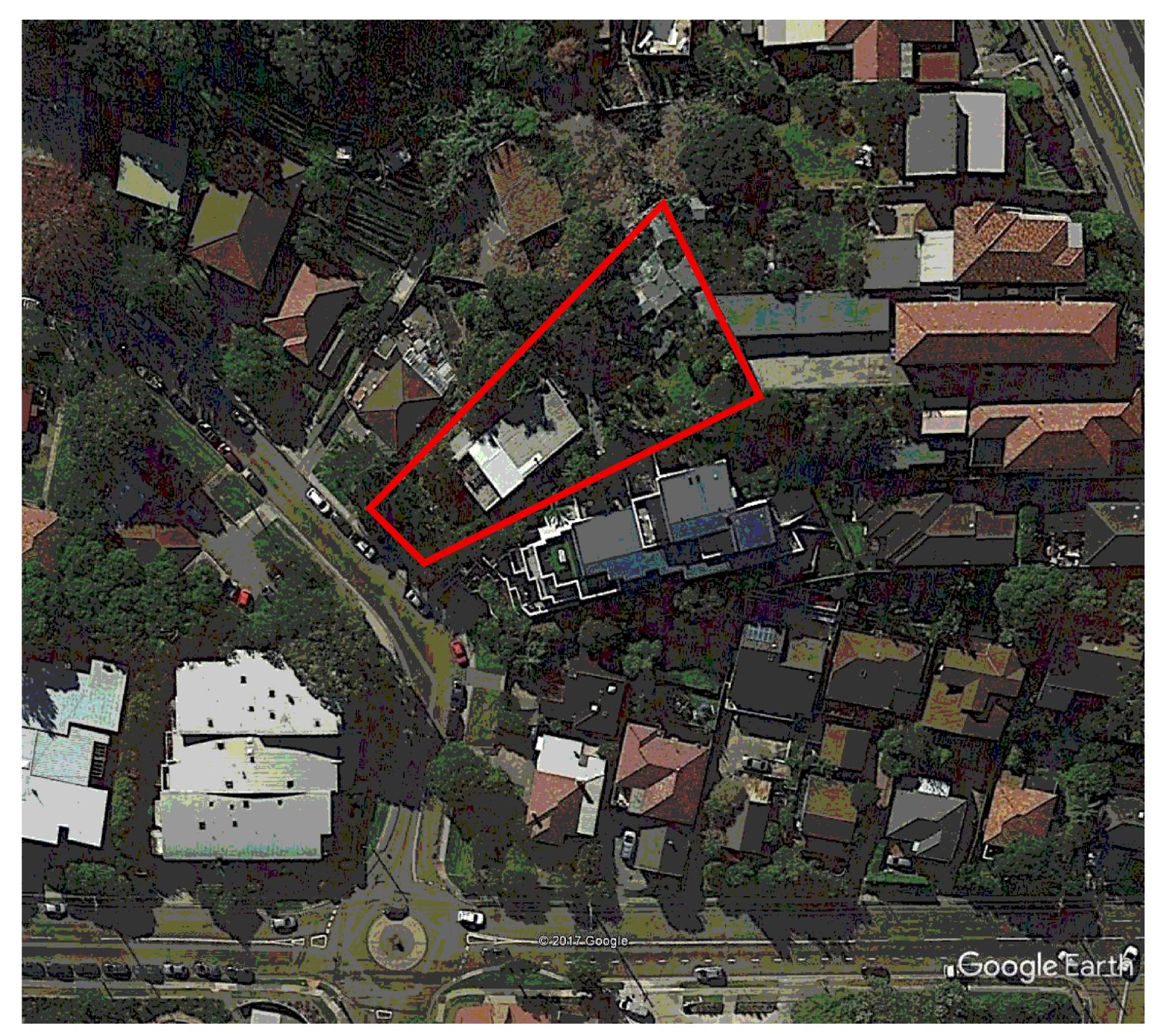
SANDSTONE BLOCK RETAINING WALL DETAIL

NORTHERN BEACHES CLIENT LOTUS PROJECTS

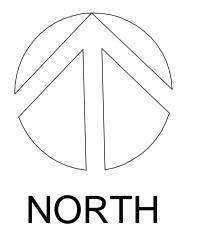
REV DATE NOTATION/AMENDMENT A 13.02.18 Preliminary DA prepared for review

PROPOSED RESIDENTIAL DEVELOPMENT 4 BROOKVALE AVE. BROOKVALE

SPECIFICATION & DETAIL DEVELOPMENT APPLICATION FEB 2018 LPDA 18 - 205 2 E.W R.F



LOCATION DIAGRAM



4 BROOKVALE AVE BROOKVALE

LIST OF DRAWINGS

A01 LOCATION DIAGRAM

A02 SITE ANALYSIS PLAN

A03 GROUND FLOOR PLAN

A04 FIRST FLOOR PLAN

A05 SECOND FLOOR PLAN

A06 THIRD FLOOR PLAN

A07 FOURTH FLOOR PLAN A08 FIFTH FLOOR PLAN

A09 SIXTH FLOOR PLAN

A10 ROOF PLAN

A11 SOUTH ELEVATION

A12 WEST ELEVATION

A13 NORTH & EAST ELEVATIONS

A14 SECTIONS

A15 SHADOW DIAGRAMS - SHEET 1

A16 SHADOW DIAGRAMS - SHEET 2

A17 DEMOLITION PLAN

A18 EXTERNAL COLOUR SCHEDULE

SURVEY

PLAN OF LOT 45 IN D.P. 6040

AT No. 4 BROOKVALE AVE., BROOVEVALE.

BY: DP Surveying DATE: 23 May, 2017

REF: 2999

ISSUE DATE AMENDMENTS

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LOTUS PROJECTS

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Project
4 BROOKVALE AVE
BROOKVALE

LOT 45 IN DP 6040

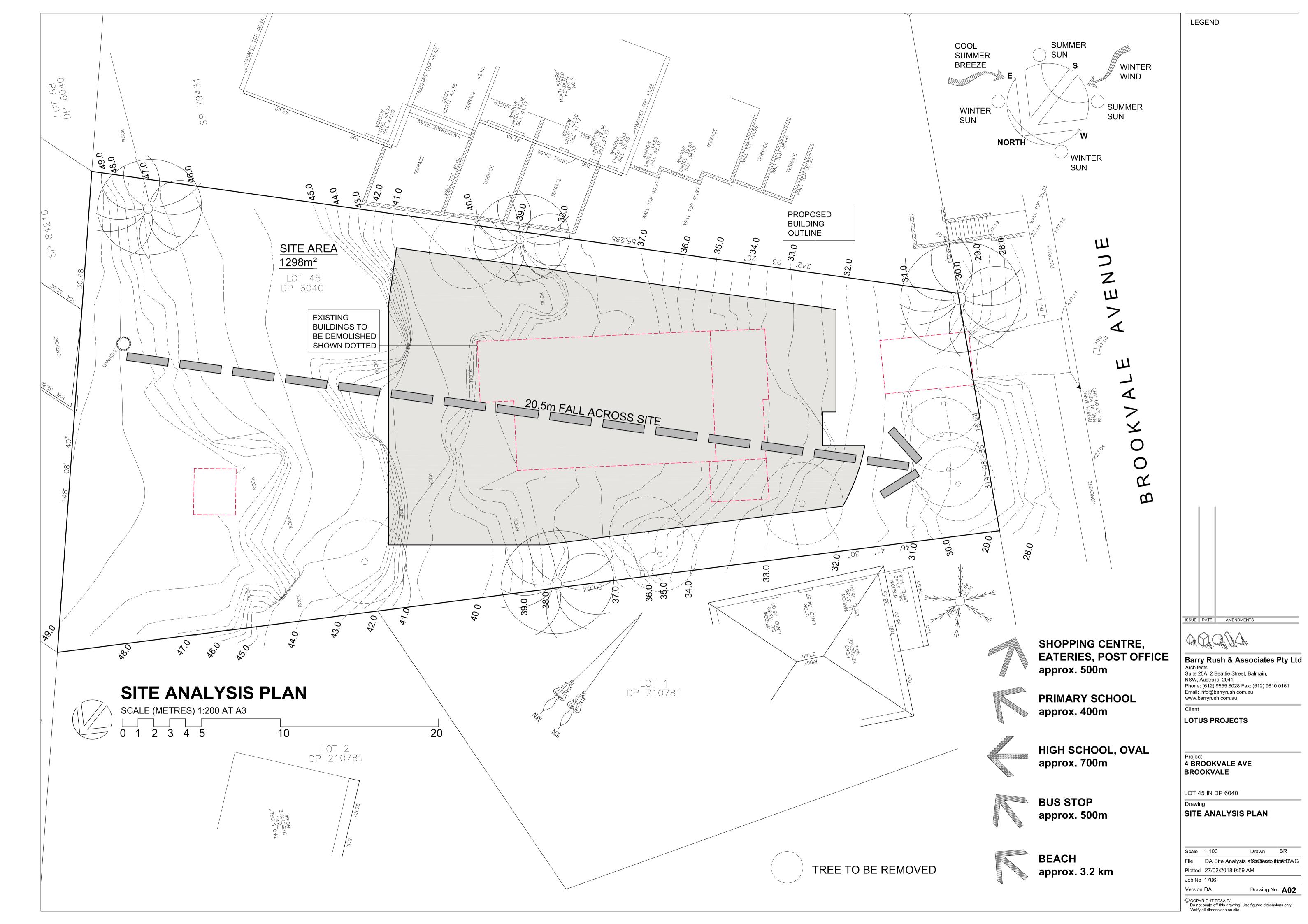
LOCATION PLAN

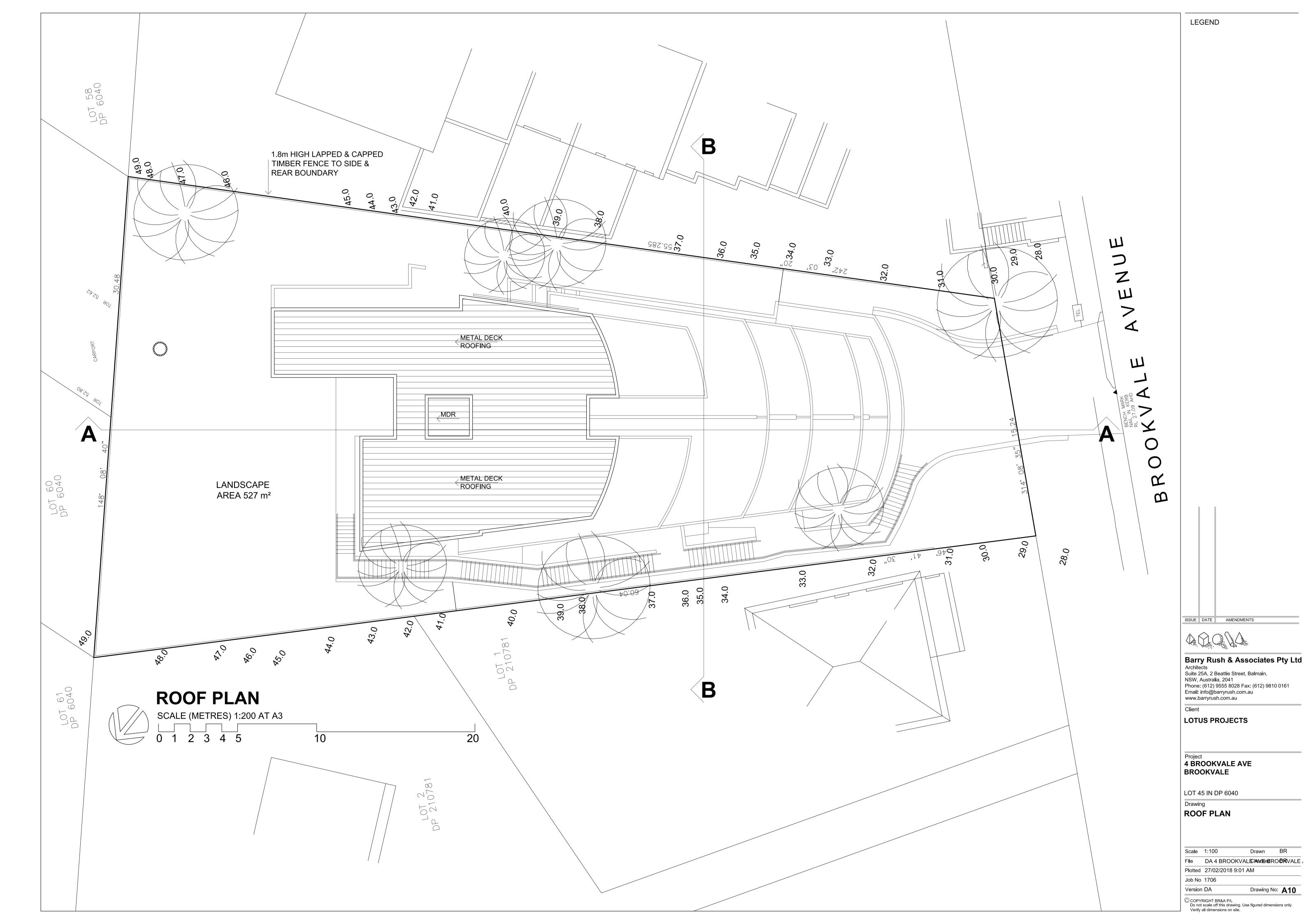
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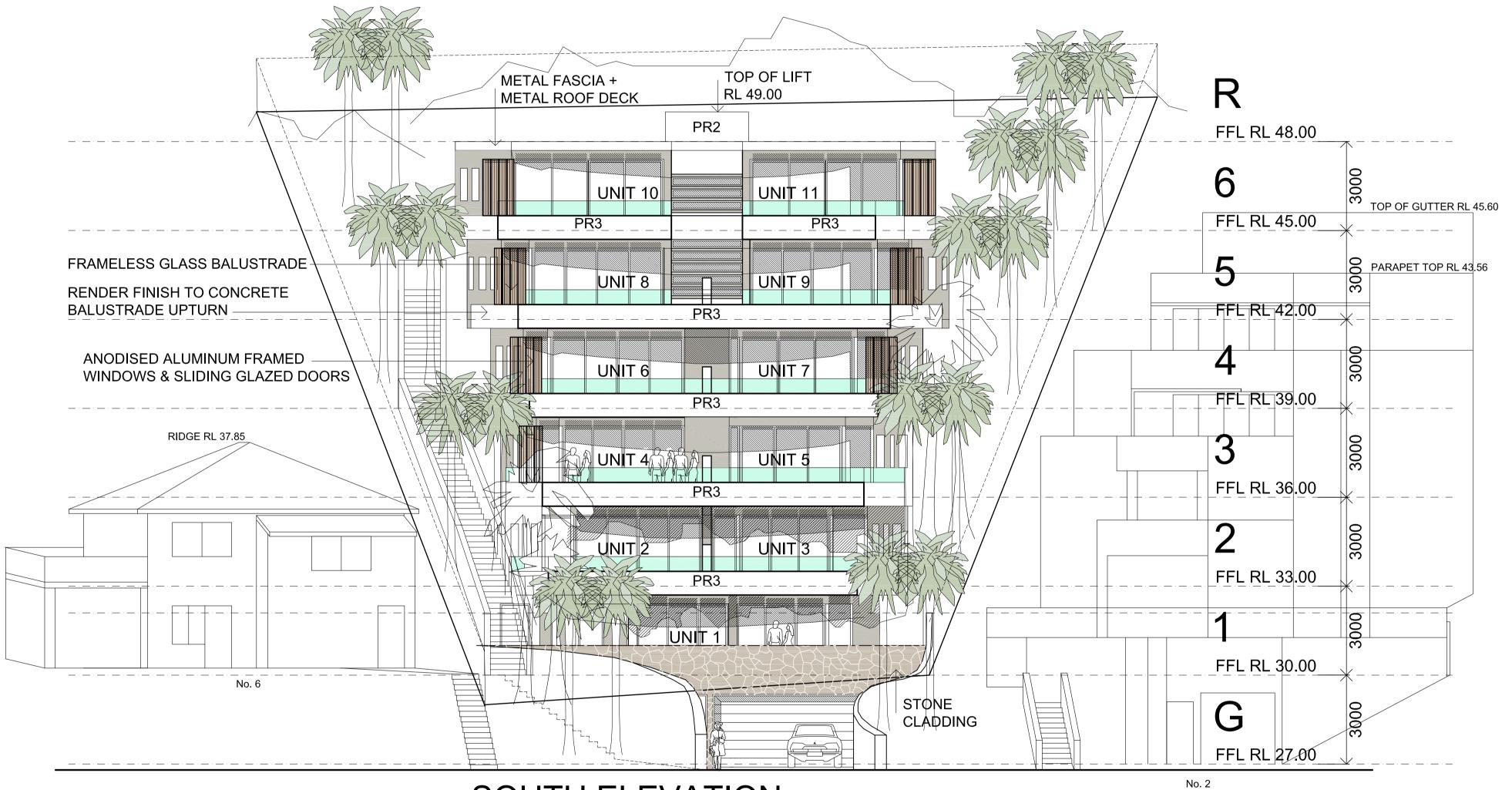
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Drawing No: A01







SOUTH ELEVATION

ISSUE DATE AMENDMENTS

Barry Rush & Associated

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LOTUS PROJECTS

Project
4 BROOKVALE AVE
BROOKVALE

LOT 45 IN DP 6040

Drawing
SOUTH ELEVATION

Scale 1:100 Drawn BR

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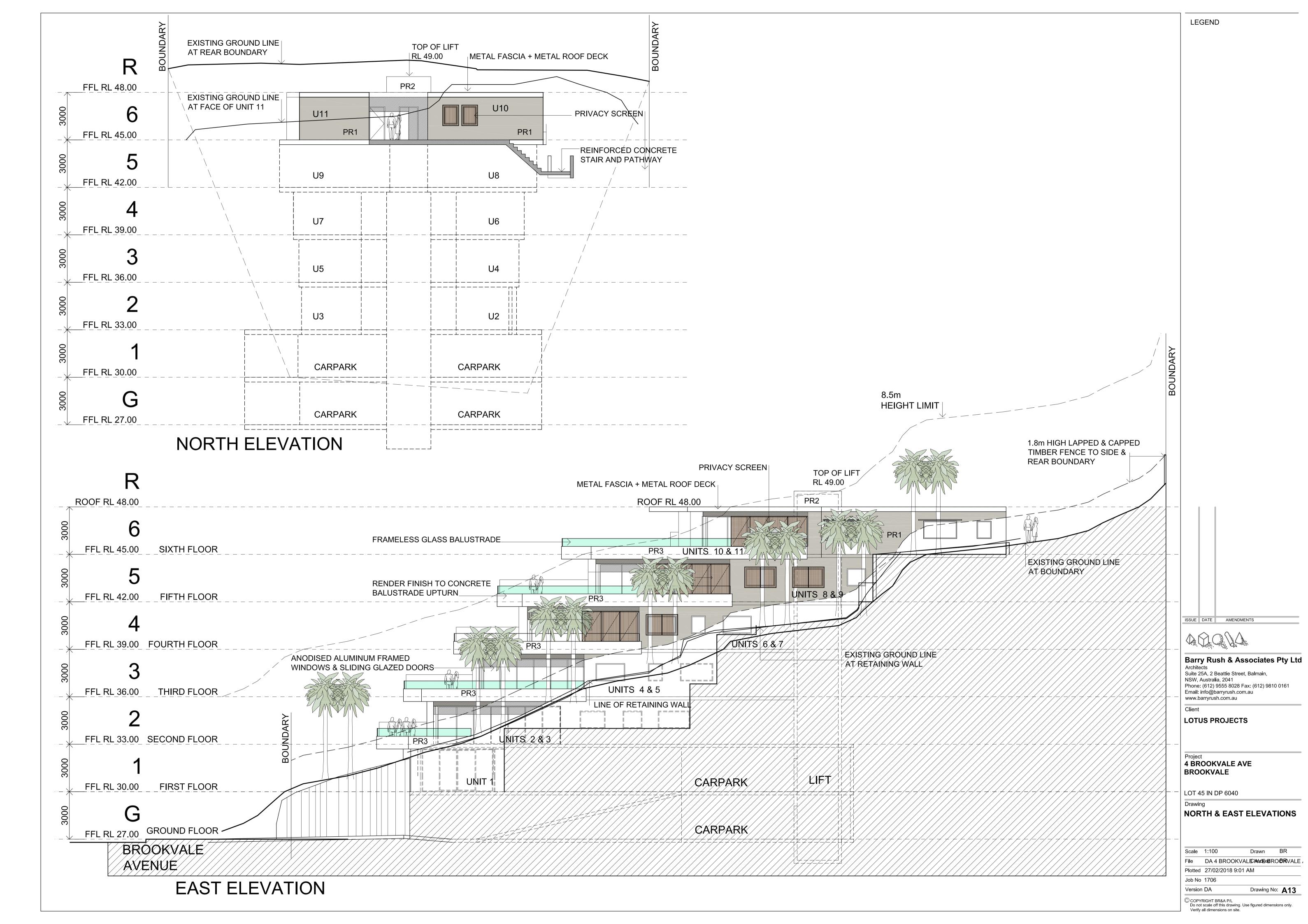
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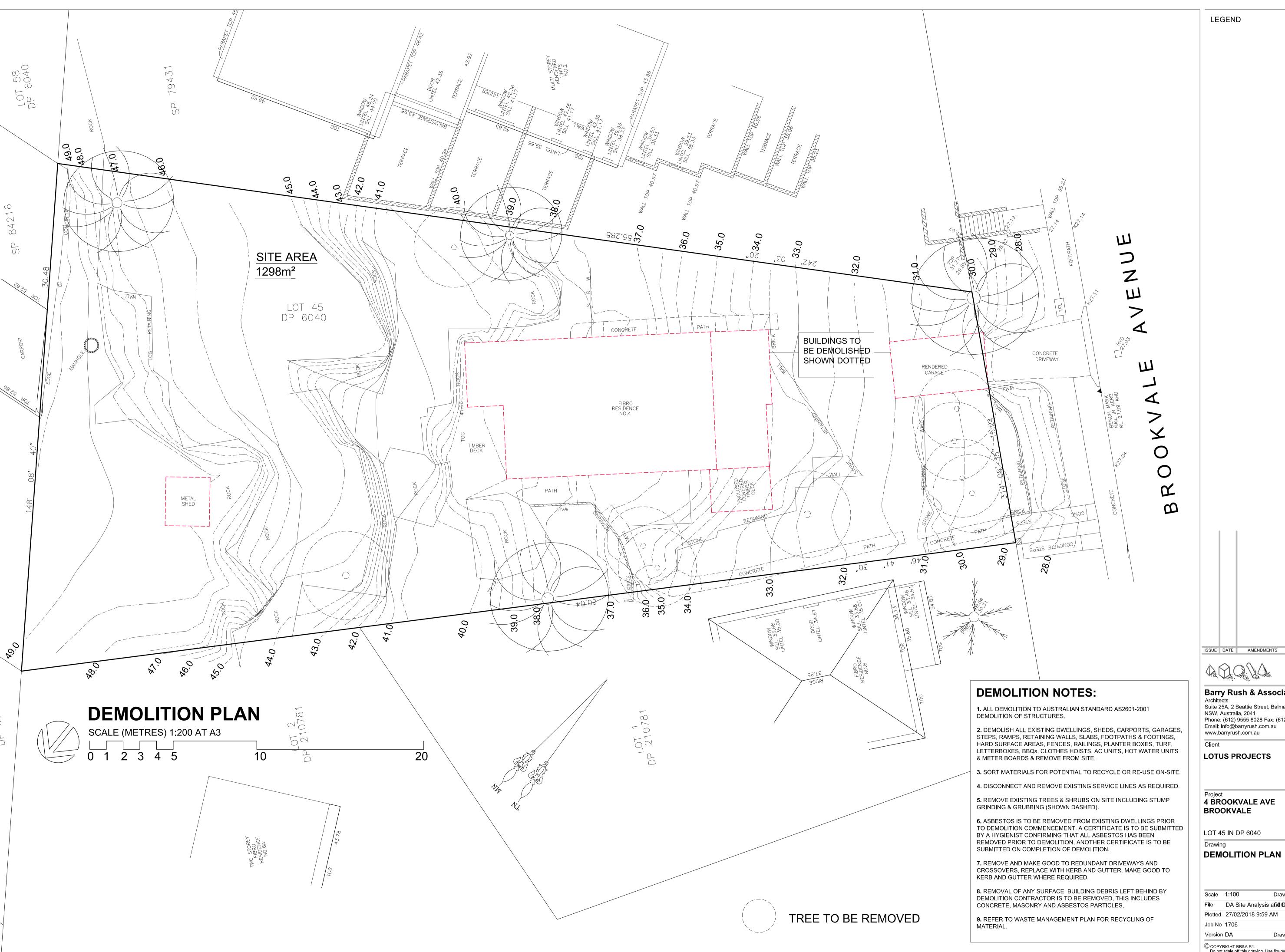
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Version DA Drawing No: A11

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Verify all dimensions on site.

Verify all dimensions on site.





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LOTUS PROJECTS

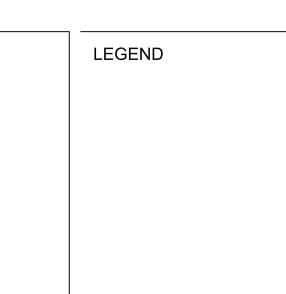
4 BROOKVALE AVE

LOT 45 IN DP 6040

Drawn File DA Site Analysis and the sandlition PDWG

Drawing No: A17

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A COLORBOND "WALLABY"

G STONE CLADDING

(H) TIMBER SCREENS



SOUTH ELEVATION (FACING BROOKVALE AVE)

(B) PR1 WATTYL "DEWKIST"







"SATIN SPANISH SILVER" ANODISED ALUMINIUM

EXTERNAL FINISHES & COLOURS SCHEDULE

ROOFING, GUTTERS, DOWNPIPES, COLORBOND WALLABY FASCIAS, BARGES

PR1 PAINTED RENDER

PR2 PAINTED RENDER

PR3 PAINTED RENDER

DOOR & WINDOW FRAMES

HANDRAILS, BALUSTRADE

RETAINING WALLS, FENCES

BALCONY SLIDING SCREENS

WATTYL "DEWKIST"

WATTYL "BOTANY GREY"

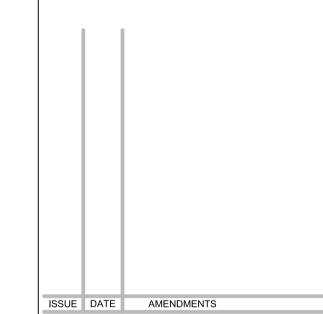
WATTYL "COTTON GREY"

SATIN SPANISH SILVER ANODISED ALUMINIUM

SATIN STAINLESS STEEL

STONE CLADDING

TIMBER





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LOTUS PROJECTS

4 BROOKVALE AVE BROOKVALE

LOT 45 IN DP 6040

EXTERNAL COLOUR SCHEDULE

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Job No 1706 Drawing No: A18 Version DA

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