



Specification for works at
42 Victoria Parade,
MANLY
For STRATA PLAN 34151
NBCE Job No. 201147
Walkway Wall, Planters, Curved Wall and Painting
25 NOVEMBER 2020

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A) Notice To Tenderers

- C1.** Tenders are to be submitted to:
- Strata Plan 34151
C/-
Northern Beaches Consulting Engineers P/L
Suite 207, 30 Fisher Road
DEE WHY NSW 2099
Attention: David Hunter (Superintendent)
- C2.** Access to site will be organised as a tender meeting
- C3.** Tenders must include the following with the tabulated quote for the works on the following page:
- i. The anticipated commencement date and estimated time of completion.
 - ii. Details of any variations proposed to the work specification.
 - iii. Warranties that would be applicable to the tender.
 - iv. Insurance certificates of currency.
 - v. Builder's Licence details and currency.
- C4.** No access will be available through individual units without prior arrangement with owners. Requests for access shall be directed to the Property Access.
- C5.** Conditions of Contract to be used for this project will be at the discretion of the Superintendent.
- C6.** The table for the quote must be completed and returned to the above address. Additional information should be included with the completed table detailing comments by the Tenderer.
- C7.** The following are the appointed positions for the project:

Position	Name/s	Company
Superintendent	David Hunter	Northern Beaches Consulting Engineers
Property Access	-	
Owners	Strata Plan 34151	-
Occupants	Not applicable	-
Contractor/Tenderer	TBD	-

Reference to these contacts shall be made throughout this document by their position.

The Tenderers are to complete the summary of tender prices in the following table.

Item No.	Scope of Work	Reference	Units	Price
1	Site Establishment	Part D	F: Site establishment and project management P: HBCF Insurance	\$ \$
2	Garden Beds	Part E	F: GB1 removal and make good walls (ex. WP & tile) F: GB2-GB5 (removal/disposal, waterproofing and re-establishment) R: Spalling repair 0-200L 201-500L 501-1000L 1001+L	\$ \$ \$/L \$/L \$/L \$/L
3	Walls	Part F	F: Curved wall (render removal, replace render and prime paint) F: Boundary wall (timber panel removal, new brickwork wall/extension, brass handrail and light cores) F: Establishment of gate (unit 4) and make good	\$ \$ \$
4	Tiling and Portico	Part G	F: Demolition of tiles, waterproofing and tiling F: Letterbox supply and install F: Portico surfaces (render removal, repair and prime paint) P: Portico ceiling P: Portico lettering	\$ \$ \$ \$ 3,000 \$
5	Painting	Part H	F: Painting (all listed areas) F: Painting (lattice prep and paint)	\$ \$

F = Fixed Fee

R = Rates

P = Provisional Sum

B) Scope of Work

The work will generally consist of:

- Removal storage and care and reinstatement of garden beds.
- Removal and make good of unit 4 garden bed (GB1) and gate access.
- Installation of glazing handrail.
- Repair works for curved wall and stairway.
- Walkway wall and lighting.
- Portico letterboxes.
- Tiling works.
- Painting.

C) General Clauses

C1. Demolition Generally

All works shall be carried out in a clean, tidy and orderly manner so as to create the least inconvenience to the Owners and Occupants. The debris may not be stored in an unsafe way or be a hindrance to safe passage for the Occupants. No debris from these works may be disposed of in the building garbage receptacles. The debris must also never be stored on the public land to the front of the building.

C2. Labour

All labour shall be full time employees of the Contactor or shall be legitimate subcontractors in the trade for which they are employed and shall be experienced in the handling and use of the materials and techniques required for these works.

C3. Safety

The Contractor shall ensure that at all times no hazard is created to any person entering upon the site arising out of the processes, debris or other materials being used for the works. The Contractor shall provide all necessary scaffolding, planking, safety railing, screening and other protection as may be required from time to time for the proper carrying out and completion of the works.

The Contractor shall comply with all Acts, Ordinances and Regulations enforceable by any authority having jurisdiction over the works. All fees, notices and the like applicable to any applications, scaffolding, plant or other equipment shall be paid or given by the Contractor.

C4. Measuring

The details included in the specification are intended for construction purposes. The plans shall not be scaled for determination of quantities. All measurements as necessary are to be confirmed on-site by the Contractor.

C5. Making Good

Make good all paths, drains, walls, paving, planters, soil surfaces etc. that are broken, damaged or disturbed through the repair works. Damage caused in the course of the works shall made good by the appropriate trades and the surface finished matching previous condition. Any damage made to neighbouring properties must be reported to

the superintendent within a reasonable timeframe and the Contractor must be prepared to repair any damage at their own cost.

C6. Authorities

In carrying out the work, the Contractor and their subcontractors shall comply with all the requirements under Acts, Regulations, Ordinances, By-laws, orders and rules of relevant authorities.

C7. Insurance

Prior to commencement of work, the Contractor will be required to produce evidence of current Public Risk and Workers Compensation Insurance policies to the Superintendent. These policies are to be maintained during the extent of the work by the Contractor.

C8. Environmental Protection

The contract is to be executed in such a manner as to not interfere with the amenity of the neighbourhood by reason of unnecessary noise, vibration, smell, fumes, vapour, ash, dust, waste water, waste products, grit, oil etc. All rubbish and waste is to be collected in containers and regularly disposed of (at least once a week) throughout the duration of the contract. Temporary storing of materials and waste is to be in areas approved by the Owners. Request for storage locations shall be made to the Superintendent at least two (2) days prior to the required date to use the area and must include an indication of the expected size of the area required, the materials that will be stored and the duration of the storage.

C9. Variations

Any and all variations under the contract are to be submitted to and approved by the Superintendent in writing prior to proceeding with the work.

C10. Inspections

The Superintendent shall be given a minimum of three (3) days notice prior to the commencement of work. A schedule of works and a programme for completion is to be prepared for issue to the Superintendent. Advance notice is to be provided on variation to the schedule times when there will be no works undertaken on site.

C11. Clean Up Site

On completion of demolition and again on the completion of the work, all debris is to be removed from the site and the site left in a clean and tidy condition. All debris shall be disposed of lawfully.

C12. Repair Product and Construction Material Applications

The application of any repair product or construction material, whether specified or otherwise, shall be in accordance with the current instructions of use and available method statements. Specifications of the supplier and/or manufacturer of proprietary products shall be strictly adhered to and when products from different manufacturers are to be used in conjunction with each other all manufacturers shall be contacted to advise the Contractor and in turn the Superintendent of their suitability to be used together.

All works shall be carried out in general accordance with industry best practices and know-how. Should any queries or uncertainties arise, the Superintendent shall be notified before proceeding.

D) Site Establishment

D1. Location of Site Office and Storage

The location of a site office and storage of items on site will be discussed in the tender meeting.

D2. HBCF Insurance

The Tenderer shall provide a provisional sum costing based on the total project works.

E) Garden Beds

E1. Identification of Garden Beds

There are 9 independent garden beds surrounding the building (Refer to R01-R03). Garden beds 1-5 are included in this scope of work. Garden beds 6-9 are not part of the project. GB1-GB5 refers to garden beds 1-5.

E2. Removal and Disposal of Soil and Plants

The soil in GB1, GB3, GB4 and GB5 as well as the plants shall be removed and disposed of. GB2 has already had the soil and plants removed.

E3. Garden Bed 1 (GB1)

GB1 is to be removed completely. It requires the following procedure:

1. Remove and dispose of all garden bed contents.
2. Removal of internal wall of garden bed.
3. Strip out of garden bed drain and dressing of affected area.
4. Install glass balustrade to top of ext. balustrade upstand (to match other units).
5. Remove all balcony tiles on unit 4 balcony.
6. Replace drains with strip drains and connect to site stormwater.
7. Waterproof unit 4 terrace and tile.

E4. Garden Beds 2-5 (GB2-GB5) Specific Procedures

GB2-GB5 unlike GB1 are to be retained. The different garden beds have some more specific requirements which are included below noting the bed that they relate to.

- Remove and dispose of all garden bed contents (except GB2).
- Replace irrigation pipe (raise above garden bed height and cap) and repair the penetration seal (GB2 only).
- Seal electrical cable penetration (GB2-GB4).
- Timber lattice to be stripped back and prepared for painting (GB2-GB3). Colour Eva-Last Spanish Saffron.
- Ensure drain and drain seal are adequate, and repair as necessary (GB4-GB5).
- Repair and resurface external edge along the property boundary (GB4).

E5. Garden Bed GB2-GB5 Rebuilding/Waterproofing

The following are the components for the rebuilt garden beds:

- Waterproof membrane (tenderer to specify) up to 75mm from top of garden bed. Membrane to be suitable for use in a planter (liquid with root inhibiting additive or root barrier or sheet membrane certified by manufacturer for use in planters).
- Drainage cell (Ausdrain 30mm) across entire bottom of garden bed, cut around drain to suit.
- Geotextile fabric (synthetic geotextile: Class A, 140gsm, with seems overlapped min. 75mm) up to 100mm from the top of the garden bed.
- Course washed river sand (70mm deep).
- Soil mix (ANL Planter Box Mix) up to 100mm from top of garden bed.
- The existing drain shall be retained. The waterproofing membranes shall be turned down into the drainage to ensure adequate seal. The planters shall be dye water tested once the membrane is installed to ensure no leakage.
- The plants/landscaping shall be by others (not part of this contract).

E6. Repair of Slabs

As part of the works, the slabs under the planters shall be exposed and tap tested. Any areas of drummy concrete, exposed reinforcement or cracking shall be repaired with the following procedure:

1. Break out any areas of flaky, drummy and/or spalling concrete and chase bars back to clean steel.
2. Use a mechanical wire brush to remove any corroded areas back to clean steel.
3. If loss of cross-sectional area is less than 15% the contractor may proceed with this remediation procedure. Otherwise, the engineer shall be notified to assess and provide further details.
4. Apply an approved rust inhibitor (to be verified for suitability with the high build mortar manufacturer).
5. Patch the concrete with a high build mortar such as Sika Monotop 352 NFG or approved equivalent.

E7. Sizes of Garden Beds

The sizes of the garden beds are as per the details in R01-R03.

F) Curved Wall/Stairway, Boundary Wall and Unit 4 Gate

F1. Repair of Curved Wall

The curved wall under unit 1 terrace at the edge of the driveway has cracking in the render. The render around the cracking shall be removed (and straight cut). Once removed the wall shall be assessed by the Superintendent. Then the render repaired and the area prime coated. The Tenderer shall allow for the render removal, re-establishment and prime coat painting in this item.

F2. Boundary Wall

The boundary wall at the entry walkway has a failing handrail at the stairs and a dilapidated wooden fence balustrade. The following is the procedure for the boundary wall:

1. The timber panels and handrail shall be removed and disposed of
2. A brick wall shall be constructed to replace the wooden fence to 1m in height. The wall shall be a 230mm brickwork wall laid on the concrete slab.
3. The existing wall shall be extended in height to match for the walkway length and on the rake to the bottom of the stairs. Common bricks may be used.
4. The entire wall shall be rendered (all exposed surfaces).
5. A new brass handrail shall be installed and fitted to the rendered raked brickwork wall at the stairs.
6. Coring of the wall and walkway lights shall be installed. The lights shall be installed in PVC sleeves. In total it shall be 11 cores and lights.

F3. Walkway Lights

The location of the lights shall be as per the diagram in the Remedial Works Drawings (R01-R03). The lights shall be LuxR M2 steplights (supplied by the SP34151). The Owners have a nominated sub-contractor, Sattler Electrical (Eric Crawford – 0416 654 559) who has possession of the lights and will install the lights. The Contractor will be required to inform Superintendent (who will contact the sub-contractor) once the lights are ready to be installed. There will be no builders margin on this item.

F4. Unit 4 Gate (Option)

The owner of unit 4 wishes for the option of a vertical slat gate through the terrace wall near the top of the stairs. The gate would be approximately 900mm high (to match the terrace wall height) and 800mm wide. The Tenderer is instructed to supply a fixed price for supply and installation of the gate (including the demolition and make good of the existing wall). The slat gate is to be made of composite material (eg Eva-Last Infinity Board in the colour Spanish Saffron), to open towards the terrace and be lockable from either side.

G) Tiling and Portico

G1. Tiling Areas

There are two areas to be re-tiled. These are the existing tiles from the drain near the council footpath to the entry deck (near GB5) including stair treads and risers and the entire unit 4 terrace.

G2. Tiling Procedure

The following are procedure shall be undertaken:

1. All existing tiles are to be removed and disposed of.
2. Once the slab is exposed, the slab shall be tap tested and any drummy area, exposed reinforcement or the like treated with the procedure in item E6.
3. Waterproofing shall be installed to manufacturer's specification and turned down into the drainage to prevent moisture transmission around the penetrations.
4. And screed required to achieve falls shall either have a lime binding additive or a top membrane to prevent lime leeching.
5. The selected tile is a 600x600x10 Ella Stone (19-1004) with P5 slip rating. Stair nosings are to be non-skid in accordance with clause D2.13 and clause D2.14 of the current BCA and the nosings are to have a minimum 30% luminance contrast to the background.

G3. Portico Letterboxes

The existing letterboxes are to be removed and disposed of. They shall be replaced with a bank of 24 x APR2 (A4 landscape) Style Mailsafe Letterboxes with the following notes:

- 6 boxes wide by 4 boxes high.
- 20 units, 1 strata and 2 x 1.5 width open parcel shelves.
- External dimensions: 2080mm wide, 736mm high and 250mm deep (Tenderer to confirm).
- Front opening; key locked (2 keys per box); weather hoods; 30mm aperture slots; silver double-sided key lock.
- Colour of bank to be confirmed.
- Engraved strip/traffolyte colours, text and font to be confirmed.

The installation includes the cutting to the portico wall, buildout under and around the wall to support the letterbox bank, and to surface the buildout to match the portico surfaces.

G4. Portico Surfaces

There are cracks in the columns of the portico and possibly a spalling issue on the roof. The Contractor shall locally remove the render on the columns as in item F1 and repair. Once again, the Tenderer shall provide a fixed fee for the render removal, re-instatement and primer coating. The roof of the portico shall be tap tested and any spalling repaired with the procedure in item E6.

G5. Portico Ceiling System

A new ceiling system (dropped ceiling) shall be installed under the portico roof. The Tenderer shall allow a provisional sum of \$3,000 incl GST for the installation of ceiling battening, linings and downlights.

G6. Portico Lettering

The portico lettering shall be removed and re-surfaced.

H) Painting**H1. Painting Specification**

All ground-level surfaces are to be surface prepared, primed and painted with at least two coats of Murolast Elastomeric Membrane. Colour to match Resene Double Akaroa Y73-029-083.

H2. Extent of Painting

The areas to be painted are:

- The entry lions
- The portico
- The entry garden wall (adjacent to the portico)
- The walkway wall from portico to garden bed 4.
- GB1-GB5
- The curved wall and curved staircase
- The boundary side wall of the walkway wall from portico to screening of unit 1 terrace.

H3. Timber Lattice Painting

The timber lattice of GB2-GB3 are to be stripped and prepared for painting, primed and painted with two coats to colour match Eva-Last Spanish Saffron (refer to item E4).

GENERAL NOTES:

GENERAL

- G1. The drawings are to be read together with all Architects drawings and specifications.
- G2. Dimensions shall not be obtained by scaling from the drawings. All setting out dimensions shall be verified and discrepancies shall be referred to the Engineer and Architect / Designer prior to commencement of work.
- G3. Care is required during construction so that structural elements are not over stressed and that the works and excavations required therefore are kept stable at all times.

- G4. Design, materials and workmanship are to be in accordance with current S.A.A standards and statutory authority regulations except where varied by these documents.
- G5. Design live loads are in accordance with AS 1170.1-2002.
- G6. Builder to ensure stability of existing structures in the vicinity of excavation works.

FOUNDATIONS

- F1. FOUNDATION STRATA IS ASSUMED FOR DESIGN PURPOSES IN ACCORDANCE WITH AS 2870-2001 "RESIDENTIAL SLAB AND FOOTINGS-CONSTRUCTION". SEE FOOTNOTE CLASSIFICATION TO BE VERIFIED BY A GEOTECHNICAL ENGINEER COMMISSIONED BY THE CLIENT FOR CERTIFICATION OF FOUNDATIONS.
- F2. Footings to be constructed and back filled as soon as possible following excavation to avoid softening by rain or drying out by exposure.
- F3. Footings must bear into undisturbed natural ground clear of organic material. Refer to details.
- F4. If rock or variable bearing strata is encountered during excavation of the footings all footings/piers are to be excavated to similar material of greater bearing capacity. The Engineer is to be contacted at that time for approval or review.
- F5. Footings to be cast in approved material having an allowable capacity as follows:

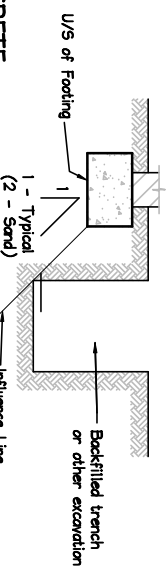
Sand Foundations:

- SA1. Required bearing capacity 100 kPa.
- SA2. Trenches must be cleaned of all debris and hand compacted prior to placement of reinforcement.
- Clay Foundations:
- CL1. Required bearing capacity 200 kPa.
- CL2. Trenches must be cleaned of all debris. Soft spots must be cut out and filled as per compacted fill notes, prior to placement of reinforcement.
- Shale Foundations:
- SH1. Required bearing capacity 600 kPa.
- SH2. Excavation for footings into shale must be cast or capped with plain concrete on the same day as excavation.

Sandstone Foundations:

- SS1. Required bearing capacity 1000 kPa.
- SS2. Slope weathered surface to remove cleaved sandstone under footings. Refer adjacent for assumed Design bearing strata.

- F6. Future development of neighbouring properties may affect ground water conditions on this site. Consequently, reactivity in subgrade beneath footings may be locally altered therefore putting footing at risk of differential settlement. We recommend that, particularly in clay, subgrades, agricultural drainage is installed to the upstream perimeter of the building at a distance from the building which is outside the zone of influence of the footings. The agricultural drain must be installed below the fluctuating seasonal zone which should be identified by geotechnical investigation.
- F7. UNLESS OTHER WISE APPROVED. Excavations near new or existing footings shall not be within the footing influence line.



CONCRETE

- C1. All workmanship and materials shall be in accordance with AS 3600-2018.
- C2. Concrete quality shall be as follows and shall be verified by tests.
- C3. All concrete unless otherwise noted shall have a slump of 80mm at point of placement, a max. aggregate size of 20 mm. No water shall be added to the mix prior to or during placement of concrete. Strength as specified on plans.
- C4. Clear concrete cover to reinforcement shall be as follows unless otherwise shown-

ELEMENT	INTERIOR	EXTERIOR	EXTERIOR CAST AGAINST GROUND
FOOTINGS	-	-	50
COLUMNS/PEDESTALS	30 UNO	REFER TO PLAN	-
SLABS/WALLS	25	REFER TO PLAN	40 ON MEMBRANE
BEAMS	25 UNO	REFER TO PLAN	50
BLOCKWORK	-	55 FROM APPROPRIATE FACE	-

- C5. Sizes of concrete elements do not include thickness of applied finishes.
- C6. All Construction Joints locations shall be approved by the Structural Engineer.
- C7. Beam depths are written first and include slab thickness, if any.

A3

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Architect:	-
Client:	SP34151

Project:	42 VICTORIA PDE, MANLY
Drawing Title:	GENERAL NOTES

Date:	NOV. 2020
Design:	DH
Job No.:	201147
Drawing No.:	R01
Rev.:	-

IF IN DOUBT ASK

- C8. No holes or chases other than those shown on the structural drawings shall be made in concrete elements without the prior approval of the engineer.
- C9. Sprinkage reducing admixtures such as 'Elipeps' or approved equivalent, if specified, must be added to mix prior to pour.
- C10. Water reducing agents, if specified, must be added to mix prior to pour. No extra water is to be added to increase slump.
- C11. Where vertical slab/beam surfaces are formed against a masonry (or other) wall, provide 10 mm styrene separation material.
- C12. Water must not be added to concrete mix prior to placement of concrete.
- C13. Above covers may have to be adjusted if fire rating is a requirement.
- C14. Any structural concrete slab that is designed in accordance with Australian Standards is susceptible to shrinkage cracking due to the nature of the hydration and curing process involved in setting. A certain level of cracking is therefore considered acceptable in the Standards and consequently if a crack free surface is necessary then a proprietary topping system should be considered.

REINFORCEMENT

- R1. All reinforcement specified is Grade D500 unless noted otherwise.
- R2. Reinforcement is represented diagrammatically it is not necessarily shown in true projection.
- R3. Top reinforcement is to be continuous over supports. Bottom reinforcement to be lapped at supports.
- R4. Welding of reinforcement shall not be permitted unless shown on the structural drawings.
- R5. Pipes or conduits shall not be placed within the zone of concrete cover to the reinforcing bars and fabric shall comply with AS 4671-2001.
- R6. All reinforcing bars and fabric shall comply with AS 4671-2001.
- R7. Reinforcement symbols:

- N - Grade 500N deformed bar (D500) Normal Ductility
 - R - Grade 250N plain round bar (R250) Normal Ductility.
 - SL - Grade 500L welded deformed ribbed mesh (D500) Square Low Ductility.
 - RL - Grade 500L welded deformed ribbed mesh (D500) Rectangular Low Ductility.
- The number immediately following these symbols is the number of millimeters in the bar diameter.
 Example : 8 N12-250
 Denotes 8, Grade 500N deformed bars, 12 mm diameter at 250 cts.
 Fabric reinforcement to be lapped 1 complete square + 25 mm unless noted otherwise.

- R9 All reinforcement shall be firmly supported on bar chairs spaced at a maximum of 750 centres both ways under rod and fabric reinforcement. Reinforcement shall be tied at alternate intersections.

FORMWORK

- FM1. Formwork must be cleaned of all debris prior to casting of concrete.
- FM2. Minimum stripping times for form work shall be as recommended in AS 3601.1-2018 or as directed by the engineer.
- FM3. The finished concrete shall be a dense homogeneous mass, completely filling the form work, thoroughly embedding the reinforcement and free of stone pockets. All concrete elements including slabs on ground and footings shall be compacted with mechanical vibrators.
- FM4. Curing of all concrete is to be achieved by keeping surfaces continuously wet for a period of 3 days, followed by prevention of loss of moisture for seven days followed by a gradual drying out. Approved sprayed on curing compounds may be used where no floor finishes are proposed. Polythene sheeting or wet hessian may be used if protected from wind and traffic.

BRICKWORK

- BR1. Brickwork is to be constructed to AS 3700-2018.
- BR2. Two layers of approved greased metal based slip material shall be used over all load bearing walls that support concrete slabs and placed on smooth brickwork or trowelled mortar finish. Non load-bearing walls shall have 10 mm compressible material and ties to the slab soffits.
- BR3. No brickwork shall be constructed on suspended slabs until all propping has been removed from the underside of the slab and the concrete has the specified 28 day cylinder strength verified by tests.
- BR4. Control joints to be placed at a maximum of 8m centres or in accordance with AS 3700-2018.
- BR5. Exposure grade bricks to be used below damp proof course.
- BR6. Vertical control joint material where specified on plan between slabs and brick walls shall be: 10 mm Spandex External UNO. Bituminastic fibreboard Internal UNO.
- BR7. Provide stainless steel wall ties below DPC to AS 3700-2018. Provide galvanized wall ties above DPC to AS 3700-2018 and Local Council Specifications.
- BR8. Extruded bricks are not suitable for standard Brick Retaining Walls detailed herein due to excessive brick growth potential, high porosity and insufficient mass.
- BR9. Excessive brick growth can cause cracking in walls and render. Ensure that manufacturers delivery certificates state that growth rate is within code limits.

BLOCKWORK

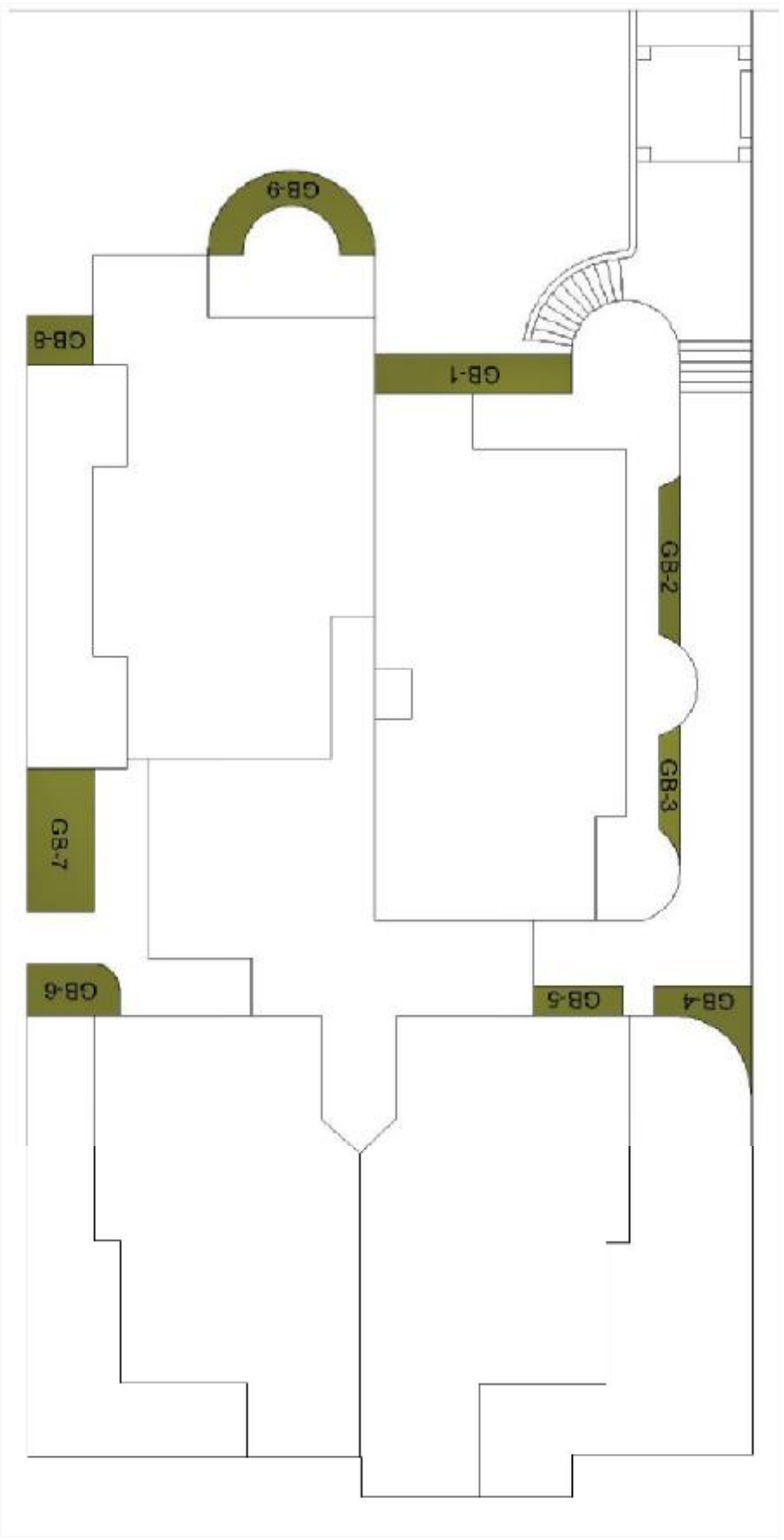
- BL1. Concrete blocks shall have a minimum compressive strength of 15 MPa and conform to AS 3700-2018. Masonry to be constructed to AS 3700-2018.
- BL2. Where cores of hollow blocks are to be filled, properly compacted 20MPa concrete with 10 mm aggregate and 230 mm slump shall be used. Clean out openings must be utilized for all cores.
- BL3. Location of actual slabs is critical to suit block cores, allow 55 mm cover from the outside face of blockwork. All reinforcement lap lengths to conform to AS 3600-2018.
- BL4. Control joints to be placed at a maximum of 8 m centres or in accordance with AS 3700-2018.
- BL5. Vertical control joint material where specified on plan between slabs and brick walls shall be: 10 mm Spandex External UNO. Bituminastic fibreboard Internal UNO.
- BL6. Retaining walls or any reinforced and concrete core filled block walls to be of Double 'U' Block Construction.
- BL7. No blockwork shall be constructed on suspended slabs until all propping has been removed from the underside of the slab and the concrete has the specified 28 day cylinder strength verified by tests. Unless approved by the Structural Engineer.
- BL8. Max. pour height for unrestrained blockwork is 2000.
- BL9. Contractor to ensure all cores are filled with concrete where additional loads are to be applied to existing core filled blockwork walls.

STEEL

- S1 All Structural steelwork to be Grade 300 or greater.
- S2. Materials and workmanship shall comply with AS 1250-1981, SAA Steel Structures Code and the specification for Structural Steel.
- S3. Rolled steel sections including steel plates shall comply with AS 3678-1990.
- S4. Cold formed steel sections shall be Grade 450 Zinc coated in accordance with AS 1539-1988.
- S5. Welded and seamless steel hollow sections shall comply with AS 1163-2016 Grade 350. 4.65 Bolt Designation:
- 8.85 - High Strength structural bolts Grade 8.8, snug tightened.
- 8.8TB - High Strength structural bolts Grade 8.8, fully tightened to AS 1511-1984 and acting as a Bearing Joint.
- 8.8TF - High Strength structural bolts Grade 8.8, fully tensioned to AS 1511-1984 and acting as a Bearing Joint.
- Unless noted otherwise, all bolts will be 8.85.
- S7. Unless shown otherwise, minimum connection shall be 2H16 bolts, 10 thick gusset plates, 6mm continuous fillet weld.
- S8. Load indicating washers shall be used in all fully tensioned joints. (8.8TF & 8.8TB).
- S9. All welding shall be carried out in accordance with AS 1554-2014 SAA Structural Steel Welding Code.
- S10. Unless noted otherwise all welds shall be category SP using E41xx Electrodes. All butt welds shall be complete penetration butt welds category SP.
- S11. Grouting of anchor bolt sleeves and base plates shall be completed by the contractor using High Strength, Non-Shrink grout.
- S12. Fabrication and erection tolerances for Structural Steelwork shall be in accordance with AS 4100-1998.
- S13. Purin bolts shall be M12 - 4.65 galvanised.
- S14. All specification, inspection and maintenance of steel coating systems to be the responsibility of the project manager and in accordance with the NCC BCA Table 3.4.4.2 and AS/NZS 2312-2014 PART 1 and 2 NB Consulting Engineers does not warrant certify or take responsibility for any specification, inspection and maintenance of steel coating systems. At a minimum NB Consulting recommends the following:
- INTERNAL 'LOW' GREATER THAN 1km FOR THE COAST AND ENCLOSED Epoxy primer (two pack) to AS/NZS 3750.13-1997
- INTERNAL 'MEDIUM' 0 TO 1km FROM THE COAST AND ENCLOSED Galvanised(HDG500) to AS/NZS 4680-2006 (after fabrication)
- CAVITY 'R3' GREATER THAN 500m FROM COAST Galvanised in accordance with AS/NZS 2699.3-2002 (after fabrication)
- CAVITY 'R4' 0 TO 500m FROM COAST Galvanised in accordance with AS/NZS 2699.3-2002 and Epoxy primer (two pack) to AS/NZS 3750.13-1997 plus Epoxy micoaceous iron oxide (two pack) to AS/NZS 3750.14-1997 (after fabrication)
- EXTERNAL 'MEDIUM' GREATER THAN 1km FROM COAST Galvanised(HDG500) to AS/NZS 4680-2006 (after fabrication)
- EXTERNAL 'HIGH' 500m TO 1km FROM COAST Galvanised(HDG900) to AS/NZS 4680-2006 (after fabrication)

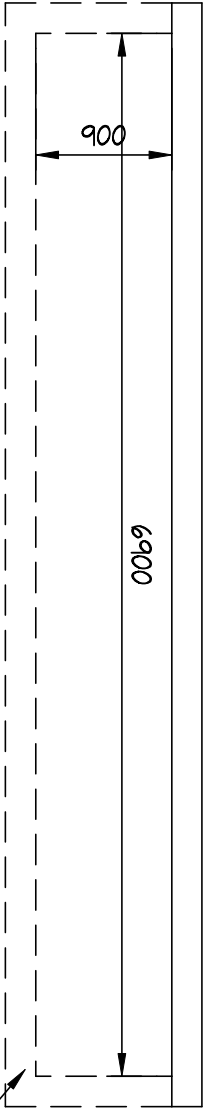
TIMBER

- TI. All workmanship and materials to be in accordance with AS 1684-2010, AS 1720-2010 and AS 3459-2018. All soft wood to be Grade MGP10 unless noted otherwise. All hardwood to be minimum Grade F14 unless otherwise noted. Exposed timber to be CCA treated (to AS 1604-2012) re-dried after full impregnation, or durability class 1, 2 or 3.
 - ALL SOFTWOOD TIMBER FRAMING TO HAVE A MINIMUM TREATMENT PROTECTION OF H2 or T2 TREATED FOR TERMITTE PROTECTION UNLESS NOTED OTHERWISE.
 - T2. All joists deeper than 150 to have blocking over support bearers and at a maximum 3000 centres.
 - T3. Roof trusses to be designed by the manufacturer to the relevant standards. Pre camber to be an amount equal to dead load deflection unless otherwise noted.
 - T4. All holes for bolts to be exact size. Washers to be used under all heads and nuts and to be at least 2.5 times the bolt diameter. Bolts to be M16 grade 4.6 unless noted otherwise.
 - T5. Treat all exposed cut ends with Reseal by Protim to manufacturers specification to achieve required Hazard Level Exposure Classification.
 - T6. Battens for T & G to be Kiln Dried to 12 %, 38mm minimum, deep treated pine or as recommended by supplier. Flooring to be installed no sooner than 28 days after slab pour.
 - T7. Hot dip galvanized nails/clouets/screws to be used with all timber connections.
 - T8. Continuous nailing must not be used for any timber connections.
 - T9. All exposed CCA treated pine to have an application of penetrating sealer to reduce warping and wail of the timber due to varying moisture content in service.
 - T10. All Stud walls to be 90x45 F7 Kiln Dried
 - T12 Treated at 450 Cts and noggins to AS 1684-2010. U.N.O.
- COMPACTED FILL**
- CF1. Only to be used with approval by Engineer & to be certified by a Geotechnical Engineer.
 - CF2. Clear organic material, topsoil and any uncontrolled existing fill under proposed slabs/footings.
 - CF3. Filling shall be granular material compacted in not more than 200 mm layers to a minimum dry density ratio (AS 1294.6.3.3-1997) of 98 percent standard maximum dry density subject to Geotechnical Engineer's Approval.
 - CF4. During clearing and excavation for slabs and footings cut out soft spots and fill as above.
- INSPECTIONS BY ENGINEER**
- 48 HOURS NOTICE IS REQUIRED BEFORE ANY SITE INSPECTION. ANY STRUCTURAL ELEMENT NOT INSPECTED BY NCC WILL NOT BE CERTIFIED BY NCC
 - 1. Bearing strata of all footings prior to concrete pour by Geotechnical Engineer.
 - 2. Any reinforcement prior to concrete pour.
 - 3. Timber and Steel framing prior to cladding or lining.
 - 4. Steel linings after installation.
 - 5. CONTACT YOUR PCA (Principal Certifying Authority) AS TO REQUIREMENTS FOR MANDATORY CRITICAL STAGE INSPECTIONS IN ACCORDANCE WITH REVISED EPA4 ACT REGULATIONS EFFECTIVE JULY 1, 2004.
 - 6. Inspection by Geotechnical Engineer over 1.5m of vertical cut through Sandstone bed rock to permit identification of defects and remedial measures initiated.



PLANTER LOCATION PLAN

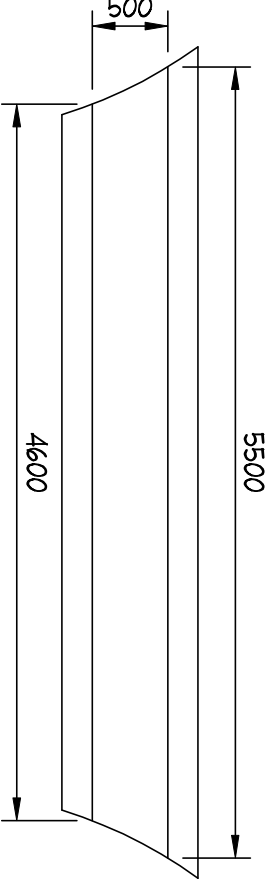
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GB1 PLAN

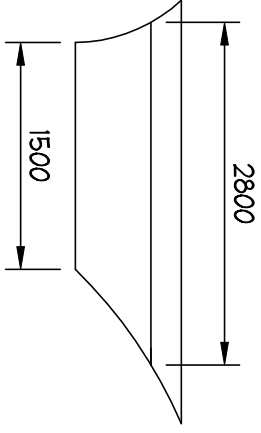
SCALE = N.T.S.

WALLS TO BE REMOVED
SHOWN HATCHED



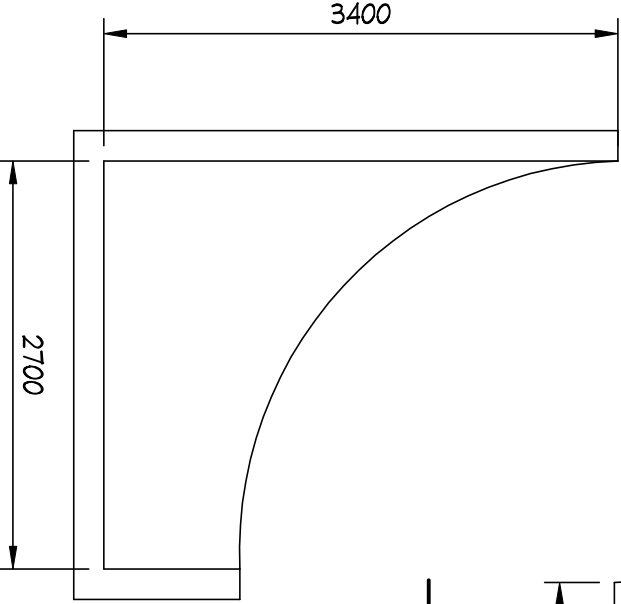
GB2 PLAN

SCALE = N.T.S.



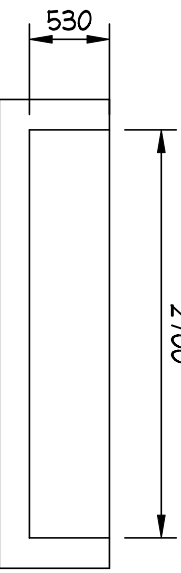
GB3 PLAN

SCALE = N.T.S.



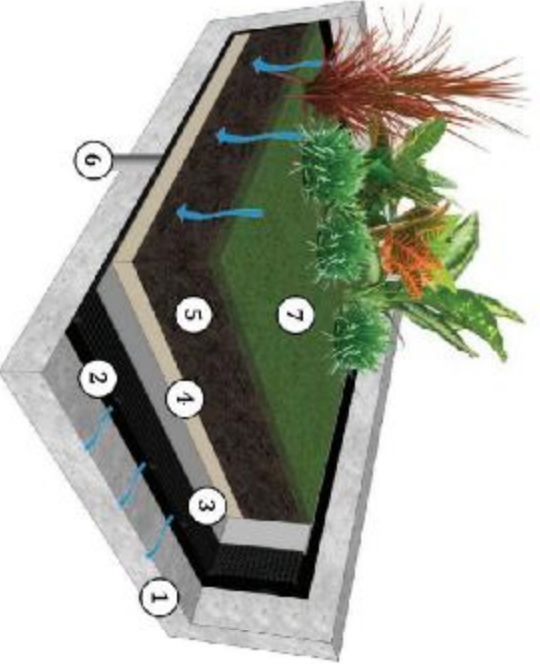
GB4 PLAN

SCALE = N.T.S.



GB5 PLAN

SCALE = N.T.S.



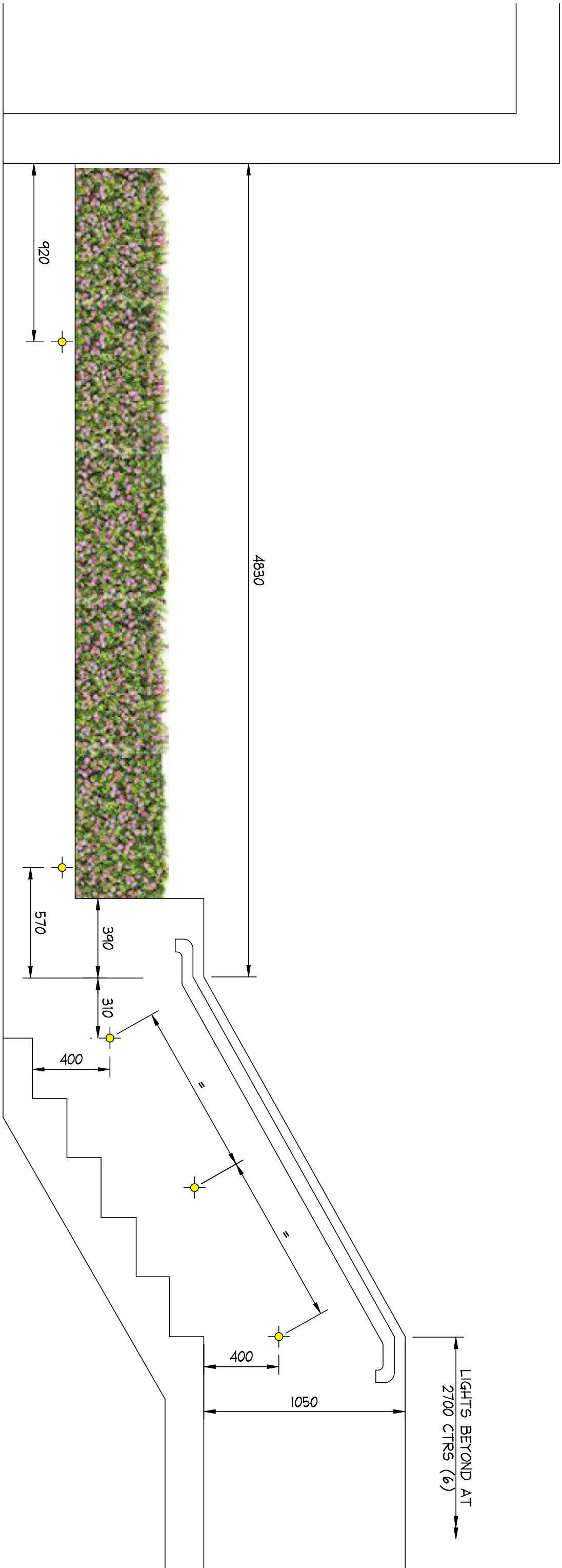
1. WATERPROOF MEMBRANE
2. DRAINAGE CELL
3. GEOTEXTILE FABRIC
4. COURSE WASHED RIVER SAND
5. SOIL MIX
6. DRAIN
7. PLANTS/LANDSCAPING

NOTES:

1. ALL DIMENSIONS TO BE VERIFIED ON SITE BY BUILDER BEFORE COMMENCING WITH WORK.
2. FOR GENERAL NOTES REFER TO DRAWING NUMBER: R01.

A3

NORTHERN BEACHES Consulting Engineers P/L.		Architect:			Project:	42 VICTORIA PDE, MANLY		Date:	NOV. 2020	Design:	DH	Drawn:	DH	Review:	-
A.C.N. 078 121 616 A.B.N. 24 078 121 616 Suite 207, 30 FISHER ROAD DEE WHY N.S.W. 2099 Ph: (02) 9984 7000 Fax: (02) 9984 7444 e-mail: nb@nbconsulting.com.au web page: www.nbconsulting.com.au		Client:	SP34151		Drawing Title:	GARDEN BEDS		Job No.:	201147		Drawing No.:	R02			



STAIR ELEVATION

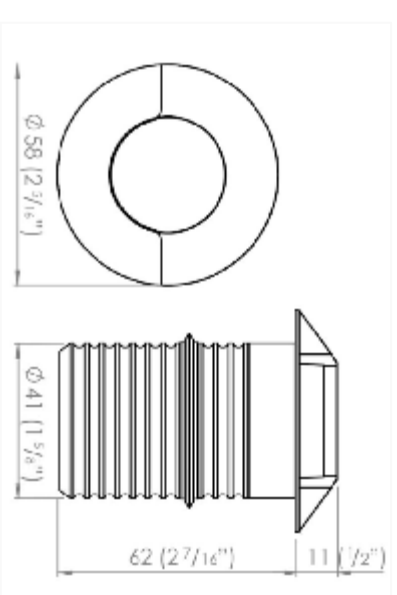
SCALE = 1:20

NOTES:

1. ALL DIMENSIONS TO BE VERIFIED ON SITE BY BUILDER BEFORE COMMENCING WITH WORK.
2. FOR GENERAL NOTES REFER TO DRAWING NUMBER: R01.

A3

NORTHERN BEACHES Consulting Engineers P/L. A.C.N. 078 121 616 A.B.N. 24 078 121 616 Suite 207, 30 FISHER ROAD DEE WHY N.S.W. 2099 Ph: (02) 9984 7000 Fax: (02) 9984 7444 e-mail: nb@nbconsulting.com.au web page: www.nbconsulting.com.au		Architect: -	Client: SP34151
42 VICTORIA PDE, MANLY		Project: WALKWAY LIGHTS	Drawing Title:
Date: NOV. 2020	Design: DH	Job No: 201147	Drawing No: R03
Drawn: DH	Review: -		



LIGHT DETAIL

SCALE = 1:10