

# PROPOSED ALTERATIONS & ADDITIONS THE BOATHOUSE PALM BEACH

## GENERAL

- G1** - These drawings are to be read in conjunction with all architectural and other consultants drawings and specifications. Any discrepancies are to be referred to all parties and rectified before proceeding with the works.
- G2** - Dimensions shall not be obtained by scaling from these drawings.
- G3** - During construction the structure and surrounds shall be kept stable at all times utilizing temporary shoring, bracing etc.
- G4** - All materials and workmanship are to be in accordance with the current Australian Standards, OH&S requirements, and the by-laws and ordinances of any relevant statutory authority.
- G5** - Barrenjoey Consulting Engineers is responsible for the items detailed within these plans only. The design, installation, certification, operation and safety of any adjacent / supported / supporting / complementary items are the responsibility of those parties carrying out such works.
- G6** - Design Wind Classification - N3 (32 / 50m/s)
- G7** - Plans are only valid if signed and dated.

## FOUNDATIONS

- F1** - The foundation material assumed to be **SAND** of min **150 kPa** bearing capacity.
- F2** -The foundation material is to be **inspected, verified and approved** by a **Geotechnical Consultant** as being in accordance with the above and that it is sound and consistent with minimal possibility of differential settlement across the development.
- F3** - Should variable foundation material be encountered the engineer is to be contacted and it is likely all foundations are to be pried to similar material of the greatest bearing capacity and that additional detailing of the foundation reinforcement will be required.
- F4** - Any excavation works are to include measures to ensure the temporary and long term stability of any existing structure within its vicinity.
- F5** - All foundations shall be a minimum 300mm into the approved material unless otherwise noted.
- F6** - Foundation depth dimensions are a minimum only and final depth will be dependent on the adequacy of the bearing material.
- F7** - All organic matter and top soil shall be removed from the underside of all slabs and foundations.
- F8** - Any soft or questionable excavated areas are to be brought to the attention of the Geotechnical Consultant and may require controlled filling.
- F9** - Any filling shall be to the approval of the Geotechnical Consultant and will generally be granular material compacted in not more than 150mm layers to a minimum dry density ratio of 98%.

## EXCAVATIONS

- E1** - All excavations are to be carried out in a safe manner utilizing applicable strata battering typically 1Vert to 2Horz.
- E2** - No excavations are to be carried out within the "zone of influence" of any adjacent/surrounding structures without a Geotechnical Consultants advice and recommendations. The "zone of influence" is to be taken as the area above a 30' (1V to 1.75H) line from the base of the proposed excavation.
- E3** - Upslope runoff is to be diverted from the cut face and the cut face covered with a wpm during wet weather and delays in construction.

## CONCRETE

- C1** - All workmanship and materials shall be in accordance with AS3600.
- C2** - Concrete quality shall be verified by tests.
- C3** - All concrete shall have a slump of 80mm and maximum aggregate size of 20mm.
- C4** - Concrete strength and cover shall be as detailed on the plans.
- C5** - Size of concrete members do not include thickness of applied finishes.
- C6** - Beam depths are written first and include slab thickness if any.
- C7** - No penetrations are to be made to the concrete members without the written approval of the engineer.
- C8** - **No water is to be added to the concrete.**
- C9** - All construction joints shall be located to the approval of the engineer.
- C10** - Fire rating requirements and adequacy is to be reviewed and specified by others.
- C11** - **All concrete members are to be cured** by keeping the surfaces continuously wet for a period of 3 days followed by the prevention of loss of moisture for a further 7 days. Alternately an applicable proprietary curing finished maybe used.
- C12** - All concrete elements shall be compacted to form a dense homogenous mass using mechanical vibrators.
- C13** - All formwork shall be installed and stripped in accordance with AS3610.
- C14** - All formwork is to be free of debris prior to pouring of concrete.
- C15** - Exposed finished concrete surfaces (such as polished floors etc) will require additional reinforcement (SL 102 Top min) plus curing / shrinkage controlling measures / additives as per the concrete suppliers recommendations.
- C16** - Exposed finished concrete surfaces (such as **polished floors** etc) will be **susceptible to cracking**.
- C17** - Slabs containing insitu heating systems are to have such systems located below the top layer of reinforcement. The system should not be turned on for a min of 60 days (and if practical 90) after

concrete placement. The system should be commissioned gradually with 25% capacity at first, then to 50% over the following 7 days. The full use of the system should be delayed as long as possible to allow the slab to cure as best possible.

## REINFORCEMENT

- R1** - All reinforcement shall be Grade D500.
- R2** - Top reinforcement is to be continuous over supporting elements and lapped between supporting elements only.
- R3** - Bottom reinforcement is to be continuous between supporting elements and lapped at supporting elements only.
- R4** - Reinforcement is represented diagrammatically only and is not necessarily shown in its true projection.
- R5** - Welding of reinforcement is not permitted.
- R6** - All reinforcement shall be supported on bar chairs at max 750mm spacing.
- R7** - Reinforcement shall be tied at alternate intersections.
- R8** - Reinforcement bars are to lap a minimum length equal to 40 times the bar diameter (ie min 480mm for N12 bars, 640mm for N16 bars) .
- R9** - Reinforcement fabric is to lap 1 complete square plus 25mm.

## MASONRY

- M1** - All workmanship and materials shall be in accordance with AS3700.
- M2** - An approved slip joint material is to be placed over all load bearing masonry supporting a concrete slab and laid on smooth brick work or a trowed mortar finish, this material may constitute two layers of greased metal.
- M3** - Masonry shall be constructed on suspended concrete structures only after all propping has been removed and the concrete has achieved its specified strength.
- M4** - Control joints are to be placed in all walls at a maximum of 8m centres and between new and existing structures or closer as deemed necessary by the engineer. The joints are to be 10mm wide and sealed with an approved flexible sealant, with ties at 600mm centres vertical.
- M5** - Concrete blocks shall have a minimum compressive strength of 15 MPa.
- M6** - Core filling shall be 20 MPa concrete with 10mm aggregate, 230mm slump and compacted adequately.
- M7** - Concrete blocks used in retaining wall construction are to be Double Web H blocks.
- M8** - Maximum pour height for unrestrained blockwork is 1.8m.
- M9** - All masonry components are to be tied at not more than 600mm centres to adjacent steel or concrete columns.
- M10** - All Masonry Units to be Exposure grade, Mortar to be Classification M4 and Ties classification R4.

## STEEL

- S1** - All workmanship and materials shall be in accordance with AS4100.
- S2** - Hot rolled plates shall comply with AS 3678.
- S3** - Hot rolled sections shall comply with AS3679.
- S4** - Cold formed sections shall comply with AS4600.
- S5** - Welded and seamless hollow sections shall comply with AS1163.
- S6** - Unless noted otherwise all welds shall be 6mm continuous fillet from E4xx electrodes, unless noted otherwise.
- S7** - Unless noted otherwise all bolts shall be M16 high strength structural bolts grade 8.8, snug tightened, uno.
- S8** - Unless noted otherwise all connections shall be 3M16 bolts, 10mm plate and 6mm continuous weld.
- S9** - All structural steel work shall have the following level of corrosion protection (coatings listed below by *DULUX Australia p/l* maybe substituted with a certified equivalent) All coatings/finishes shall be applied in accordance with the manufacturers specifications and recommendations including surface preparation.
- Internal elements**  
not visible - a single coat (75 microns) of Zincode 402.  
visible - a first coat (75 microns) of Zincode 402 and a second coat (100 microns) of Weathermax HBR.
- External elements** (> 100m from waterfront including members with an external cavity or within 1m of a significant opening)  
not visible - a first coat (90 microns) of Zincode 402 a second coat (60 microns) of Ferreko No 5 and a third coat (60 microns) of Ferreko No 5.  
or Hot Dipped Galvanised to AS 4680.
- visible - a first coat (75 microns) of Zincode 402 and a second coat (125 microns) of Ferreko No3 and a third coat (125 microns) of Ferreko No3.  
or Hot Dipped Galvanised to AS 4680 and a decorative coating.
- External elements** (marine environment ie < 100m from waterfront)  
Specialist specification from paint manufacturers is to be applied to all members.
- S10** - All work shop drawings are to be reviewed and approved by the Engineer.

## TIMBER

- T1** - All workmanship and materials shall be in accordance with AS1720 and AS1684.
- T2** - All exposed timber shall be H3 treated or of durability class 1.
- T3** - All timber in contact with the ground shall be H4 treated or of durability class 1.
- T4** - All exposed cuts shall be treated to achieve H3 or H4 requirements.
- T5** - All softwood shall be minimum F7.
- T6** - All hardwood shall be a minimum F14.
- T7** - All bolt holes shall be exact size and washers shall be 2.5 x the bolt diameter.
- T8** - All bolt holes shall be min 75mm from end and 50mm from edge of any timber section.
- T9** - All nails/screws shall be min 45mm from end and 25mm from edge of any timber section.

## INSPECTIONS

- I1** - Barrenjoey Consulting Engineers shall only inspect works within its capacity as an Engineering Consultancy and will not carry out Mandatory Critical Stage Inspections.
- I2** - Barrenjoey Consulting Engineers will not inspect or certify foundation material adequacy, see F2.
- I3** - All inspections are to be carried out at the request of the projects Principal Certifying Authority, or should independent certification be required at the request of the client or builder.
- I4** - Typical inspections include -  
Foundation reinforcement, Slab on ground reinforcement  
Suspended concrete reinforcement, Steel structures  
Timber structures, Completed Stormwater Management systems
- I5** - The client shall be responsible for any fees for inspections regardless of whom requested them.
- I6** - All re inspection required due to no compliance with issued drawings or that deemed necessary by Barrenjoey Consulting Engineers shall be charged to the client.
- I7** - **No certification will be given for works not inspected by Barrenjoey Consulting Engineers.**
- I8** - 48 Hrs notice is required for any inspection within the Sydney region and 72 Hrs notice is required for any inspection outside of this region.

## DESIGN LIFE OF THE STRUCTURE

- D1** - The design life of all elements as specified within these documents correspond to that required by the Building Code of Australia and the relevant Australian Standard.
- D2** - The Design Life of elements relevant to slope stability maybe extended to that required by Pittwater Councils Interim Risk Management Policy by the implementation of a rigorous maintenance and inspection schedule together with additional concrete strength and cover specifications as detailed within these plans.
- D3** - Maintenance and Inspection schedule  
Every 1 yr all works by the property owner  
Every 5 yrs all works by a licensed builder  
Every 10 yrs all works by the Geotechnical Consultant

## DRAWING SCHEDULE

### CIV1 - GENERAL NOTES

### CIV2 - EXCAVATION, SEDIMENT / EROSION CONTROL PLAN & DETAILING

A1

ISSUE:	DATE	DESCRIPTION
Prelim	24. 09. 2020	Issued for comment
DA	06. 10. 2020	Issued for DA submission
DA-A	04. 03. 2021	Revised to match Arch itectural revisions Issued for DA submission
DA-B	27. 08. 2021	General revision. Issued for DA submission

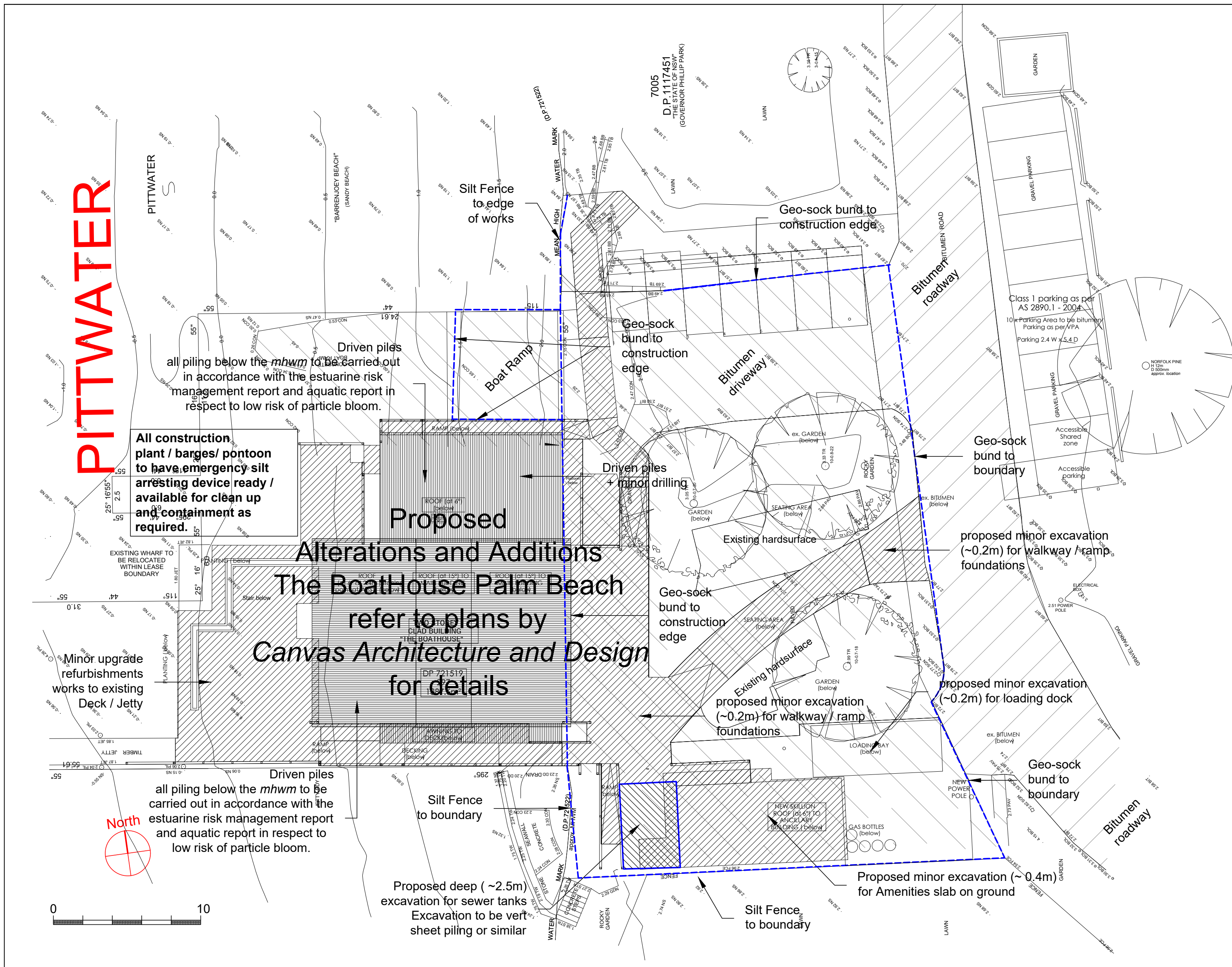
Barrenjoey Consulting Engineers Pty Ltd  
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PROJECT:  
PROPOSED  
ALTERATIONS & ADDITIONS  
BOATHOUSE  
PALM BEACH  
for ~ LONDON LAKES  
PARTNERSHIP

DRAWING :  
GENERAL NOTES

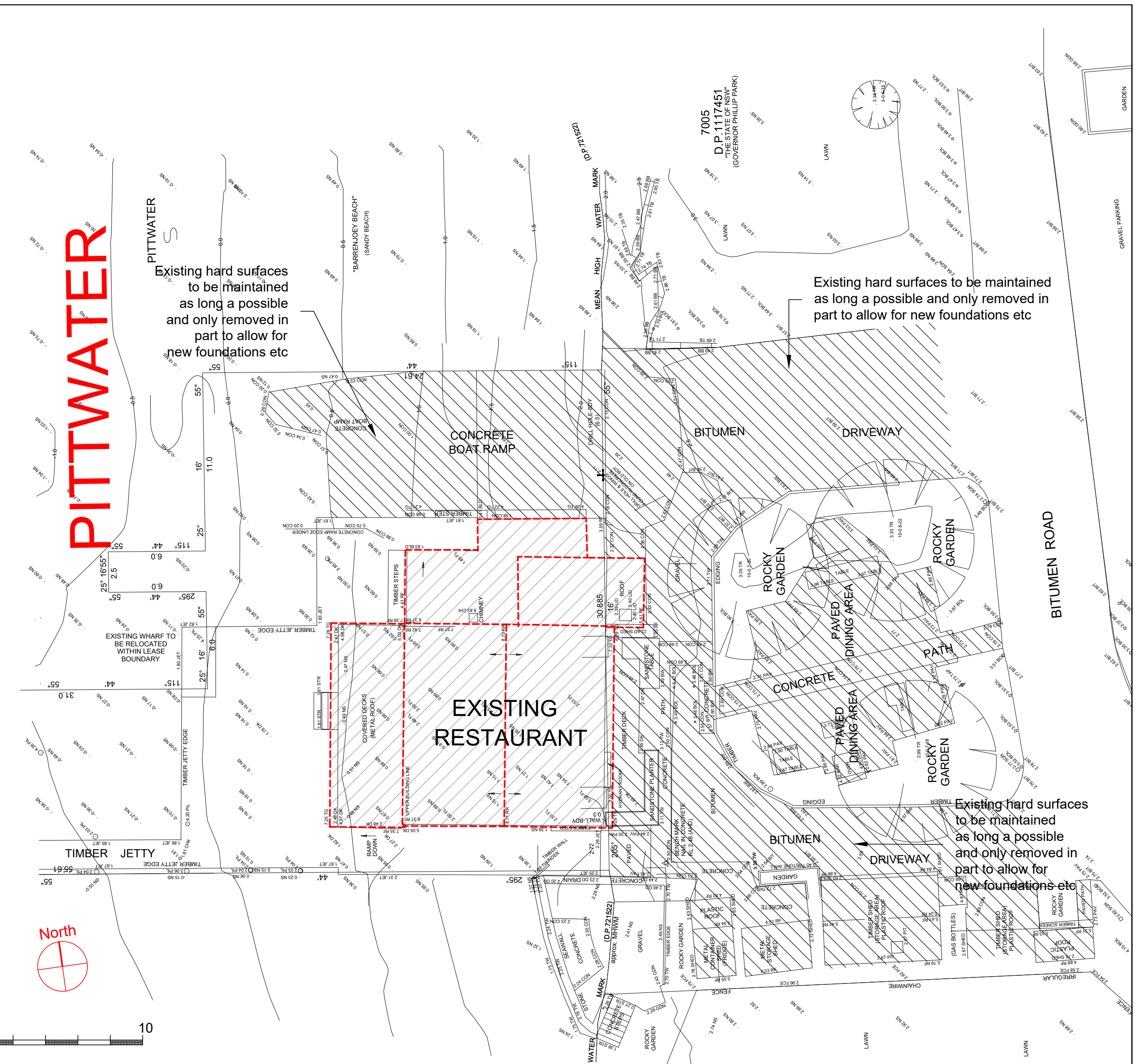
Job No :  
200612  
Drawing No  
CIV1.00  
DA-B  
Document Certification  
Barrenjoey Consulting Engineers Pty Ltd  
per  
Lucas Malloy MEA OP/Eng NER Director





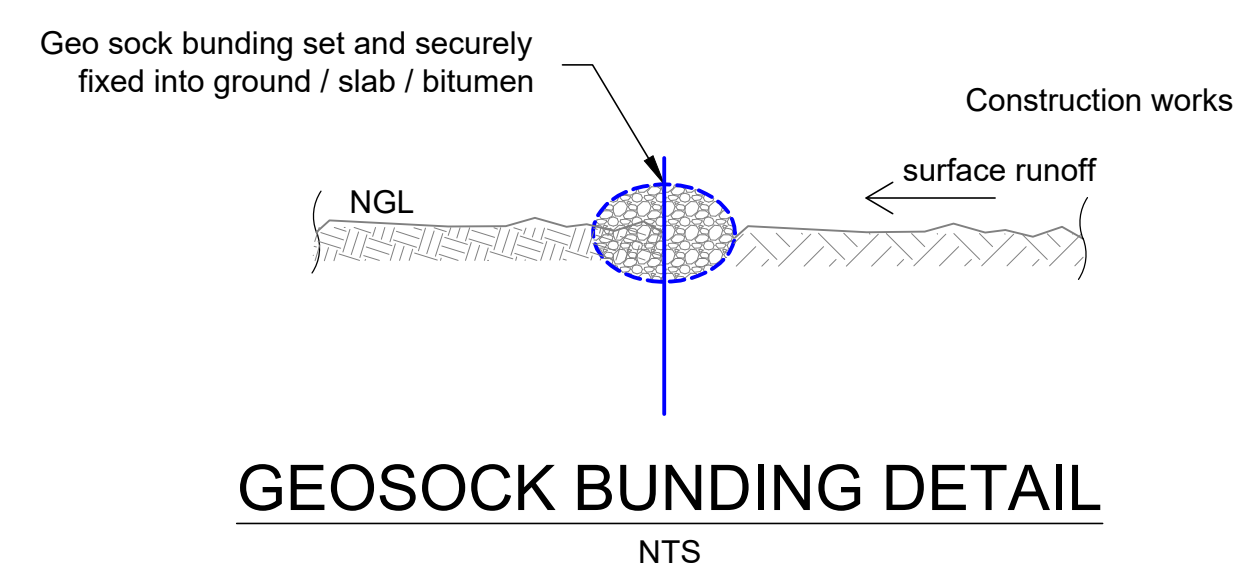
**EXCAVATION, SEDIMENT & EROSION CONTROL PLAN**

~ 1:200  
 WORKS TO BE INSTALLED PRIOR TO ANY EXCAVATION WORKS CARRIED OUT ON SITE.  
 INSTALLATIONS ARE TO BE CONTINUALLY REVIEWED, MAINTAINED, UPGRADED TO ENSURE SATISFACTORY CONTROL OF SEDIMENT AND EROSION.  
 ALL PILING BELOW THE MHW TO BE CARRIED OUT IN ACCORDANCE WITH THE ESTUARINE RISK MANAGEMENT REPORT AND AQUATIC REPORT IN RESPECT TO LOW RISK OF PARTICLE BLOOM.  
 ALL CONSTRUCTION PLANT / BARGES/ PONTOON TO HAVE EMERGENCY SILT ARRESTING DEVICE READY / AVAILABLE FOR CLEAN UP AND CONTAINMENT AS REQUIRED.



**EXISTING SITE PLAN**

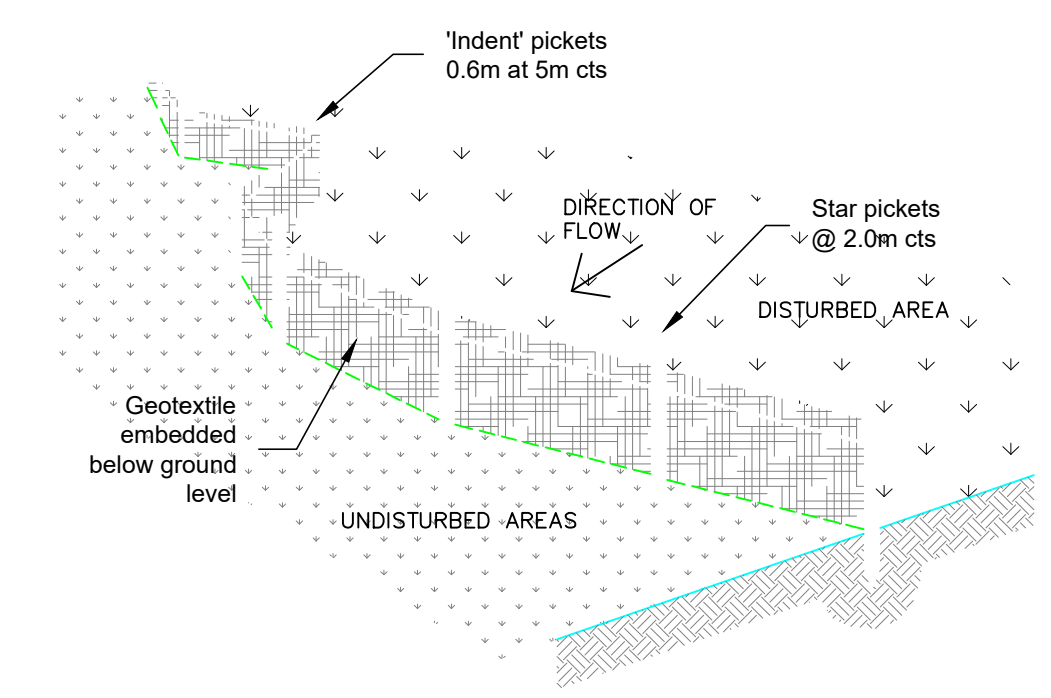
~ 1:200  
 SURFACE DISTURBANCE TO BE MINIMIZED WITH ALL HARD AREAS TO BEING MAINTAINED AND NEW FOUNDATIONS CUT THROUGH EXISTING CONCRETE ETC



**GEOSOCK BUNDING DETAIL**

NTS

- SEDIMENT FENCE CONSTRUCTION NOTES:
1. CONSTRUCT SEDIMENT FENCES AS CLOSE AS POSSIBLE TO BEING PARALLEL TO THE CONTOURS OF THE SITE, BUT WITH SMALL RETURNS AS SHOWN IN THE DRAWING TO LIMIT THE CATCHMENT AREA OF ANY ONE SECTION. THE CATCHMENT AREA SHOULD BE SMALL ENOUGH TO LIMIT WATER FLOW.
  2. CUT A 150mm DEEP TRENCH ALONG THE UPSLOPE LINE OF THE FENCE FOR THE BOTTOM OF THE FABRIC TO BE ENTRENCHED.
  3. DRIVE 1.5m LONG STAR PICKETS INTO GROUND @ 2.5m INTERVALS (MAX.) AT THE DOWNSLOPE EDGE OF THE TRENCH. ENSURE ANY STAR PICKETS ARE FITTED WITH SAFETY CAPS.
  4. FIX SELF-SUPPORTING GEOTEXTILE TO THE UPSLOPE SIDE OF THE POSTS ENSURING IT GOES TO THE BASE OF THE TRENCH. FIX THE GEOTEXTILE WITH WIRE TIES OR AS RECOMMENDED BY THE MANUFACTURER. ONLY USE GEOTEXTILE SPECIFICALLY PRODUCED FOR SEDIMENT FENCING. THE USE OF SHADE CLOTH FOR THIS PURPOSE IS NOT SATISFACTORY.
  5. JOIN SECTIONS OF FABRIC AT A SUPPORT POST WITH A 150mm OVERLAP.
  6. BACKFILL THE TRENCH OVER THE BASE OF THE FABRIC AND COMPACT IT THOROUGHLY OVER THE GEOTEXTILE.



**SEDIMENT FENCE DETAIL**

NTS

<b>ISSUE:</b> Prelim 24.09.2020 Issued for comment DA 06.10.2020 Issued for DA submission DA - Rev A 06.10.2020 Issued for DA submission, minor revision DA - Rev B 04.03.2021 Issued for DA submission, architectural revision DA - Rev C 27.08.2021 Issued for DA submission, general revision of concept DA - Rev D 01.09.2021 Issued for DA submission, general revision of concept			<b>Barrenjoey Consulting Engineers</b> Pty Ltd Stormwater Structural Civil PO Box 672 Avalon NSW 2107 M: 0414 620 550 E: lucas@bce@bigpond.com ABN: 1512469917 ACN: 12469917		<b>PROJECT:</b> PROPOSED ALTERATIONS & ADDITIONS BOATHOUSE PALM BEACH for ~ LONDON LAKES PATNERSHIP		<b>DRAWING :</b> EXCAVATION, SEDIMENT & EROSION CONTROL PLAN AND DETAILING		Job No : 200612 Drawing No : CIV2.00 DA-RevC <b>Document Certification</b> Barrenjoey Consulting Engineers Pty Ltd per Lucas Molloy MEA OPEng NER Director	
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