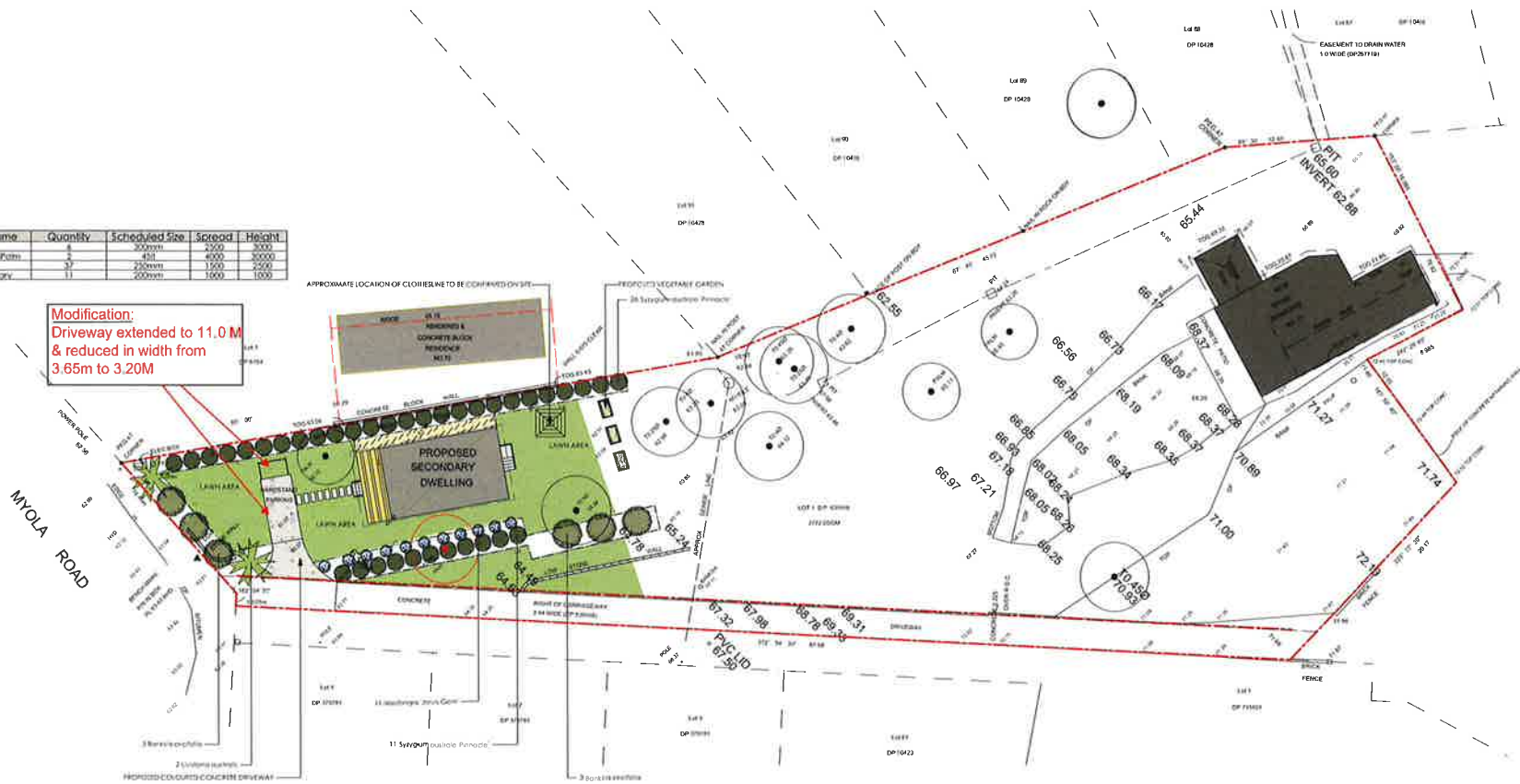


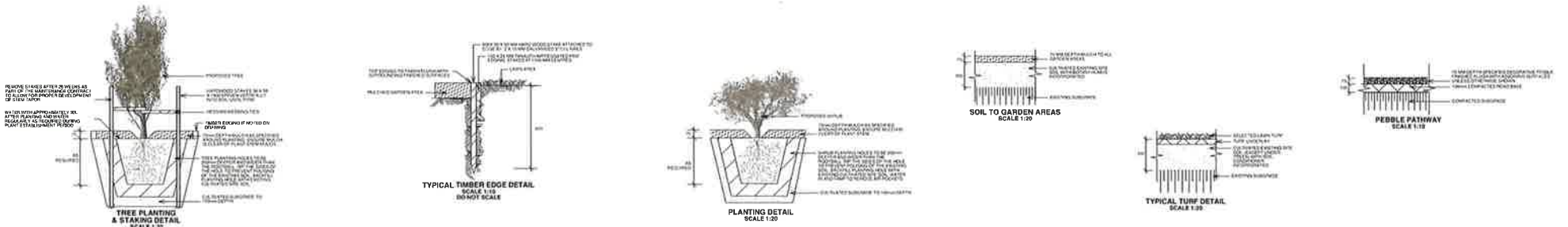
PLANTING SCHEDULE

Latin Name	Common Name	Quantity	Scheduled Size	Spread	Height
Banksia integrifolia	Heath Banksia	8	300mm	2000	3000
Acacia saligna	Coastal Wattle	2	450	4000	3000
Styphidium quadrifidum	Fireweed	27	200mm	1500	2500
Westringia myrsinifolia	Coastal Rosemary	11	200mm	1000	1000

**Modification:**  
Driveway extended to 11.0 M  
& reduced in width from  
3.65m to 3.20M



LANDSCAPE DETAILS



Legend

	PROPOSED PEBBLE/MULCHED AREA		EXISTING TREE TO BE REMOVED		EXISTING TREE TO BE RETAINED
	PROPOSED DECK AREA		EXISTING RETAINING WALL		PROPOSED STEPPING/PAVED
	LAWN AREA		TIMBER LAWN EDGE		BOUNDARY LINE
	PROPOSED CONCRETE DRIVEWAY				

**Project**  
**SECONDARY RESIDENCE**

**CLIENTS**  
**MR. DAVID & MRS. MARY CATCHLOVE**

**Notes**

- All dimensions and levels shall be verified by Contractor on site prior to commencement of work.
- Do not scale from drawings.
- If in doubt contact Landscape Architect.
- This design is copyright and shall not be copied, utilized or reproduced in any way without prior written permission of Discount Landscape Plans.
- This plan has been prepared for D A purposes only.
- All Building Works shall be installed to Structural Engineers detail.

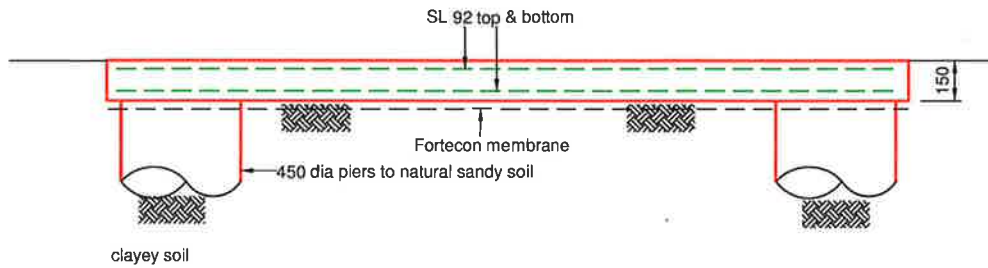
Revision	Description	Date

DATE: 08/12/17  
SCALE: 1:1000  
DRAWN: JC  
CHECK: SW  
PROJECT: 77 MYOLA ROAD, NEWPORT.

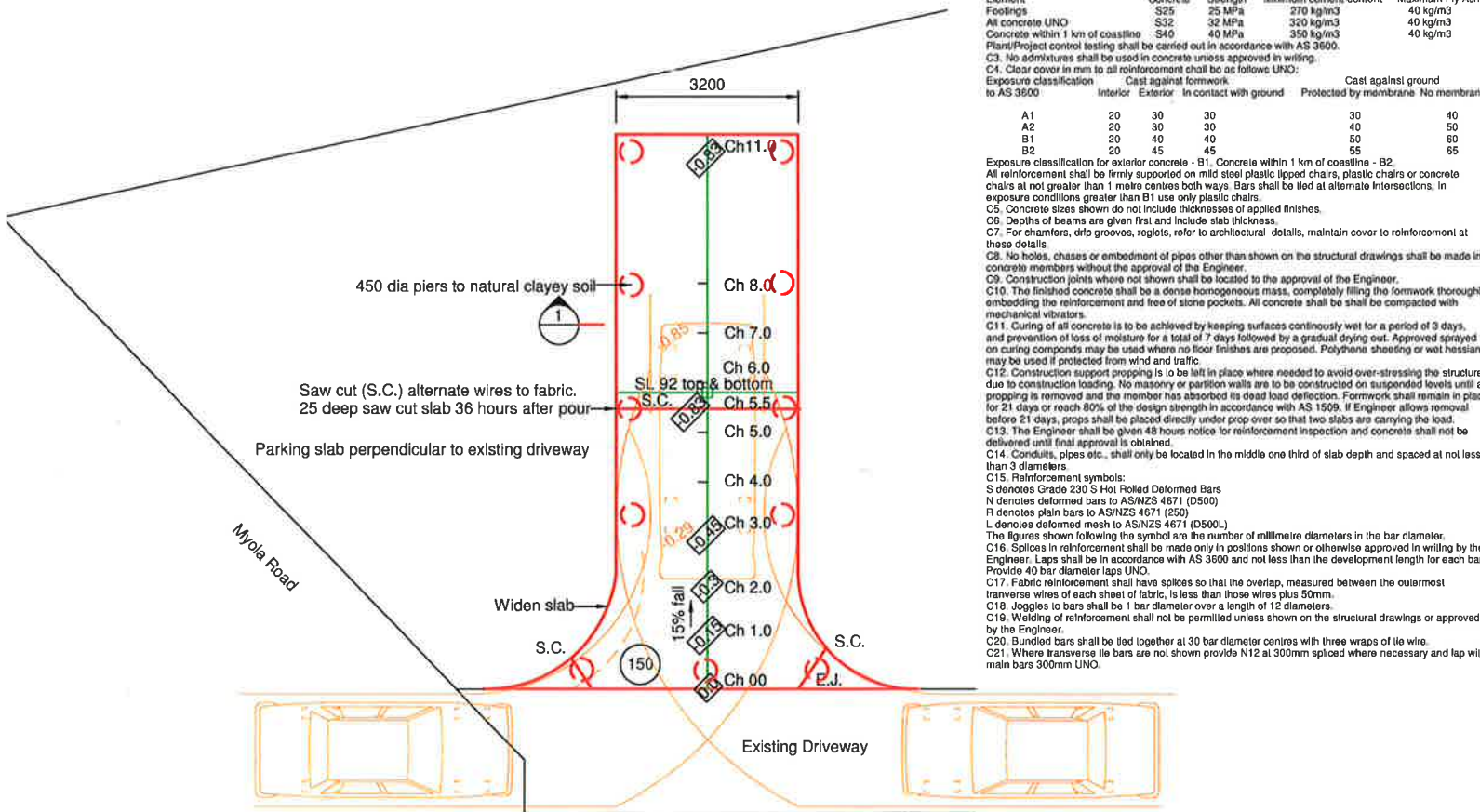
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SECTION 1



DRIVEWAY PLAN

All piers are to bear on natural sandy soil (See Note F3 for slab preparation & bearing). Slab to be 150 thick. Provide 30 sand under slab.

128.9 denotes Design Surface Level  
 128.9 denotes Natural Surface Level

GENERAL

- G1. These notes shall be read in conjunction with all architectural and other consultants' drawings and specifications and with such other instructions as may be issued during the course of the contract. Any discrepancy shall be referred to the Engineer before proceeding with the work.
  - G2. All materials and workmanship shall be in accordance with the relevant and current SAA codes and with the By-Laws and Ordinances of the relevant building authorities except where varied by the project specification.
  - G3. All dimensions shown shall be verified by the Builder on site. Engineer's drawings shall not be scaled for dimensions.
  - G4. During construction the structure shall be maintained in a stable condition and no part shall be overstressed. Temporary bracing shall be provided by the Builder to keep the works and excavations stable at all times.
- FOUNDATIONS
- F1. Footings have been designed for an allowable bearing pressure intensity of 200 kPa (sand). The foundation materials shall be approved by the Engineer for this pressure before placing reinforcement for concrete.
  - F2. Footings shall be located centrally under walls and columns unless noted otherwise.
  - F3. All organic material, soil spots, top soil and any other deleterious material shall be removed from under footings and slabs. Proof roll ground with vibrating roller and replace any soil spots with good fill. Backfilling to footing excavation and sub-bases to slabs on ground must consist of approved material compacted in 150 mm thick layers to at least 95% modified Australian compaction.

CONCRETE

- C1. All workmanship and materials shall be in accordance with AS 3600 current edition with amendments, except where varied by the contract documents.
- C2. Concrete shall have minimum characteristic compressive strength at 28 days and cement and flyash content as per table below UNO.

Element	Concrete		Strength	Minimum cement content	Maximum Fly Ash
	S25	25 MPa			
Footings	S25	25 MPa	270 kg/m <sup>3</sup>	40 kg/m <sup>3</sup>	40 kg/m <sup>3</sup>
All concrete UNO	S32	32 MPa	320 kg/m <sup>3</sup>	40 kg/m <sup>3</sup>	40 kg/m <sup>3</sup>
Concrete within 1 km of coastline	S40	40 MPa	350 kg/m <sup>3</sup>	40 kg/m <sup>3</sup>	40 kg/m <sup>3</sup>

Plant/Project control testing shall be carried out in accordance with AS 3600.

C3. No admixtures shall be used in concrete unless approved in writing.

C4. Clear cover in mm to all reinforcement shall be as follows UNO:

Exposure classification to AS 3600	Cast against formwork		Cast against ground	
	Interior	Exterior	In contact with ground	Protected by membrane
A1	20	30	30	40
A2	20	30	30	40
B1	20	40	40	50
B2	20	45	45	55

- C5. Concrete sizes shown do not include thicknesses of applied finishes.
- C6. Depths of beams are given first and include slab thickness.
- C7. For chamfers, drip grooves, registers, refer to architectural details, maintain cover to reinforcement at these details.
- C8. No holes, chases or embedment of pipes other than shown on the structural drawings shall be made in concrete members without the approval of the Engineer.
- C9. Construction joints where not shown shall be located to the approval of the Engineer.
- C10. The finished concrete shall be a dense homogeneous mass, completely filling the formwork thoroughly embedding the reinforcement and free of stone pockets. All concrete shall be compacted with mechanical vibrators.
- C11. Curing of all concrete is to be achieved by keeping surfaces continuously wet for a period of 3 days, and prevention of loss of moisture for a total of 7 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.
- C12. Construction support propping is to be left in place where needed to avoid over-stressing the structure due to construction loading. No masonry or partition walls are to be constructed on suspended levels until all propping is removed and the member has absorbed its dead load deflection. Formwork shall remain in place for 21 days or reach 80% of the design strength in accordance with AS 1509. If Engineer allows removal before 21 days, props shall be placed directly under prop over so that two slabs are carrying the load.
- C13. The Engineer shall be given 48 hours notice for reinforcement inspection and concrete shall not be delivered until final approval is obtained.
- C14. Conduits, pipes etc., shall only be located in the middle one third of slab depth and spaced at not less than 3 diameters.
- C15. Reinforcement symbols:  
 S denotes Grade 230 S HoI Rolled Deformed Bars  
 N denotes deformed bars to AS/NZS 4671 (D500)  
 R denotes plain bars to AS/NZS 4671 (250)  
 L denotes deformed mesh to AS/NZS 4671 (D500L)  
 The figures shown following the symbol are the number of millimetre diameters in the bar diameter.
- C16. Splices in reinforcement shall be made only in positions shown or otherwise approved in writing by the Engineer. Laps shall be in accordance with AS 3600 and not less than the development length for each bar. Provide 40 bar diameter laps UNO.
- C17. Fabric reinforcement shall have splices so that the overlap, measured between the outermost transverse wires of each sheet of fabric, is less than those wires plus 50mm.
- C18. Joggles to bars shall be 1 bar diameter over a length of 12 diameters.
- C19. Welding of reinforcement shall not be permitted unless shown on the structural drawings or approved by the Engineer.
- C20. Bundled bars shall be lapped together at 30 bar diameter centres with three wraps of tie wire.
- C21. Where transverse tie bars are not shown provide N12 at 300mm spliced where necessary and lap with main bars 300mm UNO.

MASONRY WALLS

M1. All workmanship and materials shall be in accordance with AS 3700

M2. Strengths of masonry units and type of mortar shall be as follows:

Element	Fuc (MPa)	Mortar C.L.S
Blockwork	25	1:1:6
Blockwork	Grade 15	2:1:9

- M3. Core filling grout to have a characteristic strength of 25 MPa.
- M4. Mortar admixtures shall not be used without written permission of the Engineer.
- M5. Masonry walls supporting slabs and beams shall have a pre-greased two layer galvanised steel slip joint between concrete and masonry UNO.
- M6. All masonry walls supporting or supported by concrete floors shall be provided with vertical joints to match any control joints in the concrete.
- M7. Non load bearing walls shall be separated from concrete above by 12mm thick closed cell polythene strip or Canalee.
- M8. No chases or recesses are permitted in load bearing and structural masonry without the written permission of the Engineer.
- M9. All load bearing and structural masonry shall be laid on full beds of mortar and all perpend shall be fully filled with mortar.
- M10. Provide vertical control joints at 9m maximum centres. Joints shall be 12mm wide and filled with compressible material and caulked on external faces.

TIMBER

- T1. All timber design, construction and materials to AS 1720.1 and AS 1720 UNO.
- T2. AS 1684 shall be applied to domestic construction in sheltered locations.
- T3. Softwood to be minimum grade F7 UNO. Hardwood to be minimum grade F14.
- T4. Anchor rods and tie down straps to the roof shall be installed that ensure uplift wind forces are transmitted to the foundations unless special fixings are nominated.

UNDERPINNING

- U1. Where beams are to be installed to support walls over new openings, walls are to be effectively supported by topping down to solid support. Cut opening and install beams, steel wedge between beam and brickwork to floor over to transfer load from loms and grout between beams and brickwork or floor before removing formling.

STRUCTURAL STEEL

- S1. All workmanship and materials shall be in accordance with AS4100 and AS 1554, except where varied by the contract documents.
- S2. All steel shall be Grade 250 for plates and Grade 300 for other members UNO.
- S3. Three copies of workshop fabrication drawings shall be submitted to the Engineer for review at least 10 working days prior to commencement of fabrication.
- S4. Bolt Designation:  
 4.6/S denotes commercial bolts of Grade 4.6 to AS 1111, snug tightened.  
 8.8/S denotes high strength structural bolts of Grade 8.8 to AS 1252, snug tightened.  
 8.8/TB denotes high strength structural bolts of Grade 8.8 to AS 1252, fully tensioned to AS 4100 as a bearing joint.  
 8.8/TF denotes high strength structural bolts of Grade 8.8 to AS 1252, fully tensioned to AS 4100 as a friction joint with lacing surfaces left uncoated.  
 S5. UNO, all bolts shall be M16 grade 8.8/S. No connection shall have less than 2 bolts.  
 S6. UNO, all welds shall be 6mm continuous fillet type GP using E41XX electrodes. Butt welds shall be complete penetration butt welds to AS 1554.  
 S7. TB and TF bolts to be installed using approved load indicating washers.  
 S8. UNO, all steel plates shall be 10mm thick.  
 S9. Provide seal plates to hollow sections, with "breather" holes if members are to be hot dip galvanised.  
 S10. All steelwork shall be securely temporarily braced as necessary to stabilise the structure during erection.  
 S11. Structural steelwork not encased in concrete shall have surface treatment in accordance with the Specification.  
 S12. The Builder shall provide all clasts and drill all holes necessary for fixing steel to steel and other elements whether or not detailed in the drawings.  
 S13. All unexposed steelwork to be primed with F.L.O.Z.C.  
 S14. All steelwork which is exposed or in contact with brickwork, and all lintels, shall be hot dip galvanised.

ISSUE	DATE	DESCRIPTION
A	28.8.19	Amend driveway slab

**Michael Gergich Consulting Engineer**  
**Structural and Civil Engineer**

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 mgergich@tpg.com.au

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For **MR D CATCHLOVE**

Project **PROPOSED DRIVEWAY AT 77 MYOLA ROAD NEWPORT**

Date	19.10.18	Scales	1:100, 1:20
Approved		Drawing No	<b>1848A</b>

B.E., M.I.E. Aust. NER (Civil & Structural)

