

0.

18th April 2016

Our ref:
Doc rev: W.TRA-002
Client
Ref:

RE: Proposed Development at 42-44 Ponds Drive LARA

To whom it may concern

PM Designs undertook a flood hazard assessment for a parcel of land at 42-44 Ponds Drive. As part of the assessment modelling was undertaken to determine the extent of overland flow during a 1% AEP event. The modelling found that during the 1% event overland flow was “channelized” through the site and the maximum depth of overland flow was 81mm.

The owner has now had concept plans prepared to construct four(4) dwellings. Concept plans have been prepared by Daryl Pelchen Architect and are provided as *Attachment 1* to this document. The dwellings have been designed with suspended slabs to ensure that the existing overland flow path is not compromised as a result of this development.

PM Designs have superimposed the proposed dwelling locations over the prepared flood mapping to ensure that the flow path is not compromised and to assist with setting floor levels. This mapping is included in *Attachment 2* and shows that the overland flow path will flow directly underneath the proposed dwellings. Driveways which will be built up to match garage levels are clear of the overland flow path and will therefore have no detrimental effect.

It is important to ensure that the underside of the suspended slab is constructed with 300mm freeboard from the 1% AEP level. *Attachment 3* shows cross sections through each of the 4 dwellings. These cross sections show that the maximum reduced level of overland flow under the dwelling is RL 8.94. Therefore the RL of the underside of structure needs to be at least RL 9.24 and this should be taken into account when the architect prepares final plans.

It is recommended that the natural surface under the proposed structure is shaped to remove any isolated high points and hence increase the cross sectional area of the flow path and reduce the depth.

The overland flow path does cross the proposed driveway at the entrance to the site. The driveway in this location is existing and has been considered in the flood mapping.

We trust the above provides adequate information to ensure that any new dwellings are designed and constructed in accordance with the flood hazard assessment and comply with AR&R requirements when constructing in flood prone areas.

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PM DESIGN GROUP

If further information is required regarding this matter please do not hesitate to contact me.

Regards



Travis Greening

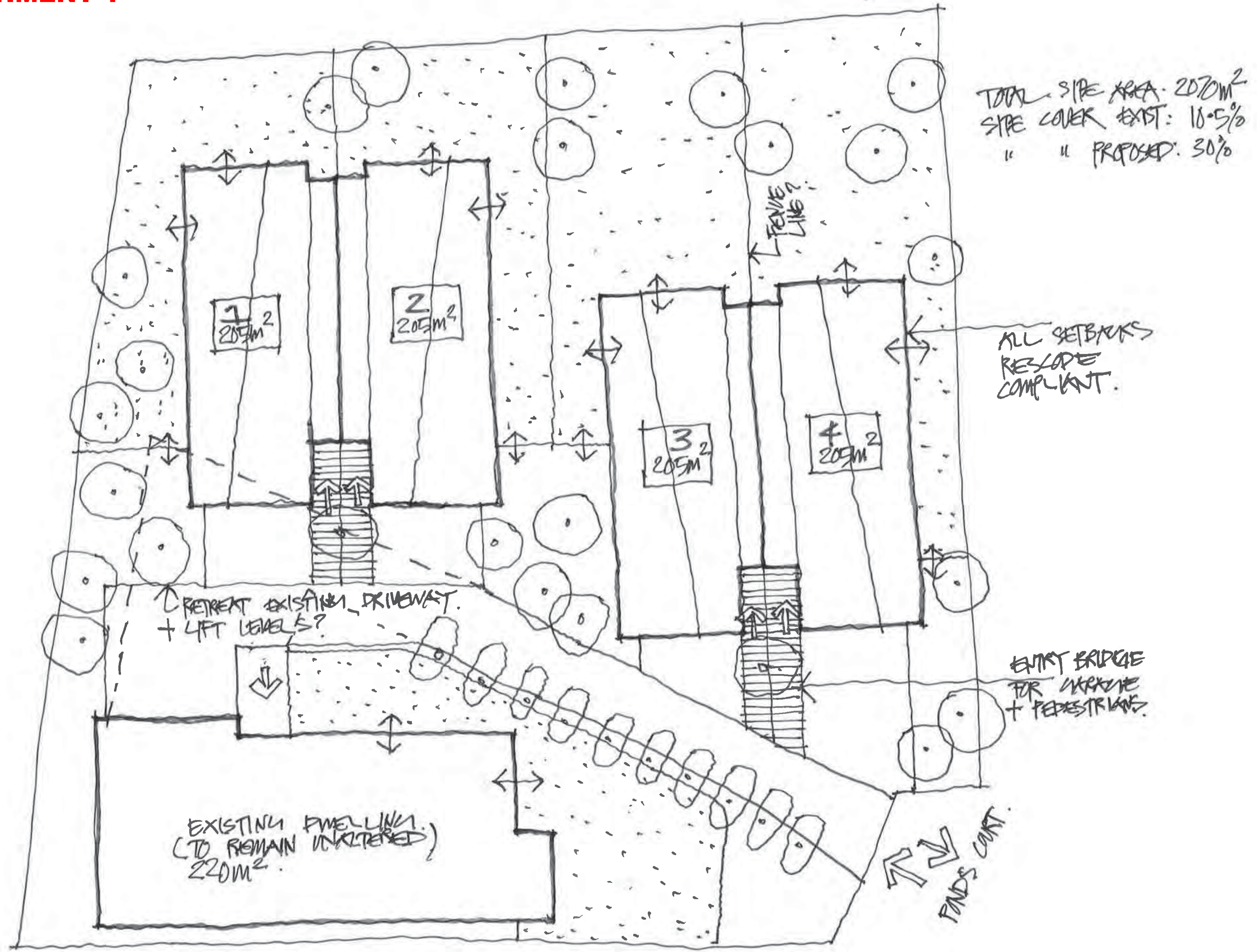
Civil/Structural Engineer

PM Design Group, Warrnambool Office, Victoria.

Email: travis.greening@pmdesign.com.au

List of Attachments	<ol style="list-style-type: none">1. Attachment 12. Attachment 23. Attachment 3
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ATTACHMENT 1



REV. DATE	REVISION	INITIAL	SCALE

Thursday, 24 March 2016 2:08 PM G:\1602 - Ponds Drive Development\2 CAD\2.1 Concept\Concept Model\1602 Concept Model.dwg

MARTUCCI DEVELOPMENT
42-44 PONDS DR
LARA
VIC 3212

SITE PLAN
CONCEPT

DRAWN
RC
CHECKED
DP
DATE
MAR 16

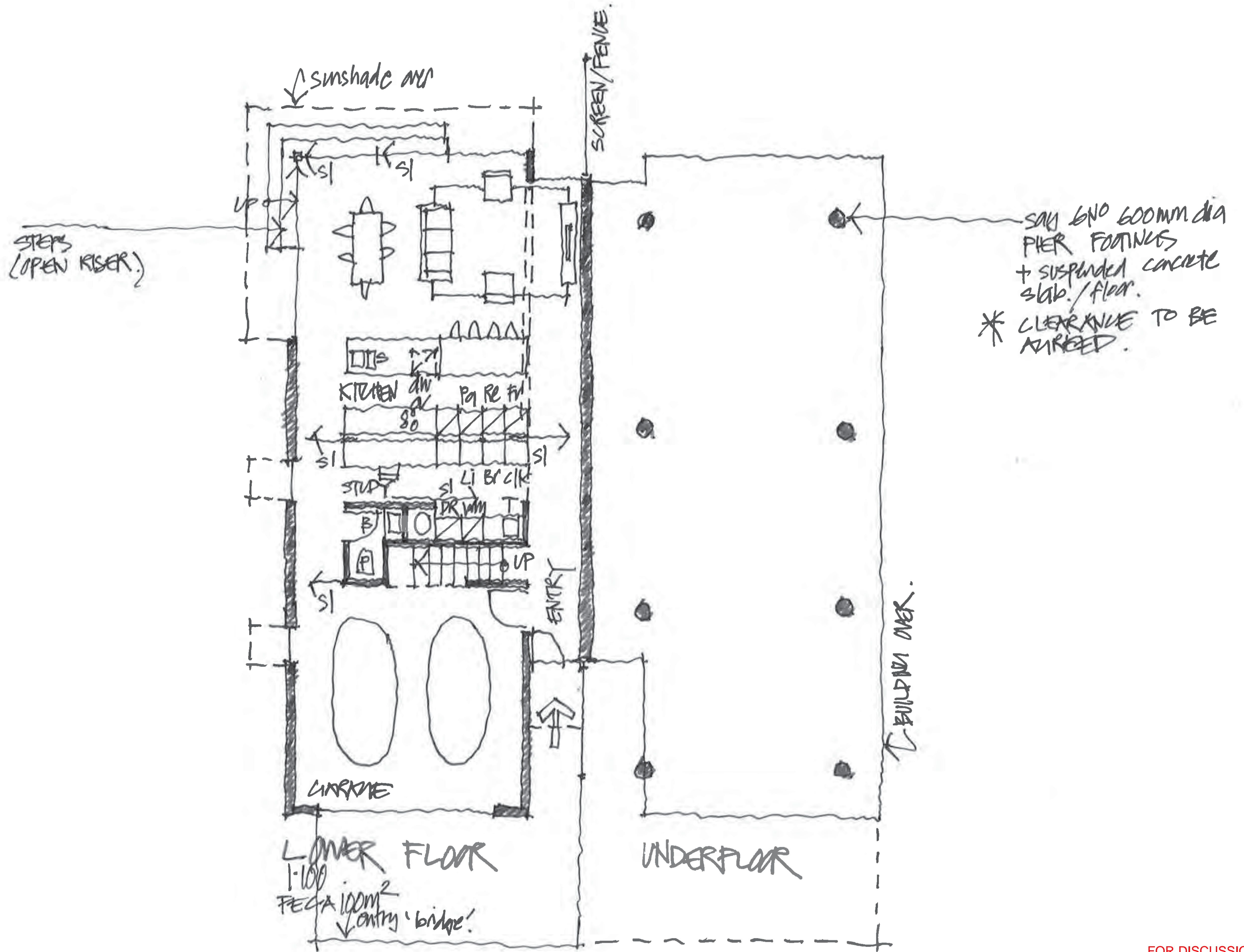
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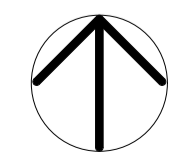
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REV. DATE	REVISION	INITIAL	SCALE



MARTUCCI DEVELOPMENT
 42-44 PONDS DR
 LARA
 VIC 3212

LOWER FLOOR PLAN
 CONCEPT

DRAWN
 RC
 CHECKED
 DP

PROJECT NUMBER
 1602
 DATE
 MAR 16

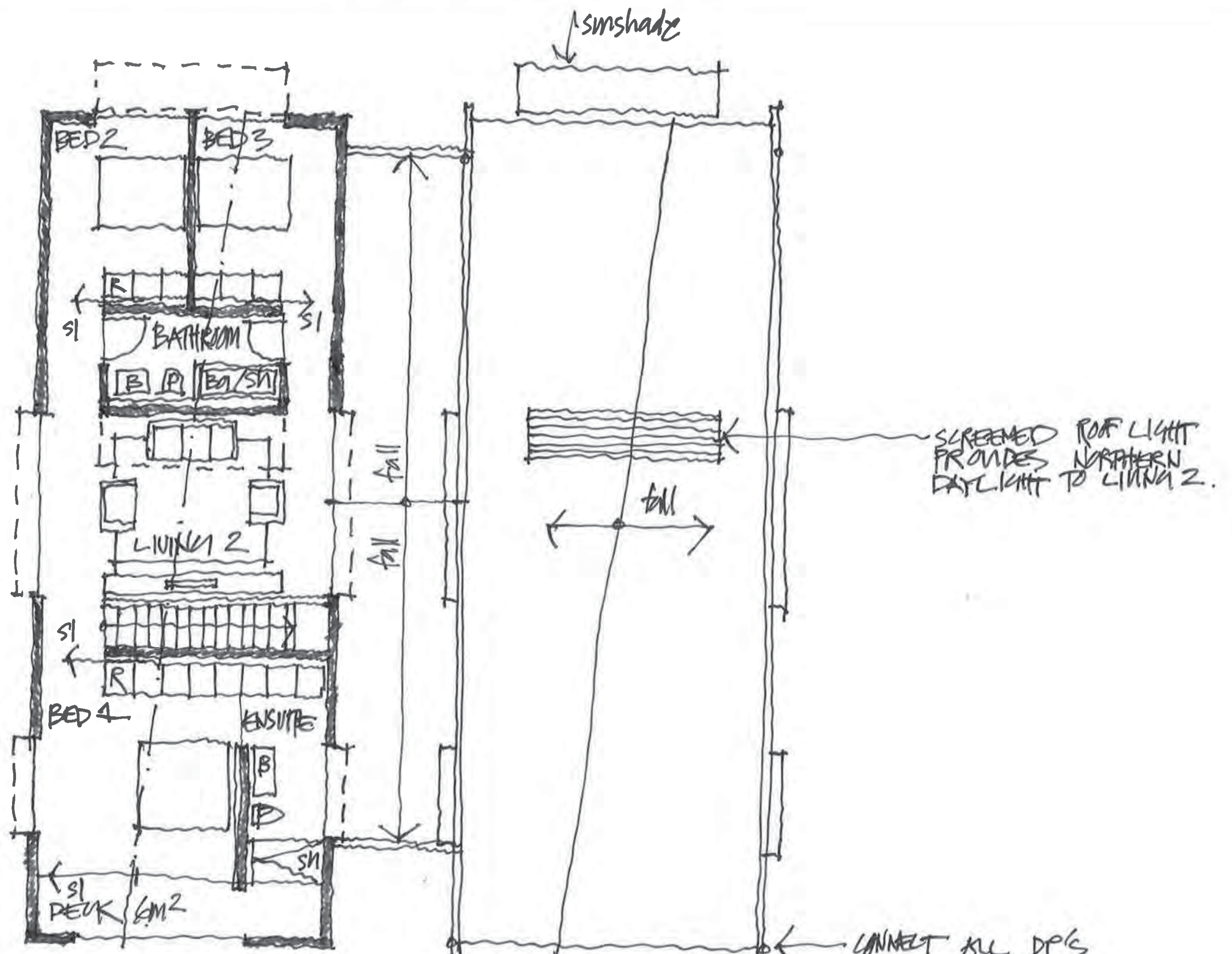
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UPPER FLOOR
 1:100
 FEA 105m²
 DFL : 205m² (22sq's)

ROOF
 1:100

REV. DATE	REVISION	INITIAL	SCALE

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 **MARTUCCI DEVELOPMENT**
 42-44 PONDS DR
 LARA
 VIC 3212

UPPER FLOOR PLAN
 CONCEPT

DRAWN
 RC
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 DP
 PROJECT NUMBER
 1602
 DATE
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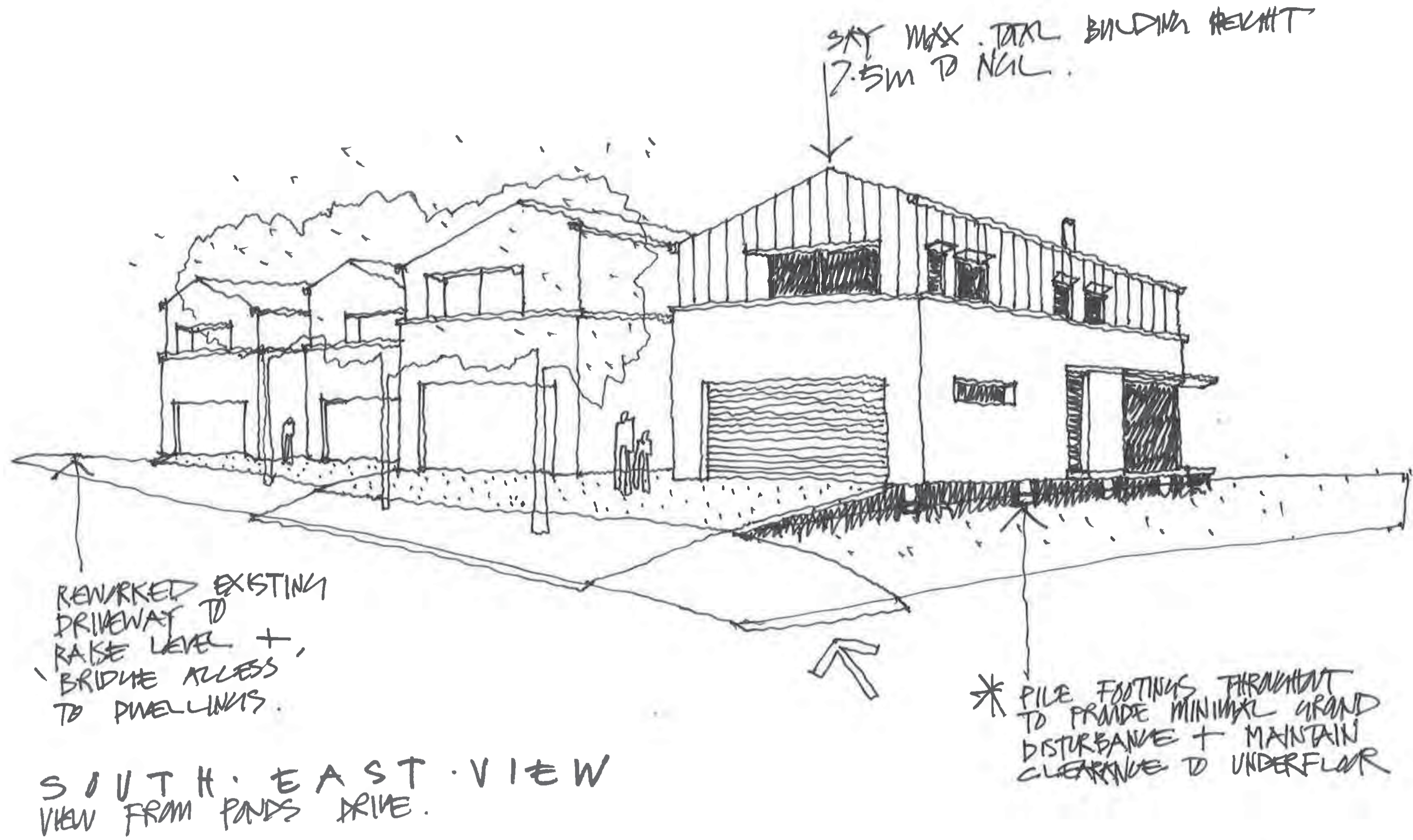
CD1.03
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**DARYL
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REWORKED EXISTING DRIVEWAY TO RAISE LEVEL + BRIDGE ACCESS TO DWELLINGS.

SKY MAX. TOTAL BUILDING HEIGHT 17.5M TO NAIL.

* PILE FOOTINGS THROUGHOUT TO PROVIDE MINIMAL GROUND DISTURBANCE + MAINTAIN CLEARANCE TO UNDERFLOOR

SOUTH EAST VIEW VIEW FROM PONDS DRIVE.

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REV. DATE	REVISION	INITIAL	SCALE

MARTUCCI DEVELOPMENT
42-44 PONDS DR
LARA
VIC 3212

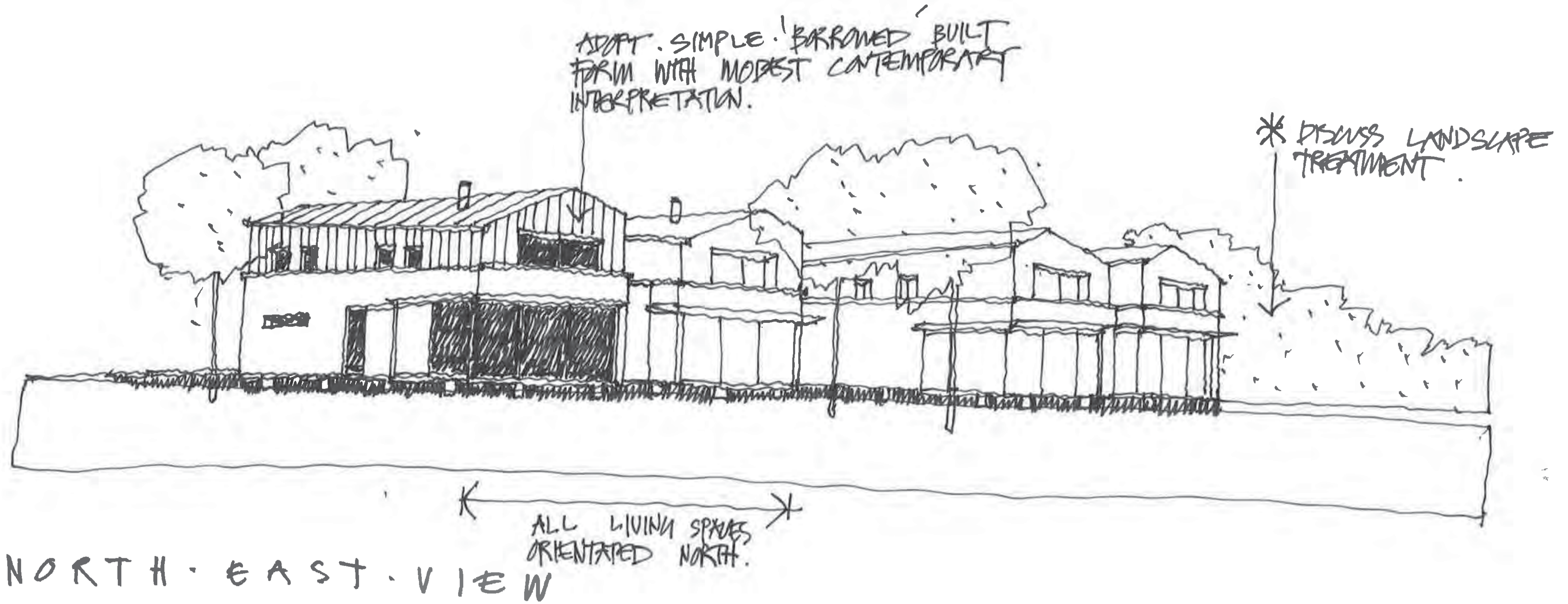
SOUTH EAST VIEW
CONCEPT

DRAWN RC	PROJECT NUMBER 1602	CD1.04
CHECKED DP	DATE MAR 16	REVISION



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REV. DATE	REVISION	INITIAL	SCALE

MARTUCCI DEVELOPMENT
 42-44 PONDS DR
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NORTH EAST VIEW
 CONCEPT

DRAWN
 RC
 CHECKED
 DP

PROJECT NUMBER
 1602
 DATE
 MAR 16

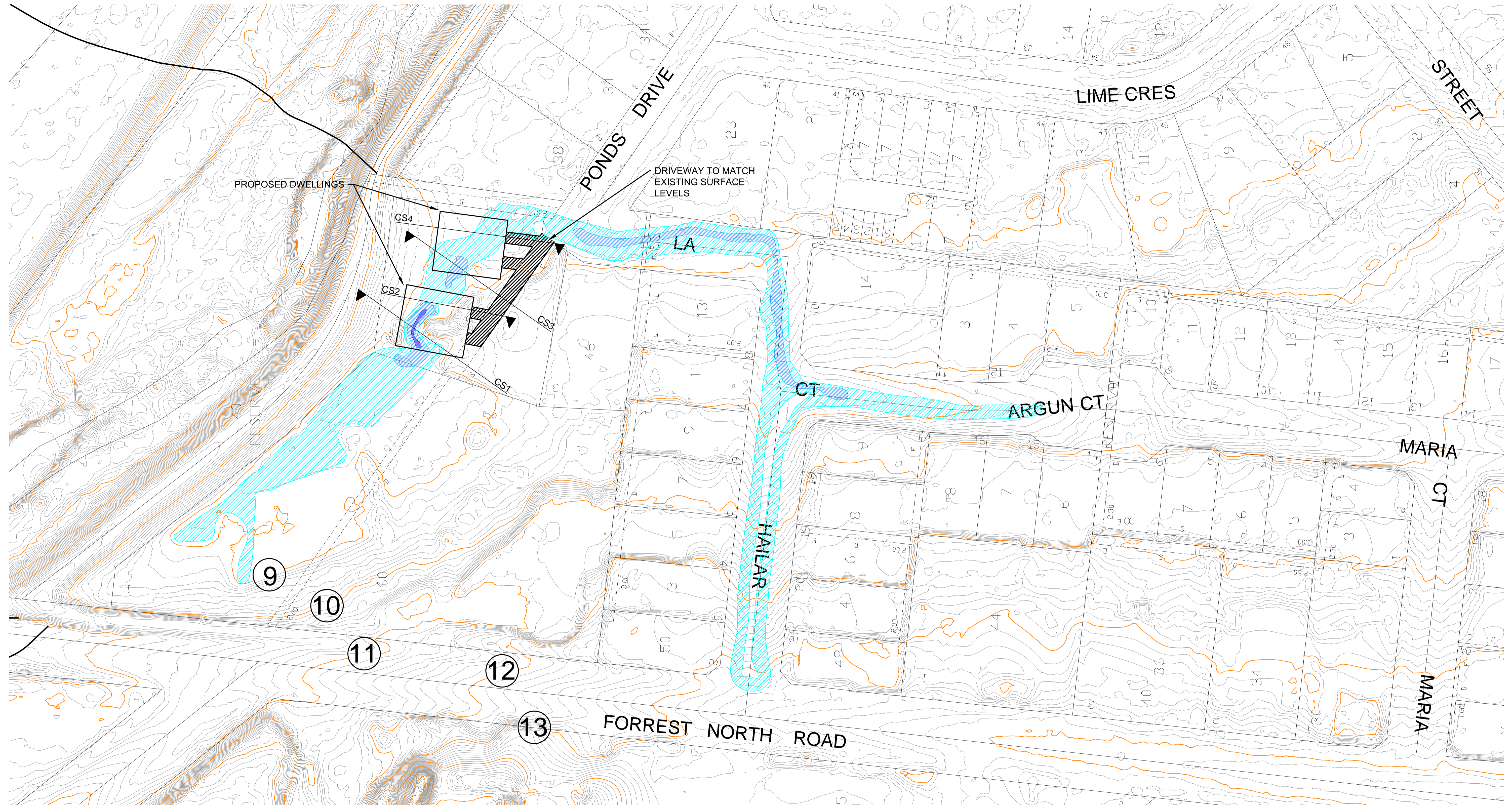
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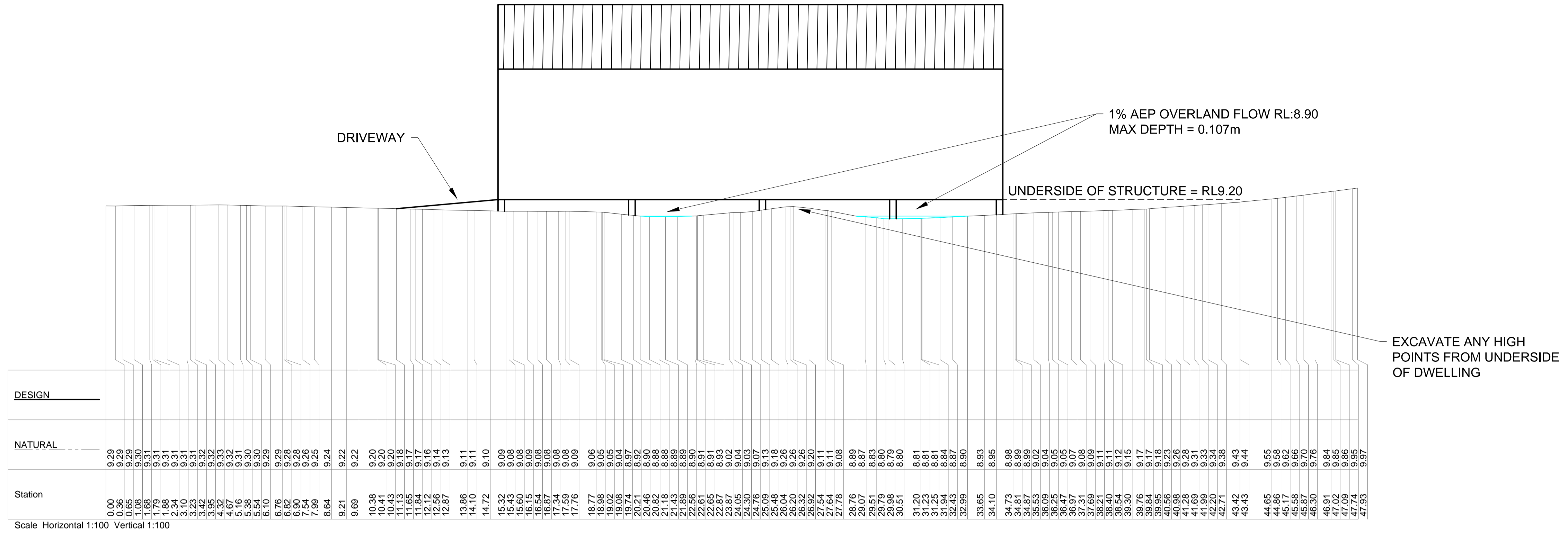
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ATTACHMENT 2

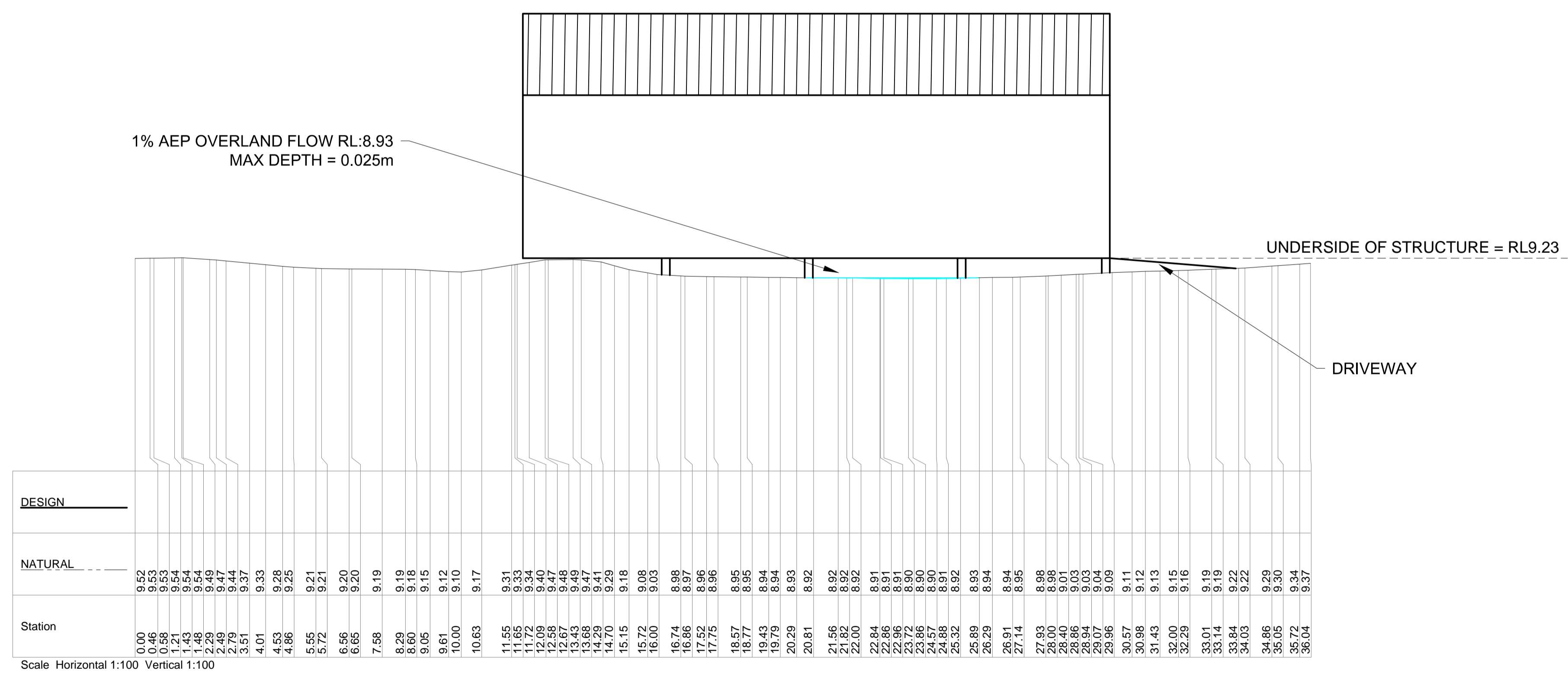


NOTES	REV	DATE	DR	CHK	APP	REVISION DESCRIPTION	ENGINEER	T. GREENING	DATE	11.11.15	PM DESIGN GROUP Engineering Solutions www.pmdesign.com.au MULTI DISCIPLINE CONSULTING ENGINEERS 2/223 KOROIT ST. WARRNAMBOOL. VIC. 3280 PHONE: (03) 5564 6888 FAX: (03) 5561 1850 WEB: www.pmdesign.com.au	PROJECT:	PONDS DRIVE LARA	DWG No. : C01	
							DESIGNER	PM DESIGN				PM PROJECT No. : W.TRA-002-15	TITLE:	FLOOR LEVEL ASSESSMENT - LAYOUT	
							CHECKED	T. GREENING				CLIENT: TRACT CONSULTANTS	SCALE:	1:500 @ A1	REV 0
							APPROVED	L. McGRATH							

ATTACHMENT 3

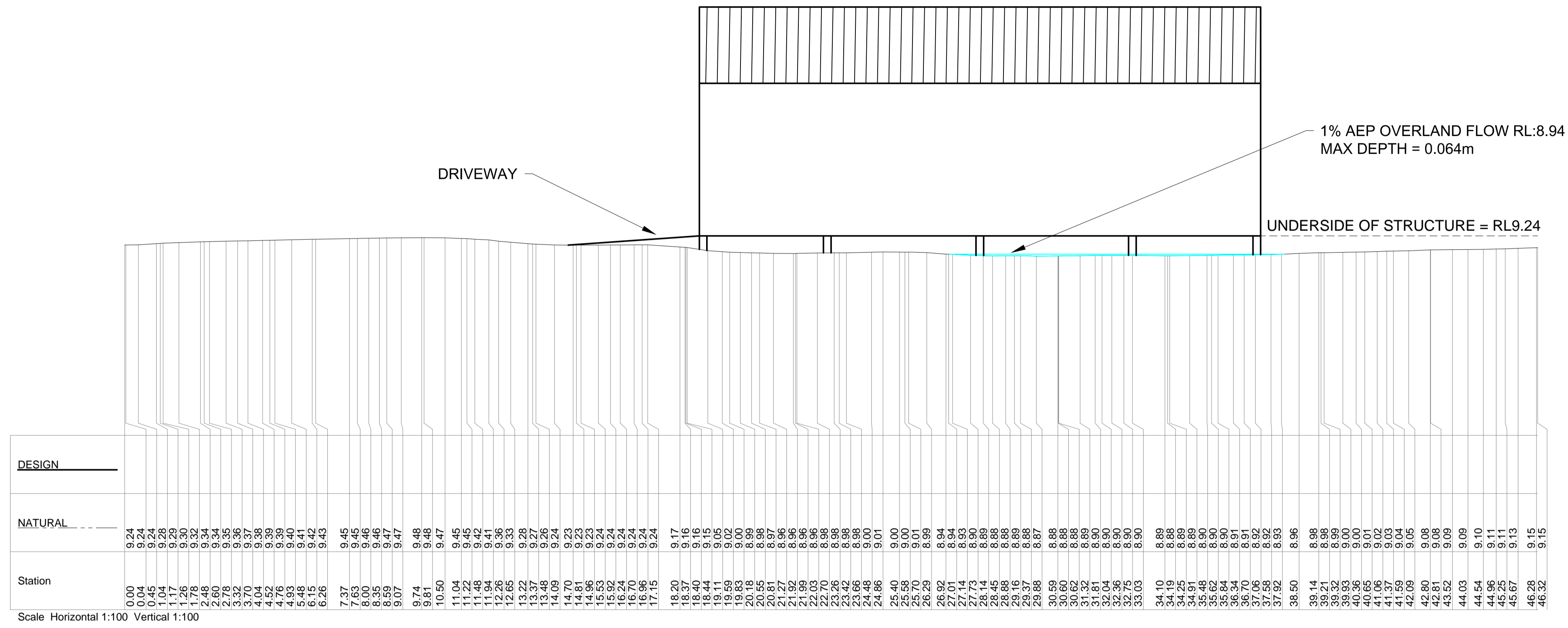


CROSS SECTION 1

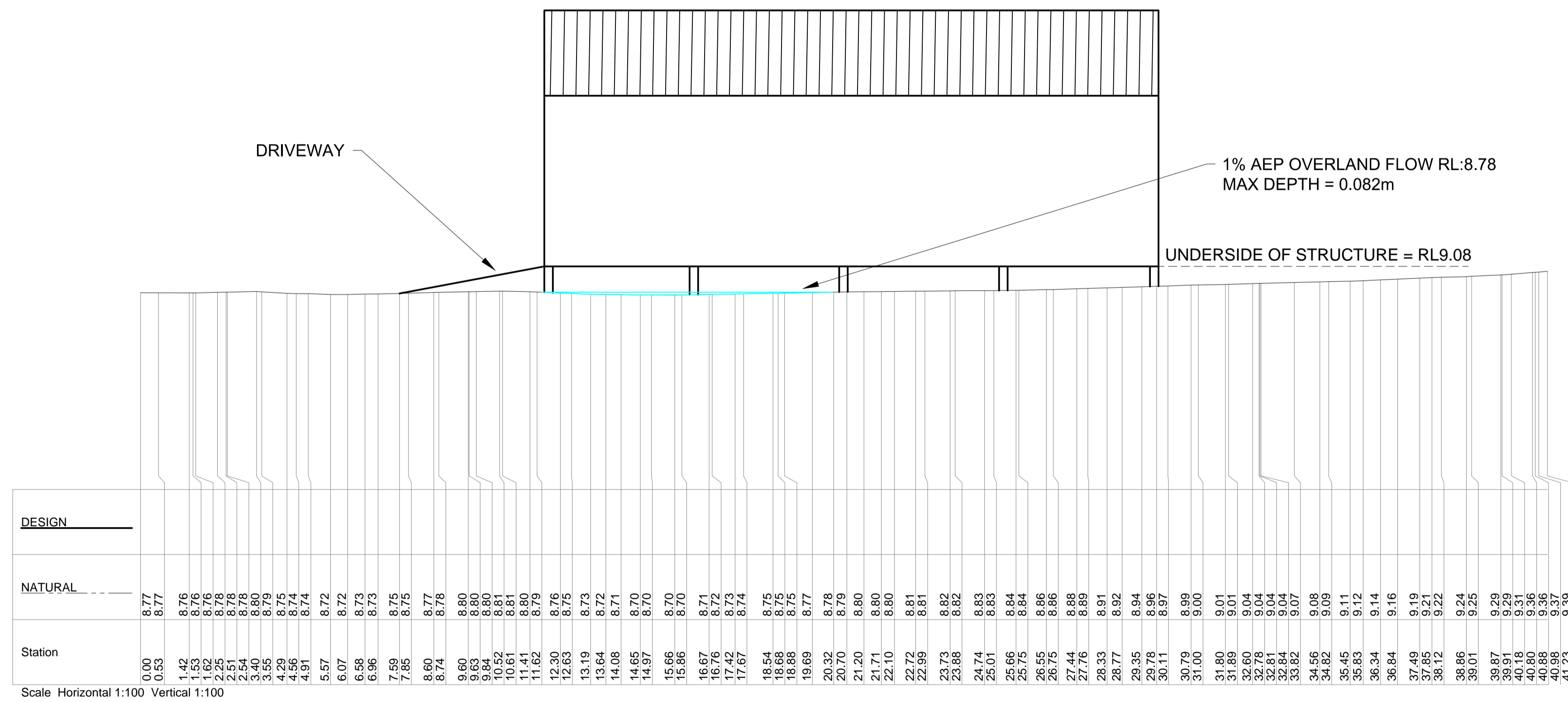


CROSS SECTION 2

NOTES	REV	DATE	DR	CHK	APP	REVISION DESCRIPTION	ENGINEER	T. GREENING	DATE	11.11.15	PM DESIGN GROUP Engineering Solutions MULTI DISCIPLINE CONSULTING ENGINEERS 2/223 KOROIT ST. WARRNAMBOOL VIC. 3280 PHONE: (03) 5564 6888 FAX: (03) 5561 1850 WEB: www.pmdesign.com.au	PROJECT:	PONDS DRIVE LARA	DWG No. : C02
							DESIGNER	PM DESIGN				TITLE:	FLOOR LEVEL ASSESSMENT - CROSS SECTIONS	
							DRAWN	KB	11.11.15			PM PROJECT No. : W.TRA-002-15		
							CHECKED	T. GREENING				CLIENT: TRACT CONSULTANTS	SCALE: AS SPECIFIED @ A1	
							APPROVED	L.McGRATH				REV 0		



CROSS SECTION 3



CROSS SECTION 4

NOTES

REV	DATE	DR	CHK	APP	REVISION DESCRIPTION

ENGINEER	T. GREENING	DATE	11.11.15
DESIGNER	PM DESIGN		
DRAWN	KB	DATE	11.11.15
CHECKED	T. GREENING		
APPROVED	L. McGRATH		

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PROJECT:
 PONDS DRIVE LARA
 PM PROJECT No.: W.TRA-002-15
 CLIENT: TRACT CONSULTANTS

DWG No.: C03
 TITLE:
 FLOOR LEVEL ASSESSMENT - CROSS SECTIONS
 SCALE: AS SPECIFIED @ A1
 REV 0