

27 November 2018

Oli Rees  
4 Augusta Road  
Manly NSW 2095

c/o power@sketcharc.com.au

**Hydraulic engineering design for proposed alterations and additions at 4 Augusta Road**

Dear Oli

Stellen consulting has reviewed the proposed architectural design (refer attached) incorporating the requested changes by Northern Beaches Council with regard to its impact on the stormwater management plan currently proposed for the site.

The previously submitted stormwater management plan is described in the following Stellen Consulting documents:

- *Stellen Consulting Design Statement letter dated 9 March 2018*
- *Stormwater drawings:*

<i>DR-000</i>	<i>Revision 0</i>	<i>Legend</i>
<i>DR-001</i>	<i>Revision 0</i>	<i>Pipe Layout &amp; Details</i>
<i>DR-002</i>	<i>Revision 0</i>	<i>Roof Layout</i>
<i>DR-003</i>	<i>Revision 0</i>	<i>Impervious Areas</i>

The overall stormwater drainage philosophy for the site remains unchanged as a result of the revised architectural plans.

Kind regards,



Logan English-Smith  
**Engineer**

Stellen Consulting  
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**Revised Architectural Plans**

Architectural Plans by sketchArc

Drawings: DA03 to DA16 all revision "DA DRAFT B"

# 4 AUGUSTA ROAD, MANLY

## STORMATER MANAGEMENT PLAN

DRAWING NUMBER	REVISION	DRAWING TITLE
DR-000	0	LEGEND
DR-001	0	PIPE LAYOUT & DETAILS
DR-002	0	ROOF LAYOUT
DR-003	0	IMPERVIOUS AREAS

NOTES:

1. ALL DIMENSIONS TO BE CONFIRMED ON SITE PRIOR TO CONSTRUCTION.

2. SITE LAYOUT BASED ON ARCHITECTURAL PLANS BY SKETCH ARC (JANUARY 2018).

3. LOCATION OF ALL SERVICES MUST BE CONFIRMED ON SITE PRIOR TO COMMENCEMENT OF EXCAVATION WORKS.

4. ALL STORMWATER DRAINAGE PIPES AND ASSOCIATED DEVICES ARE TO BE INSTALLED IN ACCORDANCE WITH THE RELEVANT STANDARDS, THE BUILDING CODE OF AUSTRALIA, MANUFACTURER’S RECOMMENDATIONS, SYDNEY CATCHMENT AUTHORITY RECOMMENDED PRACTICE, AND LOCAL COUNCIL, AS APPLICABLE.

5. ALL INVERT LEVELS PROVIDED ON THIS DRAWING ARE REDUCED TO AHD AND BASED ON INTERPOLATED SURFACE LEVELS AND SYSTEM REQUIREMENTS
6. WHERE POSSIBLE, PIPEWORK SHALL BE LOCATED EXTERNAL TO THE BUILDING.

7. DOWNPIPES AND STORMWATER LINES TO BE SEALED DN100 uPVC UNLESS OTHERWISE NOTED.


8. STORMWATER PIPES TO BE GRADED AT A MINIMUM 1% UNLESS NOTED OTHERWISE.


9. ALTERNATIVE GUTTER AND DOWNPIPE CONFIGURATION MAY BE INSTALLED PROVIDED IT COMPLIES WITH AS3500.


10. ALL PIPE AND CONDUITS TO BE MARKED IN ACCORDANCE WITH AS1345 – 1995.

11. TRENCHES AND SERVICE SEPARATIONS IN ACCORDANCE WITH AS/NZS 5601, AS/NZS 3500, AND AS/CA S009.

LEGEND:


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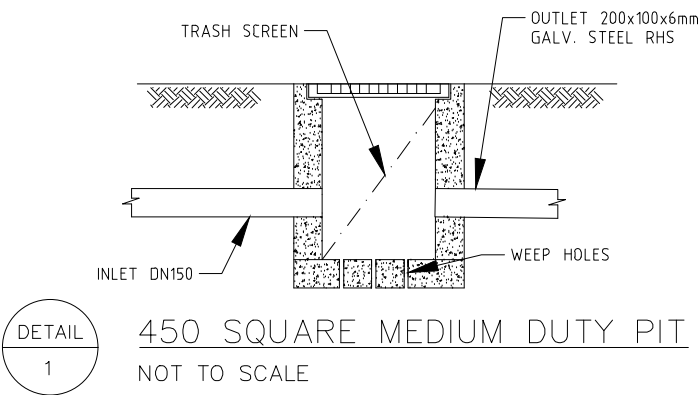
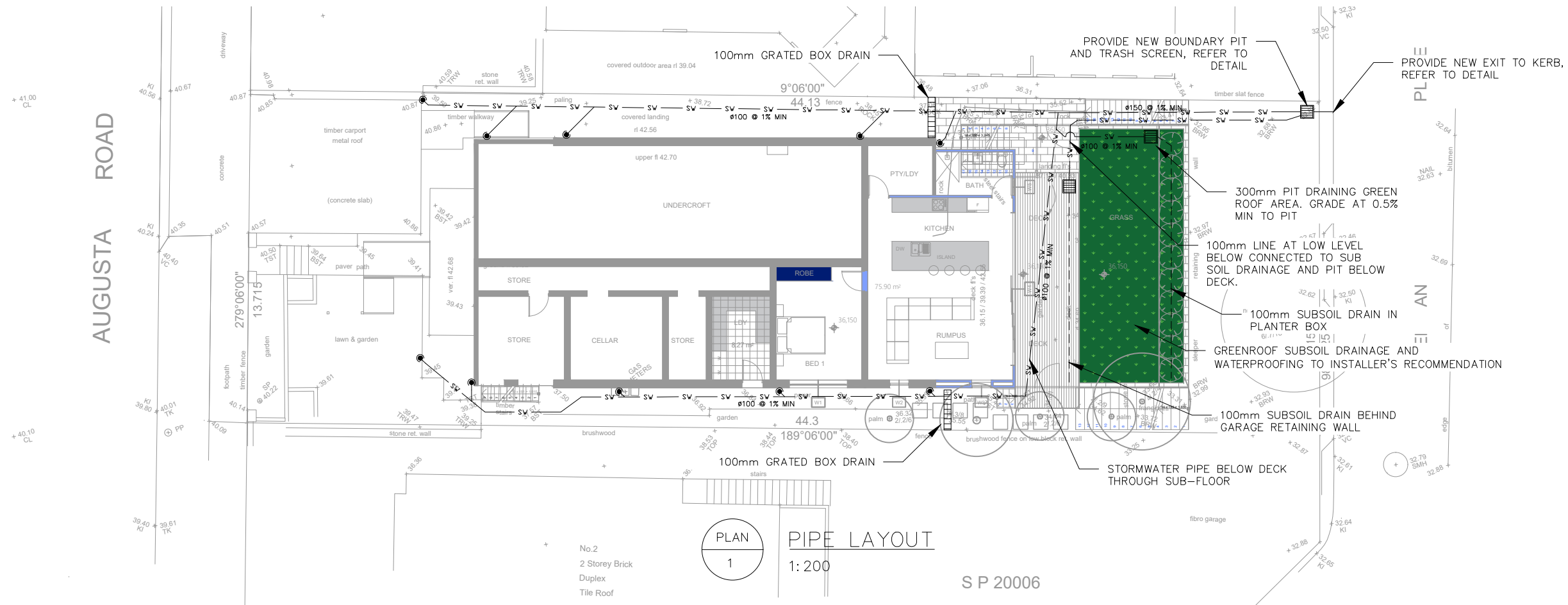
DOWNPIPE
- 

STORMWATER PIPE
- 

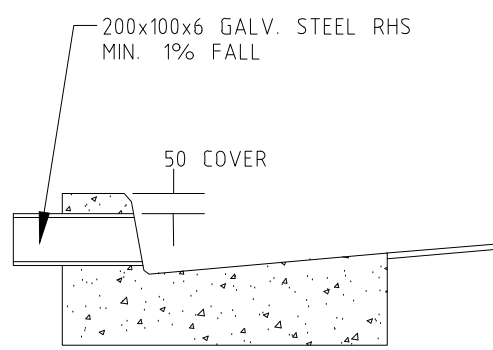
DRAINAGE PIT

NOT FOR CONSTRUCTION

This drawing is confidential and shall only be used for the purposes of this project.					Scale	THE SIGNING OF THIS TITLE BLOCK CONFIRMS THE DESIGN AND DRAFTING OF THIS PROJECT HAVE BEEN PREPARED AND CHECKED IN ACCORDANCE WITH THE STELLEN QUALITY ASSURANCE SYSTEM				 <b>Stellen</b>  Stellen Consulting ABN 61 149 095 189	This design complies with: AS3500.3:2015	4 AUGUSTA ROAD, MANLY																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
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- NOTES:
- 'LYSAGHT' MAXIMESH RH3030 (HOT DIPPED GALVANISED) OR EQUIVALENT.
  - MAXI MESH SCREENS MUST BE PLACED SUCH THAT THE LONG AXIS OF THE OVAL SHAPED HOLES ARE ORIENTATED HORIZONTALLY WITH THE PROTRUDING LIP ANGLED UPWARDS AND FACING TOWARDS THE OUTLET
  - 20DIA AT 150 SPACING AT BASE OF SUMP. BEDDING TO BE 100 THICK SAND/GRAVEL MATERIAL, FREE DRAINING WITH SUBSOIL PIPE TO NEAREST DOWNSTREAM PIT, PIPE, KERB OR OUTLET



DETAIL 2 TYPICAL KERB CONNECTION NOT TO SCALE

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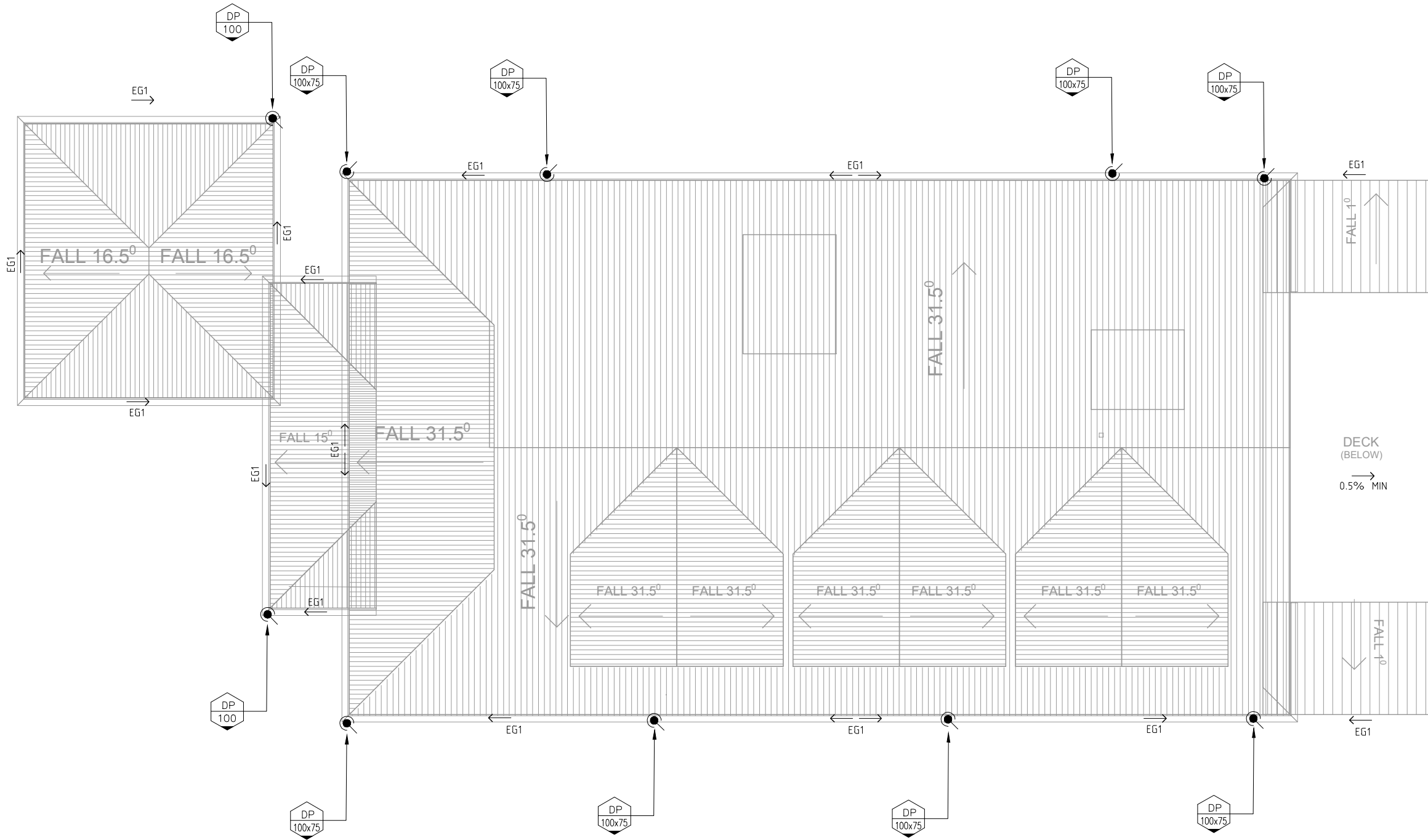
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							DESIGNED	LES	CHECKED	IRW			PIPE LAYOUT & DETAILS						
							DRAWN	LES	CHECKED	IRW									
							APPROVED	IRW	DATE	09/02/2018									
0	LES	09/02/2018	DEVELOPMENT APPLICATION		IRW					 <b>Stellen</b>  Stellen Consulting ABN 61 149 095 189	This design complies with: AS3500.3:2015	Size	A3	Status	DEVELOPMENT APPLICATION	Orig No.	DR-001	Rev.	0
No.	BY	DATE	DESCRIPTION		APPD														

DP - DOWNPIPE  
EG - EAVES GUTTER

TYPE  
DIA - DOWNPIPE TYPE AND DIAMETER

NOTE:

- GUTTER DESIGN FOR 5 MINUTE 20YR ARI (206mm/hr)
- GUTTERS TO HAVE 1:500 OR GREATER FALL
- GUTTERS TO HAVE THE FOLLOWING MINIMUM CROSS SECTIONAL AREA  
EG1=7,800mm<sup>2</sup>



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PLAN

2

ROOF LAYOUT

1:100

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Scale

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APPROVED	IRW	DATE	09/02/2018



Stellen

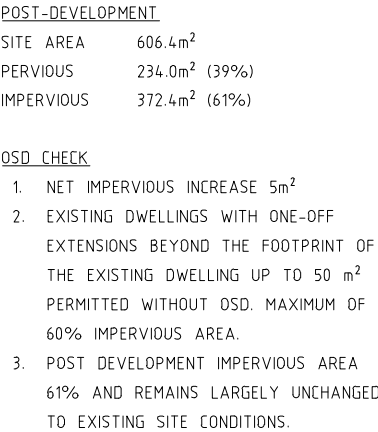
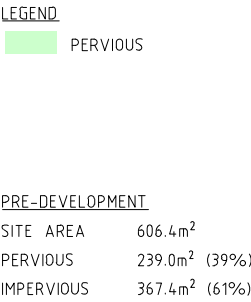
Stellen Consulting ABN 61 149 095 189

This design complies with:  
AS3500.3:2015

4 AUGUSTA ROAD, MANLY


ROOF LAYOUT

Size	A3	Status	DEVELOPMENT APPLICATION	Org No.	DR-002	Rev.	0
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BASED ON THE INFORMATION ABOVE THE  
APPLICATION OF OSD IS NOT RECOMMENDED.

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						APPROVED	IRW	DATE	09/02/2018											
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					Size		A3		Status		DEVELOPMENT APPLICATION		Orig. No.		DR-003		Rev.		0	