

PROJECT: PROPOSED BOARDING HOUSE

PLANSET: **STORMWATER MANAGEMENT PLAN**

CLIENT: MY MANLY VALE PTY LTD

DRAWING LIST		
DWG NO.	REV	DWG TITLE
GENERAL		
PS06-A000	B	COVER SHEET
DRAINAGE		
PS06-E100	B	DRAINAGE LAYOUT FOR SUBGROUND FLOOR
PS06-E101	B	DRAINAGE LAYOUT FOR GROUND FLOOR
PS06-E102	B	DRAINAGE LAYOUT FOR FIRST FLOOR
PS06-E200	B	TYPICAL SECTION OF BIORETENTION BASIN & RAINWATER TANK
PS06-E700	B	WATER QUALITY CATCHMENT PLANS, MODELS & RESULTS



LOCALITY PLAN
NOT TO SCALE


LGA: NORTHERN BEACHES COUNCIL

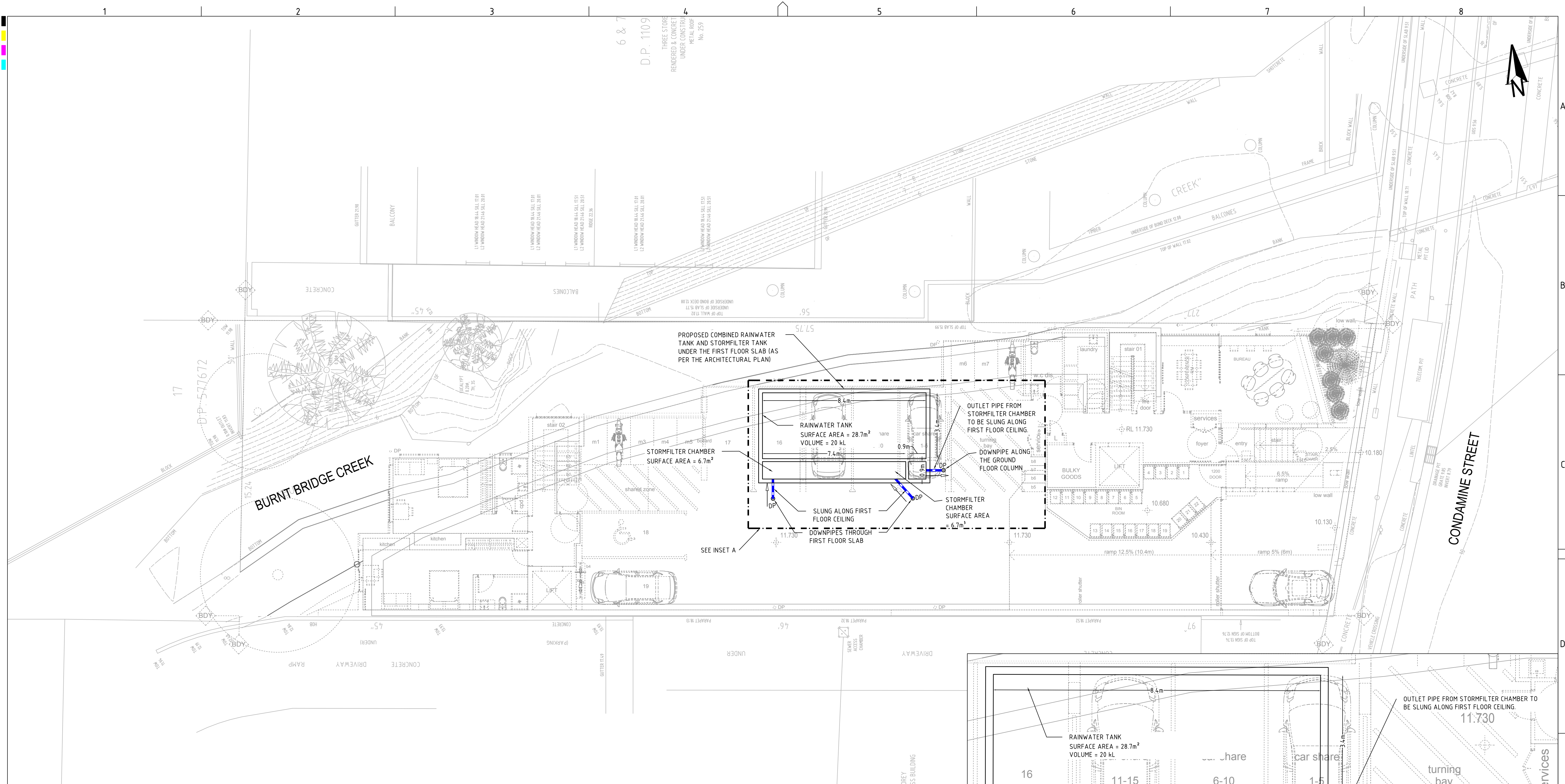
255 CONDRAMINE STREET, MANLY VALE NSW
LOT 8 DP 604034

GENERAL NOTES:

1. THIS PLAN IS FOR DEVELOPMENT APPLICATION PURPOSE AND NOT FOR CONSTRUCTION. DESIGN TO BE REVIEWED AND UPDATED FOR CONSTRUCTION CERTIFICATE.
2. ALL WORK TO BE CARRIED OUT IN ACCORDANCE WITH, AND THESE NOTES ARE TO BE READ IN CONJUNCTION WITH THE RELEVANT AUSTRALIAN STANDARDS, COUNCIL SPECIFICATIONS, AND ALL PROJECT CONSULTANT'S PLANS AND REPORTS.
3. INTERNAL SURVEY INFORMATION AND EXTERNAL SITE BOUNDARY SHOWN BASED ON SURVEY INFORMATION PROVIDED BY BEE & LETHBRIDGE 15/09/2020.
4. ARCHITECTURAL INFORMATION SHOWN BASED ON DESIGN BY GARTNER TROVATO ARCHITECTS 21/09/2021.
5. LEVELS ARE TO AUSTRALIAN HEIGHT DATUM (AHD).
6. FINAL SURFACE CONTOURS ARE BASED ON DESIGN AND EXISTING SURVEY AND LIDAR SURFACES.

DEVELOPMENT APPLICATION

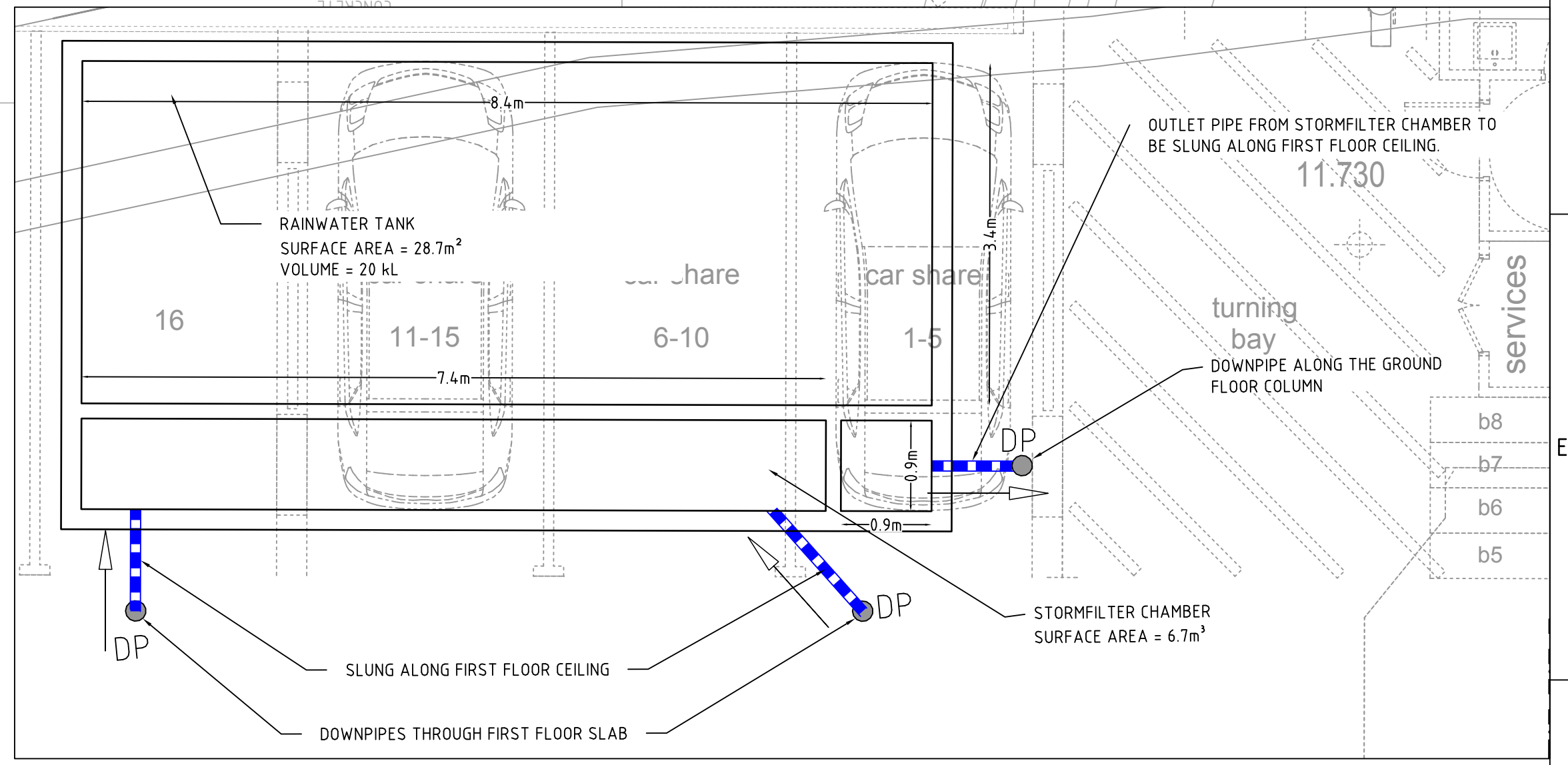
REV	DESCRIPTION	DATE	DRAWN	DESIGNED	CHECKED	APPROVED	SCALE	GRID	DATUM	PROJECT MANAGER	CLIENT	DRAWING TITLE			
B	WITHOUT PREJUDICE DRAFT FOR S34	28/09/2021	NN	EZ	SA	AN		---	---	AN	MY MANLY VALE PTY LTD	COVER SHEET			
A	INITIAL RELEASE	03/08/2021	JS		SA	AN					PROJECT NAME/PLANSET TITLE	 <div> <div>Consulting Engineers</div> <div>Environment Water Geotechnical Civil</div> </div>			
											DISCLAIMER & COPYRIGHT	<div> <div>PROJECT NAME/PLANSET TITLE</div> <div>PROPOSED BOARDING HOUSE</div> <div>STORMWATER MANAGEMENT PLAN</div> <div>255 CONDOMINE STREET, MANLY VALE NSW</div> </div>			
											<p>This plan must not be used for construction unless signed as approved by principal certifying authority.</p> <p>All measurements in millimetres unless otherwise specified.</p> <p>This drawing must not be reproduced in whole or part without prior written consent of Martens & Associates Pty Ltd</p> <p>(C) Copyright Martens & Associates Pty Ltd</p>	<div> <div>Project No.</div> <div>PlanSet No.</div> <div>Release No.</div> <div>Drawing No.</div> <div>Revision</div> </div> <div> <div>P1605609</div> <div>PS06</div> <div>R02</div> <div>PS06-A000</div> <div>B</div> </div>			
											<p>Suite 201, 20 George St, Hornsby, NSW 2077 Australia. Phone: (02) 9476 9999 Fax: (02) 9476 8767</p> <p>Email: mail@martens.com.au Internet: www.martens.com.au</p>	<div> <div>Drawing ID: P1605609-PS06-R02-A000</div> <div> <div>1:1</div> <div>1:2</div> <div>1:3</div> <div>1:4</div> <div>1:5</div> <div>1:6</div> <div>1:7</div> <div>1:8</div> <div>1:9</div> <div>1:10</div> <div>1:11</div> <div>1:12</div> <div>1:13</div> <div>1:14</div> <div>1:15</div> <div>1:16</div> <div>1:17</div> <div>1:18</div> <div>1:19</div> <div>1:20</div> <div>1:21</div> <div>1:22</div> <div>1:23</div> <div>1:24</div> <div>1:25</div> <div>1:26</div> <div>1:27</div> <div>1:28</div> <div>1:29</div> <div>1:30</div> <div>1:31</div> <div>1:32</div> <div>1:33</div> <div>1:34</div> <div>1:35</div> <div>1:36</div> <div>1:37</div> <div>1:38</div> <div>1:39</div> <div>1:40</div> <div>1:41</div> <div>1:42</div> <div>1:43</div> <div>1:44</div> <div>1:45</div> <div>1:46</div> <div>1:47</div> <div>1:48</div> <div>1:49</div> <div>1:50</div> <div>1:51</div> <div>1:52</div> <div>1:53</div> <div>1:54</div> <div>1:55</div> <div>1:56</div> <div>1:57</div> <div>1:58</div> <div>1:59</div> <div>1:60</div> <div>1:61</div> <div>1:62</div> <div>1:63</div> <div>1:64</div> <div>1:65</div> <div>1:66</div> <div>1:67</div> <div>1:68</div> <div>1:69</div> <div>1:70</div> <div>1:71</div> <div>1:72</div> <div>1:73</div> <div>1:74</div> <div>1:75</div> <div>1:76</div> <div>1:77</div> <div>1:78</div> <div>1:79</div> <div>1:80</div> <div>1:81</div> <div>1:82</div> <div>1:83</div> <div>1:84</div> <div>1:85</div> <div>1:86</div> <div>1:87</div> <div>1:88</div> <div>1:89</div> <div>1:90</div> <div>1:91</div> <div>1:92</div> <div>1:93</div> <div>1:94</div> <div>1:95</div> <div>1:96</div> <div>1:97</div> <div>1:98</div> <div>1:99</div> <div>1:100</div> </div> </div>			
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KEY	
EXISTING CONTOURS	---
PROPOSED CONTOURS	---
STORMWATER PIPELINE	---
EDGE OF WALL	---
FLOW DIRECTION	→
DOWNPINES	DP
SITE BOUNDARY	---

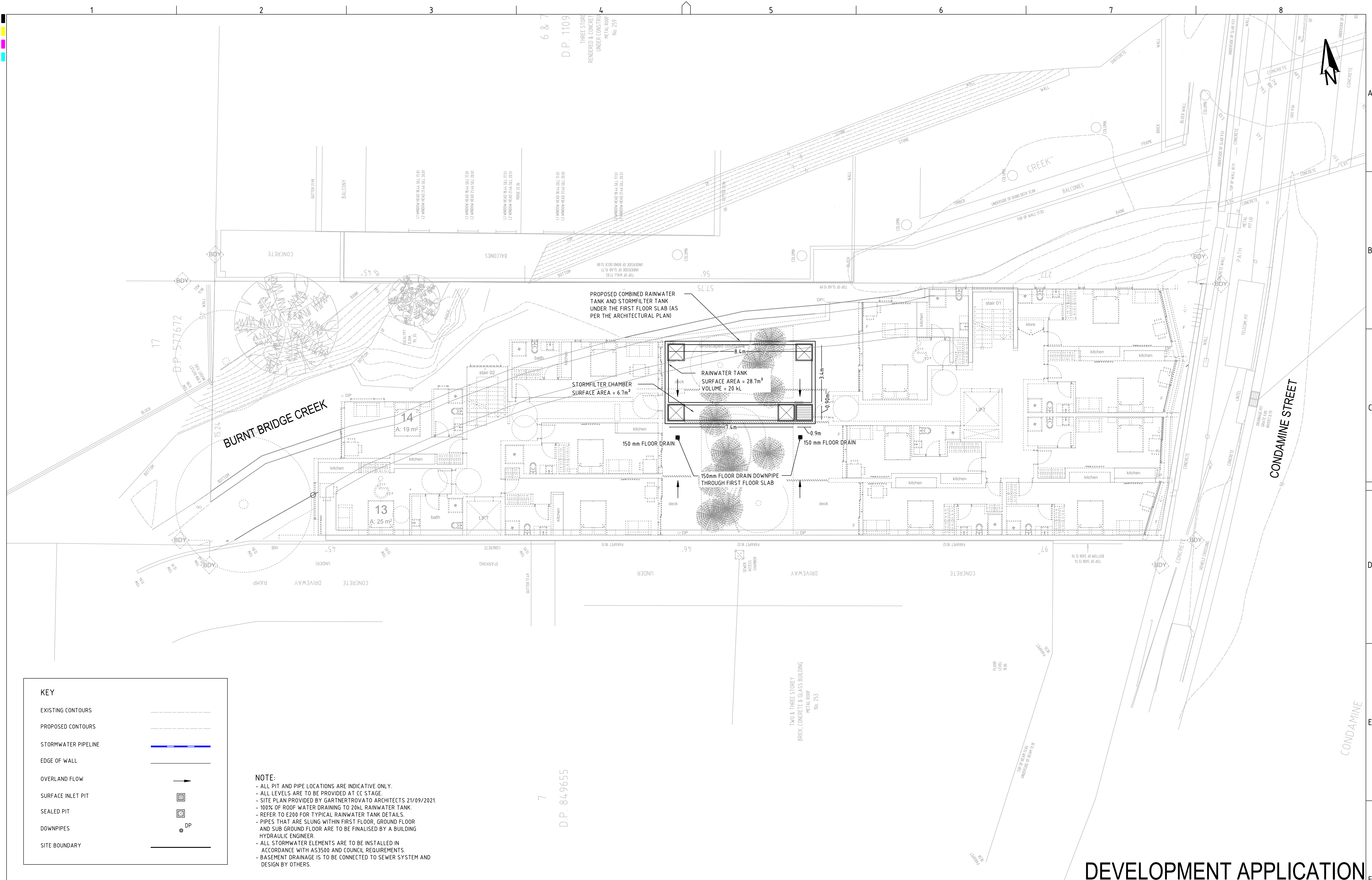
NOTE:

- ALL PIT AND PIPE LOCATIONS ARE INDICATIVE ONLY.
- ALL LEVELS ARE TO BE PROVIDED AT CC STAGE.
- SITE PLAN PROVIDED BY GARTNERTROVATO ARCHITECTS 21/09/2021.
- 100% OF ROOF WATER DRAINING TO 20KL RAINWATER TANK.
- REFER TO E200 FOR TYPICAL RAINWATER TANK DETAILS.
- PIPES THAT ARE SLUNG WITHIN FIRST FLOOR, GROUND FLOOR AND SUB GROUND FLOOR ARE TO BE FINALISED BY A BUILDING HYDRAULIC ENGINEER.
- ALL STORMWATER ELEMENTS ARE TO BE INSTALLED IN ACCORDANCE WITH AS3500 AND COUNCIL REQUIREMENTS.
- BASEMENT DRAINAGE IS TO BE CONNECTED TO SEWER SYSTEM AND DESIGN BY OTHERS.



INSET A DEVELOPMENT APPLICATION

REV		DESCRIPTION	DATE	DRAWN	DESIGNED	CHECKED	APPRVD	SCALE	GRID	DATUM	PROJECT MANAGER	CLIENT	 Consulting Engineers Environment Water Geotechnical Civil		DRAWING TITLE DRAINAGE LAYOUT FOR GROUND FLOOR			
B		WITHOUT PREJUDICE DRAFT FOR S34	28/09/2021	NN	EZ	SA	AN	0 1 2 3 4 5 6 7 8 9 10 A1 (A3) 1:100 (1:200) METRES	MGA	mAHD	AN	MY MANLY VALE PTY LTD						
A		INITIAL RELEASE	03/08/2021	JS	EZ	SA	AN		DISCLAIMER & COPYRIGHT This plan must not be used for construction unless signed as approved by principal certifying authority. All measurements in millimetres unless otherwise specified. This drawing must not be reproduced in whole or part without prior written consent of Martens & Associates Pty Ltd. (C) Copyright Martens & Associates Pty Ltd			PROJECT NAME/PLANSET TITLE PROPOSED BOARDING HOUSE STORMWATER MANAGEMENT PLAN 255 CONDOMINE STREET, MANLY VALE NSW			Suite 201, 20 George St, Hornsby, NSW 2077 Australia Phone: (02) 9476 9999 Fax: (02) 9476 8767 Email: mail@martens.com.au Internet: www.martens.com.au			
												PROJECT NO. P1605609					PLANSET NO. PS06	RELEASE NO. R02
DRAWING ID: P1605609-PS06-R02-E101																		



KEY

- EXISTING CONTOURS
- PROPOSED CONTOURS
- STORMWATER PIPELINE
- EDGE OF WALL
- OVERLAND FLOW
- SURFACE INLET PIT
- SEALED PIT
- DOWNPipes
- SITE BOUNDARY

NOTE:

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- ALL LEVELS ARE TO BE PROVIDED AT CC STAGE.
- SITE PLAN PROVIDED BY GARTNERTROVATO ARCHITECTS 21/09/2021.
- 100% OF ROOF WATER DRAINING TO 20kL RAINWATER TANK.
- REFER TO E200 FOR TYPICAL RAINWATER TANK DETAILS.
- PIPES THAT ARE SLUNG WITHIN FIRST FLOOR, GROUND FLOOR AND SUB GROUND FLOOR ARE TO BE FINALISED BY A BUILDING HYDRAULIC ENGINEER.
- ALL STORMWATER ELEMENTS ARE TO BE INSTALLED IN ACCORDANCE WITH AS3500 AND COUNCIL REQUIREMENTS.
- BASEMENT DRAINAGE IS TO BE CONNECTED TO SEWER SYSTEM AND DESIGN BY OTHERS.

REV	DESCRIPTION	DATE	DRAWN	DESIGNED	CHECKED	APPRVD
B	WITHOUT PREJUDICE DRAFT FOR S34	28/09/2021	NN	EZ	SA	AN
A	INITIAL RELEASE	03/08/2021	JS	EZ	SA	AN

SCALE
A1 (A3) 1:100 (1:200)

GRID
MGA
DATUM
mAHD
PROJECT MANAGER
AN
CLIENT
MY MANLY VALE PTY LTD
PROJECT NAME/PLANSET TITLE
PROPOSED BOARDING HOUSE
STORMWATER MANAGEMENT PLAN
255 CONDOMINE STREET, MANLY VALE NSW
DISCLAIMER & COPYRIGHT
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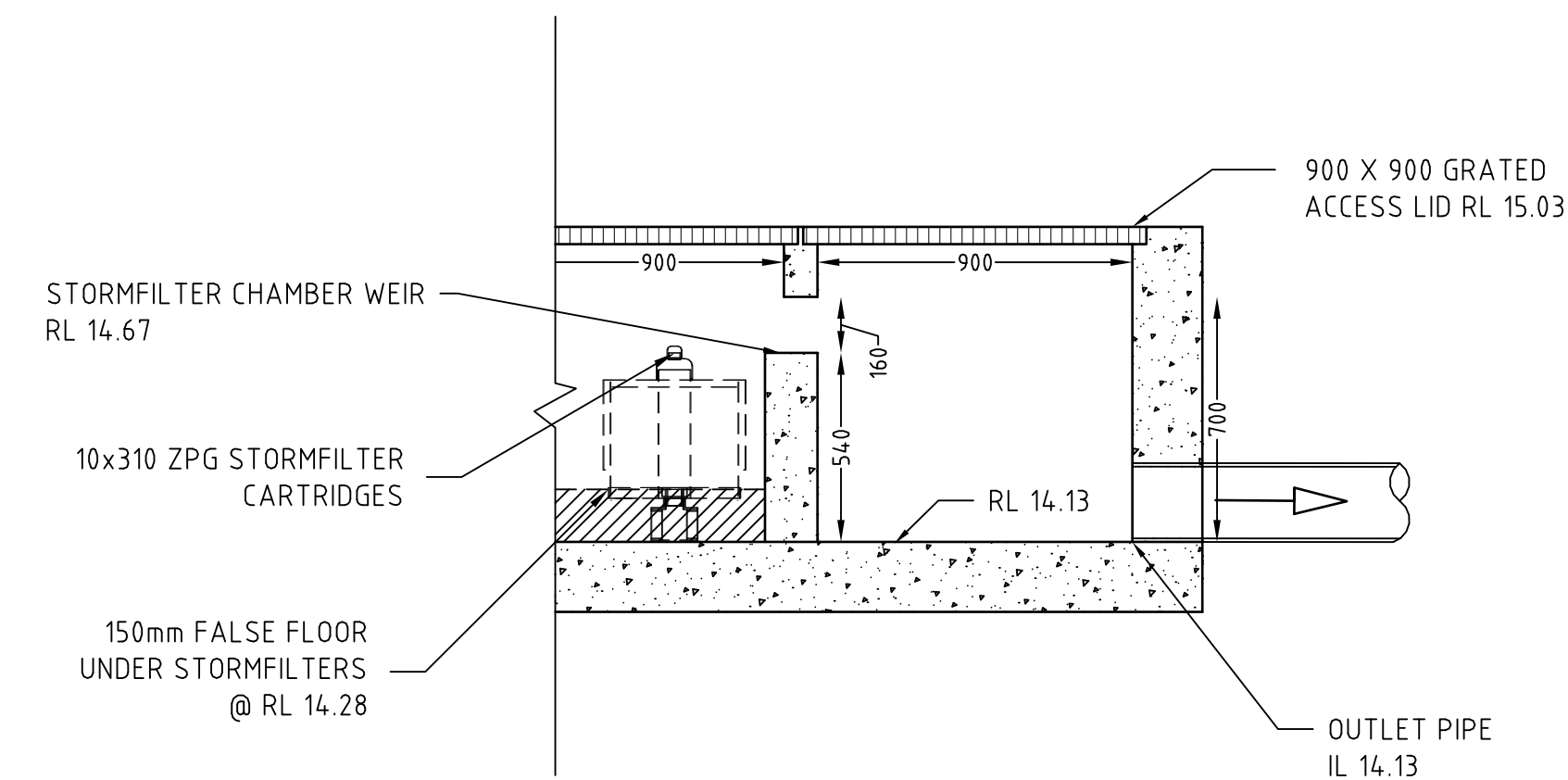
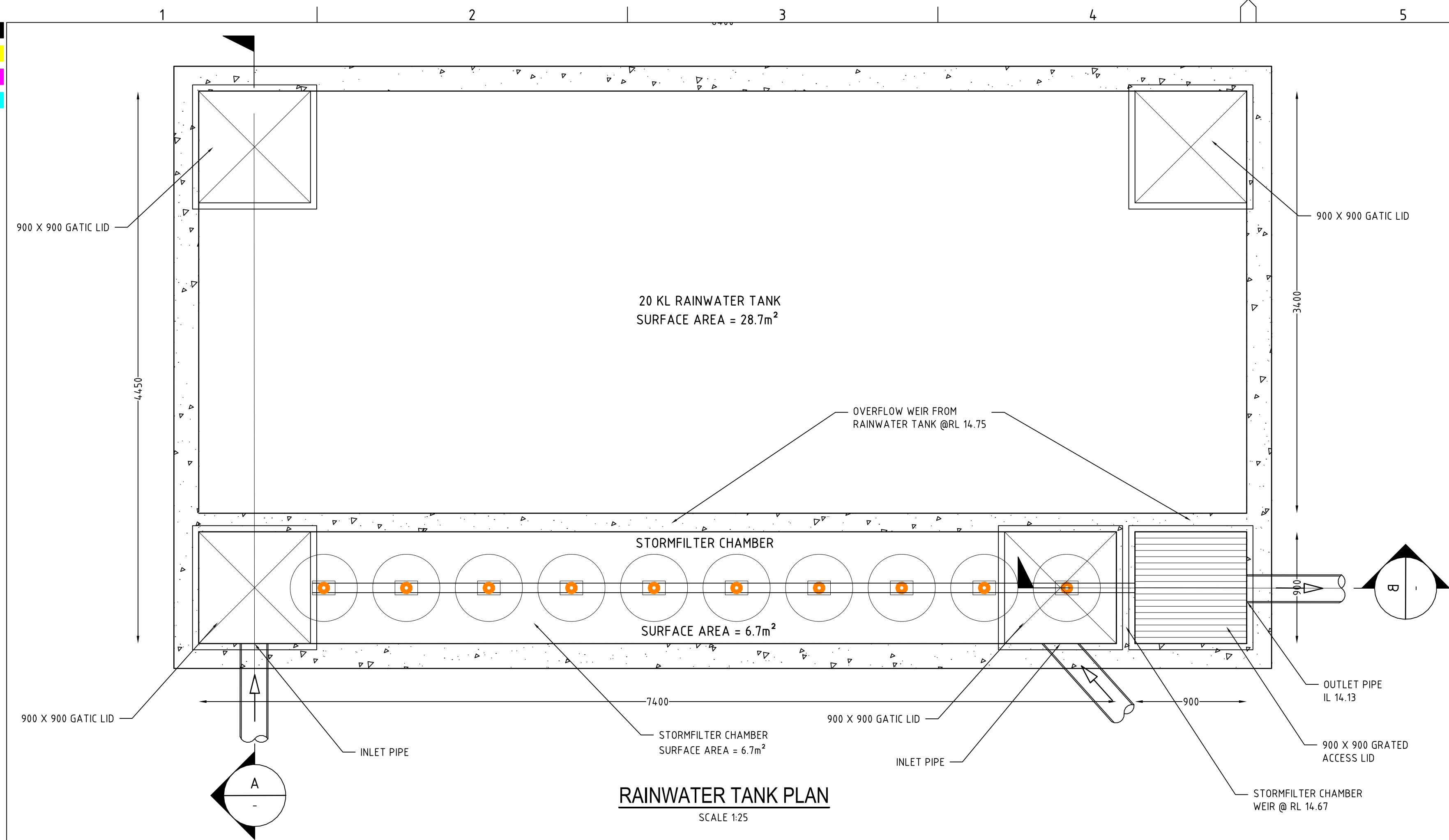
Consulting Engineers
Environment
Water
Geotechnical
Civil

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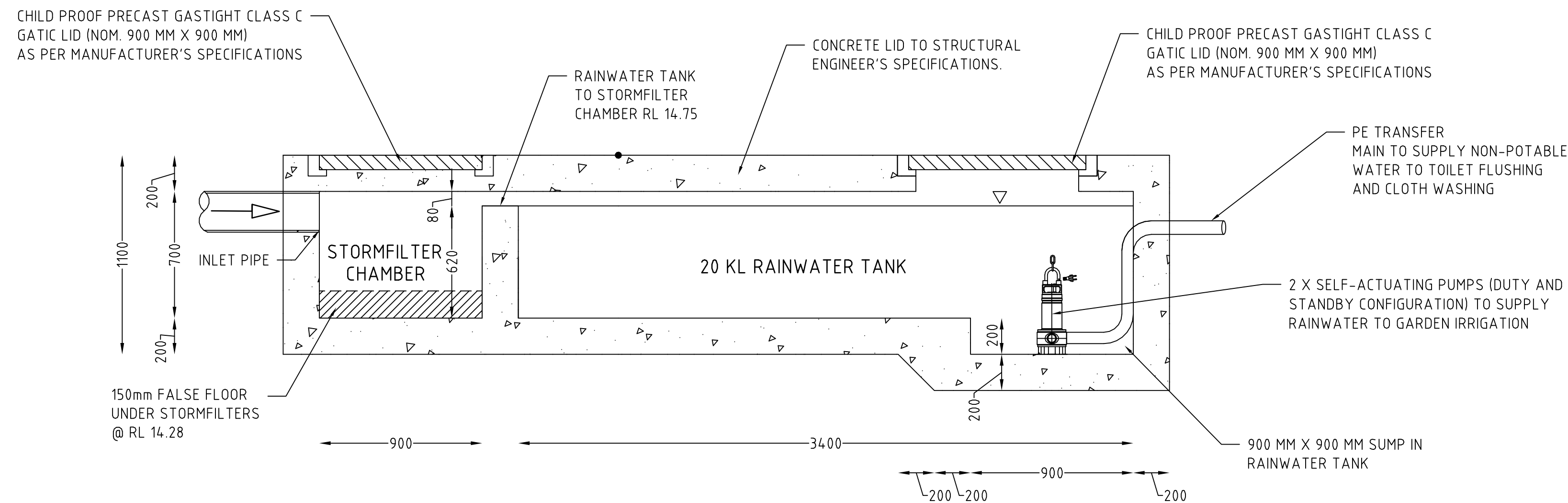
DEVELOPMENT APPLICATION

DRAWING TITLE				
DRAINAGE LAYOUT FOR FIRST FLOOR				
PROJECT NO.	PLANSET NO.	RELEASE NO.	DRAWING NO.	REVISION
P1605609	PS06	R02	PS06-E102	B

DRAWING ID: P1605609-PS06-R02-E102



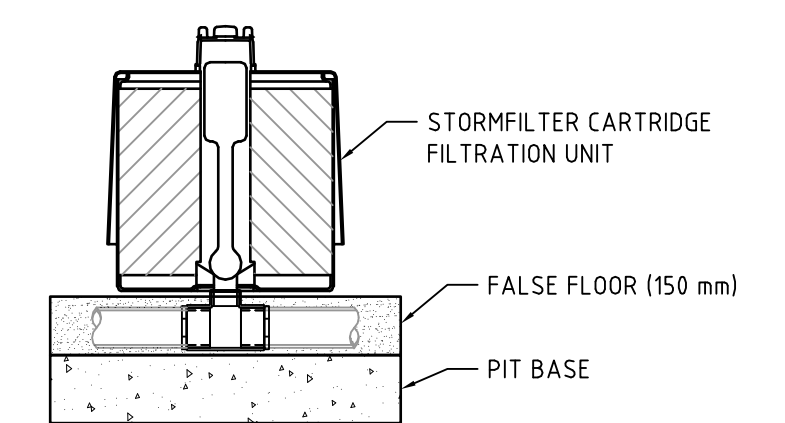
STORMFILTER CHAMBER SECTION B
SCALE 1:20



RAINWATER TANK SECTION A
SCALE 1:20

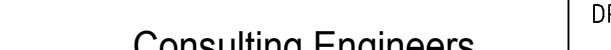
NOTES

1. PROVIDE RAINWATER RE-USE SYSTEM TO SUPPLY WATER FOR TOILET FLUSHING AND CLOTH WASHING.
2. PRESSURE PUMP SET TO BE PROVIDED IN RAINWATER TANK TO SUPPLY WATER.
3. A PERMANENT AND PROMINENT SIGN IS TO BE LOCATED IN THE VICINITY OF THE RAINWATER TANK STATING THAT THE WATER IS NOT FOR POTABLE USE.
4. ALL RAINWATER SERVICES SHALL BE CLEARLY LABELLED 'NON-POTABLE WATER' WITH APPROPRIATE HAZARD IDENTIFICATION TO AUSTRALIAN STANDARDS.
5. PIPEWORK USED FOR RAINWATER SERVICES SHALL BE COLOURED GREEN IN ACCORDANCE WITH AUSTRALIAN STANDARD AS 1345.
6. ALL VALVES AND APERTURES SHALL BE CLEARLY AND PERMANENTLY LABELLED WITH SAFETY SIGNS TO COMPLY WITH AS 1319.
7. AN AIR GAP OR A RPZD TO BE INSTALLED TO PREVENT BACKFLOW.
8. RAINWATER TANK RETICULATION SYSTEM AND MAINS TOP UP ARRANGEMENTS IS TO BE INSTALLED IN ACCORDANCE WITH AS/NZS 3500.1.2 (2003) AND THE NSW CODE OF PRACTICE; PLUMBING AND DRAINING.
9. A FIRST FLUSH DEVICE (OR DEVICES) IS TO BE PROVIDED UPSLOPE OF THE RAINWATER TANK TO BYPASS THE FIRST 5 MM OF RAINWATER FROM CONTRIBUTING ROOF AREAS.
10. DETAILED DESIGN TO BE PROVIDED AT CC STAGE.

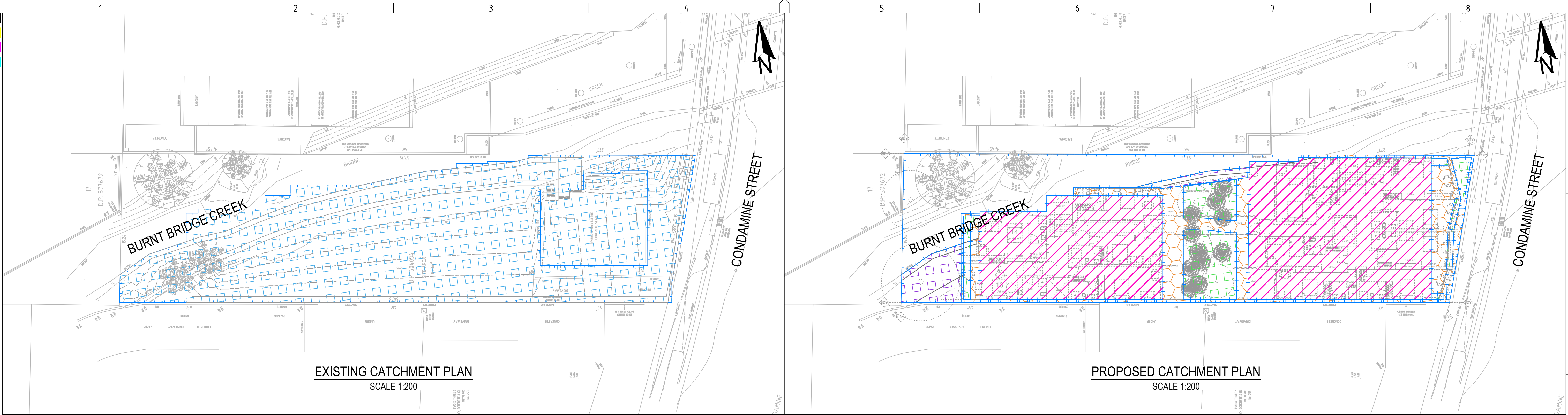


STORMFILTER CARTRIDGE DETAIL
NOT TO SCALE

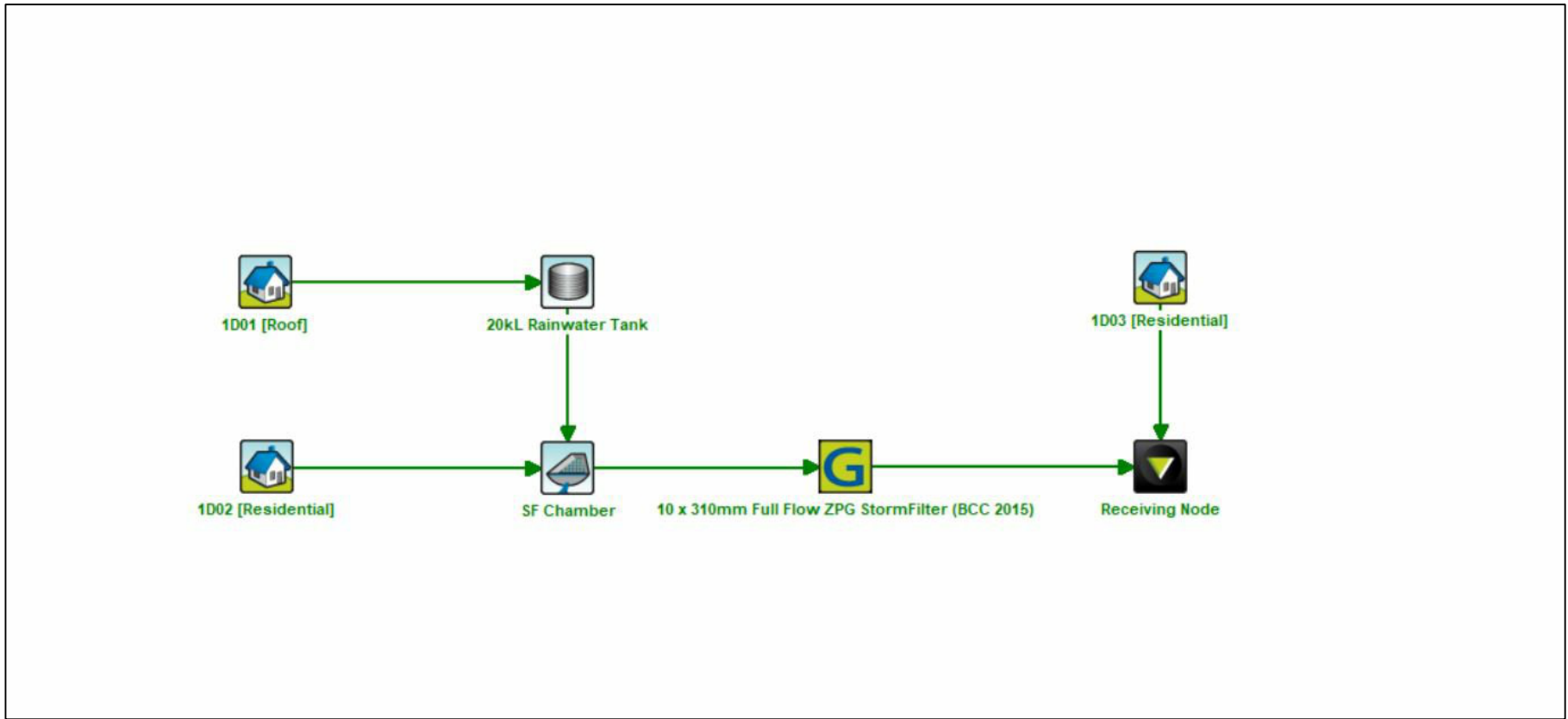
DEVELOPMENT APPLICATION

REV	DESCRIPTION	DATE	DRAWN	DESIGNED	CHECKED	APPRVD	SCALE	GRID	DATUM	PROJECT MANAGER	CLIENT		Consulting Engineers Environment Water Geotechnical Civil	DRAWING TITLE				
B	WITHOUT PREJUDICE DRAFT FOR S34	28/09/2021	NN	EZ	SA	AN	0 0.25 0.50 0.75 1.00 1.25 1.50 1.75 2.00 2.25 2.50 A1 (A3) 1:25 (1:50) METRES	---	---	AN	MY MANLY VALE PTY LTD			TYPICAL SECTION OF BIORETENTION BASIN & RAINWATER TANK				
A	INITIAL RELEASE	03/08/2021	JS	EZ	SA	AN	0 0.2 0.4 0.6 0.8 1.0 1.2 1.4 1.6 1.8 2.0 A1 (A3) 1:20 (1:40) METRES	DISCLAIMER & COPYRIGHT This plan must not be used for construction unless signed as approved by principal certifying authority. All measurements in millimetres unless otherwise specified. This drawing must not be reproduced in whole or part without prior written consent of Martens & Associates Pty Ltd. (C) Copyright Martens & Associates Pty Ltd		PROJECT NAME/PLANSET TITLE PROPOSED BOARDING HOUSE STORMWATER MANAGEMENT PLAN 255 CONDOMINE STREET, MANLY VALE NSW		PROJECT NO. PLANSET NO. RELEASE NO. DRAWING NO. REVISION P1605609 PS06 R02 PS06-E200 B						
A1/ A3 LANDSCAPE (A1/LC v02.0.01)														DRAWING ID: P1605609-PS06-R02-E200 PROJECT				





DRAWING ID: P1605609-PS06-R02-E200



PRE DEVELOPMENT MUSIC CATCHMENT DETAILS (P1605609MUS01V05)					
KEY	DESCRIPTION	MUSIC NODE ID	AREA (ha)	IMPERVIOUS %	MUSIC NODE REFERENCE
	COMMERCIAL	1.00E+01	0.069	15	NORTHERN BEACHES COUNCIL WSUD & MUSIC MODELLING GUIDELINES 2016
	TOTAL SITE				
		TOTAL - OVERALL	0.069	= 100 % OF OVERALL AREA	
		TOTAL - IMPERVIOUS	0.01	= 15 % OF OVERALL AREA	
		TOTAL - PERVIOUS	0.059	= 85 % OF OVERALL AREA	

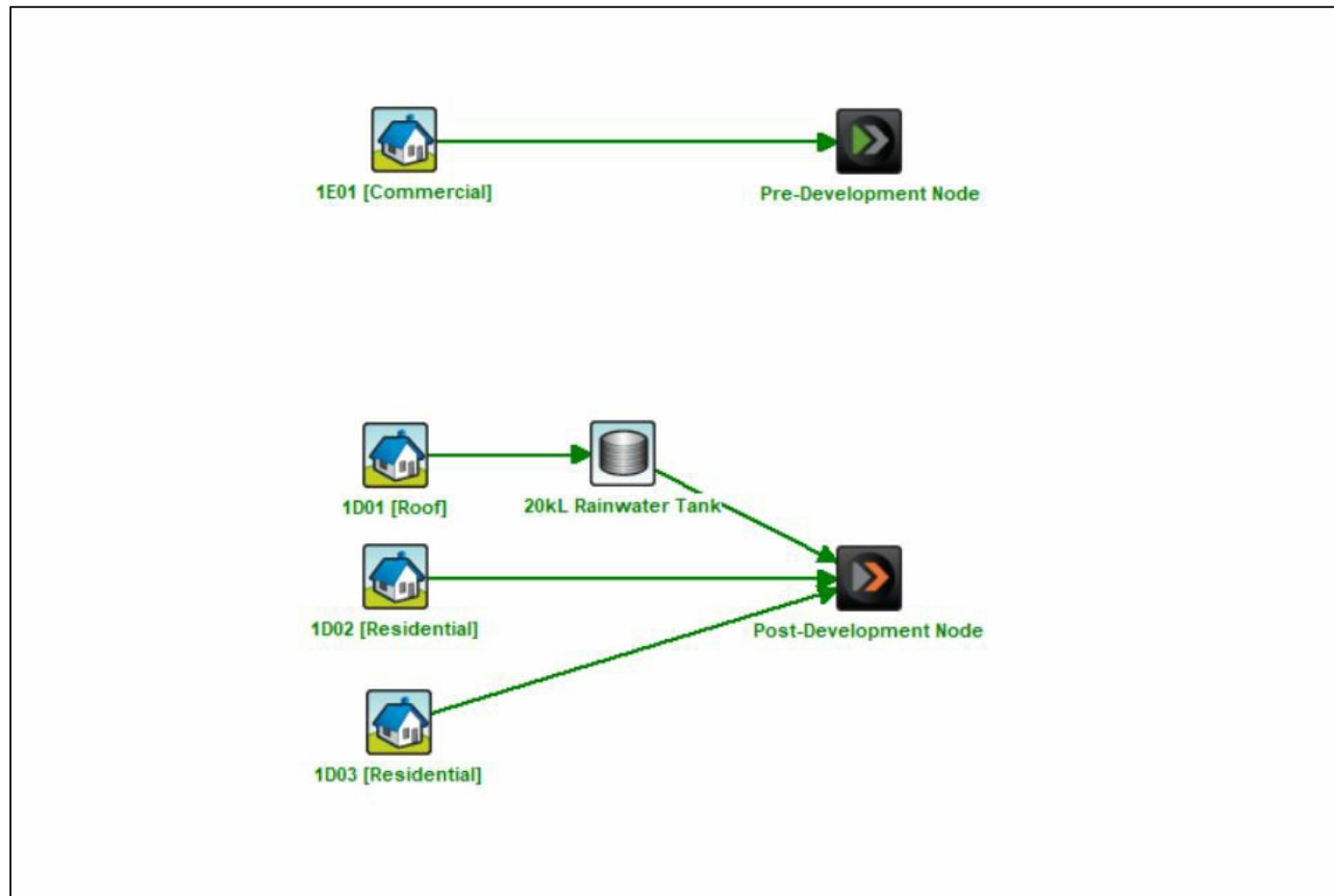


MUSIC MODELLING LAYOUT TTE (P1605609MUS01V05)

POST DEVELOPMENT MUSIC CATCHMENT DETAILS (P1605609MUS01V05)					
KEY	DESCRIPTION	MUSIC NODE ID	AREA (ha)	IMPERVIOUS %	MUSIC NODE REFERENCE
	ROOF	1D01	0.046	100	NORTHERN BEACHES COUNCIL WSUD & MUSIC MODELLING GUIDELINES 2016
	RESIDENTIAL	1D02	0.019	60	NORTHERN BEACHES COUNCIL WSUD & MUSIC MODELLING GUIDELINES 2016
	RESIDENTIAL BYPASSING BASIN	1D03	0.004	0	NORTHERN BEACHES COUNCIL WSUD & MUSIC MODELLING GUIDELINES 2016
	TOTAL SITE				
		TOTAL - OVERALL		0.069	= 100 % OF OVERALL AREA
		TOTAL - IMPERVIOUS		0.058	= 83 % OF OVERALL AREA
		TOTAL - PERVIOUS		0.012	= 17 % OF OVERALL AREA
Notes:					
1. Land that is not considered part of the development has been excluded from the MUSIC model, and					
2. Roof runoff will be directed to a 20 kL rainwater tank for internal reuse.					

Treatment Train Effectiveness - Receiving Node			
	Sources	Residual Load	% Reduction
Flow (ML/yr)	0.728	0.249	65.8
Total Suspended Solids (kg/yr)	41.4	6.18	85.1
Total Phosphorus (kg/yr)	0.13	0.0273	79.1
Total Nitrogen (kg/yr)	1.56	0.359	77
Gross Pollutants (kg/yr)	18.4	0	100

MUSIC MODELLING RESULTS TTE (P1605609MUS01V05)



MUSIC MODELLING LAYOUT NORBE (P1605609MUS01V05)

Mean Annual Loads - Pre-Development Node		
	Inflow	
	Pre	Post
Flow (ML/yr)	0.363	0.249
Total Suspended Solids (kg/yr)	41.2	28.6
Total Phosphorus (kg/yr)	83.8E-3	58.6E-3
Total Nitrogen (kg/yr)	0.666	0.516
Gross Pollutants (kg/yr)	5.28	4.10

MUSIC MODELLING RESULTS NORBE (P1605609MUS01V05)

DEVELOPMENT APPLICATION

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B	WITHOUT PREJUDICE DRAFT FOR S34	28/09/2021	NN	EZ	SA	AN	SCALE	MGA	mAHD	AN	MY MANLY VALE PTY LTD	PROJECT NAME/PLANSET TITLE		Environment		WATER QUALITY CATCHMENT PLANS,	
A	INITIAL RELEASE	03/08/2021	JS	EZ	SA	AN	A1 (A3) 1:200 (1:400)				PROPOSED BOARDING HOUSE	PROPOSED BOARDING HOUSE		Water		MODELS & RESULTS	
											STORMWATER MANAGEMENT PLAN	255 CONDOMINE STREET, MANLY VALE NSW		Geotechnical		PROJECT NO.	
												Suite 201, 20 George St, Hornsby, NSW 2077 Australia Phone: (02) 9476 9999 Fax: (02) 9476 8767		Civil		PLANSET NO.	
												Email: mail@martens.com.au Internet: www.martens.com.au		Release No.		DRAWING NO.	
														R02		PS06-E700	
																REVISION	
																B	