PROPOSED RESIDENTIAL DEVELOPMENT
TYPE: ALTERATIONS AND ADDITIONS

DRAWINGS SERIES TO BE PRINTED IN COLOUR

DEVELOPMENT APPLICATION ISSUE
NOT FOR CONSTRUCTION

ADDRESS: No. 26 NORTH AVALON ROAD, AVALON BEACH
TITLE: LOT 19/DP 8394
DRAWING SERIES: STORMWATER MANAGEMENT PLAN

GENERAL NOTES

GN1 ALL DIMENSIONS TO BE CONFIRMED ON SITE PRIOR TO CONSTRUCTION.
GN2 THE CONTRACTOR SHALL LOCATE AND DETERMINE LEVELS OF ALL EXISTING SERVICES PRIOR TO COMMENCING EXCAVATION WORK. ALL SERVICES SHOWN ON THIS DRAWING ARE INDICATIVE AND FOR GUIDANCE ONLY.
GN3 THIS DRAWING SERIES IS TO BE READ IN CONCURRENCE WITH RELEVANT DRAWINGS SERIES FROM OTHER CONSULTANTS, COUNCIL OR RELEVANT SPECIFICATIONS. WHERE DISCREPANCIES ARE DETECTED THE DESIGN ENGINEER IS TO BE CONTACTED IMMEDIATELY FOR VALIDATION/ RECTIFICATION.
GN4 BUILDER AND CONTRACTORS IS TO ENSURE THAT ALL COUNCIL DEVELOPMENT CONSENT CONDITIONS, CONSTRUCTION CERTIFICATE AND BASIX REQUIREMENTS ARE MET.
GN5 A STRUCTURAL ENGINEER IS TO DESIGN AND DETAIL SUBSOIL DRAINAGE. UNLESS APPROVED BY OUR OFFICE, SUBSOIL DRAINAGE IS NOT TO CONNECT INTO THE STORMWATER SYSTEM DISPLAYED WITHIN THIS DRAWING SERIES.
GN6 PLANS ISSUED FOR DEVELOPMENT APPLICATION, SHALL NOT BE USED FOR OBTAINING A CONSTRUCTION CERTIFICATE.
GN7 PLANS ISSUED FOR DEVELOPMENT APPLICATION PURPOSES, SHALL NOT BE USED FOR CONSTRUCTION PURPOSES.

RAINWATER RE-USE NOTES

RN1 THE RAINWATER TANK IS TO BE INSTALLED AND EMPLOYED AS PER BASIX, SYDNEY WATER, COUNCIL AND NSW HEALTH REQUIREMENTS FOR NON DRINKING USE ONLY.
RN2 ALL PLUMBING WORKS ARE TO BE CARRIED OUT BY LICENSED PLUMBERS IN ACCORDANCE WITH AS/NZS3500.1 NATIONAL PLUMBING AND DRAINAGE CODE.
RN3 BUILDER AND PLUMBER TO ENSURE THE INSTALLATION OF THE RAINWATER TANK SYSTEM IS IN ACCORDANCE WITH THE RELEVANT AUSTRALIAN STANDARDS AND THE RAINWATER TANK DESIGN AND INSTALLATION HANDBOOK (HB 230- 2008).
RN4 DO NOT DIRECT CONNECT TOWN WATER SUPPLY AND THE RAIN WATER SUPPLY.
RN5 THE RAINWATER TANK AND EVERY RAINWATER SUPPLY OUTLET POINT ARE TO BE LABELLED (RAINWATER) ON A METAL SIGN IN ACCORDANCE WITH AS1319.
RN6 SCREENED DOWNPIPE RAINWATER HEAD OR OTHER SUITABLE LEAF AND DEBRIS DEVICE TO BE INSTALLED ON EACH DOWNPIPE. SCREEN MESH TO BE 4-6mm AND DESIGNED TO BE SELF-CLEANING.
RN7 ROOF RUN-OFF ONLY IS BE DIRECTED TO THE RAINWATER TANK . SURFACE WATER SYSTEMS/INLETS ARE NOT TO BE CONNECTED.
RN8 ALL INLETS AND OUTLETS TO THE RAINWATER TANK ARE TO HAVE SUITABLE DEVICES TO PREVENT MOSQUITO AND VERMIN ENTRY TO THE SATISFACTION OF THE REGULATORY AUTHORITY.
RN9 PROVIDE APPROPRIATE FLOAT VALVES TO CONTROL TOWN WATER SUPPLY INLET TO TANK IN ORDER TO ACHIEVE THE TOP-UP INDICATED ON THE TYPICAL DETAIL
RN10 PRESSURE PUMP ELECTRICAL CONNECTION TO BE CARRIED OUT BY A LICENSED ELECTRICIAN

BEFORE YOU DIG AUSTRALIA

BEFORE YOU DIG www.byda.com.au

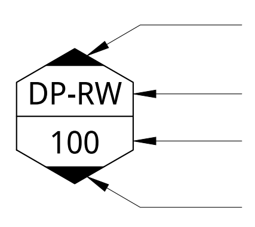
THE MOST UP TO DATE BEFORE YOU DIG AUSTRALIA (BYDA) PLANS MUST BE KEPT ON-SITE AT ALL TIMES. ANY PERSON ABOUT TO DIG OR EXCAVATE MUST READ BYDA PLANS PRIOR TO THE COMMENCEMENT OF WORK.

STORMWATER NOTES

SN1 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.
SN2 ALL WORK SHALL BE CARRIED OUT IN ACCORDANCE AS/NZS3500 AND THE REQUIREMENTS OF THE LOCAL GOVERNMENT AREAS POLICIES, CODES AND SPECIFICATIONS. ENSURE INSPECTION OPENINGS ARE INSTALLED TO DRAINAGE LINES AT REQUIRED LOCATIONS.
SN3 STORMWATER PIPES UP TO DN150 SHALL BE LAID AT A MINIMUM 1% GRADE UNLESS OTHERWISE NOTED.
SN4 WHERE NECESSARY PUBLIC UTILITY SERVICES ARE TO BE ALTERED AND AMENDED AT THE CLIENT'S EXPENSE.
SN5 ALL NEW WORK MAKE SMOOTH TRANSITIONS AND CONNECTIONS WITH EXISTING WORK.
SN6 LOCAL GOVERNMENT AREAS TREE PRESERVATION AND MANAGEMENT ORDERS TO BE ABIDED BY. A PERMIT IS REQUIRED BEFORE TREE/S CAN BE REMOVED .
SN7 ALL PITS TO BE STREAMLINED AND BENCHED IN ACCORDANCE WITH LOCAL GOVERNMENTS AREAS SPECIFICATIONS.
SN8 STEP IRONS ARE TO BE PROVIDED FOR ALL PITS OVER 1.2m DEEP IN ACCORDANCE WITH AS/NZS3500 AND LOCAL GOVERNMENT AREAS CODES AND POLICES.
SN9 DOWNPIPES, RAINWATER LINES AND STORMWATER LINES TO BE FULLY SEALED UNLESS OTHERWISE NOTED.
SN10 ALL GRATE AND INVERT LEVELS PROVIDED ON THIS DRAWING ARE EXTRACTED FROM SURVEY AND REDUCED TO AHD. FOLLOWING EARTHWORKS, PIT INSTALLATION AND BENCHING THE LEVELS ARE TO BE VERIFIED OR ADJUSTED TO MEET THE DESIGN INTENT. IF EVER IN DOUBT CONTACT DESIGN ENGINEER.
SN11 ALL SUSPENDED DRAINAGE PIPES ARE TO STRAPPED IN ACCORDANCE WITH AS/NZ 2032.
SN12 LOW POINTS OF CHARGED DRAINAGE SYSTEMS REQUIRE DEVICES FOR FLUSHING AND MAINTENANCE.
SN13 THE NUMBER AND LOCATION OF DOWNPIPES, ON THIS DRAWING SERIES, ARE SHOWN INDICATIVELY AND ARE TO BE CONFIRMED ON-SITE BY BUILDER PRIOR TO CONSTRUCTION. ROOF DRAINAGE, BY OTHERS, AND TO BE INSTALLED IN ACCORDANCE WITH AS/NZs 3500 SERIES.
SN14 NEW WORKS SHALL NOT CREATE ANY TRAPPED SURFACE AREAS. IN SUCH CASES WHERE TRAPPED AREAS EXIST, A DRAINAGE NETWORK WITH ADEQUATE CAPACITY SHALL BE REQUIRED TO DRAIN STORMWATER TO AN APPROVED DISCHARGE POINT. A PUMP-OUT SYSTEM MAY BE REQUIRED IF THE TRAPPED AREA IS BELOW THE NATURAL SURFACE LEVEL. IN EACH INSTANCE, THE DESIGN ENGINEER MUST BE CONTACTED FOR DESIGN DETAILS (AS REQUIRED) BEFORE CONSTRUCTION.
SN15 WHEN SURFACES FALL TOWARDS A BUILDING, INCLUDING LAND OUTSIDE OF THE SITE, GROUND SURFACE LEVELS ADJACENT TO THE BUILDING ARE TO BE RE-GRADED SUCH THAT THE FIRST METER HAS A MINIMUM 50MM FALL AWAY FROM THE BUILDING AS PER THE NATIONAL CONSTRUCTION CODE.
SN16 BALCONY DRAINAGE AND WATERPROOFING TO BE INSTALLED IN STRICT ACCORDANCE WITH RELEVANT AUSTRALIAN STANDARD AND NATIONAL CONSTRUCTION CODE, DESIGN IS TO BE BY OTHERS.

DRAWING LEGEND

⬜	INDICATES INDICATIVE EXTENT OF EXISTING DWELLING
▭	INDICATES INDICATIVE EXTENT OF PROPOSED EXTENSION
▭	INDICATES INDICATIVE EXTENT OF PROPOSED DRIVEWAY
🟦	INDICATES ON-SITE DETENTION TANK
🟩	INDICATES RAINWATER TANK
🟫	INDICATES ABSORPTION SYSTEM
● DP	INDICATES PROPOSED DOWNPIPE/RISER
● e.DP	INDICATES EXISTING DOWNPIPE/RISER
○ I.O.	INDICATES INSPECTION OPENING WITH SCREW DOWN LID
⊘ RWO	INDICATES RAINWATER OUTLET
○ PBO	INDICATES PLANTER BOX OUTLET
○	INDICATES EAVE OPENING
C	INDICATES PIPE DROPPER
⊡	BOX GUTTER SUMP/RAINWATER HEAD SUMP
← EG1 →	INDICATES EAVE TYPE AND DIRECTION
OR	INDICATES DOWNPIPE SPREADER
▥	INDICATES GRATED BOX DRAIN WITH OUTLET
▦	INDICATES DRAINAGE PIT GRATED OPENING
■	INDICATES DRAINAGE PIT SEALED COVER
SW ▦ SW ILXX.XXX	INDICATES STORMWATER PIPE INVERT LEVELS. UNLESS OTHERWISE NOTED PIT BASE IS TO EQUAL PIPE BASE
RW	INDICATES DN100 RAINWATER PIPE.
SW	INDICATES DN100 STORMWATER PIPE.
e.SW	INDICATES EXISTING STORMWATER PIPE.
s.SW	INDICATES DN100 SEWER GRADE CHARGED STORMWATER PIPE.
w.RM	INDICATES INDICITIVE LOCATION OF RISING MAIN BY OTHERS.
← DN150 RW	INDICATES SIZE AND DIRECTION OF RAINWATER PIPE GREATER THAN DN100.
← DN150 SW	INDICATES SIZE AND DIRECTION OF STORMWATER PIPE GREATER THAN DN100.
← DN150 e.SW	INDICATES SIZE AND DIRECTION OF EXISTING STORMWATER PIPE GREATER THAN DN100.
← DN150 s.SW	INDICATES SIZE AND DIRECTION OF SEWER GRADE CHARGED STORMWATER PIPE.
—	INDICATES SITE BOUNDARY
– – –	INDICATES EASEMENT WITHIN SITE, REFER TO DETAILED SURVEY
– – –	INDICATES INDICATIVE ROOF OUTLINE
PAGE S??	PIPE LINE CONTINUES TO REFERENCED PAGE



PENETRATION DIRECTION
SERVICE TYPE
SIZE
PENETRATION DIRECTION

SITE SUMMARY OF COUNCIL SPECIFICATION

1. COUNCIL: NORTHERN BEACHES COUNCIL
2. RELEVANT DOCUMENTS:
    2.1. NORTHERN BEACHES COUNCIL WATER MANAGEMENT FOR DEVELOPMENT POLICY (FEB 2021)
    2.2. AS/NZS 3500.3
3. ENGINEERING COMMENTS:
    - STORMWATER DISCHARGE
      THE PROPOSED SITE DRAINS BY GRAVITY TO AN EXISTING KERB OUTLET AT NORTH AVALON ROAD.
    - ON- SITE DETENTION (OSD)
      THE DEVELOPMENT IS LOCATED IN A LOW RISK FLOOD PRECINCT. IN THIS REGARD WE ARE OF THE VIEW THAT OSD IS NOT APPLICABLE REFER TO S7 FOR COUNCIL CHECKLIST.
    - WATER SENSITIVE URBAN DESIGN (WSUD)
      THE DEVELOPMENT IS A SINGLE LOT RESIDENTIAL. WSUD IS BELIEVED NOT TO BE REQUIRED IN ACCORDANCE WITH NORTHERN BEACHES DCP SECTION 1.0 TABLE 1.

THIS DRAWING SERIES HAS BEEN PREPARED IN GENERAL ACCORDANCE WITH THE ABOVE DOCUMENTS.

PAGE DIRECTORY

AMUNA
CIVIL ENGINEERING

Revision	Drawn	Date	Description	Checked	Approved
1	RM	18.12.24	ISSUED FOR CONSTRUCTION CERTIFICATE	SSD	SSD

North

Architect
BLUE SKY
BUILDING DESIGNS
Client: ELLIS

Project
PROPOSED
ALT'S AND ADD'S
No. 26 NORTH AVALON ROAD
AVALON

Drawing Title
TITLE PAGE & NOTES
Project No. ACE24113
Scale: A1 AS NOTED
Page No. S1
Revision 1

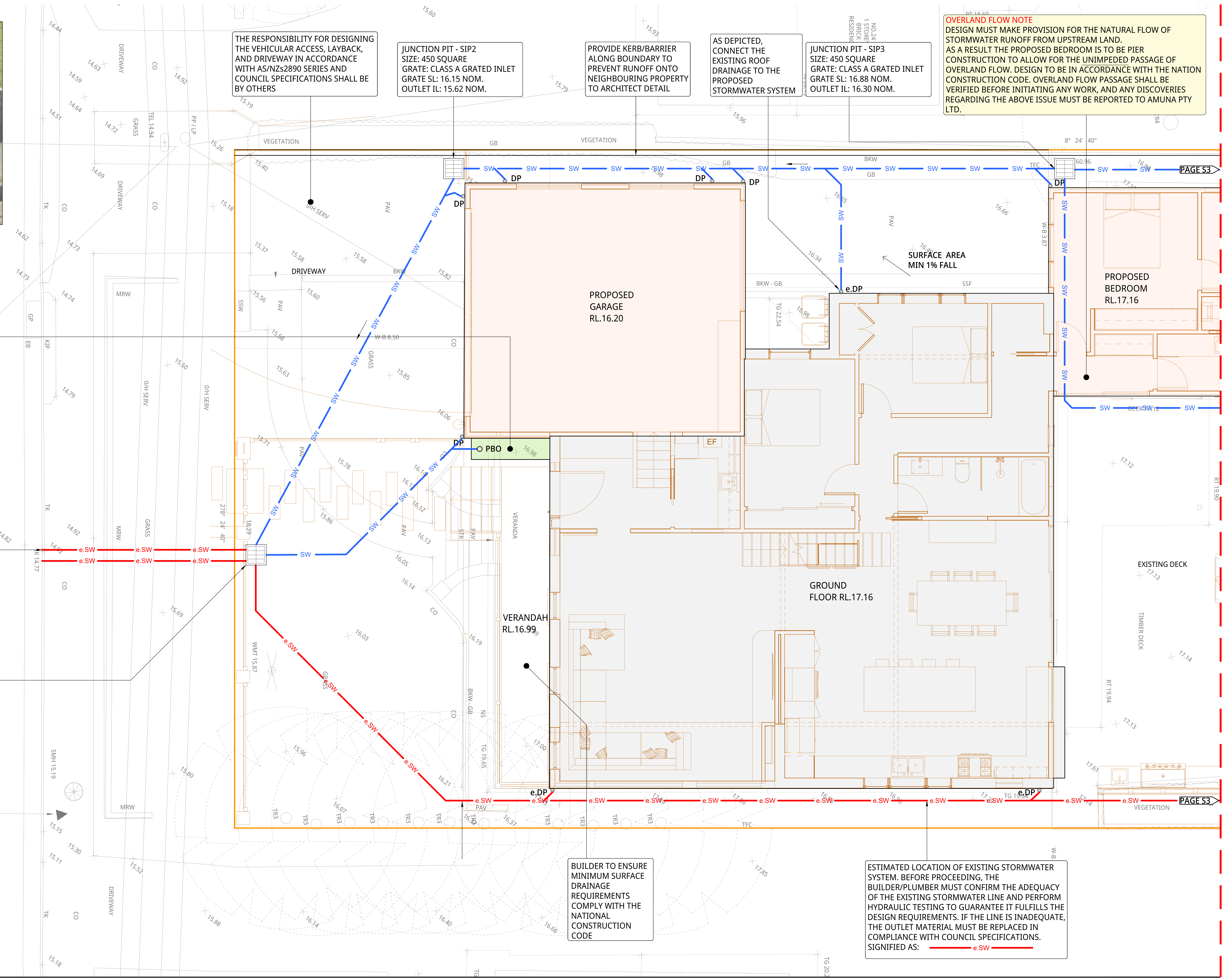
IMAGE 1 - EXISTING OUTLET

PLANTER BOX PRIMARY DRAINAGE (PBO):
- TYPE: SPS TRUFLO 100mm WITH ALL-PURPOSE PLANTER BOX ADAPTER OR APPROVED EQUIVALENT, PRODUCT TYPE MAY CHANGE AS LONG AS MINIMUM OUTLET DIAMETER IS ACHIEVED.
- DRAINAGE PIPE TO BE MINIMUM 100mm SEWER GRADE uPVC
- STORMWATER SYSTEM TO BE FULLY SEALED WITH A MINIMUM 1:100 PIPE FALL
- PLANTER BASE AREA SHALL FALL TOWARD OUTLET AT A MINIMUM 1:80
- PROVIDE INSPECTION OPENING RISER OVER PRIMARY DRAINAGE OUTLET

WATERPROOFING DESIGN BY OTHERS

PLANTER EXTENT SIGNIFIED AS: 🟩

NORTH AVALON ROAD



THE RESPONSIBILITY FOR DESIGNING THE VEHICULAR ACCESS, LAYBACK, AND DRIVEWAY IN ACCORDANCE WITH AS/NZs2890 SERIES AND COUNCIL SPECIFICATIONS SHALL BE BY OTHERS

JUNCTION PIT - SIP2
SIZE: 450 SQUARE
GRATE: CLASS A GRATED INLET
GRATE SL: 16.15 NOM.
OUTLET IL: 15.62 NOM.

PROVIDE KERB/BARRIER ALONG BOUNDARY TO PREVENT RUNOFF ONTO NEIGHBOURING PROPERTY TO ARCHITECT DETAIL

AS DEPICTED, CONNECT THE EXISTING ROOF DRAINAGE TO THE PROPOSED STORMWATER SYSTEM

JUNCTION PIT - SIP3
SIZE: 450 SQUARE
GRATE: CLASS A GRATED INLET
GRATE SL: 16.88 NOM.
OUTLET IL: 16.30 NOM.

OVERLAND FLOW NOTE
DESIGN MUST MAKE PROVISION FOR THE NATURAL FLOW OF STORMWATER RUNOFF FROM UPSTREAM LAND. AS A RESULT THE PROPOSED BEDROOM IS TO BE PIER CONSTRUCTION TO ALLOW FOR THE UNIMPEDED PASSAGE OF OVERLAND FLOW. DESIGN TO BE IN ACCORDANCE WITH THE NATION CONSTRUCTION CODE. OVERLAND FLOW PASSAGE SHALL BE VERIFIED BEFORE INITIATING ANY WORK, AND ANY DISCOVERIES REGARDING THE ABOVE ISSUE MUST BE REPORTED TO AMUNA PTY LTD.

THE EXISTING STORMWATER LINE SHALL BE DIRECTED TOWARDS THE KERB AND GUTTER AS ILLUSTRATED IN IMAGE 1. BEFORE PROCEEDING, THE BUILDER/PLUMBER MUST CONFIRM THE ADEQUACY OF THE EXISTING STORMWATER LINE AND PERFORM HYDRAULIC TESTING TO GUARANTEE IT FULFILLS THE DESIGN REQUIREMENTS. IF THE LINE IS INADEQUATE, THE OUTLET MATERIAL MUST BE REPLACED IN COMPLIANCE WITH COUNCIL SPECIFICATIONS.
OUTLET MATERIAL: 200 x 100 x 6mm GALV. STEEL RHS
OUTLET IL: 14.77 NOM.
LEVELS TO BE CONFIRMED ON-SITE PRIOR TO CONSTRUCTION

JUNCTION PIT - SIP1
SIZE: 450 SQUARE
GRATE: CLASS A GRATED INLET
GRATE SL: 15.55 NOM.
OUTLET IL: 14.95 NOM.

BUILDER TO ENSURE MINIMUM SURFACE DRAINAGE REQUIREMENTS COMPLY WITH THE NATIONAL CONSTRUCTION CODE

ESTIMATED LOCATION OF EXISTING STORMWATER SYSTEM. BEFORE PROCEEDING, THE BUILDER/PLUMBER MUST CONFIRM THE ADEQUACY OF THE EXISTING STORMWATER LINE AND PERFORM HYDRAULIC TESTING TO GUARANTEE IT FULFILLS THE DESIGN REQUIREMENTS. IF THE LINE IS INADEQUATE, THE OUTLET MATERIAL MUST BE REPLACED IN COMPLIANCE WITH COUNCIL SPECIFICATIONS.
SIGNIFIED AS: —— e.SW ——

MANAGEMENT OF STORMWATER PLAN - GROUND FLOOR

SCALE - 1:50/A1, 1:100/A3

0 1m 2m 3m 4m 5m

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North

Architect
BLUE SKY
BUILDING DESIGNS
Client: ELLIS

ABN:31 658 411 299

Project
PROPOSED
ALT'S AND ADD'S
No. 26 NORTH AVALON ROAD
AVALON

Drawing Title
MANAGEMENT OF STORMWATER
PLAN - GROUND FLOOR PAGE 1

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LINE TOP RUN IN SUBFLOOR AND BE STRAPPED IN ACCORDANCE WITH AS3500.3

ESTIMATED LOCATION OF EXISTING STORMWATER SYSTEM. BEFORE PROCEEDING, THE BUILDER/PLUMBER MUST CONFIRM THE ADEQUACY OF THE EXISTING STORMWATER LINE AND PERFORM HYDRAULIC TESTING TO GUARANTEE IT FULFILLS THE DESIGN REQUIREMENTS. IF THE LINE IS INADEQUATE, THE OUTLET MATERIAL MUST BE REPLACED IN COMPLIANCE WITH COUNCIL SPECIFICATIONS. SIGNIFIED AS: e.SW

AS DEPICTED, CONNECT THE PROPOSED ROOF DRAINAGE TO THE EXISTING STORMWATER SYSTEM

EXISTING RAINWATER TANK BUILDER/PLUMBER MUST CONFIRM THE ADEQUACY OF THE EXISTING RAINWATER SYSTEM AND GUARANTEE IT FULFILLS THE DESIGN REQUIREMENTS

MANAGEMENT OF STORMWATER PLAN - GROUND FLOOR

SCALE - 1:50/A1, 1:100/A3

0 1m 2m 3m 4m 5m

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Drawing Title
MANAGEMENT OF STORMWATER
PLAN - GROUND FLOOR PAGE 2

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ACE24113

Scale: A1
AS NOTED

Page No.
S3

Revision
1

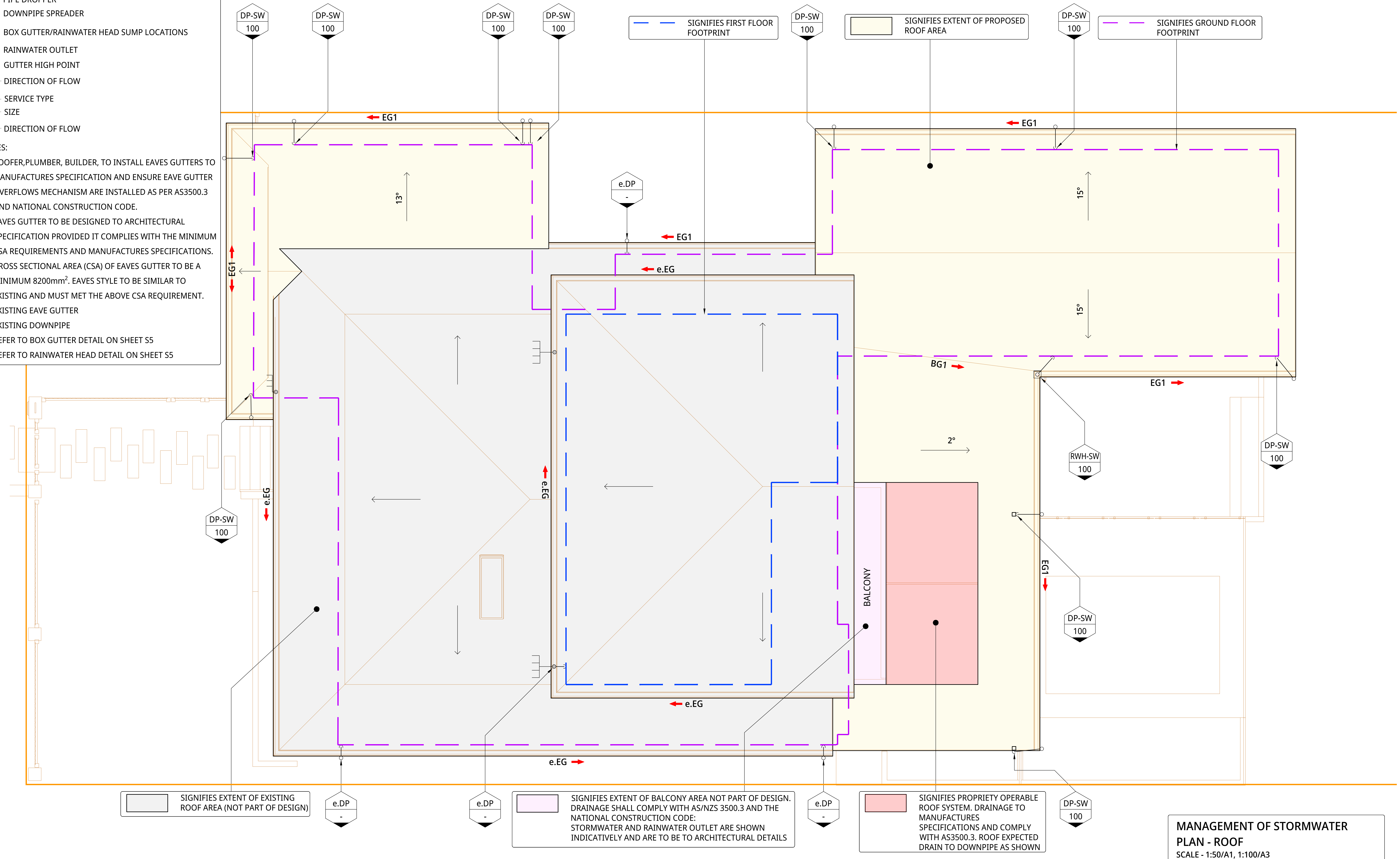
ROOF LEGEND:

○	INDICATIVE EAVES GUTTER ORIFICE LOCATION
◦	PIPE RISER
◡	PIPE DROPPER
	DOWNPIPE SPREADER
⊡	BOX GUTTER/RAINWATER HEAD SUMP LOCATIONS
RWO	RAINWATER OUTLET
HP	GUTTER HIGH POINT

DP-RW 100: DIRECTION OF FLOW, SERVICE TYPE, SIZE, DIRECTION OF FLOW

ROOF NOTES:

1.	ROOFER,PLUMBER, BUILDER, TO INSTALL EAVES GUTTERS TO MANUFACTURES SPECIFICATION AND ENSURE EAVE GUTTER OVERFLOWS MECHANISM ARE INSTALLED AS PER AS3500.3 AND NATIONAL CONSTRUCTION CODE.
2.	EAVES GUTTER TO BE DESIGNED TO ARCHITECTURAL SPECIFICATION PROVIDED IT COMPLIES WITH THE MINIMUM CSA REQUIREMENTS AND MANUFACTURES SPECIFICATIONS.
EG1:	CROSS SECTIONAL AREA (CSA) OF EAVES GUTTER TO BE A MINIMUM 8200mm^2. EAVES STYLE TO BE SIMILAR TO EXISTING AND MUST MET THE ABOVE CSA REQUIREMENT.
e.EG	EXISTING EAVE GUTTER
e.DP	EXISTING DOWNPIPE
BG1:	REFER TO BOX GUTTER DETAIL ON SHEET S5
RHW:	REFER TO RAINWATER HEAD DETAIL ON SHEET S5



— — SIGNIFIES FIRST FLOOR FOOTPRINT

☐ SIGNIFIES EXTENT OF PROPOSED ROOF AREA

— — SIGNIFIES GROUND FLOOR FOOTPRINT

☐ SIGNIFIES EXTENT OF EXISTING ROOF AREA (NOT PART OF DESIGN)

☐ SIGNIFIES EXTENT OF BALCONY AREA NOT PART OF DESIGN. DRAINAGE SHALL COMPLY WITH AS/NZS 3500.3 AND THE NATIONAL CONSTRUCTION CODE: STORMWATER AND RAINWATER OUTLET ARE SHOWN INDICATIVELY AND ARE TO BE TO ARCHITECTURAL DETAILS

🟥 SIGNIFIES PROPRIETY OPERABLE ROOF SYSTEM. DRAINAGE TO MANUFACTURES SPECIFICATIONS AND COMPLY WITH AS3500.3. ROOF EXPECTED DRAIN TO DOWNPIPE AS SHOWN

MANAGEMENT OF STORMWATER PLAN - ROOF

SCALE - 1:50/A1, 1:100/A3

0 1m 2m 3m 4m 5m

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MANAGEMENT OF STORMWATER
PLAN - ROOF

Project No.	Scale: A1	Page No.	Revision
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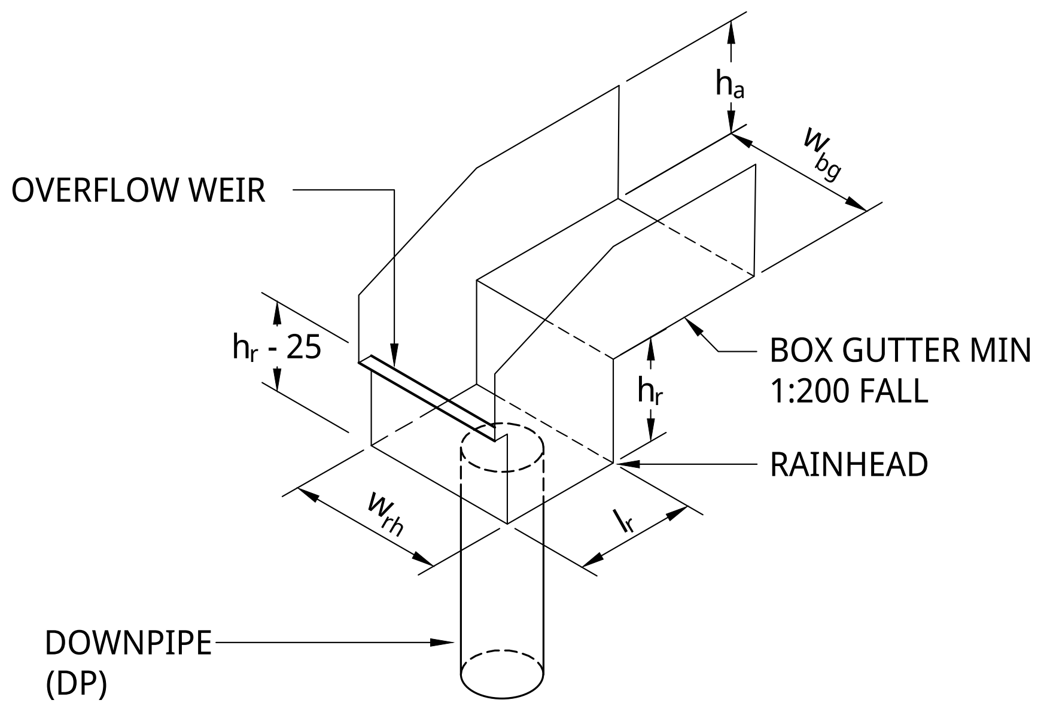

TYPICAL BOX GUTTER TO
RAINWATER HEAD DETAIL - RWH1

TABLE 1 - RAINWATER HEAD DESIGN - RWH

DESIGN STORMEVENT	-	1%	AEP
ROOF SERVICE AREA (MAX.)	-	30	m^2
SLOPE AT SOLE OF BOX GUTTER	-	1:200	-
DOWNPIPE DIAMETER	DP	100	mm
BOX GUTTER WIDTH (MIN.)	w_{bg}	300	mm
BOX GUTTER DEPTH (MIN.)	h_a	100	mm
RAINWATER HEAD DEPTH (MIN.)	h_r	125	mm
RAINWATER HEAD LENGTH (MIN.)	l_r	140	mm
RAINWATER HEAD WIDTH (MIN.)	w_{rh}	300	mm

SPECIFIC NOTES FOR RAINWATER HEAD:

1. RAINWATER HEAD OVERFLOW WEIR TO BE SET 30mm BELOW SOLE OF BOX GUTTER.

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Drawing Title
MANAGEMENT OF STORMWATER
DETAILS

Project No.
ACE24113

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AS NOTED

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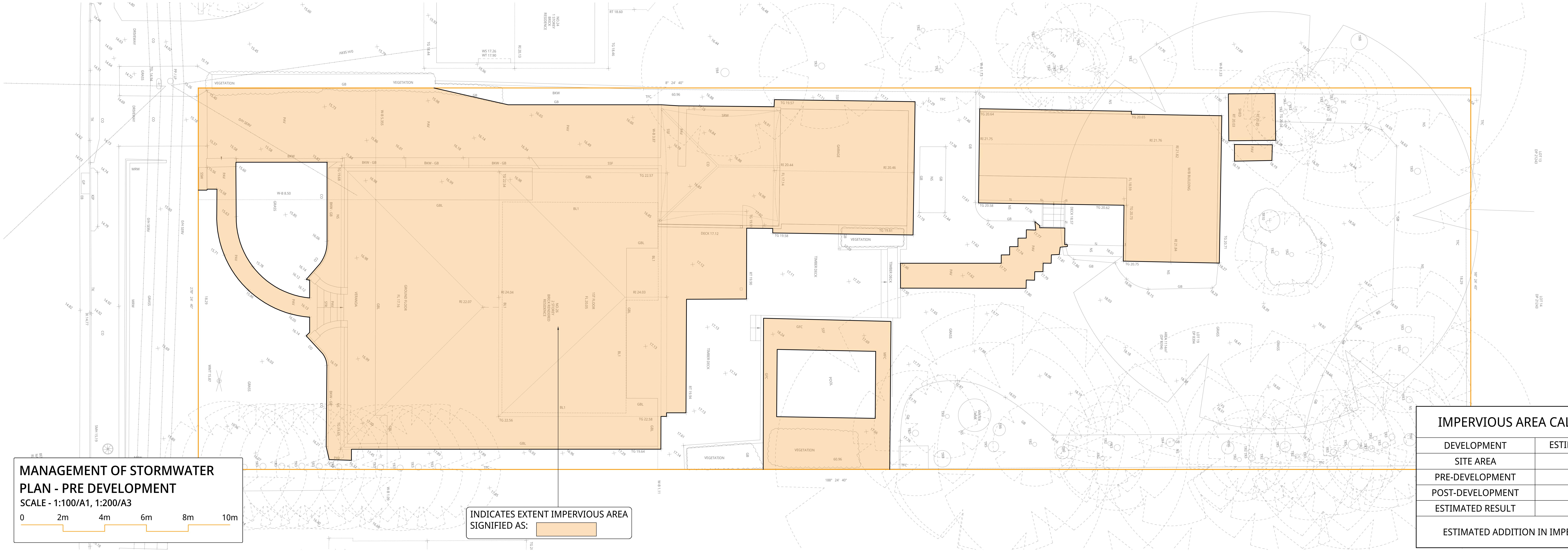


MANAGEMENT OF STORMWATER PLAN - PRE DEVELOPMENT

SCALE - 1:100/A1, 1:200/A3

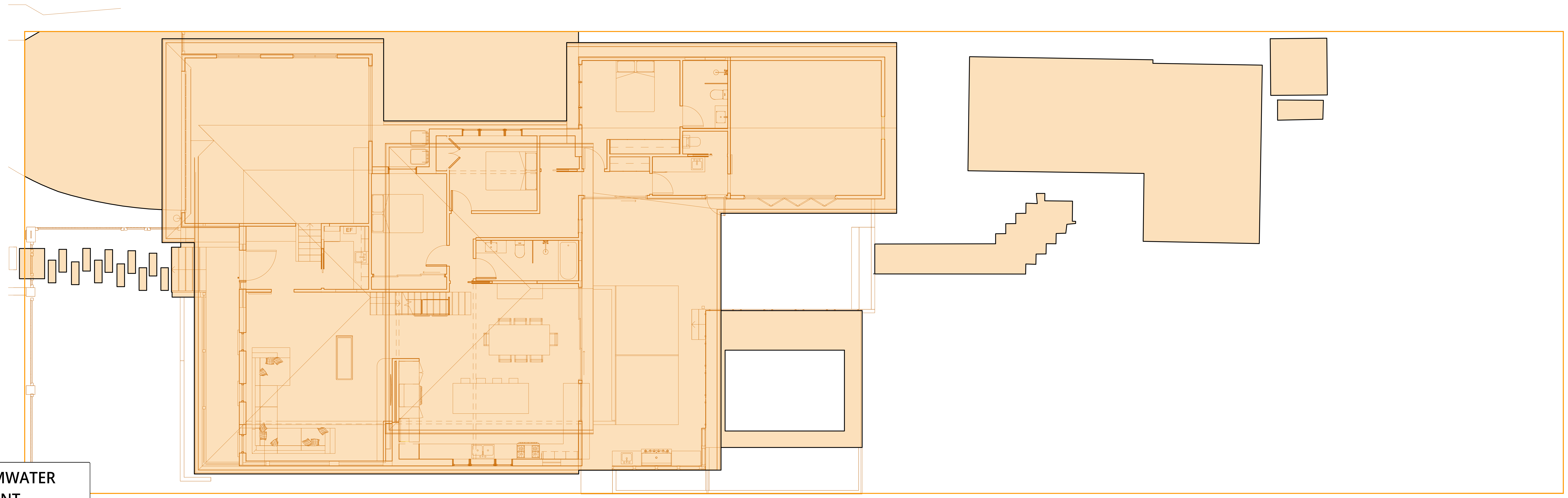
0 2m 4m 6m 8m 10m

INDICATES EXTENT IMPERVIOUS AREA SIGNIFIED AS: ▨

IMPERVIOUS AREA CALCULATION

DEVELOPMENT	ESTIMATED AREA (m^2)
SITE AREA	1114
PRE-DEVELOPMENT	511.0
POST-DEVELOPMENT	558.9
ESTIMATED RESULT	47.9

ESTIMATED ADDITION IN IMPERVIOUS AREA



MANAGEMENT OF STORMWATER PLAN - POST DEVELOPMENT

SCALE - 1:100/A1, 1:200/A3

0 2m 4m 6m 8m 10m

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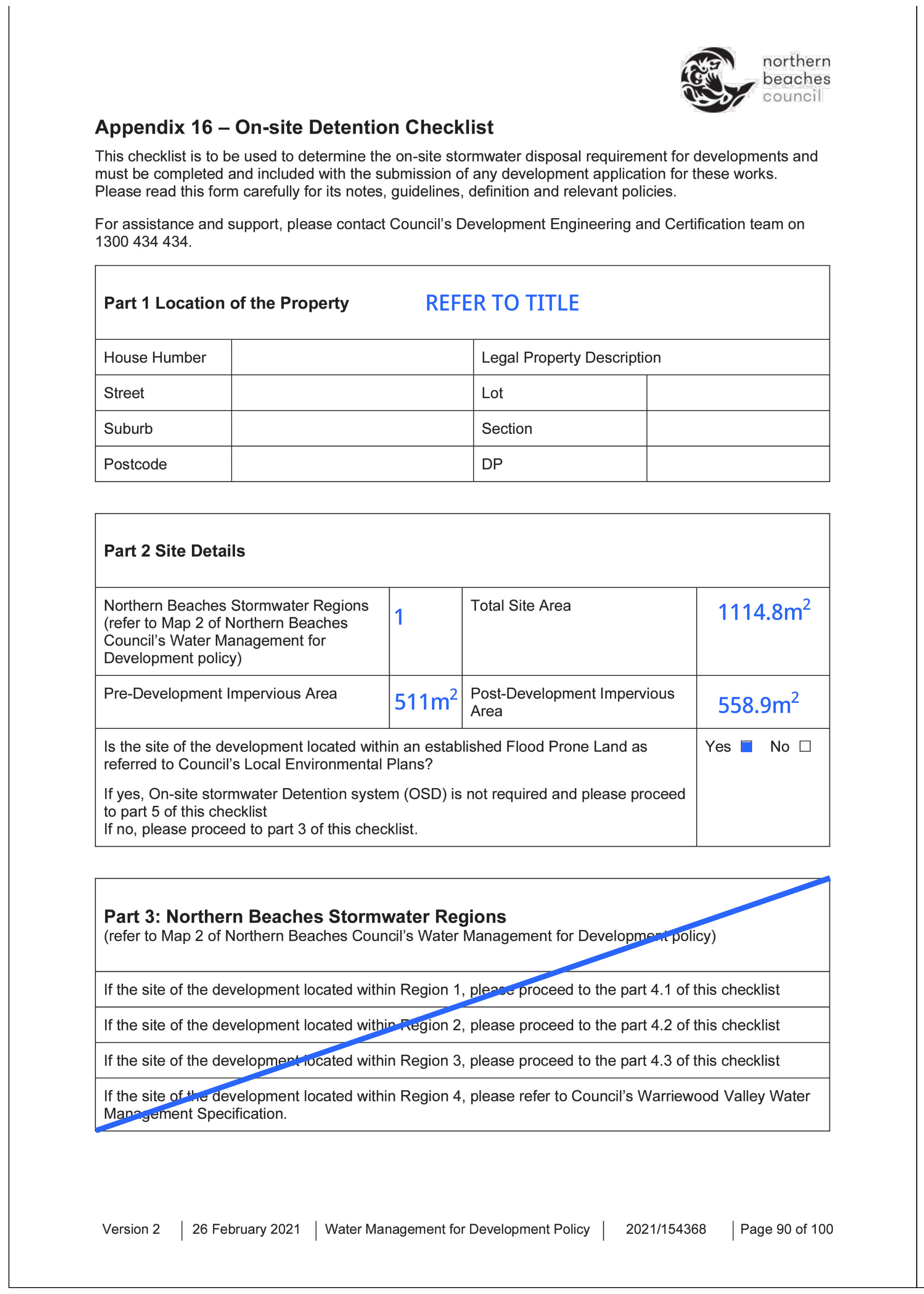
Drawing Title
MANAGEMENT OF STORMWATER
CALCULATIONS

Project No.	Scale: A1	Page No.	Revision
ACE24113	AS NOTED	S6	1



Appendix 16 – On-site Detention Checklist

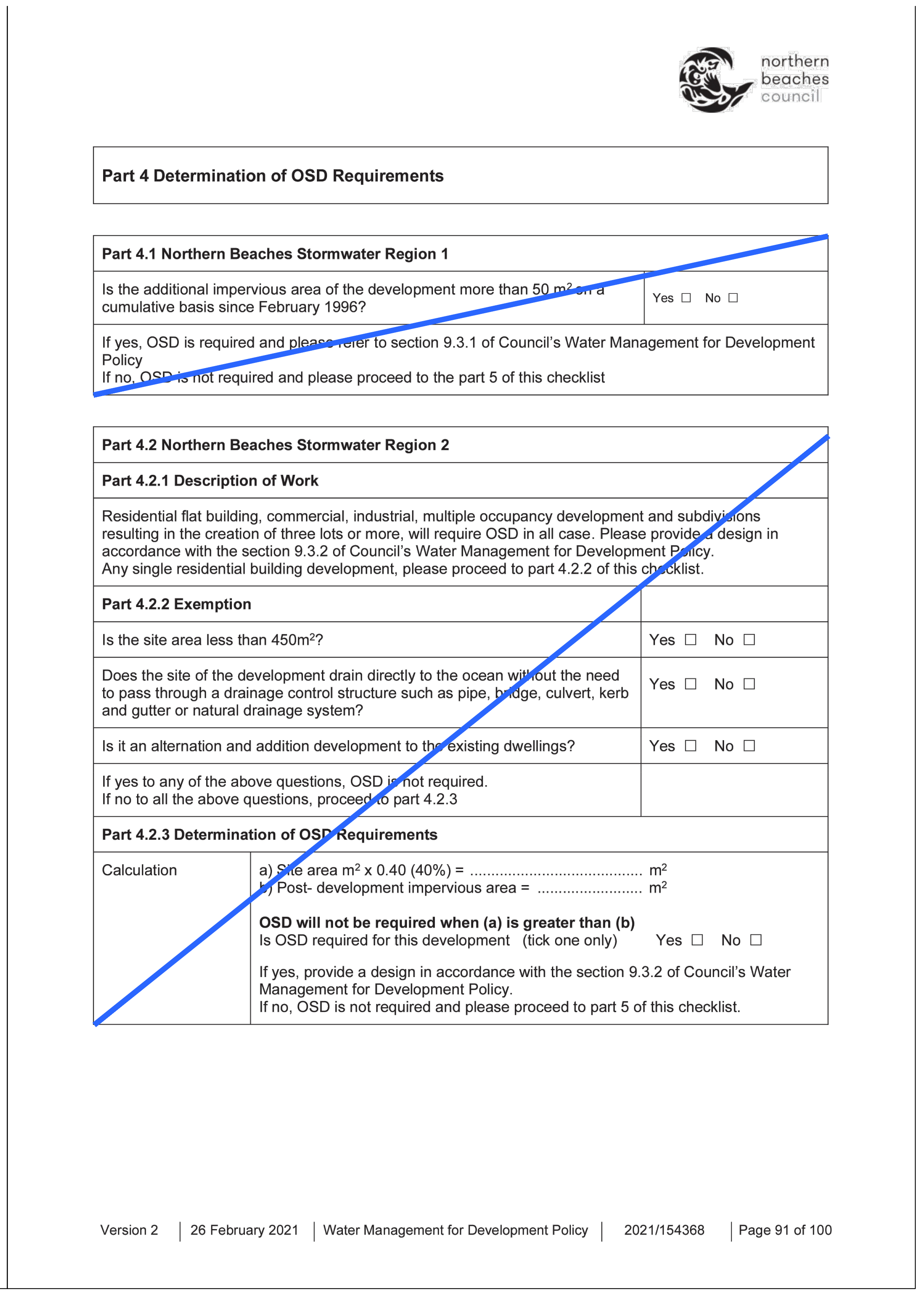
This checklist is to be used to determine the on-site stormwater disposal requirement for developments and must be completed and included with the submission of any development application for these works. Please read this form carefully for its notes, guidelines, definition and relevant policies.

For assistance and support, please contact Council's Development Engineering and Certification team on 1300 434 434.

Part 1 Location of the Property	REFER TO TITLE		
House Humber		Legal Property Description	
Street		Lot	
Suburb		Section	
Postcode		DP	

Part 2 Site Details			
Northern Beaches Stormwater Regions (refer to Map 2 of Northern Beaches Council's Water Management for Development policy)	1	Total Site Area	1114.8m^2
Pre-Development Impervious Area	511m^2	Post-Development Impervious Area	558.9m^2
Is the site of the development located within an established Flood Prone Land as referred to Council's Local Environmental Plans? If yes, On-site stormwater Detention system (OSD) is not required and please proceed to part 5 of this checklist If no, please proceed to part 3 of this checklist.			Yes ■ No ☐

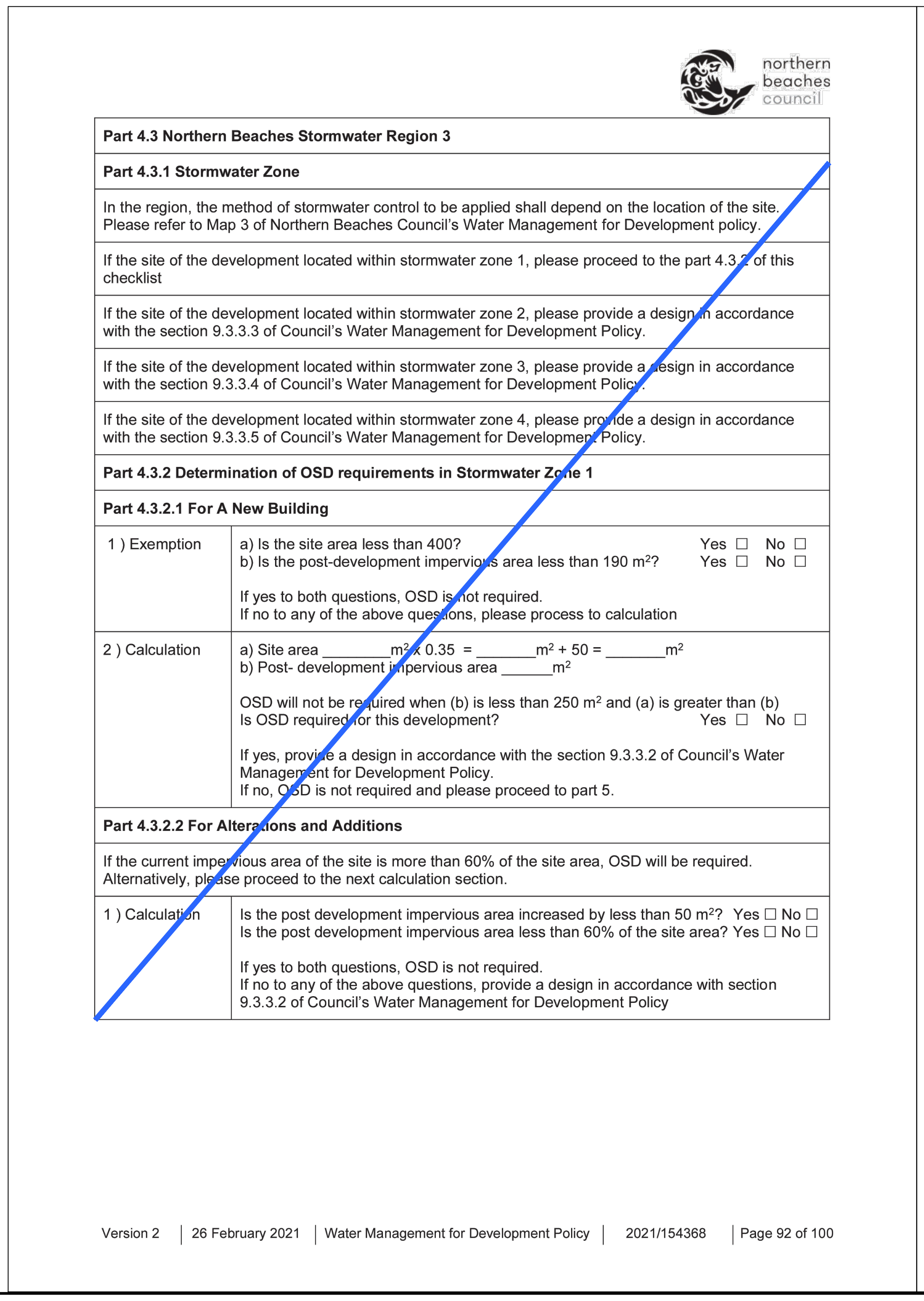
Part 3: Northern Beaches Stormwater Regions (refer to Map 2 of Northern Beaches Council's Water Management for Development policy)
If the site of the development located within Region 1, please proceed to the part 4.1 of this checklist
If the site of the development located within Region 2, please proceed to the part 4.2 of this checklist
If the site of the development located within Region 3, please proceed to the part 4.3 of this checklist
If the site of the development located within Region 4, please refer to Council's Warriewood Valley Water Management Specification.



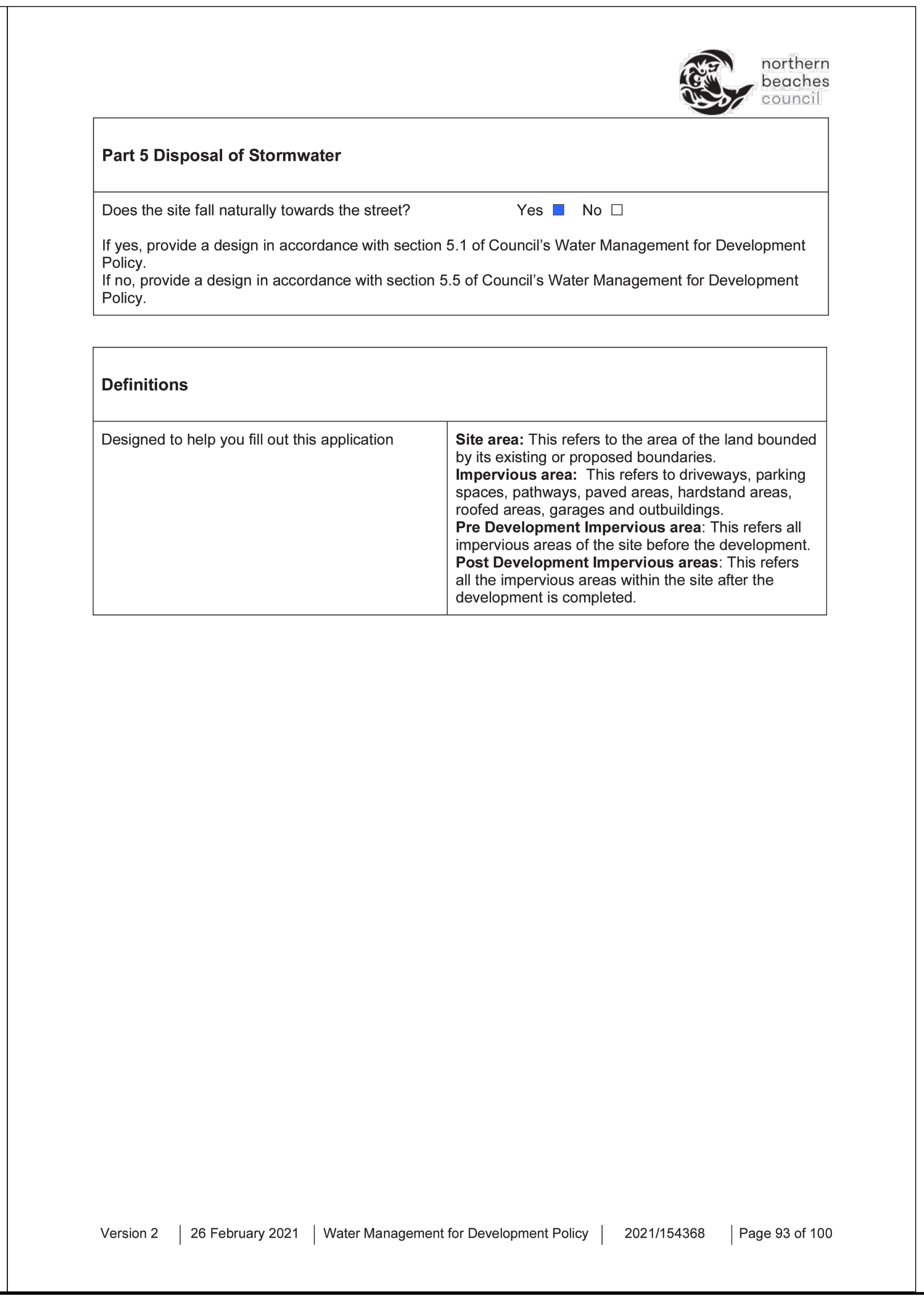
Part 4 Determination of OSD Requirements

Part 4.1 Northern Beaches Stormwater Region 1	
Is the additional impervious area of the development more than 50 m^2 on a cumulative basis since February 1996?	Yes ☐ No ☐
If yes, OSD is required and please refer to section 9.3.1 of Council's Water Management for Development Policy If no, OSD is not required and please proceed to the part 5 of this checklist	

Part 4.2 Northern Beaches Stormwater Region 2	
Part 4.2.1 Description of Work	
Residential flat building, commercial, industrial, multiple occupancy development and subdivisions resulting in the creation of three lots or more, will require OSD in all case. Please provide a design in accordance with the section 9.3.2 of Council's Water Management for Development Policy. Any single residential building development, please proceed to part 4.2.2 of this checklist.	
Part 4.2.2 Exemption	
Is the site area less than 450m^2?	Yes ☐ No ☐
Does the site of the development drain directly to the ocean without the need to pass through a drainage control structure such as pipe, bridge, culvert, kerb and gutter or natural drainage system?	Yes ☐ No ☐
Is it an alternation and addition development to the existing dwellings?	Yes ☐ No ☐
If yes to any of the above questions, OSD is not required. If no to all the above questions, proceed to part 4.2.3	
Part 4.2.3 Determination of OSD Requirements	
Calculation	a) Site area m^2 x 0.40 (40%) = ... m^2 b) Post- development impervious area = ... m^2 **OSD will not be required when (a) is greater than (b)** Is OSD required for this development (tick one only) Yes ☐ No ☐ If yes, provide a design in accordance with the section 9.3.2 of Council's Water Management for Development Policy. If no, OSD is not required and please proceed to part 5 of this checklist.



Part 4.3 Northern Beaches Stormwater Region 3	
Part 4.3.1 Stormwater Zone	
In the region, the method of stormwater control to be applied shall depend on the location of the site. Please refer to Map 3 of Northern Beaches Council's Water Management for Development policy.	
If the site of the development located within stormwater zone 1, please proceed to the part 4.3.2 of this checklist	
If the site of the development located within stormwater zone 2, please provide a design in accordance with the section 9.3.3.3 of Council's Water Management for Development Policy.	
If the site of the development located within stormwater zone 3, please provide a design in accordance with the section 9.3.3.4 of Council's Water Management for Development Policy.	
If the site of the development located within stormwater zone 4, please provide a design in accordance with the section 9.3.3.5 of Council's Water Management for Development Policy.	
Part 4.3.2 Determination of OSD requirements in Stormwater Zone 1	
Part 4.3.2.1 For A New Building	
1) Exemption	a) Is the site area less than 400? Yes ☐ No ☐ b) Is the post-development impervious area less than 190 m^2? Yes ☐ No ☐ If yes to both questions, OSD is not required. If no to any of the above questions, please process to calculation
2) Calculation	a) Site area _________m^2 x 0.35 = ________m^2 + 50 = ________m^2 b) Post- development impervious area _______m^2 OSD will not be required when (b) is less than 250 m^2 and (a) is greater than (b) Is OSD required for this development? Yes ☐ No ☐ If yes, provide a design in accordance with the section 9.3.3.2 of Council's Water Management for Development Policy. If no, OSD is not required and please proceed to part 5.
Part 4.3.2.2 For Alterations and Additions	
If the current impervious area of the site is more than 60% of the site area, OSD will be required. Alternatively, please proceed to the next calculation section.	
1) Calculation	Is the post development impervious area increased by less than 50 m^2? Yes ☐ No ☐ Is the post development impervious area less than 60% of the site area? Yes ☐ No ☐ If yes to both questions, OSD is not required. If no to any of the above questions, provide a design in accordance with section 9.3.3.2 of Council's Water Management for Development Policy



Part 5 Disposal of Stormwater
Does the site fall naturally towards the street? Yes ■ No ☐ If yes, provide a design in accordance with section 5.1 of Council's Water Management for Development Policy. If no, provide a design in accordance with section 5.5 of Council's Water Management for Development Policy.

Definitions	
Designed to help you fill out this application	**Site area:** This refers to the area of the land bounded by its existing or proposed boundaries. **Impervious area:** This refers to driveways, parking spaces, pathways, paved areas, hardstand areas, roofed areas, garages and outbuildings. **Pre Development Impervious area**: This refers all impervious areas of the site before the development. **Post Development Impervious areas**: This refers all the impervious areas within the site after the development is completed.

AMUNA
CIVIL ENGINEERING

Revision	Drawn	Date	Description	Checked	Approved
1	RM	18.12.24	ISSUED FOR CONSTRUCTION CERTIFICATE	SSD	SSD

North

Architect
BLUE SKY
BUILDING DESIGNS
Client: ELLIS

ABN:31 658 411 299

Project
PROPOSED
ALT'S AND ADD'S
No. 26 NORTH AVALON ROAD
AVALON

Drawing Title
MANAGEMENT OF STORMWATER
CHECKLIST

Project No.	Scale: A1	Page No.	Revision
ACE24113	AS NOTED	S7	1