

CONCEPT STORMWATER DRAWINGS FOR PROPOSED CASTLEREAGH TOURISM DEVELOPMENT



SUIT 2.04, L2, BLDG 3,
35-41 WATERLOO RD., MACQUARIE PARK, NSW 2113
info@smartstrucs.com.au | T: (02) 9052 6467

CLIENT

ARCHITECT

MORSON GROUP

39-65 OLD CASTLEREAGH ROAD,
CASTLEREAGH NSW 2749

Revision

A

Sheet Number

D00

Address

Project Number

240150

DRAWING LIST	
DRAWING NUMBER	DRAWING NAME
D00	COVER SHEET, LEGEND & DRAWING SCHEDULE
D01	GENERAL NOTES
D02	GENERAL ARRANGEMENT PLAN
D03	GROUND FLOOR STORMWATER DRAINAGE PLAN SHEET 1
D04	GROUND FLOOR STORMWATER DRAINAGE PLAN SHEET 2
D05	GROUND FLOOR STORMWATER DRAINAGE PLAN SHEET 3
D09	THIRD FLOOR STORMWATER DRAINAGE PLAN SHEET 1
D10	THIRD FLOOR STORMWATER DRAINAGE PLAN SHEET 2
D11	THIRD FLOOR STORMWATER DRAINAGE PLAN SHEET 3
D12	FOURTH FLOOR STORMWATER DRAINAGE PLAN SHEET 1
D13	FOURTH FLOOR STORMWATER DRAINAGE PLAN SHEET 2
D14	FOURTH FLOOR STORMWATER DRAINAGE PLAN SHEET 3
D30	PRE & POST DEVELOPMENT CATCHMENT ANALYSIS
D31	CATCHMENT ANALYSIS & MUSIC MODEL RESULTS
D35	STORMWATER DRAINAGE SECTION AND DETAILS SHEET 1
D41	CATCHMENT 1 (STAGE 1) OSD DESIGN COMPUTATION AND DETAILS SHEET 1
D42	CATCHMENT 1 (STAGE 1) OSD DESIGN COMPUTATION AND DETAILS SHEET 2
D43	CATCHMENT 2 (STAGE 2) OSD DESIGN COMPUTATION AND DETAILS SHEET 1
D44	CATCHMENT 2 (STAGE 2) OSD DESIGN COMPUTATION AND DETAILS SHEET 2
D45	CATCHMENT 3 (STAGE 3) OSD DESIGN COMPUTATION AND DETAILS SHEET 1
D46	CATCHMENT 3 (STAGE 3) OSD DESIGN COMPUTATION AND DETAILS SHEET 2
D60	EROSION AND SEDIMENT CONTROL PLAN
D61	EROSION AND SEDIMENT CONTROL DETAILS



AS 3500.3- TABLE 8.2
SIZE OF MINIMUM INTERNAL DIMENSIONS FOR
STORMWATER AND INLET PITS

DEPTH OF INVERT OF OUTLET	MINIMUM INTERNAL DIMENSIONS (mm)		
	RECTANGULAR WIDTH	LENGTH	CIRCULAR DIAMETER
≤450	350	350	
≤600	450	450	600
>600 ≤900	600	600	900
>900 ≤1200	600	900	1000
>1200	900	900	1000

SYMBOLS

RL	PIT SURFACE LEVEL	PG	PLANTER GRATE
IL	INVERT LEVEL	DP	DOWN PIPE
TK	TOP OF KERB	CO	CLEAN OUT
B.O.W	BOTTOM OF WALL	IO	INSPECTION OPENING
T.O.W	TOP OF WALL	VD	VERTICAL DROP
SV	STORMWATER DRAINAGE PIPE	VR	VERTICAL RISER
RVT	DOWNPIPE TO RAINWATER TANK	OF	OVERFLOW (DOME TYPE)
SV	OVERFLOW PIPE FROM RAINWATER TANK	CCJP	CONCRETE COVER JUNCTION PIT
Ø100	SUBSOIL PIPE	GIP	GRATED INLET PIT
Ø100	SUBSOIL PIPE	WGD	WIDE GRATED DRAIN
FW	FLOOR WASTE 150X150	OF	OVERLAND FLOW PATH
FW	FLOOR WASTE 1500	CSIP	CAST IN SLAB PIPE
RWO	RAINWATER OUTLET 3000		



IMPORTANT:
CONTRACTOR TO OBTAIN CURRENT SET OF
"DIAL BEFORE YOU DIG" PLANS ON SITE ALL
TIMES AND PRIOR TO CONSTRUCTION WORKS

DISCLAIMER:
THE DOCUMENTS PROVIDED HEREIN ARE INTENDED SOLELY FOR CIVIL AND STORMWATER DRAINAGE DESIGN PURPOSES. ANY REPRESENTATION OF ELEMENTS RELATED TO OTHER DISCIPLINES (E.G., ARCHITECTURAL, STRUCTURAL, HYDRAULIC, FAÇADE, AND OTHER SERVICES) IS BASED ON INFORMATION PROVIDED BY THE RESPECTIVE DESIGN TEAMS. THESE ELEMENTS ARE INCLUDED FOR COORDINATION PURPOSES ONLY AND DO NOT CONSTITUTE VERIFICATION OF THEIR DESIGN, COMPLIANCE, OR ADEQUACY, EXCEPT WHERE THEY INTERACT WITH THE CIVIL AND STORMWATER DRAINAGE ASPECTS. THIS INCLUDES, BUT IS NOT LIMITED TO, COMPONENTS SUCH AS FLOOR LEVELS, FALLS, SET-DOWNS, AND ANY OTHER NON-CIVIL OR NON-DRAINAGE-RELATED FEATURES.

GENERAL NOTES

1.
- IT IS THE CONTRACTORS RESPONSIBILITY TO LOCATE & LEVEL ALL EXISTING SERVICES PRIOR TO THE COMMENCEMENT OF ANY EARTHWORKS. ALL DESIGN LEVELS SHOWN ON PLAN SHALL BE VERIFIED ON SITE PRIOR TO THE COMMENCEMENT OF ANY WORK.
2.
- THESE PLANS SHALL BE READ IN CONJUNCTION WITH OTHER RELEVANT CONSULTANTS' PLANS, SPECIFICATIONS, CONDITIONS OF DEVELOPMENT CONSENT AND CONSTRUCTION CERTIFICATE REQUIREMENTS. WHERE DISCREPANCIES ARE FOUND SMART STRUCTURE AUSTRALIA MUST BE CONTACTED IMMEDIATELY FOR VERIFICATION.
3.
- ALL STORWMATER LINES' JOINTS BE FULLY SEALED AND WATERTIGHT IN ACCORDANCE WITH AS3500.3.2021.
4.
- ALL LINES ARE TO BE MIN. 100Ø UPVC @ MIN 1.0% GRADE UNLESS NOTED OTHERWISE.
5.
- ALL PIPES TO HAVE MIN 200mm COVER IF LOCATED WITHIN PROPERTY.
6.
- ALL PITS IN DRIVEWAYS BE HEAVY DUTY GRATES. DIRECT SURFACE FLOW TO ALL GRATED SURFACE INLET PITS.
7.
- ALL WORK DO BE DONE IN ACCORDANCE WITH AS/NZ 3500.3 (CURRENT EDITION) AND COUNCIL SPECIFICATIONS.
8.
- COUNCIL'S TREE PRESERVATION ORDER IS TO BE STRICTLY ADHERED TO. NO TREES SHALL BE REMOVED UNTIL PERMIT IS OBTAINED
9.
- PUBLIC UTILITY SERVICES ARE TO BE ADJUSTED AS NECESSARY AT THE DEVELOPER'S EXPENSE
10.
- LOCATION OF DOWNPIPES & FLOOR WASTES ARE INDICATIVE ONLY. DOWNPIPE & FLOOR WASTE SIZE, LOCATION & QUANTITY TO BE DETERMINED BY BUILDER & IN ACCORDANCE WITH RELEVANT AUSTRALIAN STANDARDS.
11.
- THIS PLAN IS TO BE READ IN CONJUNCTION WITH THE ARCHITECTURAL, LANDSCAPE AND STRUCTURAL AND ALL OTHER RELEVANT CONSULTANT'S PLANS.
12.
- ALL LIFT PITS ARE TO BE FULLY TANKED UNLESS NOTED OTHERWISE.
13.
- PROVIDE EMERGENCY OVERFLOW TO ALL PLANTER BOX AND BALCONIES.
14.
- ALL RAINWATER TANKS TO BE FITTED WITH A FIRST FLUSH DEVICE TO PREVENT POTENTIAL CONTAMINANTS FROM ENTERING THE TANKS.
15.
- ANY DISCREPANCIES OR OMISSIONS SHALL BE REFERRED TO THE DESIGN ENGINEER FOR RESOLUTION.
16.
- ANY VARIATION TO THE WORKS AS SHOWN ON THE APPROVED DRAWINGS ARE TO BE CONFIRMED BY SMART STRUCTURES AUSTRALIA PRIOR TO THEIR COMMENCEMENT
17.
- ALL PITS OR GRATES IN TRAFFICABLE AREAS TO BE HEAVY DUTY.
18.
- CHILD -PROOF LOCKING SYSTEM MUST BE EMPLOYED FOR ALL GRATES AND LIDS IN COMMON AREAS
19.
- ALL GUTTERS WILL BE FITTED WITH LEAF GUARDS AND SHOULD BE INSPECTED AND CLEANED TO ENSURE LEAF LITTER CANNOT ENTER THE DOWNPIPES
20.
- PROVIDE EMERGENCY OVERFLOW TO ALL PLANTER BOX AND BALCONIES.
21.
- ALL PITS WITH DEPTH MORE THAN 900mm MUST HAVE IRON STEPS AND TO BE BENCHED AND STREAMLINED
22.
- PROVIDE STORMWATER GRATE 200Wx200D AT THE BASE OF ALL MECHANICAL SHAFTS AND UNCOVERED STAIRS OR OPENINGS.
23.
- ENSURE ALL DRAINAGE WORKS ARE AWAY FROM TREE ROOTS
24.
- SERVICES SHOWN ON THESE PLANS HAVE BEEN LOCATED FROM INFORMATION SUPPLIED BY THE RELEVANT AUTHORITIES AND FIELD INVESTIGATION AND ARE NOT GUARANTEED COMPLETE NOR CORRECT. IT IS THE CLIENT AND CONTRACTOR'S RESPONSIBILITY TO LOCATE ALL PRIOR TO CONSTRUCTION.
25.
- ALL VARIATIONS TO THE WORKS AS SHOWN ON THE APPROVED DRAWINGS ARE TO BE

CONFIRMED BY SMART STRUCTURES AUSTRALIA PRIOR TO COMMENCEMENT OF WORKS.

26.
- THE MINIMUM SIZES OF THE STORMWATER DRAINS SHALL NOT BE LESS THAN DN90 FOR CLASS 1 BUILDINGS AND DN100 FOR OTHER CLASSES OF BUILDING OR AS REQUIRED BY THE REGULATORY AUTHORITY
27.
- ALL STORMWATER DRAINAGE PITS IN GARDEN OR TURFED AREAS TO BE FITTED WITH PERFORATED GALVANISED STEEL MESH UNDER THE LIDS TO PREVENT DEBRIS ENTERING STORMWATER NETWORK.
28.
- ALL PITS/GRATES IN COMMON AREAS TO BE HEELPROOF TYPE.
29.
- MAKE SMOOTH JUNCTION WITH ALL EXISTING WORK
30.
- VEHICULAR ACCESS AND ALL SERVICES TO BE MAINTAINED AT ALL TIMES TO ADJOINING PROPERTIES AFFECTED BY CONSTRUCTION
31.
- RAINWATER SUPPLY PLUMBING TO BE CONNECTED TO OUTLETS WHERE REQUIRED BY BASIX CERTIFICATE (BY OTHERS)
32.
- POTABLE WATER CONNECTION TO RAINWATER TANK TO BE TO THE SATISFACTION OF THE REGULATORY AUTHORITY. THIS MAY REQUIRE PROVISION OF PERMANENT AIR GAP AND/OR BACKFLOW PREVENTION DEVICE
33.
- PROVIDE APPROPRIATE FLOAT VALVES AND/OR SOLENOID VALVES TO CONTROL TOWN WATER SUPPLY INLET TO TANK IN ORDER TO ACHIEVE THE TOP-UP INDICATED ON THE TYPICAL DETAIL
34.
- ALL PLUMBING WORKS ARE TO BE CARRIED OUT BY LICENSED PLUMBERS IN ACCORDANCE WITH AS/NZS3500.1 NATIONAL PLUMBING AND DRAINAGE CODE
35.
- PRESSURE PUMP ELECTRICAL CONNECTION TO BE CARRIED OUT BY A LICENSED ELECTRICIAN
36.
- ONLY ROOF RUN-OFF IS TO BE DIRECTED TO THE RAINWATER TANK .SURFACE WATER INLETS ARE NOT TO BE CONNECTED
37.
- PIPE MATERIALS FOR RAINWATER SUPPLY PLUMBING ARE TO BE APPROVED MATERIALS TO AS/NZS3500 PART 1 SECTION 2 AND TO BE CLEARLY AND PERMANENTLY IDENTIFIED AS 'RAINWATER'. THIS MAY BE ACHIEVED FOR BELOW GROUND PIPES USING IDENTIFICATION TAPE(MADE IN ACCORDANCE WITH AS2648) OR FOR ABOVE GROUND PIPES BY USING ADHESIVE PIPE MARKERS (MADE IN ACCORDANCE WITH AS1345)
38.
- EVERY RAINWATER SUPPLY OUTLET POINT AND THE RAINWATER TANK ARE TO BE LABELED 'RAINWATER' ON A METALLIC SIGN IN ACCORDANCE WITH AS1319
39.
- ALL INLETS AND OUTLETS TO THE RAINWATER TANK ARE TO HAVE SUITABLE MEASURES PROVIDED TO PREVENT MOSQUITO AND VERMIN ENTRY.
40.
- PIPE INSTALLATION TO BE IN ACCORDANCE WITH THE REQUIREMENTS OF CURRENT AS3500.3 AND RELEVANT VOLUME OF NCC (NATIONAL CONSTRUCTION CODE). THIS IS CONTRACTOR'S RESPONSIBILITY TO CHECK IMPACT OF PIPE TRENCHING TO SURROUNDING STRUCTURAL AND NON STRUCTURAL ELEMENTS.
41.
- PRESSURIZED PIPES / RISING MAINS FROM PUMP OUT TANK TO BE CONNECTED DIRECTLY AND INDEPENDENTLY TO EITHER OSD TANK OR BOUNDARY PIT AS PER DESIGN PLANS.

SUBSOIL DRAINAGE NOTES

42.
- PROVIDE SUBSOIL DRAINS TO INTERCEPT GROUNDWATER SEEPAGE AND PREVENT WATER BUILD-UP BEHIND WALLS AND UNDER FLOORS AND PAVEMENTS. CONNECT SUBSOIL TO SURFACE DRAINS OR TO THE STORMWATER DRAINAGE SYSTEM AS APPLICABLE.
43.
- ALL SUBSOIL PIPES SHALL BE 100MM SLOTTED CORRUGATED UPVC IN A FILTER SOCK U.N.O.
44.
- FILTER SOCKS ARE TO BE POLYESTER PERMEABLE SOCKS CAPABLE OF RETAINING PARTICLES GREATER THAN 0.25MM IN SIZE. SECURELY FIT OR JOIN THE SOCK AT EACH JOINT.
45.
- WHERE SUBSOIL DRAINS PASS UNDER EXTERNAL SLABS AND VEHICULAR PAVEMENTS, UNSLOTTED UPVC SEWER GRADE PIPE IS TO BE USED.

46.
- SUBSOIL DRAINAGE TRENCHES ARE TO BE WRAPPED WITH PERMEABLE TEXTILE FABRIC 'BIDIM A12' OR EQUIVALENT.
47.
- TO REDUCE GROUND WATER TRACKING WITHIN STORMWATER TRENCHES INSTALL A 3M LENGTH OF SUBSOIL PIPE IN PIPE TRENCHES DRAINING IN DIRECTION OF FALL OF PIPE AND CONNECT TO DOWNSTREAM STORMWATER DRAINAGE PIT.
48.
- SUBSOIL MINIMUM CLEARANCE DEPTHS, MEASURED TO THE CROWN OF THE PIPE, WHERE THE PIPE PASSES BELOW THE FOLLOWING ELEMENTS:

100mm BELOW FORMATION LEVEL OF THE PAVEMENT, KERB OR CHANNEL.

AT THE AVERAGE GRADIENT OF THE BOTTOM OF FOOTINGS.
49.
- JUNCTIONS OF SUBSOIL PIPES PROVIDE TEES, COUPLINGS OR ADAPTORS IN ACCORDANCE WITH AS2439.1.
50.
- SUBSOIL DRAINAGE TRENCHES SHALL BE A MINIMUM 300mm WIDE
51.
- GRADE THE TRENCH FLOOR EVENLY TO THE GRADIENT OF THE PIPELINE. IF THE TRENCH FLOOR IS ROCK, CORRECT ANY IRREGULARITIES WITH COMPACTED BEDDING MATERIAL. BED PIPING ON A CONTINUOUS UNDERLAY OF BEDDING MATERIAL, AT LEAST 75mm THICK AFTER COMPACTION. LAY THE PIPE WITH ONE LINE OF PERFORATIONS AT THE BOTTOM.
52.
- PLACE THE MATERIAL IN THE PIPE SURROUND IN LAYERS SMALLER THAN OR EQUAL TO 200MM LOOSE THICKNESS, AND COMPACT WITHOUT DAMAGING OR DISPLACING PIPING.

Client:

-

Architect:

MORSON GROUP

Approved by: K.E.

Internal Revisions:

Rev. #	Drafter	Engineer	Date
	Revision	Description	
A	N.E.	K.E. ISSUE FOR D.A.	28.04.25

Notes

1. Drawings to be read in conjunction with architectural drawings.
2. Refer to architectural drawings for all setout, levels.
3. Do not scale any dimensions
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NOT FOR CONSTRUCTION

Project North



Scale @ A1:

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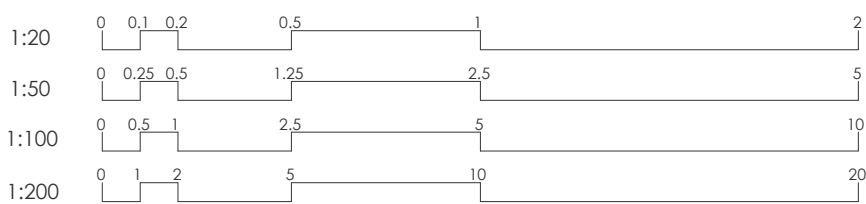
Sheet Name:

GENERAL NOTES

Sheet Number:

Revision:

D01
A



FINAL BASIN

39-65 OLD CASTLEREAGH ROAD,
CASTLEREAGH NSW 2749

Address

Start Date: APRIL 2025
Project No. 240150

Client:

Architect:
MORSON GROUP

Approved by: K.E.

Internal Revisions:

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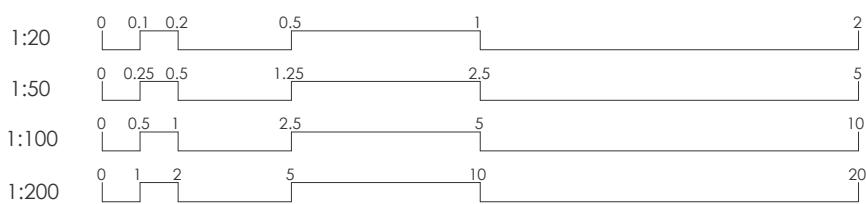
Sheet Name:
GENERAL
ARRANGEMENT PLAN

Sheet Number:

D02

Revision:

A

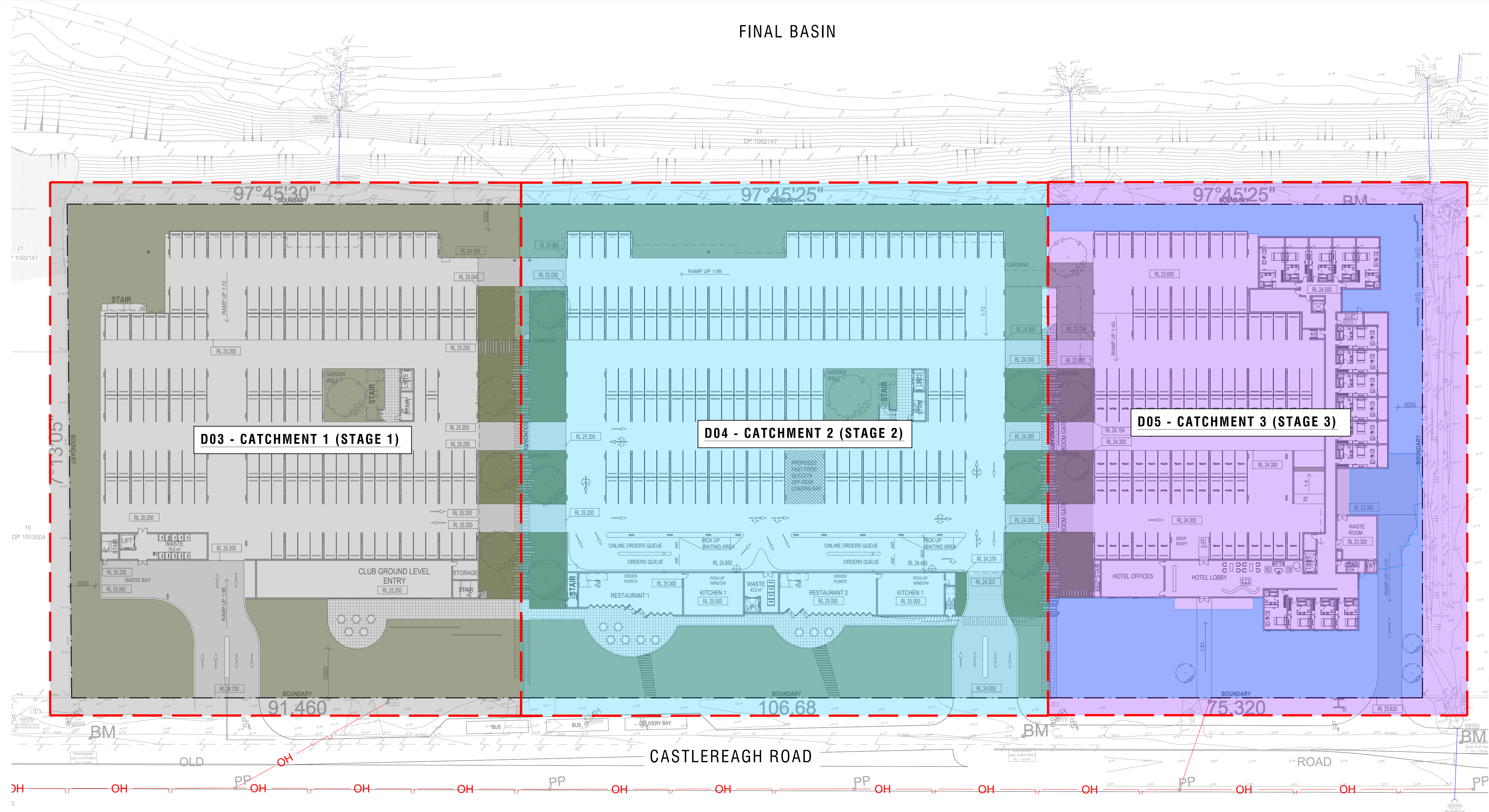


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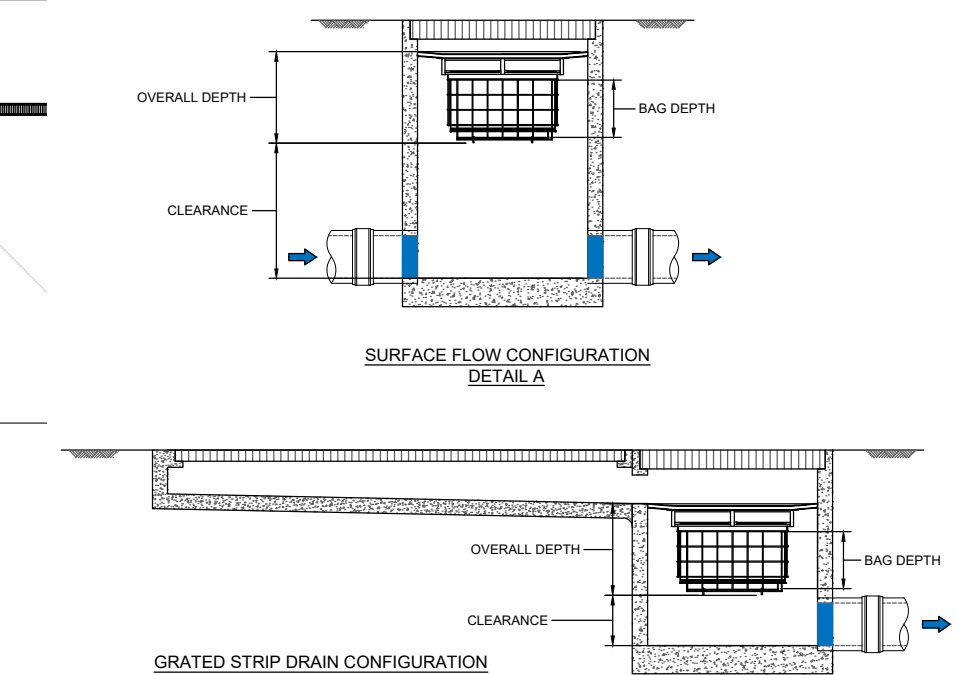
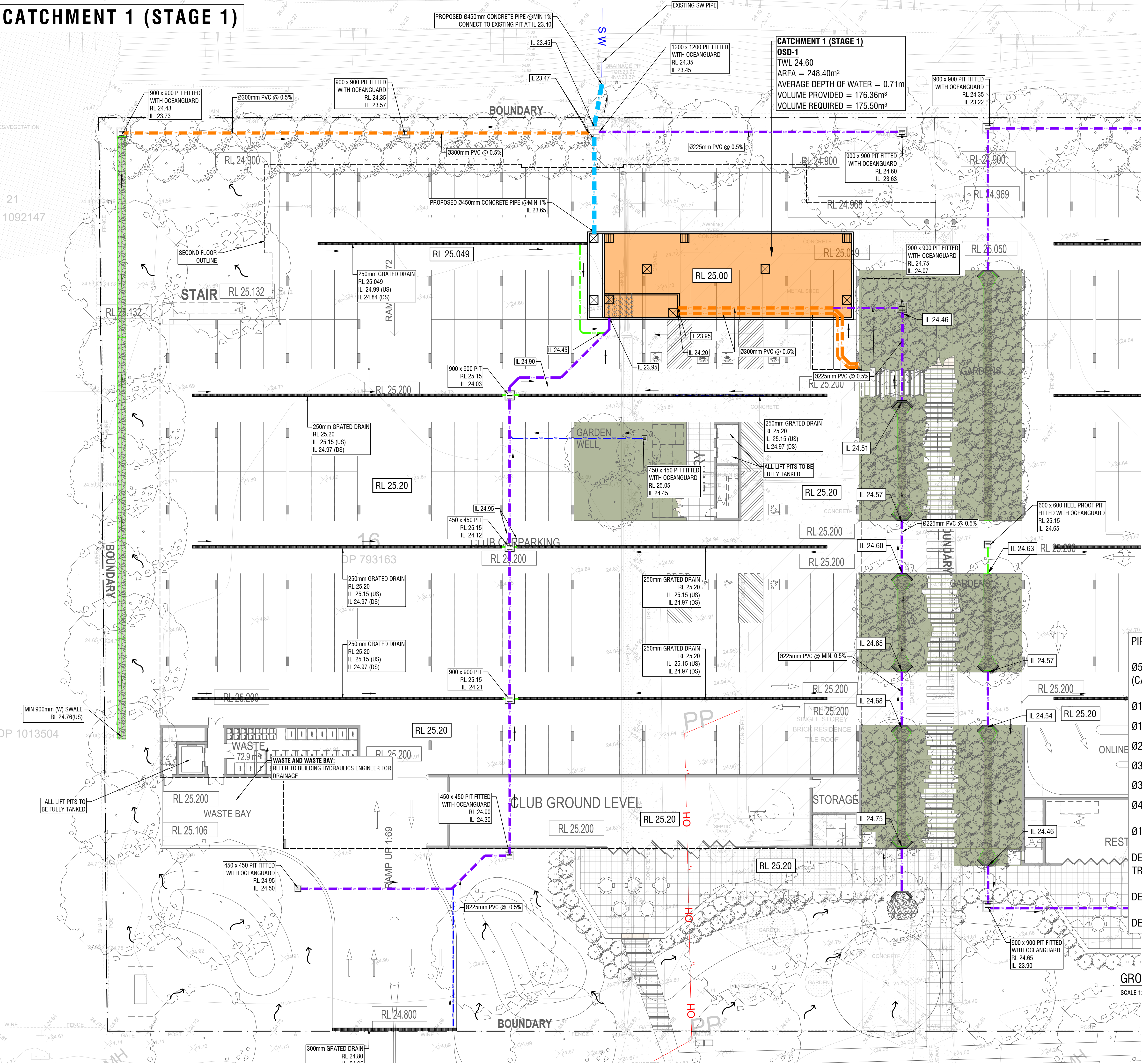
 - DENOTES EXTENT OF OVERLAND
FLOW PATH AS PER FLOOD STUDY

GENERAL ARRANGEMENT PLAN

SCALE 1: 400



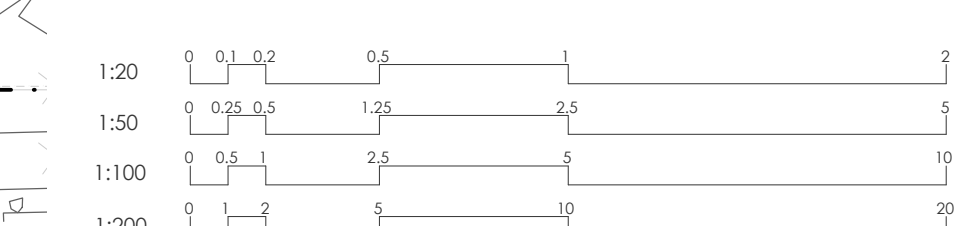
CATCHMENT 1 (STAGE 1)



PIPE LEGEND (U.N.O):

Ø50mm STORMWATER PIPE (CAST IN SLAB)	SW SW SW SW
Ø100mm STORMWATER PIPE	SW SW SW SW
Ø150mm STORMWATER PIPE	SW SW SW SW
Ø225mm STORMWATER PIPE	SW SW SW SW
Ø300mm STORMWATER PIPE	SW SW SW SW
Ø375mm STORMWATER PIPE	SW SW SW SW
Ø450mm STORMWATER PIPE	SW SW SW SW
Ø100mm OVERFLOW PIPE LINE	OF OF OF OF
DENOTES Ø100mm PIPE/DP TRANSFER	SW SW SW SW
DENOTES Ø65mm PIPE OVERFLOW	OF OF OF OF
DENOTES DIRECTION OF FLOW	→ → → →

GROUND FLOOR STORMWATER DRAINAGE PLAN
SCALE 1: 200



SUIT 2.04, L2, BLDG 3,
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Start Date: APRIL 2025
Project No. 240150

Client:
Architect: MORSON GROUP

Approved by: K.E.

Internal Revisions:

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A	N.E.	K.E.	28.04.25
B	N.E.	K.E.	12.06.25

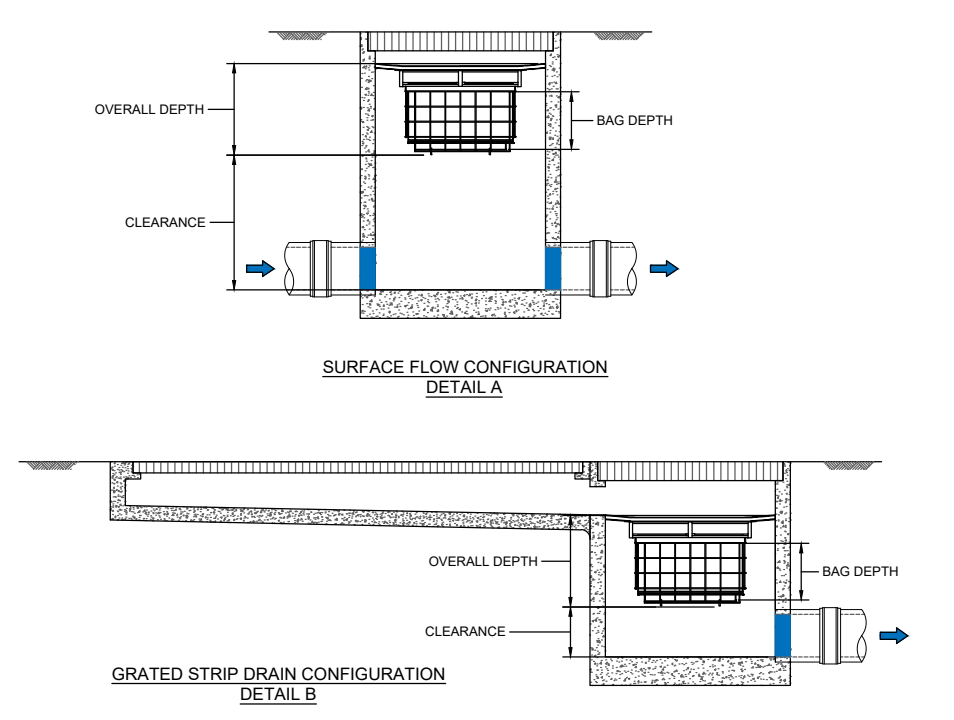
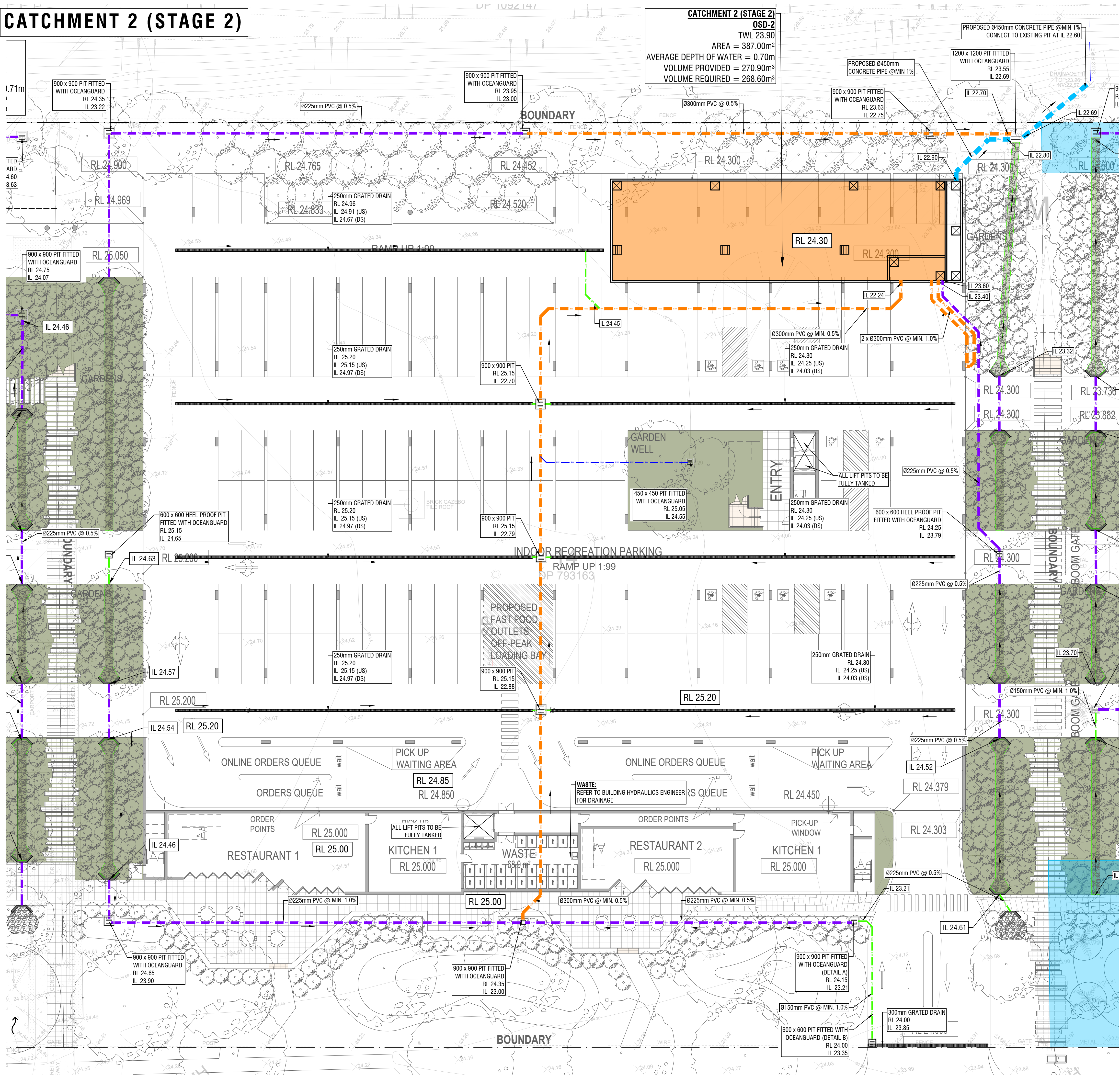
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Project North
Scale @ A1: AS SHOWN
Sheet Name: GROUND FLOOR STORMWATER DRAINAGE PLAN
SHEET 1
Sheet Number:

Revision: D03
C

CATCHMENT 2 (STAGE 2)



Address
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CASTLEREAGH NSW 2749

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Architect:
MORSON GROUP

Approved by: **K.E.**

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A	N.E.	K.E.	ISSUE FOR D.A.	28.04.25
B	N.E.	K.E.	ISSUE FOR D.A.	12.06.25

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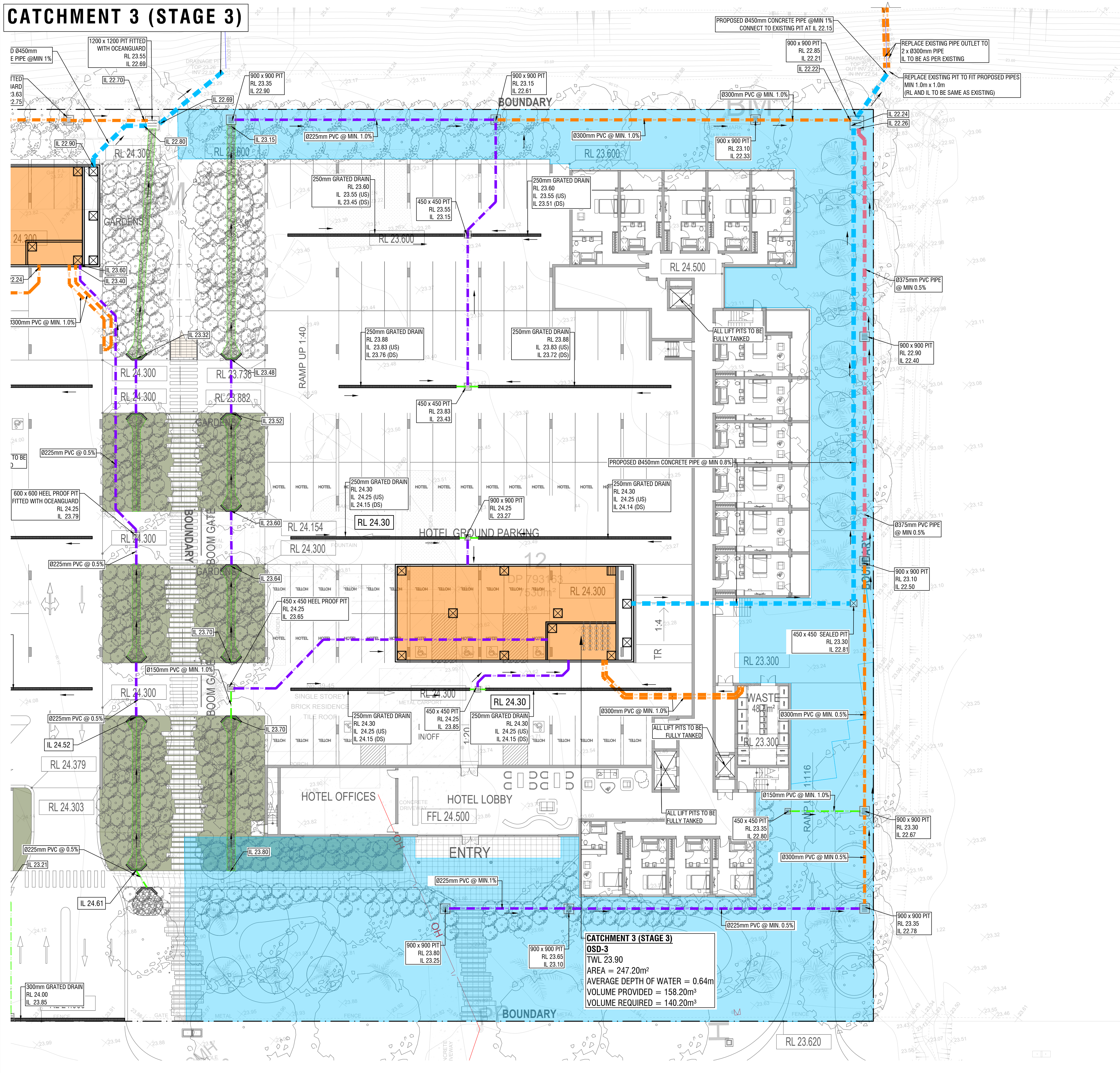
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**GROUND FLOOR
STORMWATER
DRAINAGE PLAN
SHEET 2**
Sheet Number:

Revision:

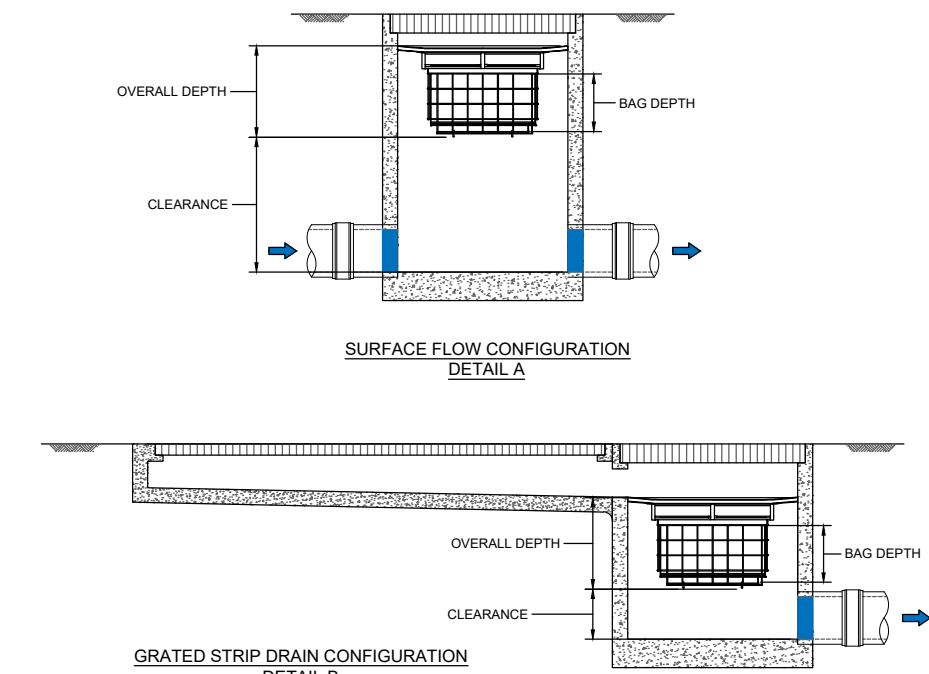
D04

B

CATCHMENT 3 (STAGE 3)



CATCHMENT 3 (STAGE 3)
OSD-3
TWL 23.90
AREA = 247.20m²
AVERAGE DEPTH OF WATER = 0.64m
VOLUME PROVIDED = 158.20m³
VOLUME REQUIRED = 140.20m³

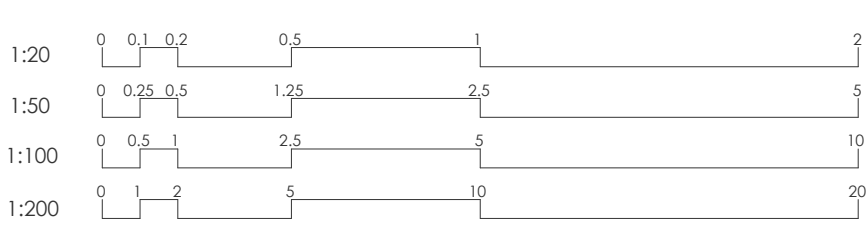


LEGEND:

DF
- DENOTES EXTENT OF OVERLAND FLOW PATH AS PER FLOOD STUDY

PIPE LEGEND (U.N.O):	
Ø50mm STORMWATER PIPE (CAST IN SLAB)	SW RW
Ø100mm STORMWATER PIPE	SW SW SW
Ø150mm STORMWATER PIPE	SW SW SW
Ø225mm STORMWATER PIPE	SW SW SW
Ø300mm STORMWATER PIPE	SW SW SW
Ø375mm STORMWATER PIPE	SW SW SW
Ø450mm STORMWATER PIPE	SW SW SW
Ø100mm OVERFLOW PIPE LINE	OF OF OF
DENOTES Ø100mm PIPE/DP TRANSFER	SW SW SW SW
DENOTES Ø65mm PIPE OVERFLOW	
DENOTES DIRECTION OF FLOW	→ → → →

GROUND FLOOR STORMWATER DRAINAGE PLAN
SCALE 1: 200



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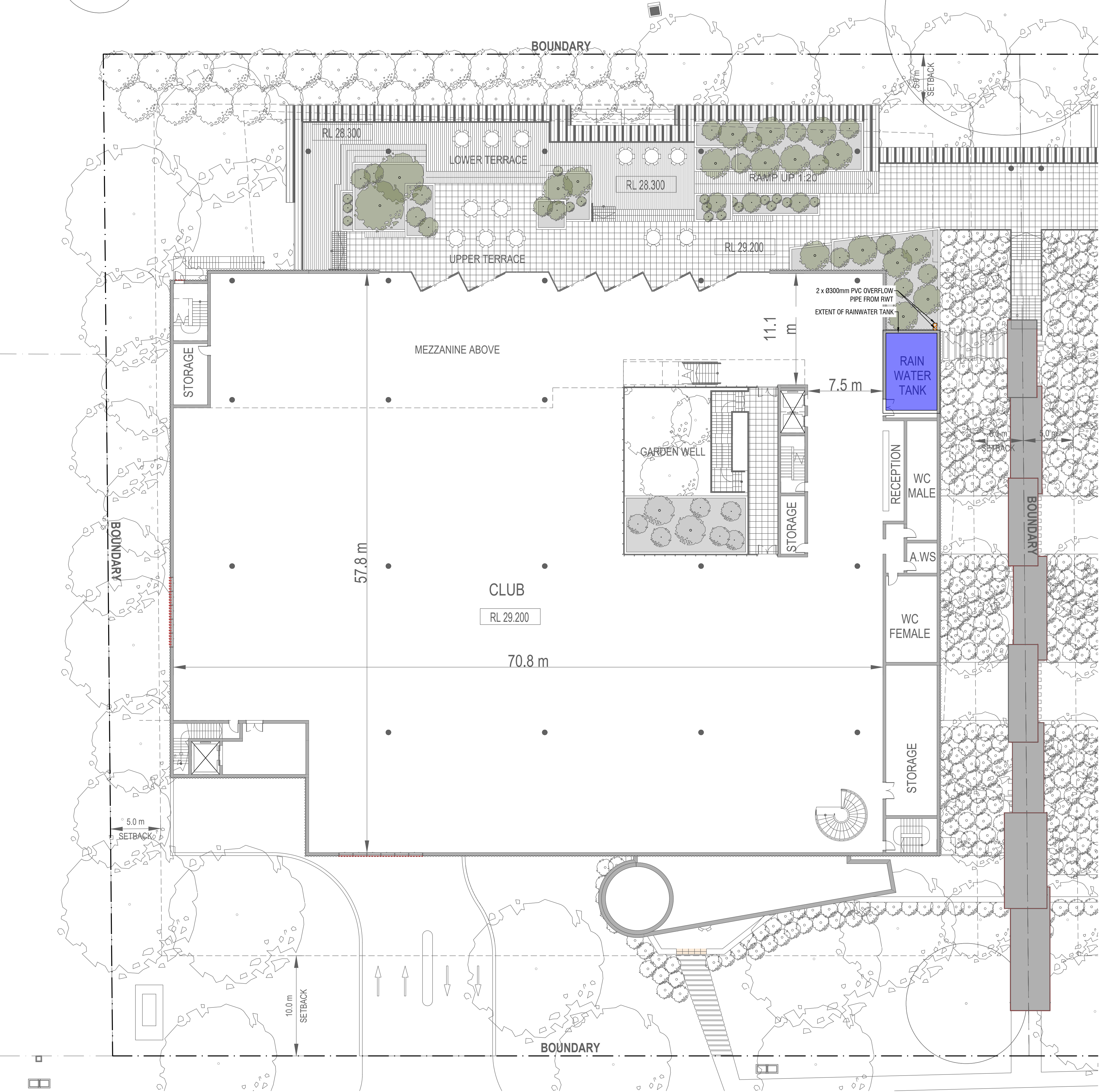


Scale @ A1: **AS SHOWN**

Sheet Name:
GROUND FLOOR STORMWATER DRAINAGE PLAN SHEET 3
Sheet Number:

Revision:
D05
B

CATCHMENT 1 (STAGE 1)



PIPE LEGEND (U.N.O):

Ø50mm STORMWATER PIPE
(CAST IN SLAB)

SW

SW

SW

RWT

RWT

RWT

Ø100mm STORMWATER PIPE

SW

SW

SW

SW

SW

SW

Ø150mm STORMWATER PIPE

SW

SW

SW

SW

SW

SW

Ø225mm STORMWATER PIPE

SW

SW

SW

SW

SW

SW

Ø300mm STORMWATER PIPE

SW

SW

SW

SW

SW

SW

Ø150mm OVERFLOW PIPE LINE

OF

OF

OF

OF

OF

OF

DENOTES Ø100mm PIPE/DP
TRANSFER

SW

SW

SW

RWT

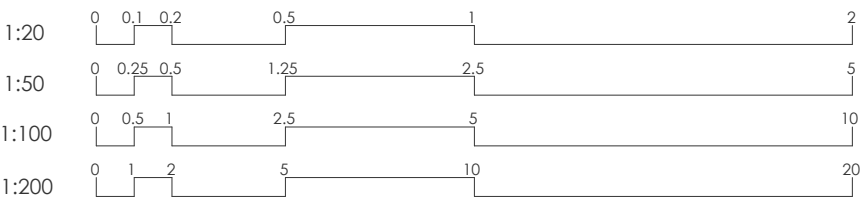
RWT

RWT

DENOTES Ø65mm PIPE OVERFLOW

DENOTES DIRECTION OF FLOW

SECOND FLOOR STORMWATER DRAINAGE PLAN
SCALE 1: 200



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Notes

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Scale @ A1:

AS SHOWN

Sheet Name:

SECOND FLOOR
STORMWATER
DRAINAGE PLAN
SHEET 1

Sheet Number:

D09

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B

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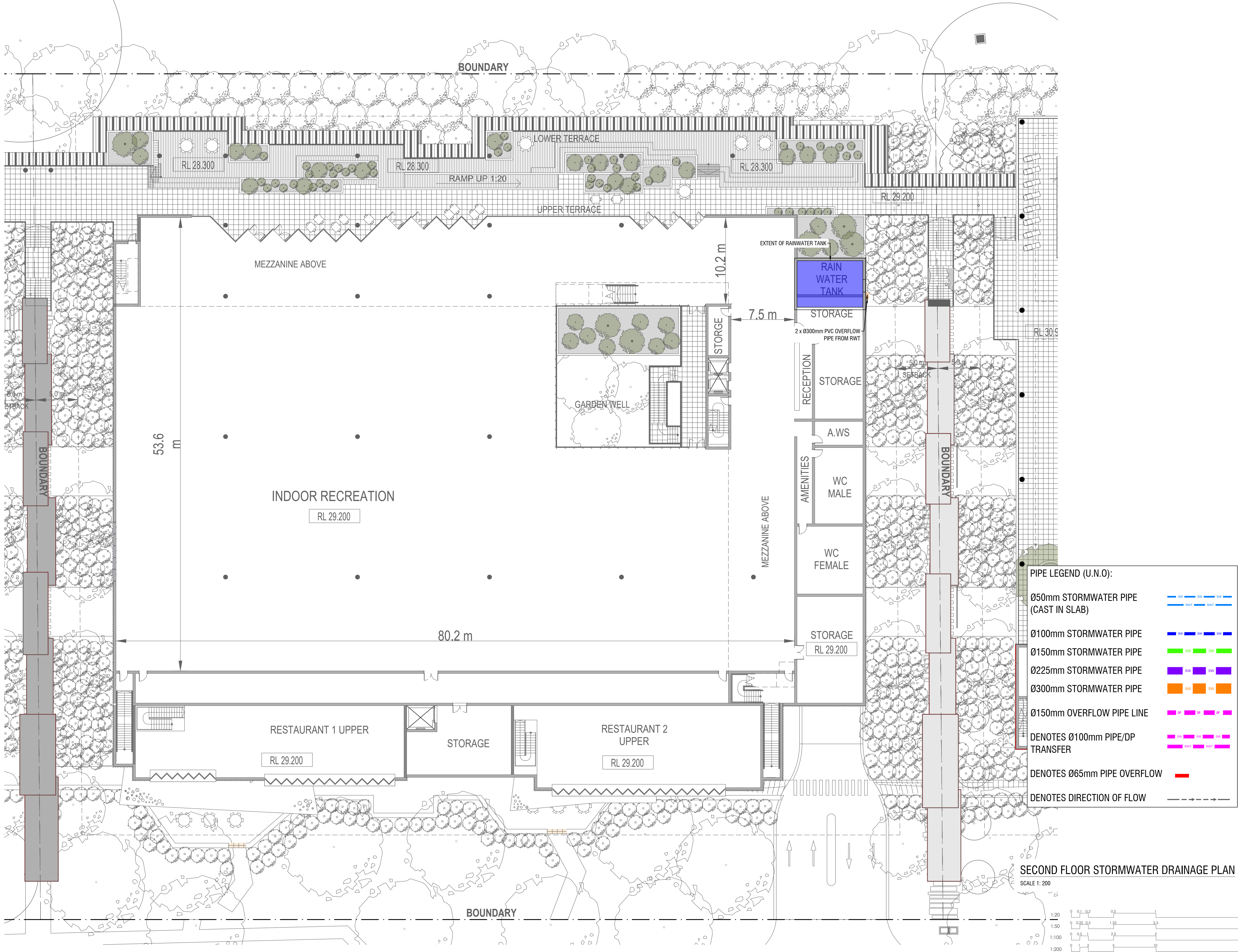
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Sheet Name:
**SECOND FLOOR
STORMWATER
DRAINAGE PLAN
SHEET 2**
Sheet Number:

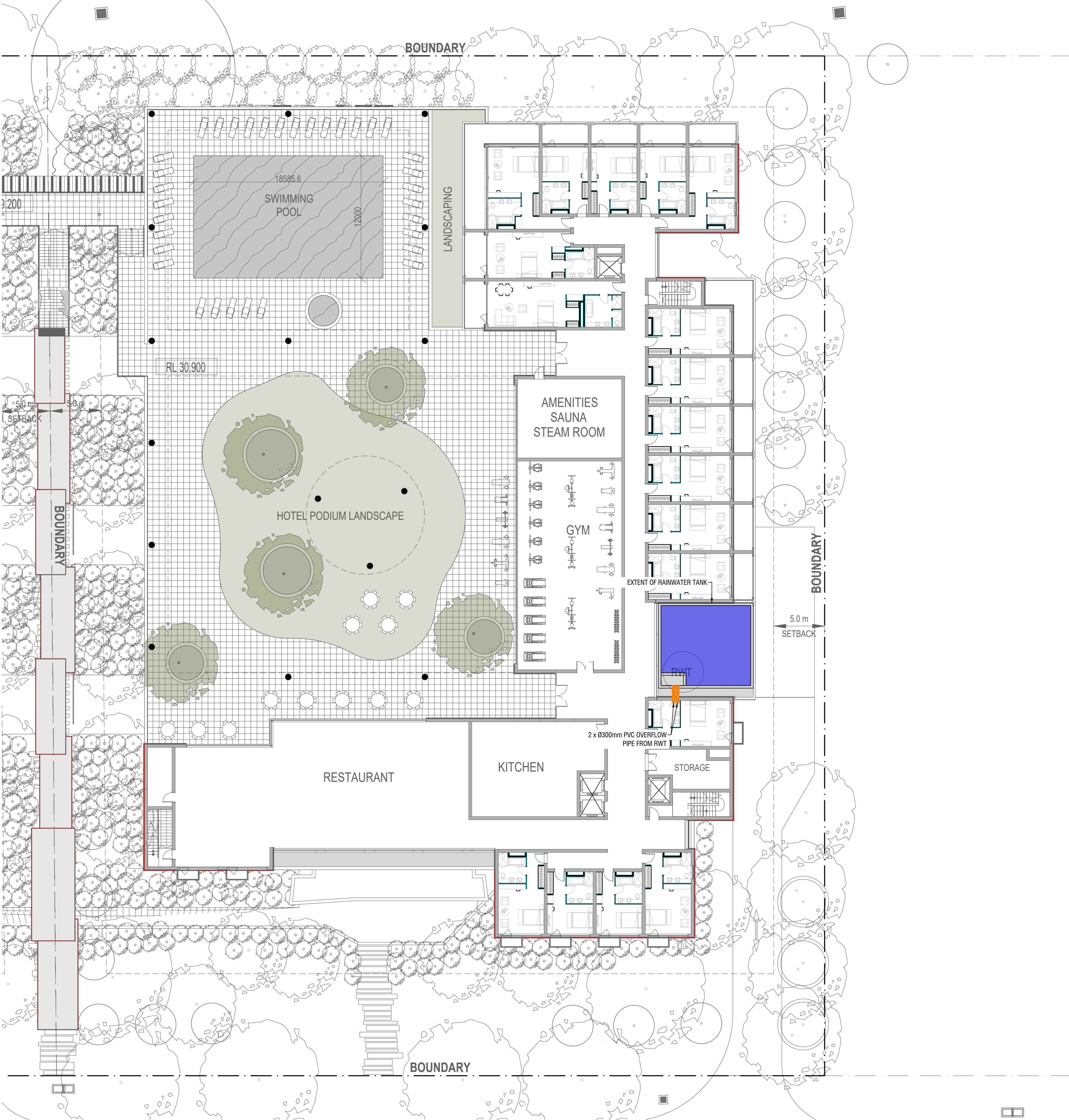
D10

Revision:

B



CATCHMENT 3 (STAGE 3)



PIPE LEGEND (U.N.O):

Ø50mm STORMWATER PIPE
(CAST IN SLAB)

SW

SW

SW

SW

RWT

RWT

RWT

Ø100mm STORMWATER PIPE

SW

SW

SW

SW

Ø150mm STORMWATER PIPE

SW

SW

SW

SW

Ø225mm STORMWATER PIPE

SW

SW

SW

SW

Ø300mm STORMWATER PIPE

SW

SW

SW

SW

Ø150mm OVERFLOW PIPE LINE

OF

OF

OF

OF

DENOTES Ø100mm PIPE/DP
TRANSFER

SW

SW

SW

SW

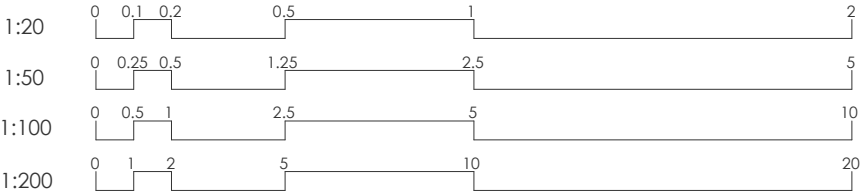
RWT

RWT

DENOTES Ø65mm PIPE OVERFLOW

DENOTES DIRECTION OF FLOW

SECOND FLOOR STORMWATER DRAINAGE PLAN
SCALE 1: 200



Address

39-65 OLD CASTLEREAGH ROAD,
CASTLEREAGH NSW 2749

Start Date:

APRIL 2025

Project No.

240150

Client:

Architect:

MORSON GROUP

Approved by:

K.E.

Internal Revisions:			
Rev. #	Drafter	Engineer	Date
		Revision Description	
A	N.E.	K.E. ISSUE FOR D.A.	28.04.25
B	N.E.	K.E. ISSUE FOR D.A.	12.06.25

- Notes
1. Drawings to be read in conjunction with architectural drawings.

2. Refer to architectural drawings for all setout, levels.

3. Do not scale any dimensions

4. Drawings to be read & printed in colour.

PRELIMINARY
NOT FOR CONSTRUCTION

Project North

Scale @ A1:

AS SHOWN

Sheet Name:

SECOND FLOOR
STORMWATER
DRAINAGE PLAN
SHEET 3

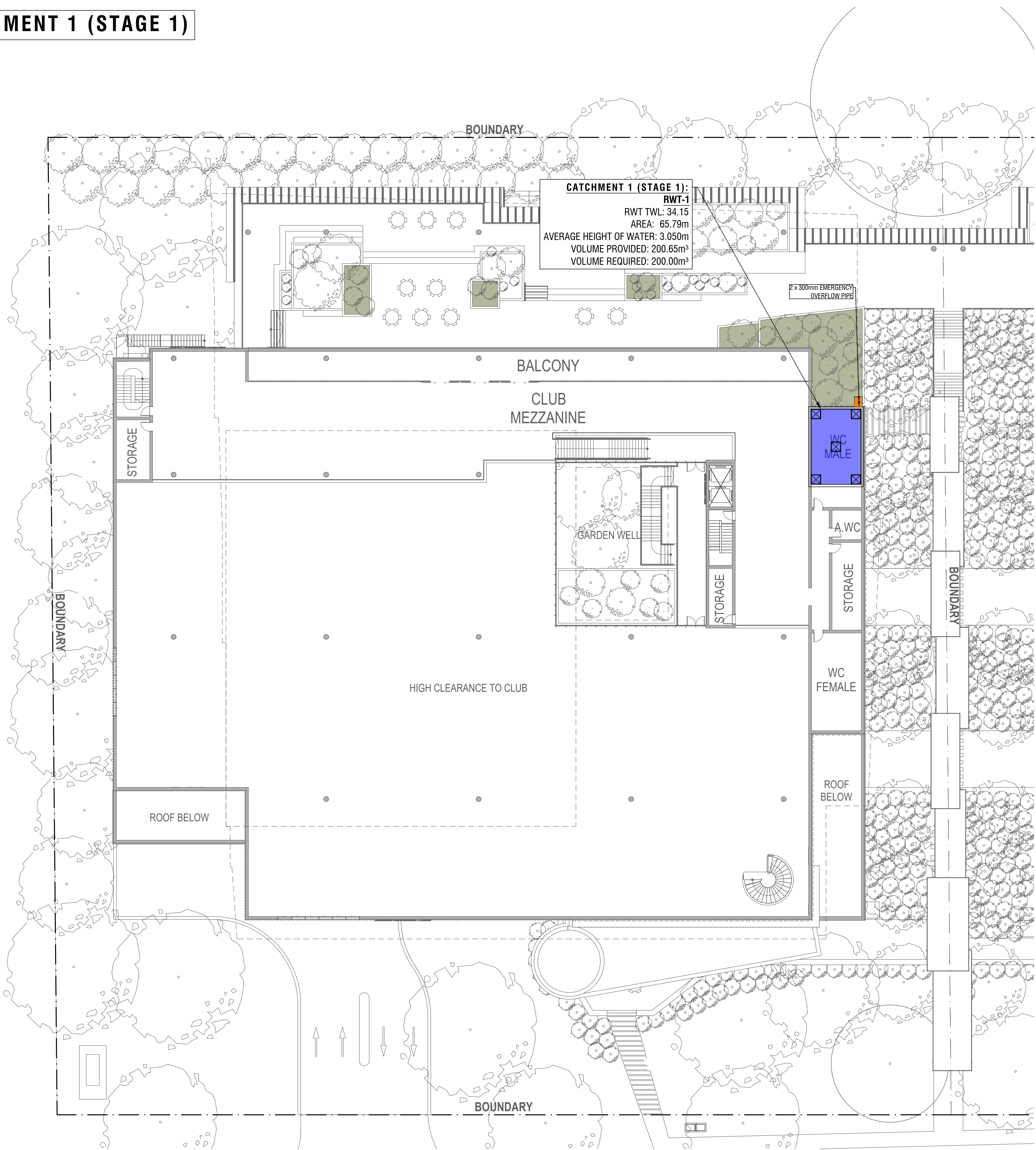
Sheet Number:

Revision:

D11

B

CATCHMENT 1 (STAGE 1)



PIPE LEGEND (U.N.O):

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Ø100mm STORMWATER PIPE

Ø150mm STORMWATER PIPE

Ø225mm STORMWATER PIPE

Ø300mm STORMWATER PIPE

Ø150mm OVERFLOW PIPE LINE

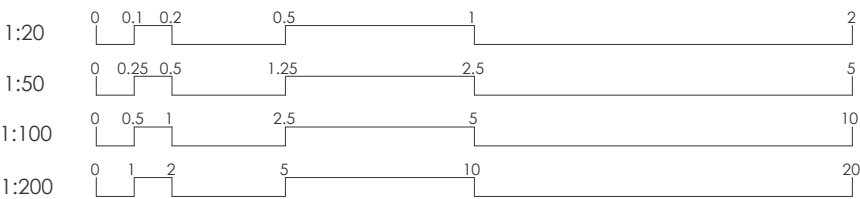
DENOTES Ø100mm PIPE/DP TRANSFER

DENOTES Ø65mm PIPE OVERFLOW

DENOTES DIRECTION OF FLOW

THIRD FLOOR STORMWATER DRAINAGE PLAN

SCALE 1: 200



SUIT 2.04, L2, BLDG 3,
35-41 WATERLOO RD., MACQUARIE PARK, NSW 2113
info@smartstructs.com.au | T: (02) 9052 6467

Address

39-65 OLD CASTLEREAGH ROAD,
CASTLEREAGH NSW 2749

Start Date: APRIL 2025

Project No. 240150

Client:

Architect: MORSON GROUP

Approved by: K.E.

Rev. #	Drafter	Engineer	Revision Description	Date
A	N.E.	K.E.	ISSUE FOR D.A.	28.04.25
B	N.E.	K.E.	ISSUE FOR D.A.	12.06.25

Notes

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PRELIMINARY
NOT FOR CONSTRUCTION

Project North

Scale @ A1: AS SHOWN

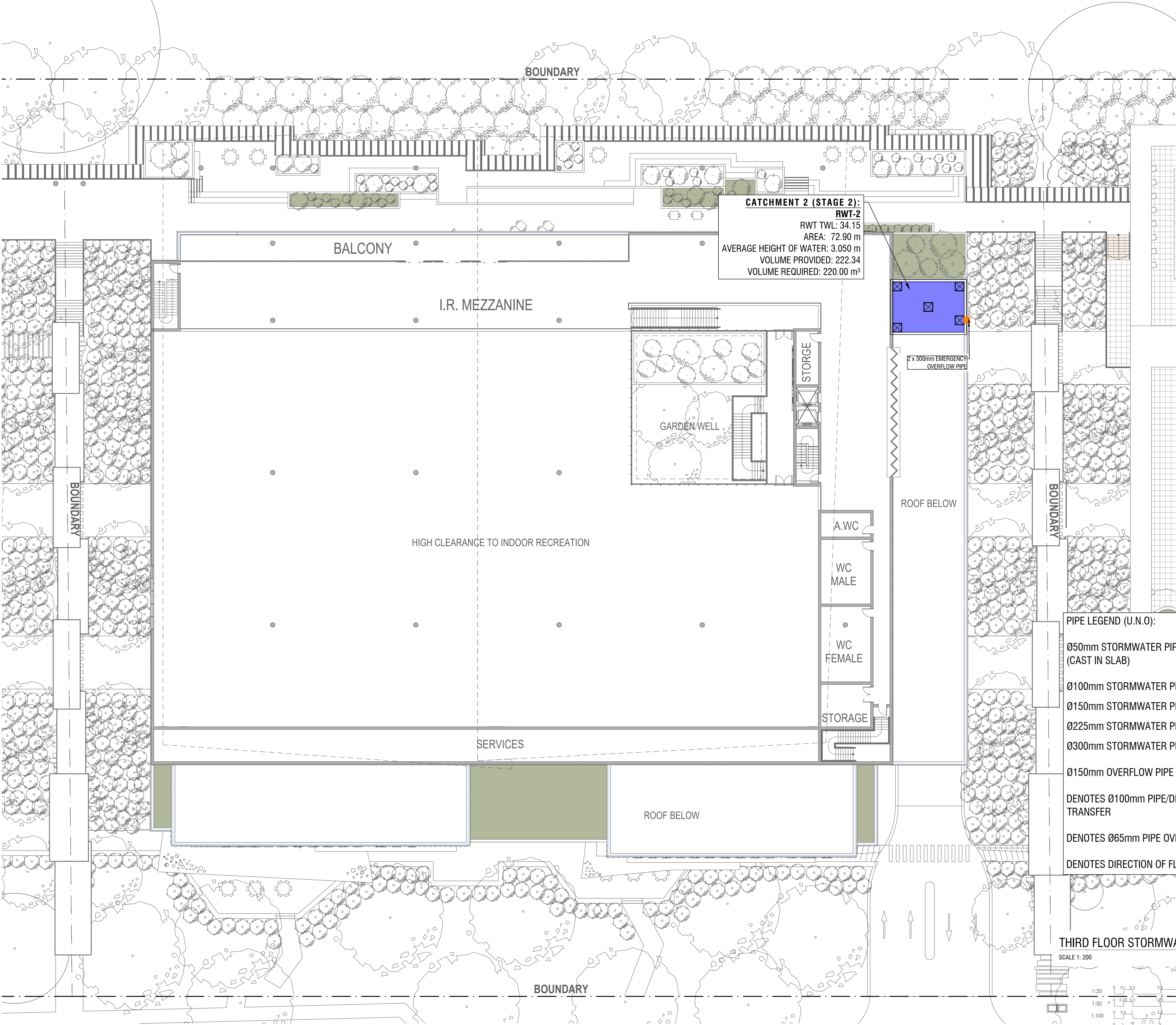
Sheet Name:
THIRD FLOOR
STORMWATER
DRAINAGE PLAN
SHEET 1
Sheet Number:

Revision:

D12

B

CATCHMENT 2 (STAGE 2)



CATCHMENT 2 (STAGE 2):
RWT-2
RWT TWL: 34.15
AREA: 72.90 m
AVERAGE HEIGHT OF WATER: 3.050 m
VOLUME PROVIDED: 222.34
VOLUME REQUIRED: 220.00 m³

2 x 300mm EMERGENCY
OVERFLOW PIPE

ROOF BELOW

A.WC

WC
MALE

WC
FEMALE

STORAGE

SERVICES

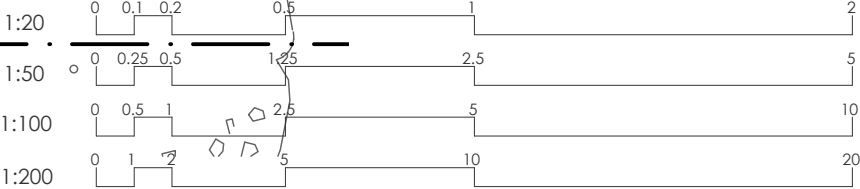
ROOF BELOW

PIPE LEGEND (U.N.O):

Ø50mm STORMWATER PIPE (CAST IN SLAB)	SW SW SW SW RWT RWT RWT RWT
Ø100mm STORMWATER PIPE	SW SW SW SW
Ø150mm STORMWATER PIPE	SW SW SW SW
Ø225mm STORMWATER PIPE	SW SW SW SW
Ø300mm STORMWATER PIPE	SW SW SW SW
Ø150mm OVERFLOW PIPE LINE	OF OF OF OF
DENOTES Ø100mm PIPE/DP TRANSFER	SW SW SW SW RWT RWT RWT RWT
DENOTES Ø65mm PIPE OVERFLOW	
DENOTES DIRECTION OF FLOW	→ → → →

THIRD FLOOR STORMWATER DRAINAGE PLAN

SCALE 1: 200



Address
**39-65 OLD CASTLEREAGH ROAD,
CASTLEREAGH NSW 2749**

Start Date: **APRIL 2025**
Project No. **240150**

Client:
Architect:
MORSON GROUP

Approved by: **K.E.**

Internal Revisions:			
Rev. #	Drafter	Engineer	Date
		Revision Description	
A	N.E.	K.E. ISSUE FOR D.A.	28.04.25
B	N.E.	K.E. ISSUE FOR D.A.	03.06.25

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**PRELIMINARY
NOT FOR CONSTRUCTION**

Project North

Scale @ A1: **AS SHOWN**

Sheet Name:
**THIRD FLOOR
STORMWATER
DRAINAGE PLAN
SHEET 2**

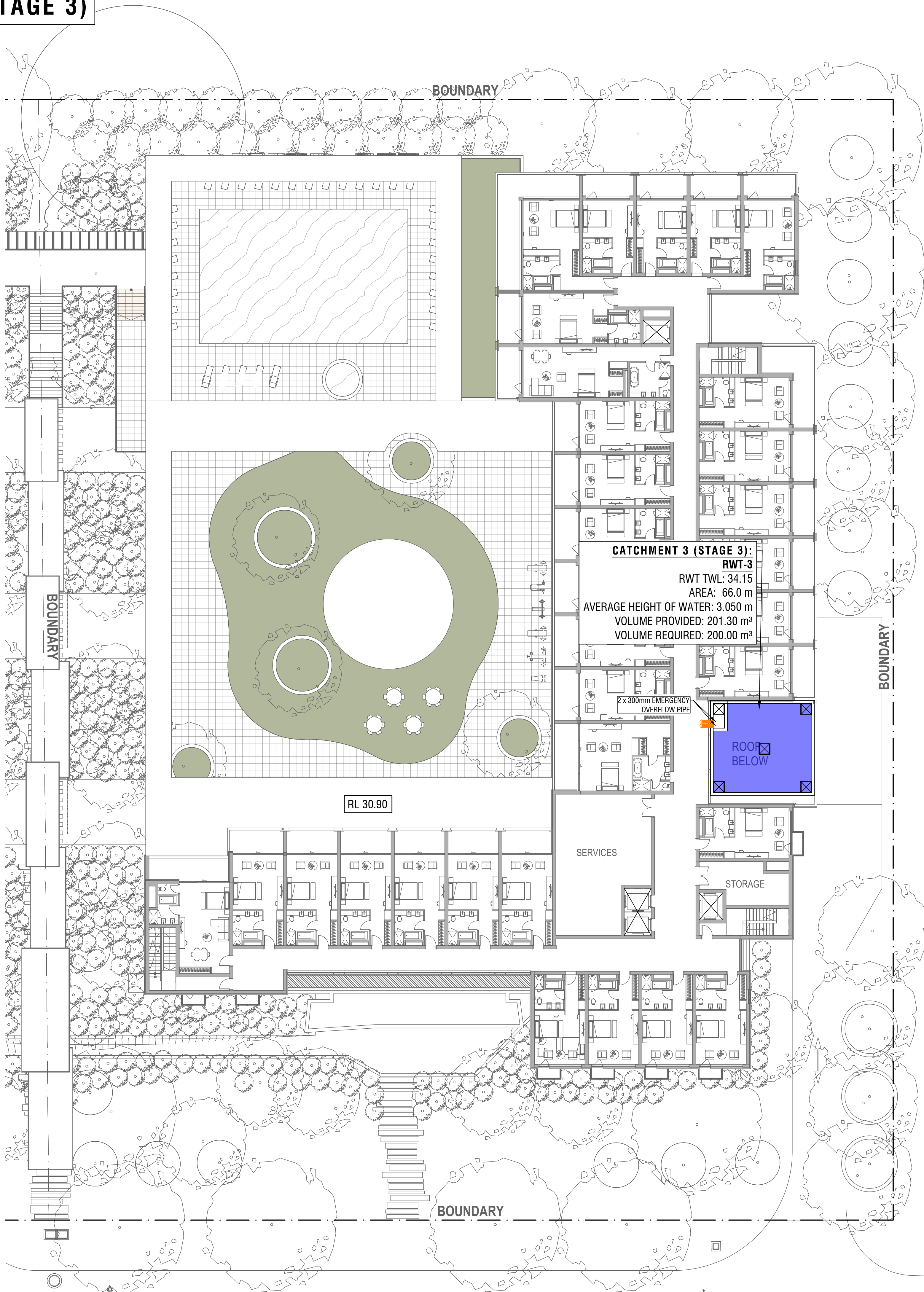
Sheet Number:

Revision:

D13

B

CATCHMENT 3 (STAGE 3)



PIPE LEGEND (U.N.O):

Ø50mm STORMWATER PIPE (CAST IN SLAB)

Ø100mm STORMWATER PIPE

Ø150mm STORMWATER PIPE

Ø225mm STORMWATER PIPE

Ø300mm STORMWATER PIPE

Ø150mm OVERFLOW PIPE LINE

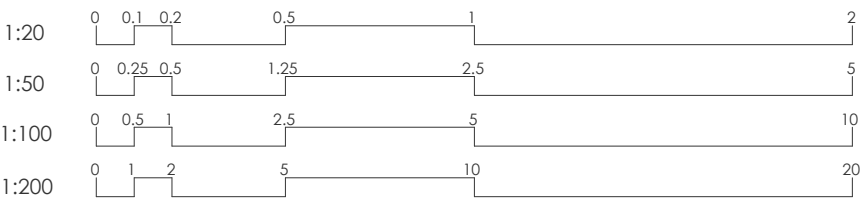
DENOTES Ø100mm PIPE/DP TRANSFER

DENOTES Ø65mm PIPE OVERFLOW

DENOTES DIRECTION OF FLOW

THIRD FLOOR STORMWATER DRAINAGE PLAN

SCALE 1: 200



SUIT 2.04, L2, BLDG 3,
35-41 WATERLOO RD., MACQUARIE PARK, NSW 2113
info@smartstructs.com.au | T: (02) 9052 6467

Address

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Start Date: APRIL 2025

Project No. 240150

Client:

Architect:
MORSON GROUP

Approved by: K.E.

Internal Revisions:

Rev. #	Drafter	Engineer	Date
A	N.E.	K.E.	28.04.25
B	N.E.	K.E.	03.06.25

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PRELIMINARY
NOT FOR CONSTRUCTION

Project North

Scale @ A1: AS SHOWN

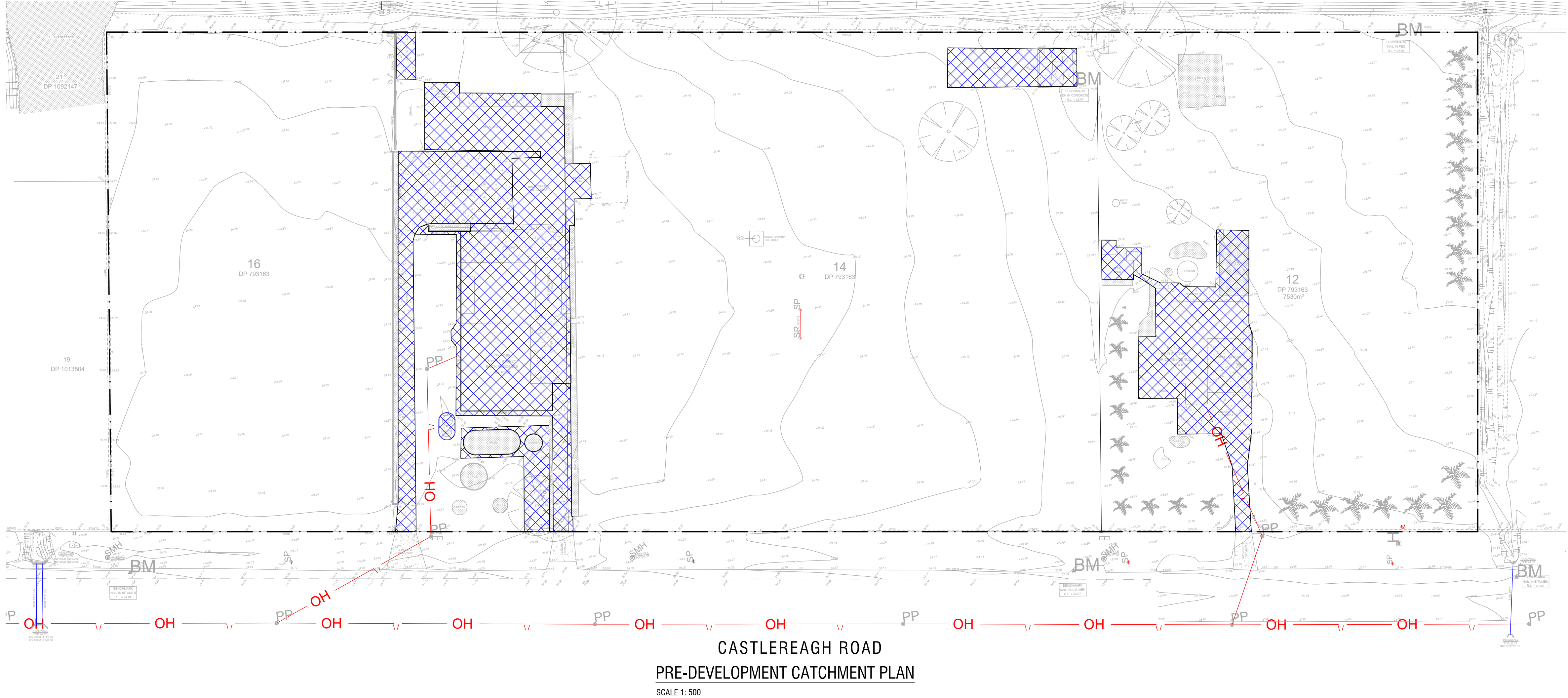
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THIRD FLOOR
STORMWATER
DRAINAGE PLAN
SHEET 3
Sheet Number:

Revision:

D14

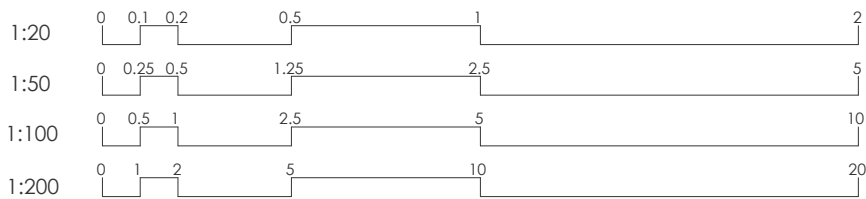
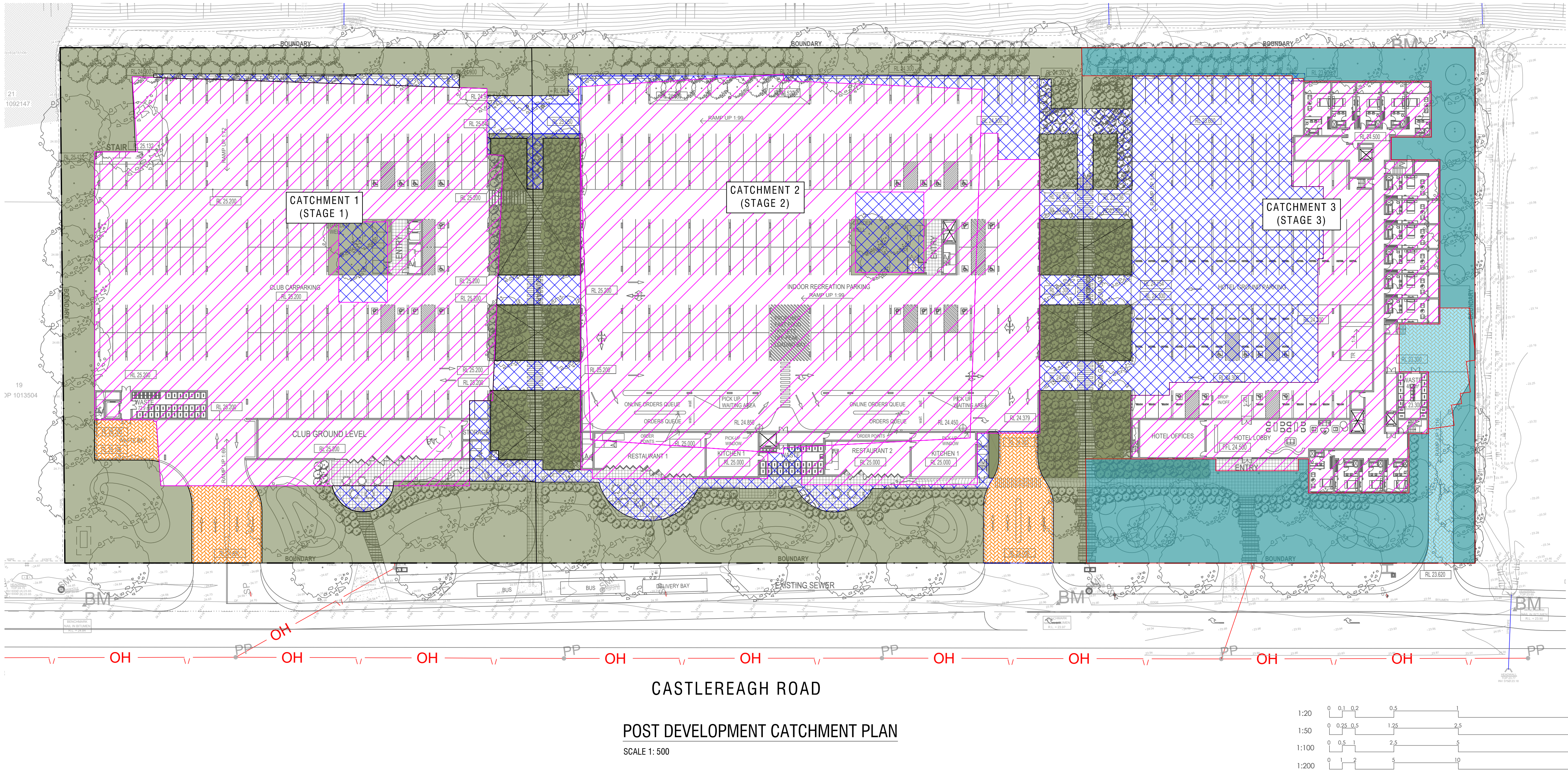
B

PRE DEVELOPMENT CATCHMENT ANALYSIS:	
TOTAL SITE AREA:	27,387.70 m²
CATCHMENT 1 (STAGE 1)	
SITE AREA:	9,145.20 m²
HARDSTAND AREA:	2,200.91m²
LANDSCAPE AREA:	6,944.29 m²
CATCHMENT 2 (STAGE 2)	
SITE AREA:	10,666.0 m²
HARDSTAND AREA:	199.32 m²
LANDSCAPE AREA:	10,466.68 m²
CATCHMENT 3 (STAGE 3)	
SITE AREA:	7,576.50 m²
HARDSTAND AREA:	781.67 m²
LANDSCAPE AREA:	6,794.83 m²



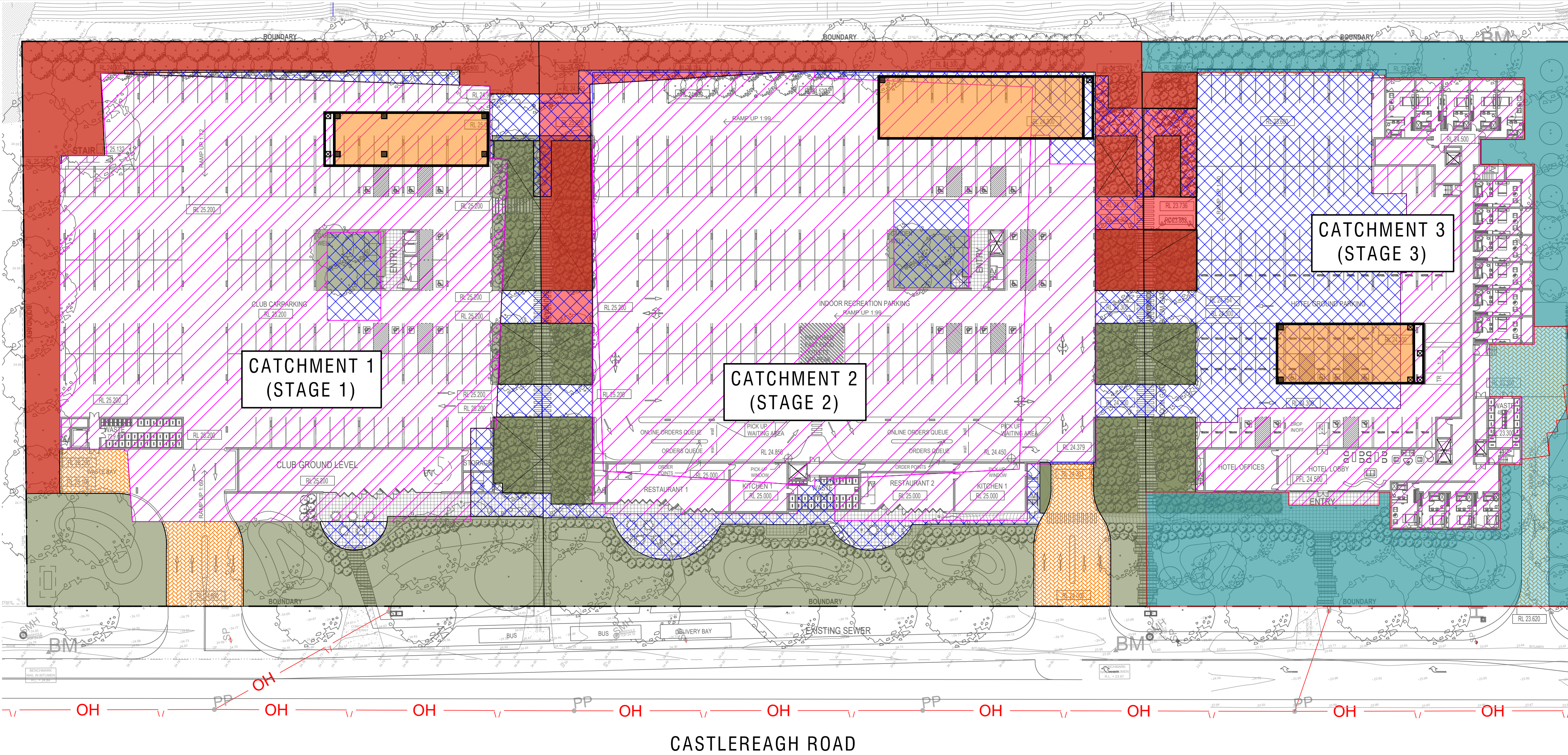
POST DEVELOPMENT CATCHMENT ANALYSIS:	
TOTAL SITE AREA:	27,387.70 m²
TOTAL HARDSTAND AREA: 19,339.26 m²	
TOTAL LANDSCAPE AREA: 8,048.44 m²	
CATCHMENT 1 (STAGE 1)	
SITE AREA:	9,145.20 m²
ROOF:	5,578.73 m²
HARDSTAND AREA:	563.90 m²
DRIVEWAY:	297.16 m²
LANDSCAPE AREA:	2,705.41 m²
CATCHMENT 2 (STAGE 2)	
SITE AREA:	10,666.0 m²
ROOF:	6,380.78 m²
HARDSTAND AREA:	1,232.76 m²
DRIVEWAY:	287.64 m²
LANDSCAPE AREA:	2,764.82 m²
CATCHMENT 3(STAGE 3)	
SITE AREA:	7,576.50 m²
TOTAL OVERLAND FLOW PATH AREA:	2,489.16m²
TOTAL AREA (EXCLUDING OVERLAND FLOW PATH):	5,087.34 m²
ROOF:	2,304.40 m²
HARDSTAND AREA:	2,294.79 m²
LANDSCAPE AREA:	448.78 m²

LEGEND:	
	ROOF:
	HARDSTAND AREA:
	DRIVEWAY:
	LANDSCAPE AREA:
	OVERLAND FLOW PATH:



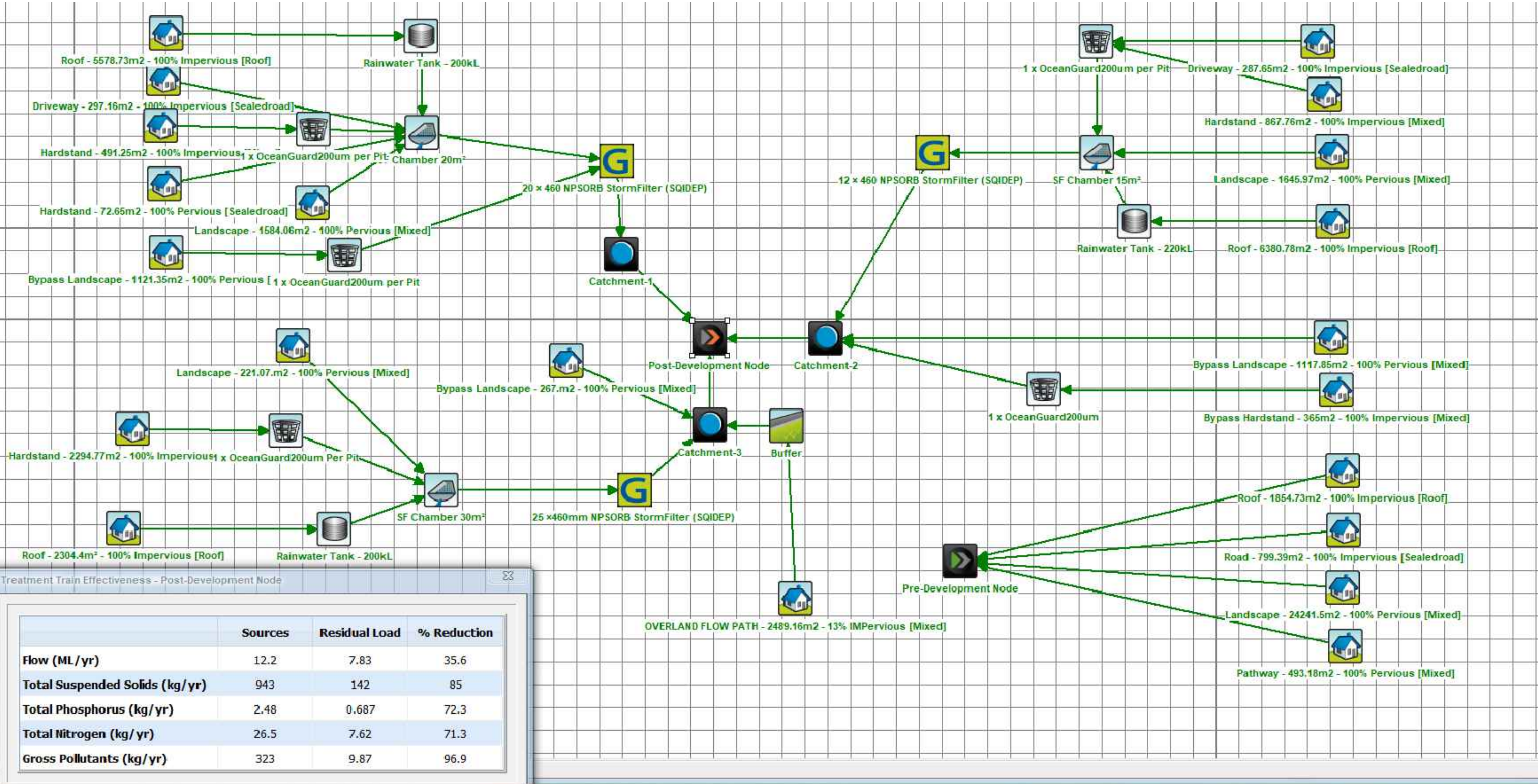
Internal Revisions:			
Rev. #	Drafter	Engineer	Date
A	N.E.	K.E.	28.04.25
B	N.E.	K.E.	03.06.25
Revision Description			
ISSUE FOR D.A.			
ISSUE FOR D.A.			

- Notes
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CATCHMENT PLAN

SCALE 1: 500



MUSIC MODEL RESULTS

LEGEND:

- ROOF:
- HARDSTAND AREA:
- DRIVEWAY:
- LANDSCAPE AREA:
- BYPASSING OSD:
- OVERLAND FLOW PATH:

POST DEVELOPMENT CATCHMENT ANALYSIS:

TOTAL SITE AREA: 27,387.70 m²

CATCHMENT 1 (STAGE 1)

SITE AREA: 9,145.20 m²

TOTAL AREA DRAINING TO OSD: 7,951.20 m²

ROOF: 5,578.73 m²

HARDSTAND AREA: 491.25 m²

HARDSTAND AREA: 72.65 m²

DRIVEWAY: 297.16 m²

LANDSCAPE AREA: 1,584.06 m²

TOTAL AREA BYPASSING OSD (13%): 1,194.00m²

HARDSTAND AREA: 72.65 m²

LANDSCAPE AREA: 1,121.35 m²

CATCHMENT 2 (STAGE 2)

SITE AREA: 10,666.0 m²

TOTAL AREA DRAINING TO OSD: 9,183.15 m²

ROOF: 6,380.78 m²

HARDSTAND AREA: 867.76 m²

DRIVEWAY: 287.64 m²

LANDSCAPE AREA: 1,645.97 m²

TOTAL AREA BYPASSING OSD (14%): 1,482.85 m²

HARDSTAND AREA: 365.00 m²

LANDSCAPE AREA: 1,117.85 m²

CATCHMENT 3(STAGE 3)

SITE AREA: 7,576.50 m²

TOTAL OVERLAND FLOW PATH AREA: 2,489.16m²

DRIVEWAY: 341.50 m²

LANDSCAPE AREA: 2,147.66 m²

TOTAL CATCHMENT AREA (WITHOUT OVERFLOW PATH AREA): 5,087.34m²

TOTAL AREA DRAINING TO OSD: 4,820.24 m²

ROOF: 2,304.40 m²

HARDSTAND AREA: 2,194.77 m²

HARDSTAND AREA: 100.02 m²

LANDSCAPE AREA: 221.07 m²

TOTAL AREA BYPASSING OSD (5.25%): 267.10 m²

LANDSCAPE AREA: 267.08 m²

Rev. #	Drafter	Engineer	Revision Description	Date
A	N.E.	K.E.	ISSUE FOR D.A.	28.04.25
B	N.E.	K.E.	ISSUE FOR D.A.	12.06.25

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**PRELIMINARY
NOT FOR CONSTRUCTION**

Project North

Scale @ A1: **AS SHOWN**

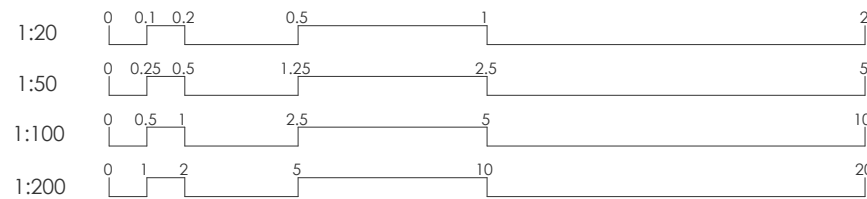
Sheet Name:
**CATCHMENT ANALYSIS
& MUSIC MODEL
RESULTS**

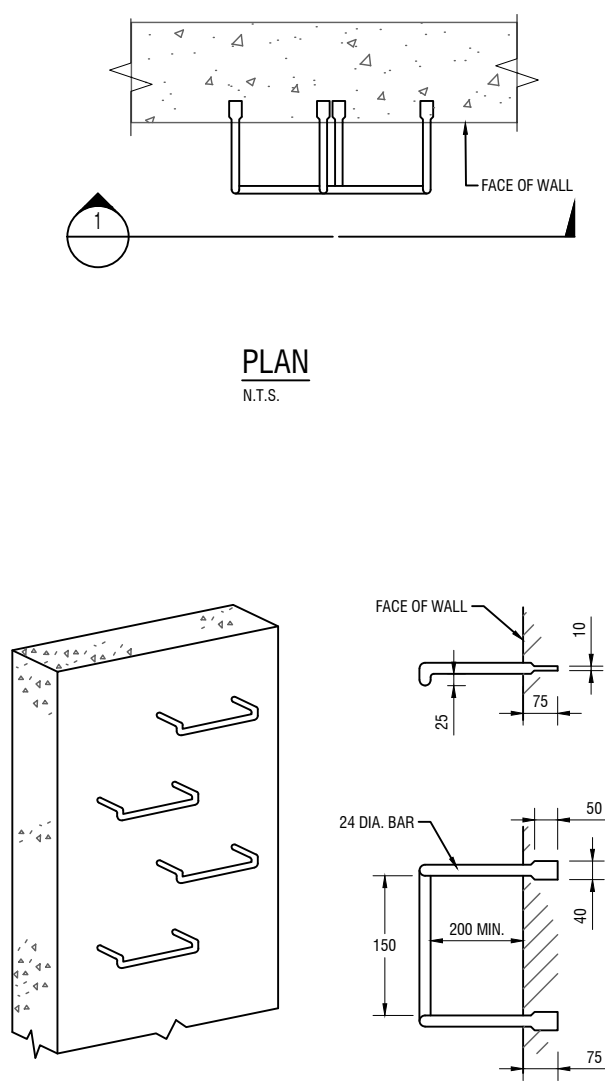
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Revision:

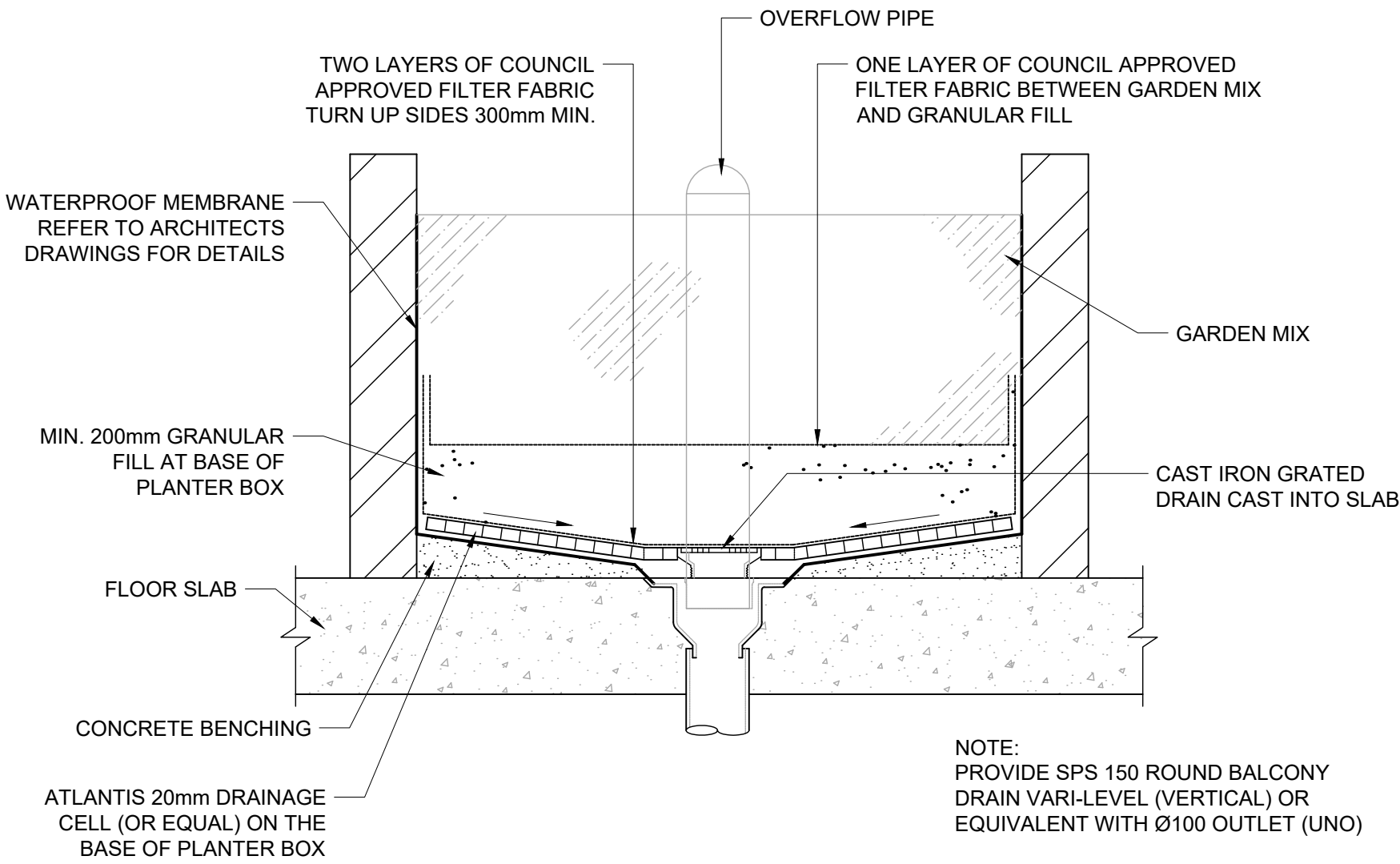
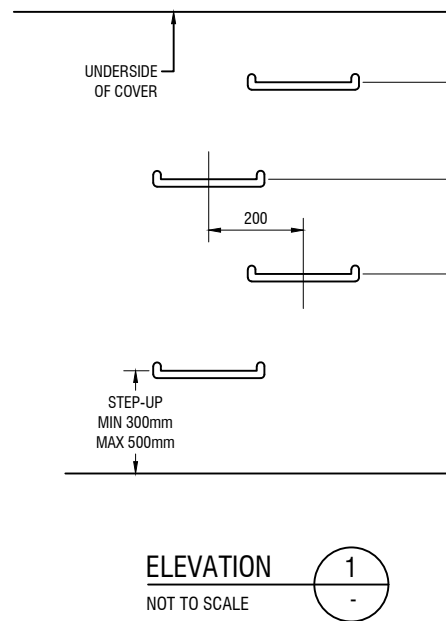
D31

B

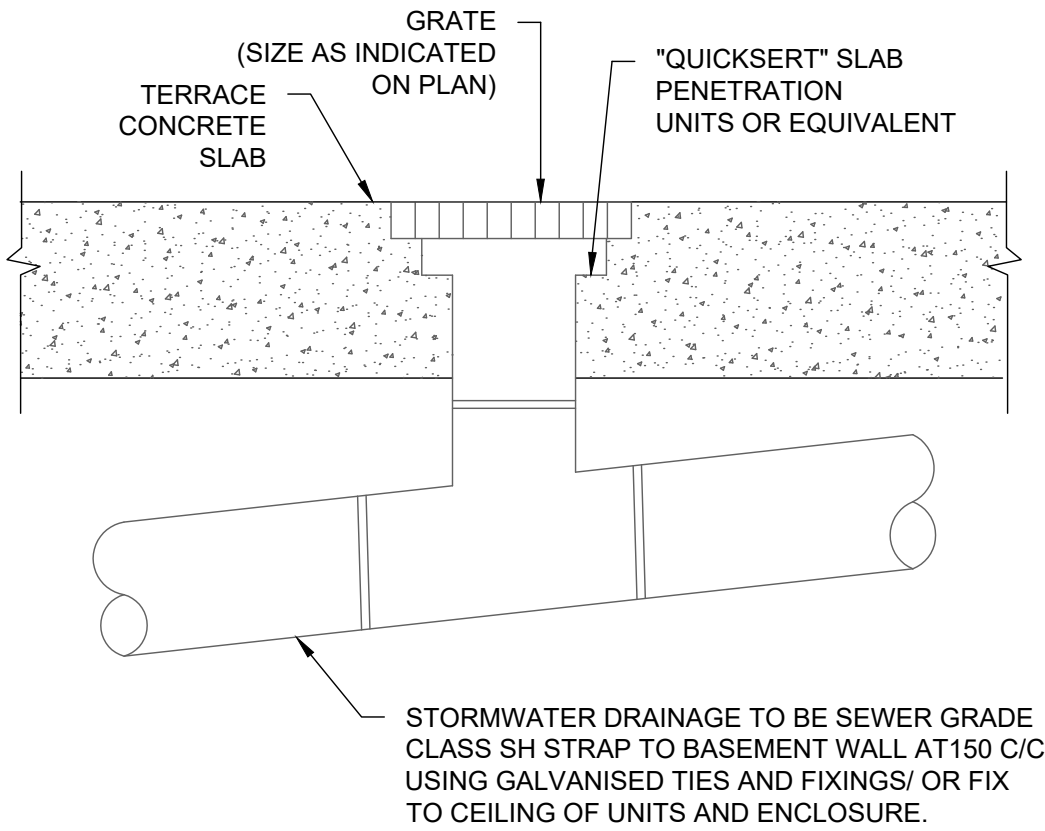




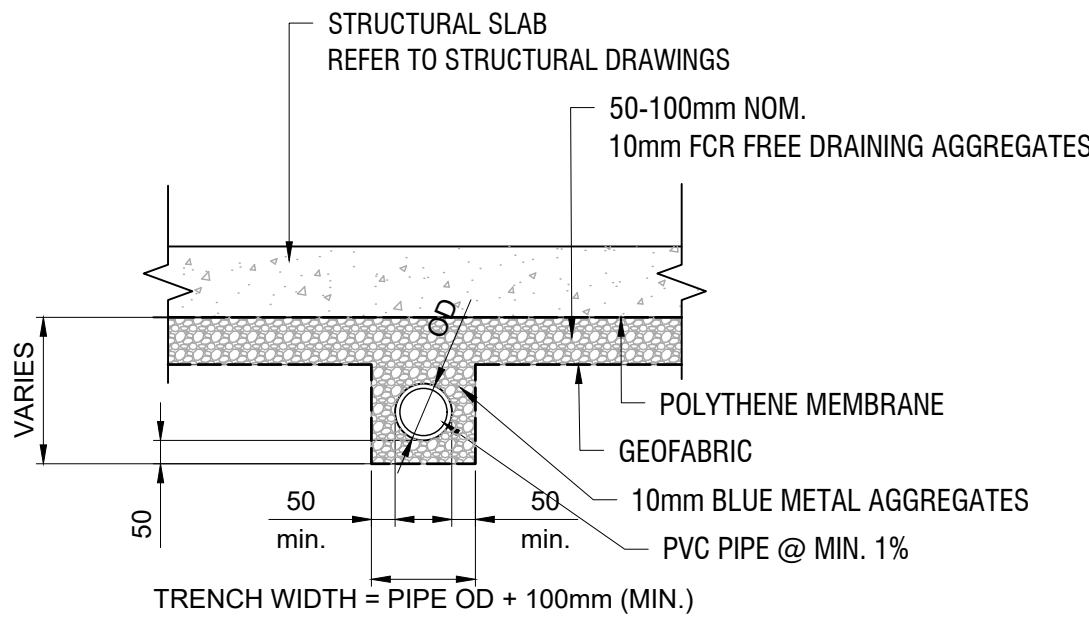
STEP IRON DETAILS
N.T.S.



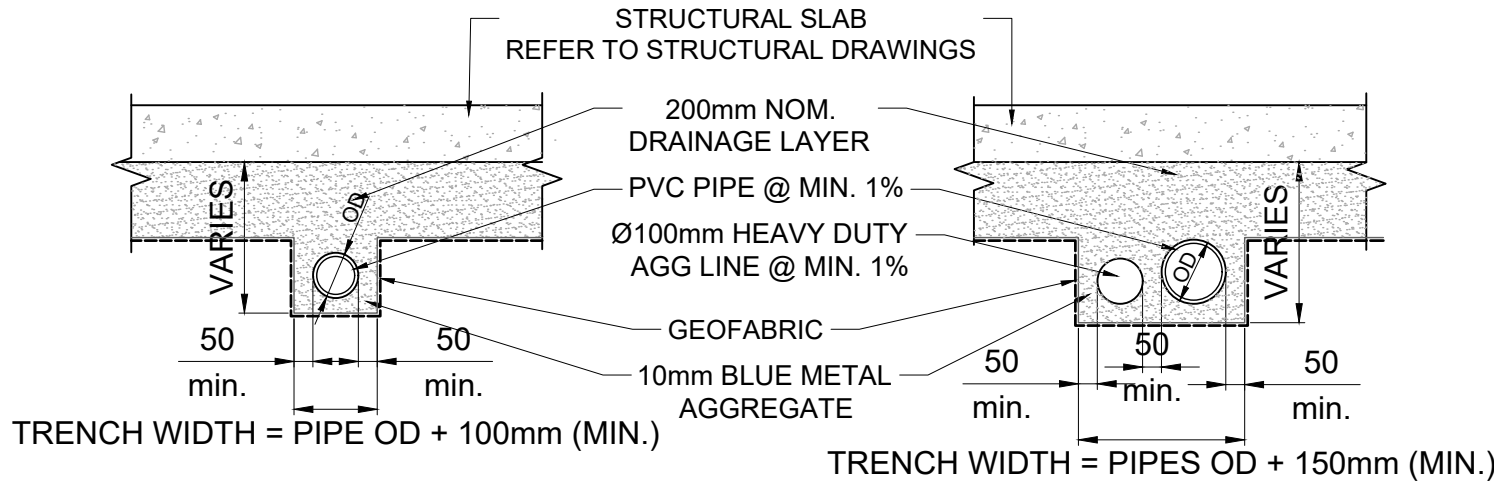
TYPICAL PLANTER BOX DETAIL
SCALE NTS



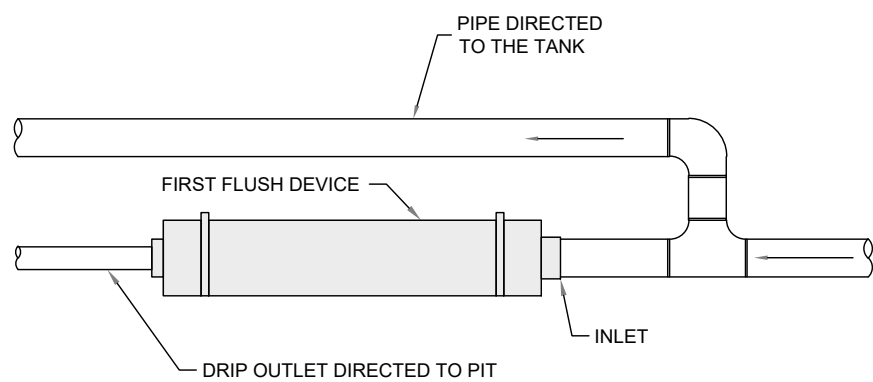
RAINWATER OUTLET DETAIL
SCALE N.T.S.



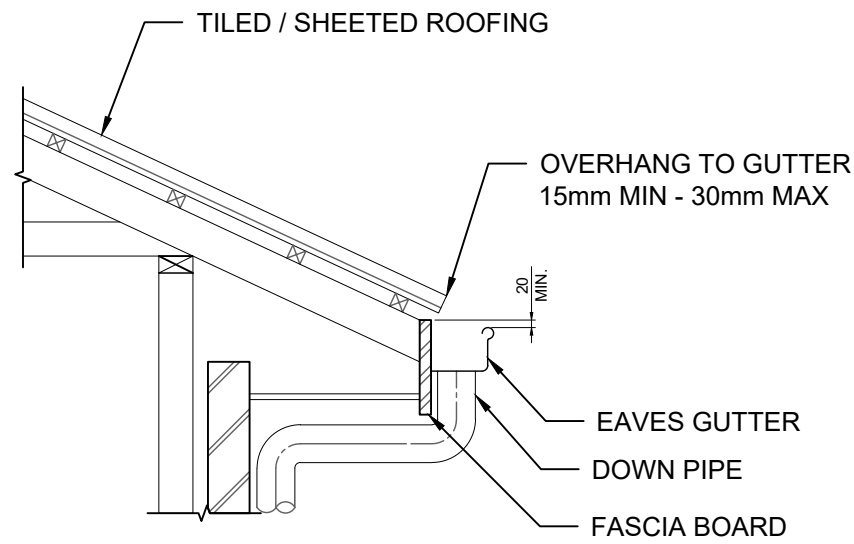
TYPICAL PIPE TRENCH DETAIL
SCALE: NTS



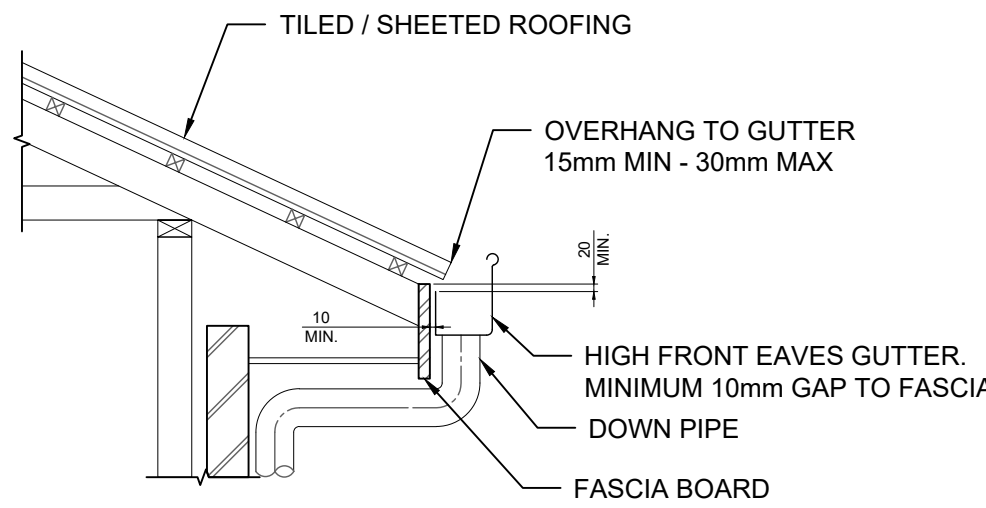
PIPE TRENCH
TYPICAL SECTION
SCALE NTS



TYPICAL FIRST FLUSH DETAIL
N.T.S.

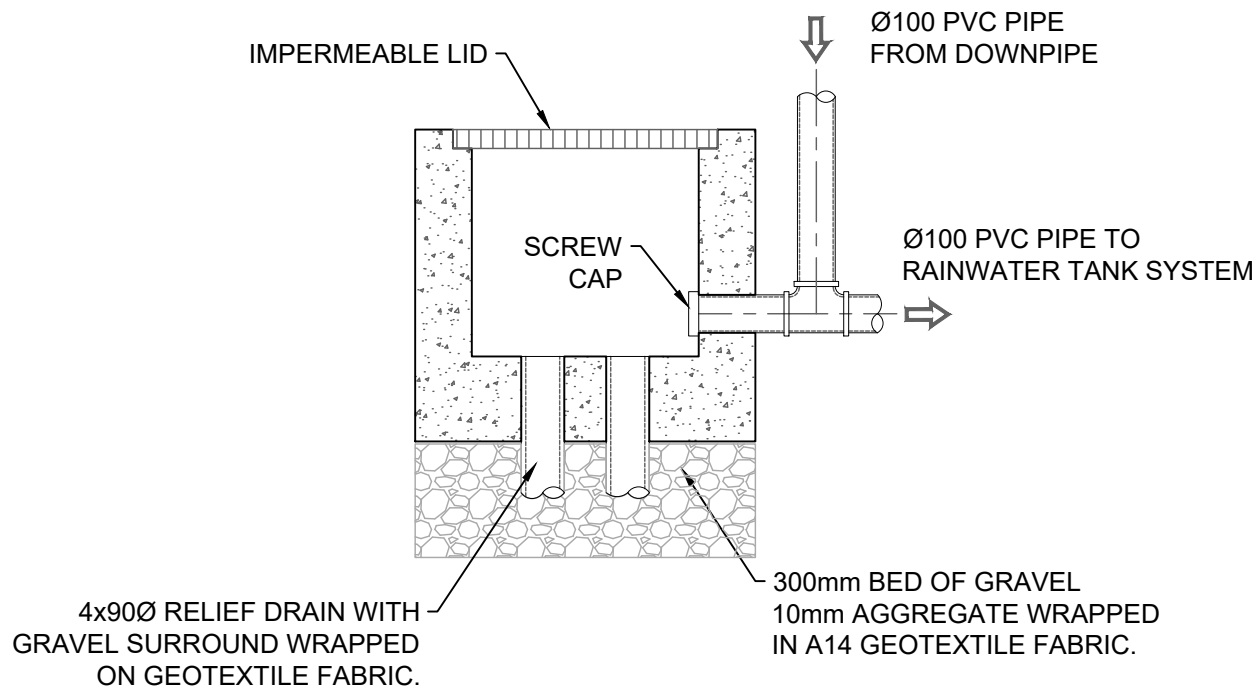


FRONT OVERFLOW

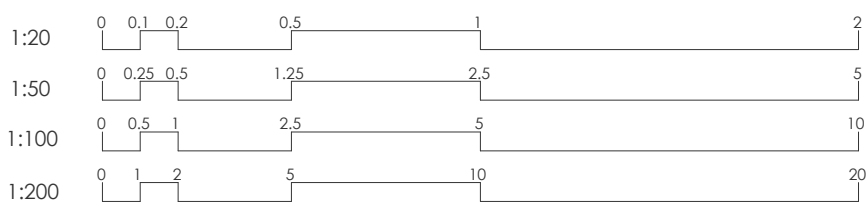
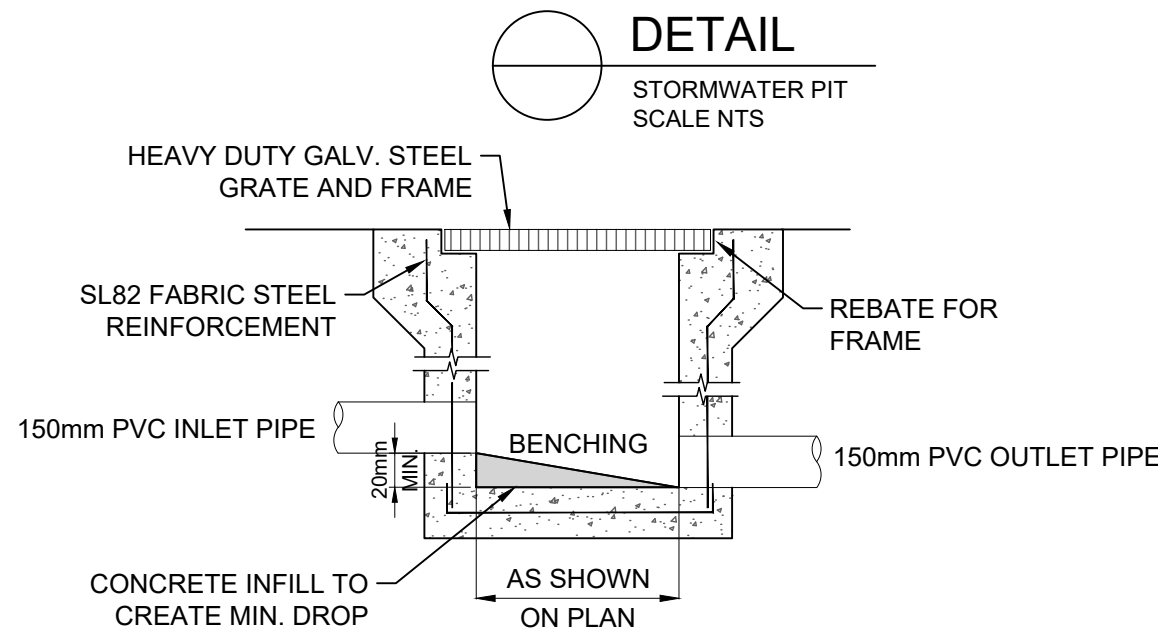
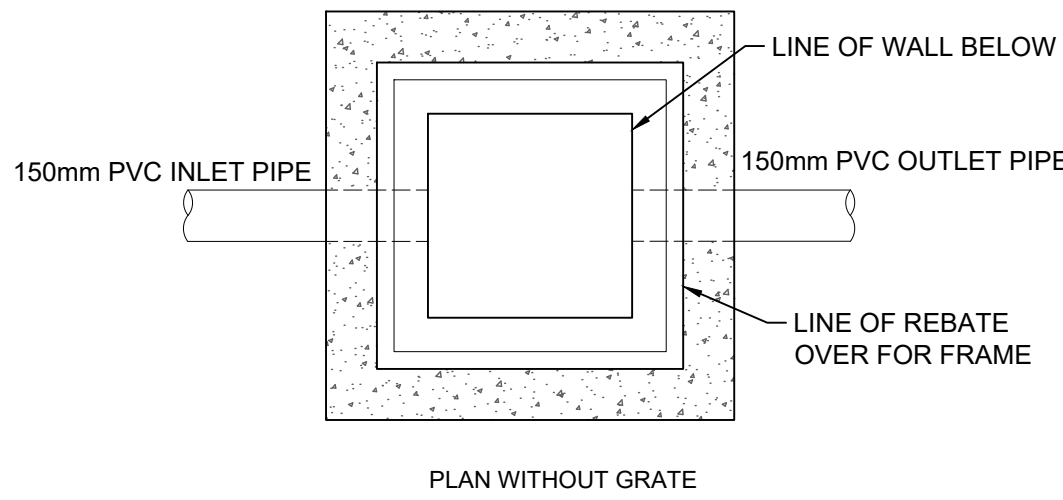
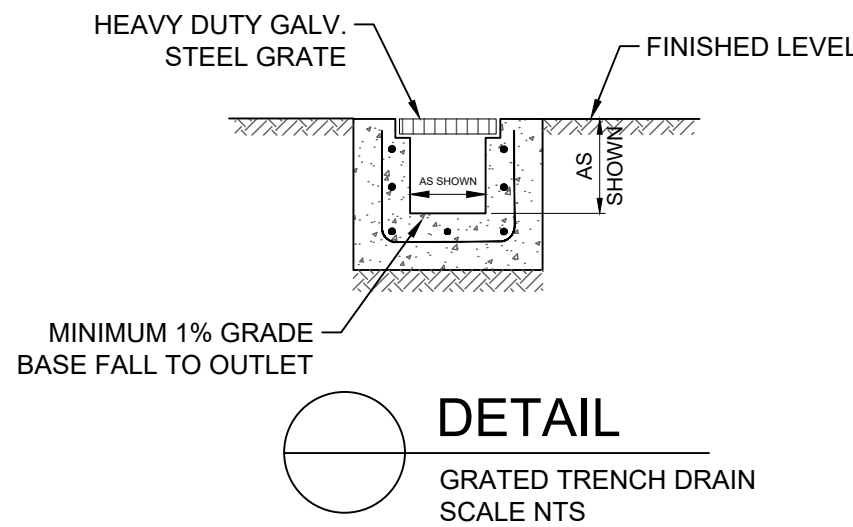


REAR OVERFLOW

TYPICAL EAVES GUTTER DETAIL
SCALE NTS



CLEANING EYE DETAIL
SCALE NTS



CATCHMENT 1 (STAGE 1)

OSD DESIGN DETAILS

BASED ON PENRITH CITY COUNCIL STORMWATER DRAINAGE SPECIFICATION FOR BUILDING DEVELOPMENTS, AN OSD SYSTEM IS REQUIRED FOR THE DEVELOPMENT.

TOTAL SITE AREA: 9,145.20 m²

PRE-DEVELOPMENT CATCHMENT CONDITIONS:

IMPERVIOUS AREA = 2,200.91 m²
PERVIOUS AREA = 6,944.29 m²

POST DEVELOPMENT CATCHMENT CONDITIONS:

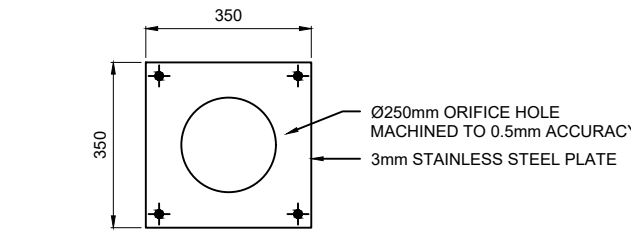
TOTAL AREA DRAINING TO OSD = 7,951.20m²
- ROOF AREA (IMPERVIOUS) = 5578.73 m²
- DRIVEWAY AREA (IMPERVIOUS) = 9297.16 m²
- HARDSTAND AREA (IMPERVIOUS) = 491.25 m²
- LANDSCAPE (PERVIOUS) = 1584.05 m²

TOTAL AREA BYPASSING OSD = 1194.00m²
- IMPERVIOUS AREA(BYPASSING) = 72.65m²
- PERVIOUS AREA (BYPASSING) = 1121.35m²

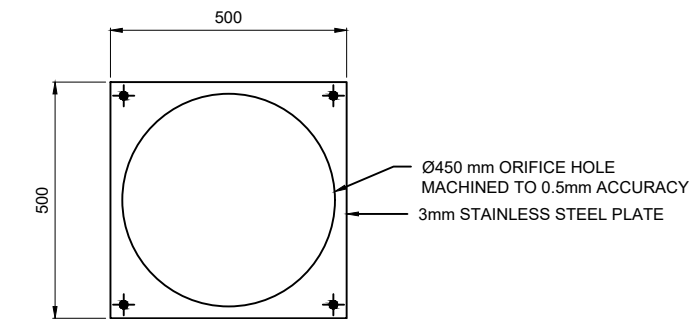
TO SIZE THE OSD SYSTEM, WHERE THE DEVELOPMENT SITE AREA IS GREATER THAN 5000m2, SPECIFIC SITE ANALYSIS SHALL BE UNDERTAKEN USING AN APPROPRIATE COMPUTER MODEL. COUNCIL'S PREFERRED MODEL IS DRAINS. AS A MINIMUM IT WILL BE NECESSARY TO DEMONSTRATE THAT THERE WILL BE NO INCREASE IN RUNOFF FROM THE SITE AS A RESULT OF THE DEVELOPMENT UNDER ALL DURATIONS FOR ALL THE STORMS UP TO AND INCLUDING THE 1% AEP EVENT.

A DRAINS MODEL HAS BEEN CREATED USING ILSAX METHOD. BASED ON THE DESIGN POLICY MENTIONED.

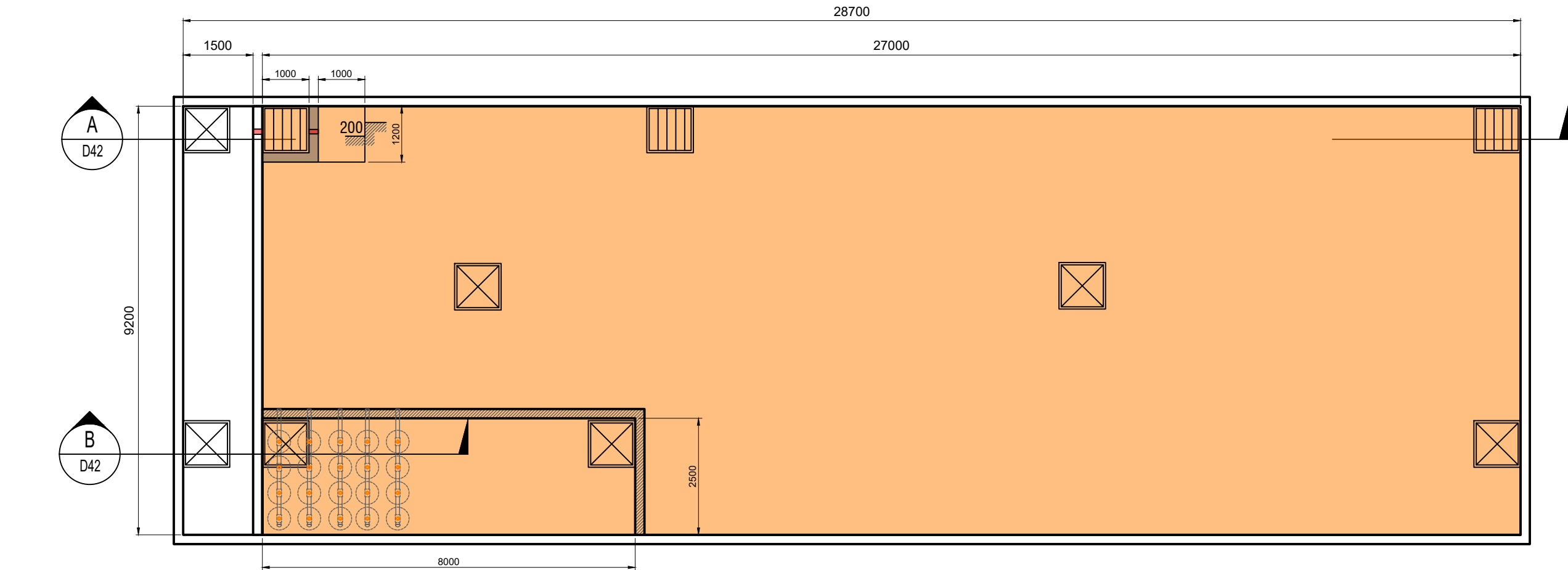
IN ORDER TO REACH AN OPTIMUM DESIGN, TWO-STAGE ORIFICE AND WEIR WALL METHODOLOGY ADOPTED TO SIZE OSD VOLUME AND CALCULATE THE SITE'S PSD VALUES FOR DESIGN STORM EVENTS.



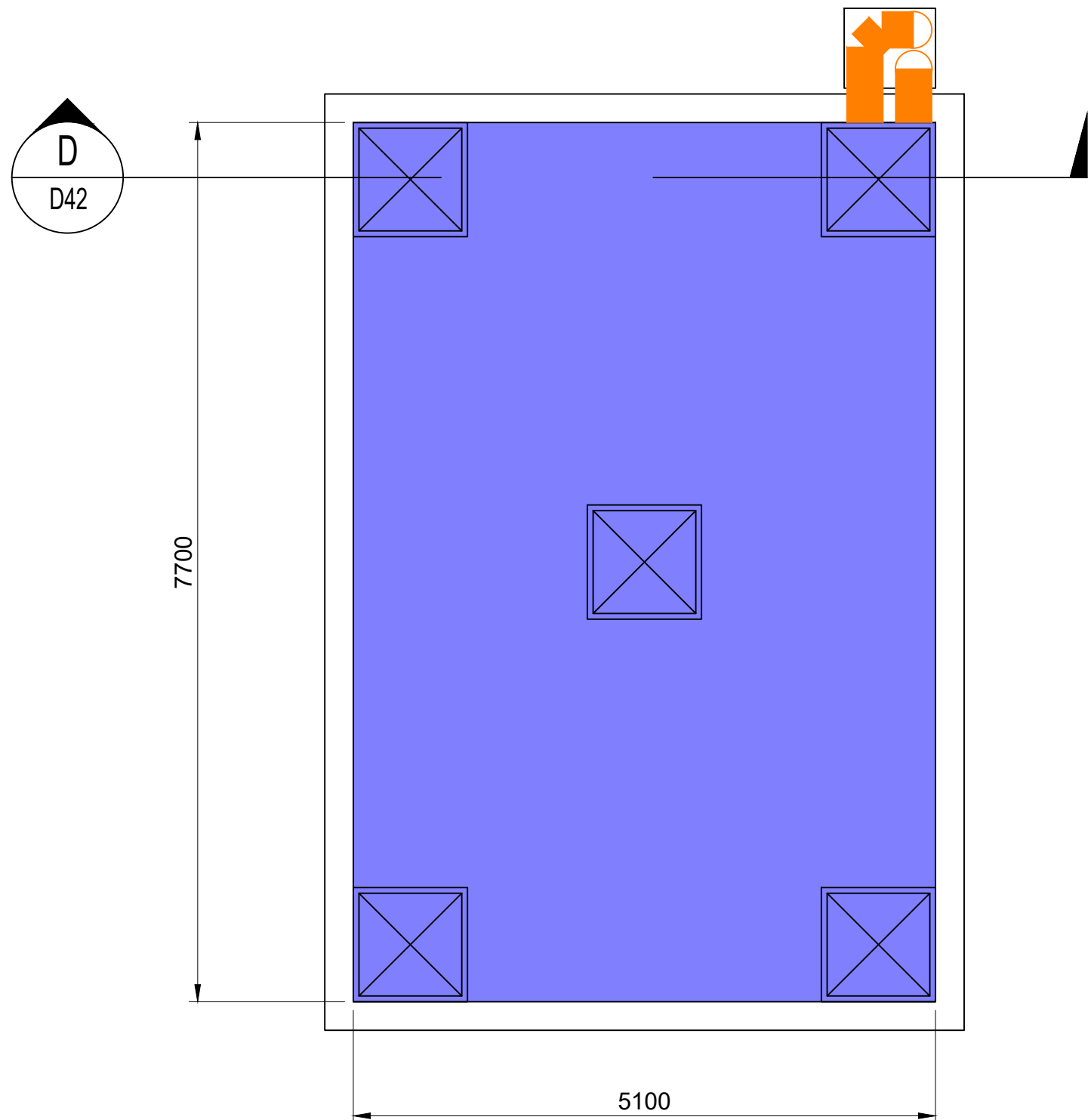
CATCHMENT 1 (STAGE 1)
20% AEP
ORIFICE PLATE ELEVATION
SCALE: NTS



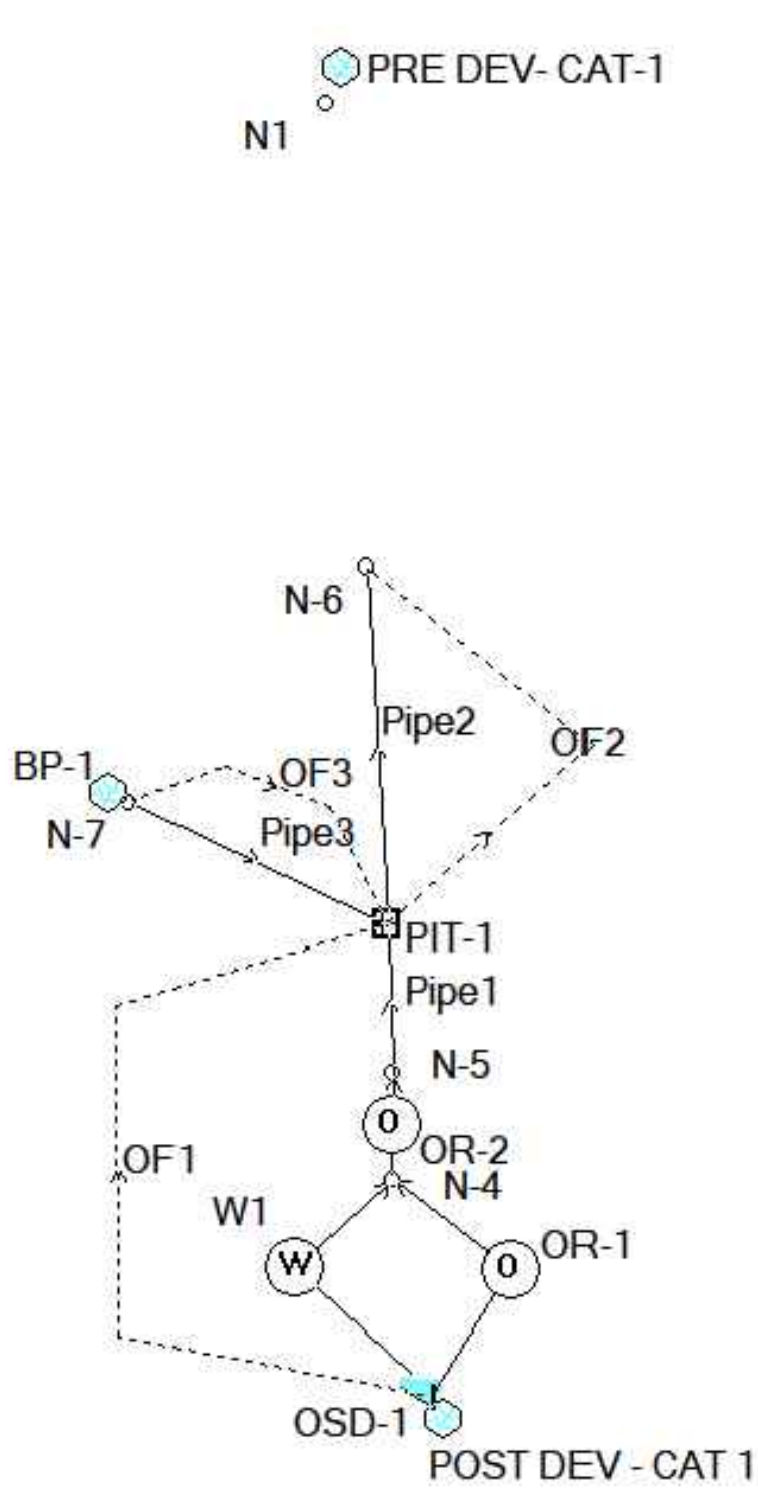
CATCHMENT 1 (STAGE 1)
1% AEP
ORIFICE PLATE ELEVATION
SCALE: NTS



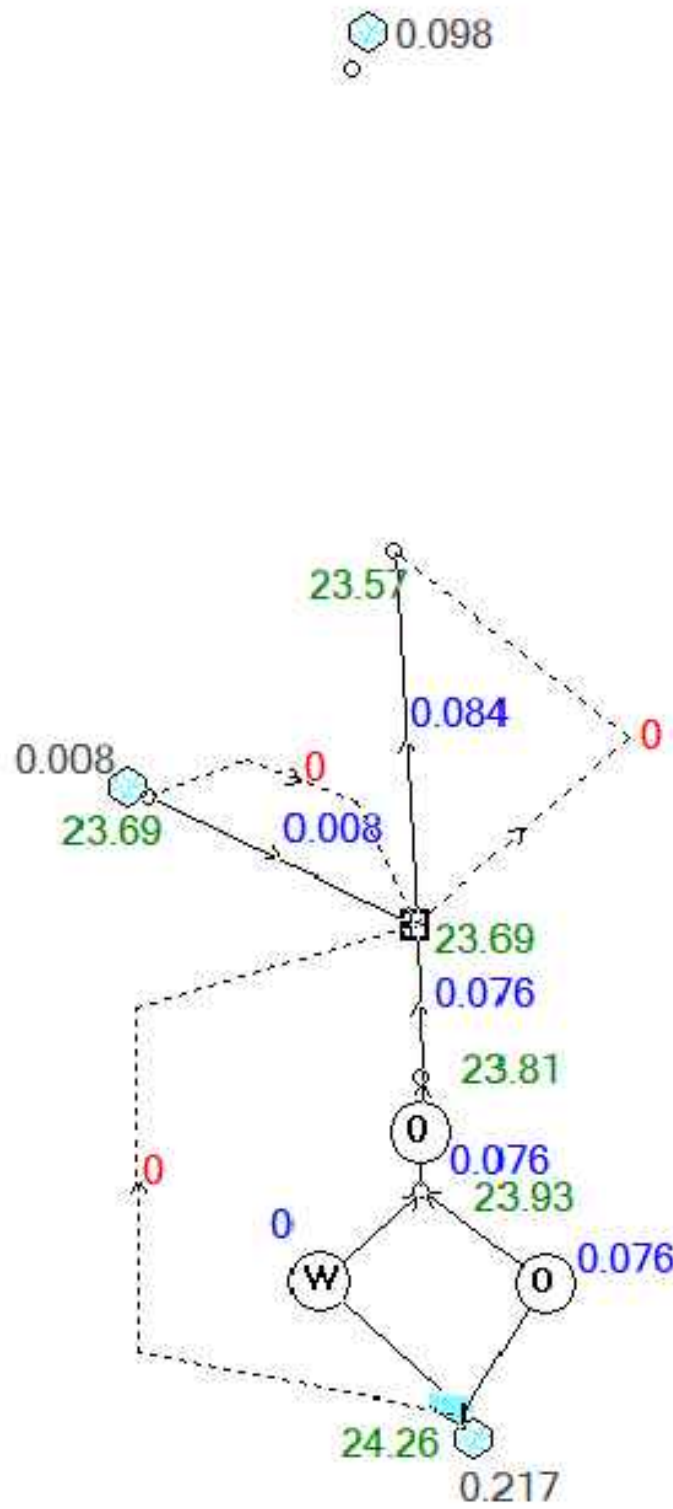
CATCHMENT 1 (STAGE 1)
OSD TANK PLAN VIEW
SCALE NTS



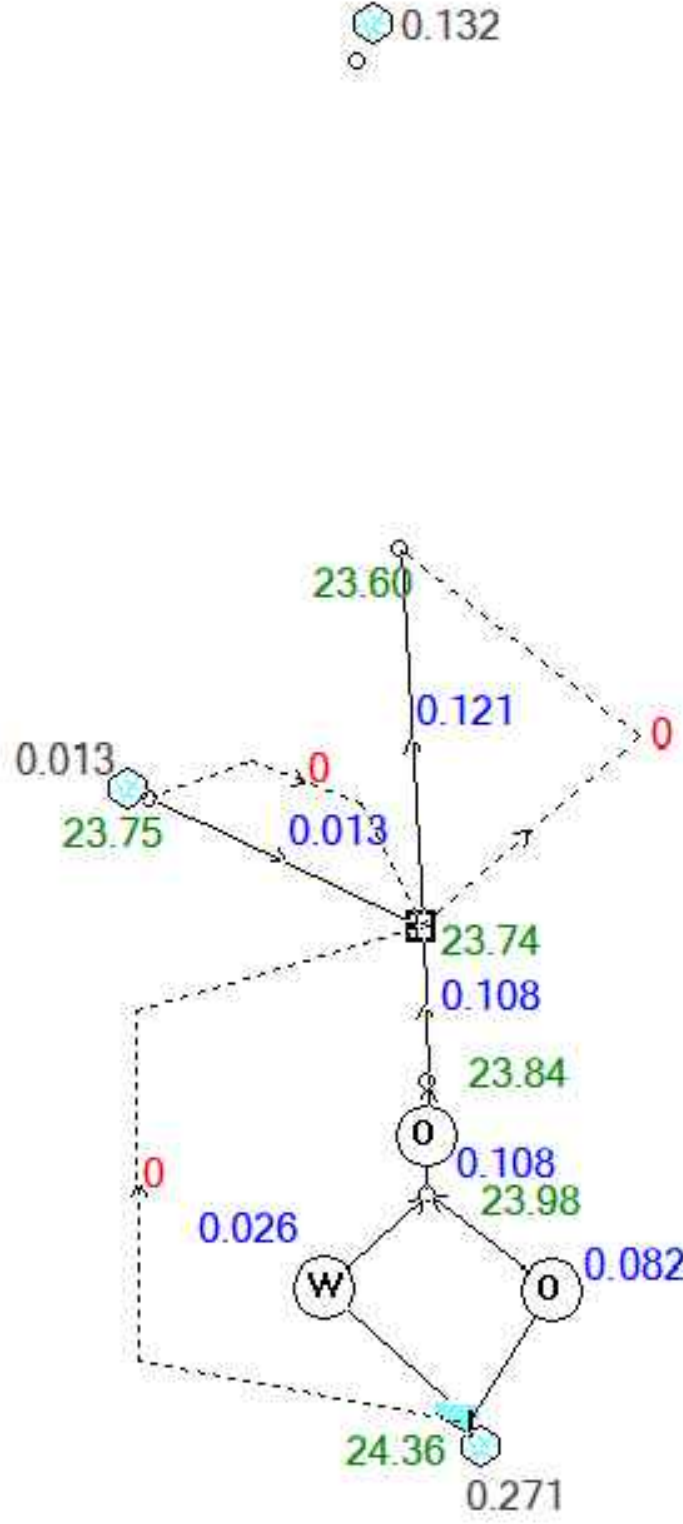
CATCHMENT 1 (STAGE 1)
RAINWATER TANK PLAN VIEW
SCALE NTS



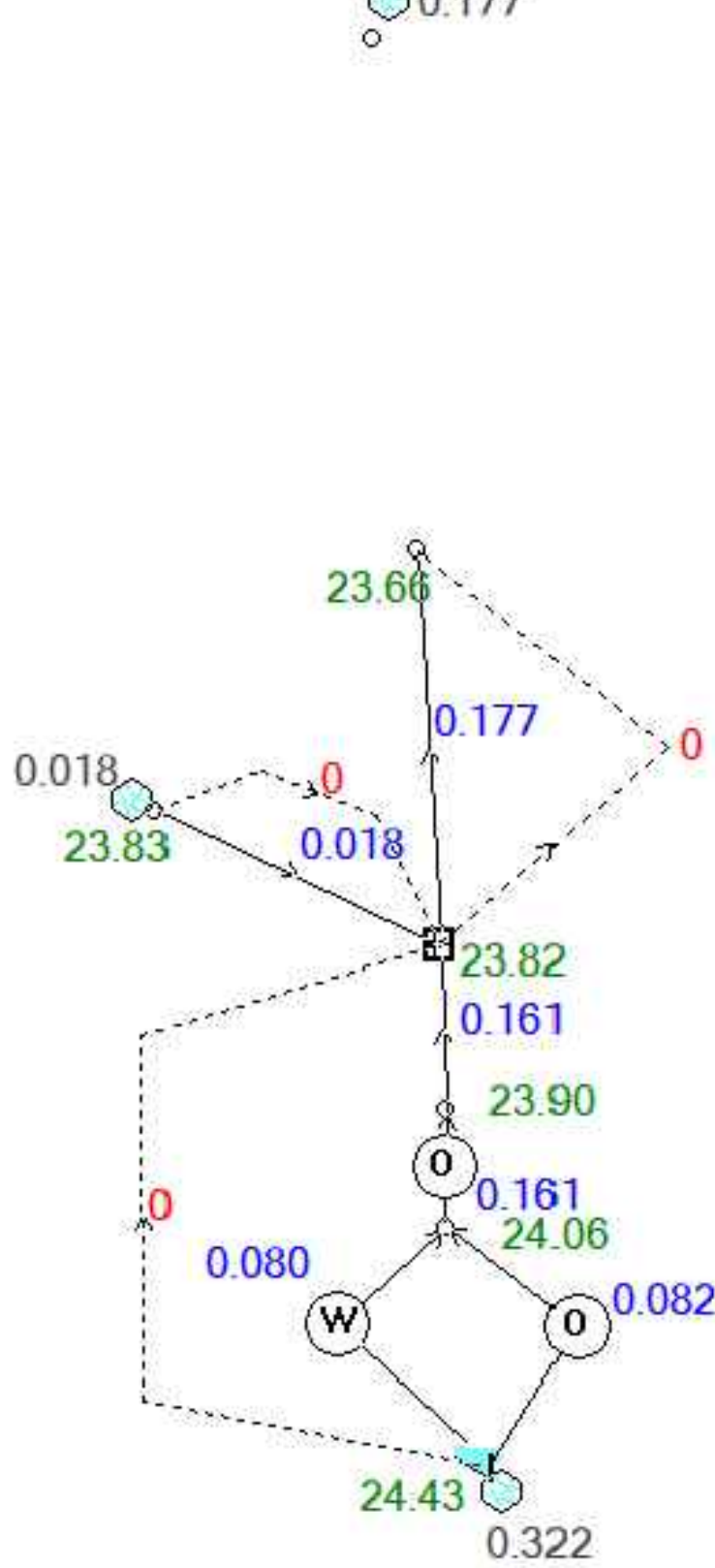
CATCHMENT 1 (STAGE 1)
DRAINS MODEL



CATCHMENT 1 (STAGE 1)
5 YEAR ARI (20% AEP) POST DEVELOPMENT - DRAINS MODEL



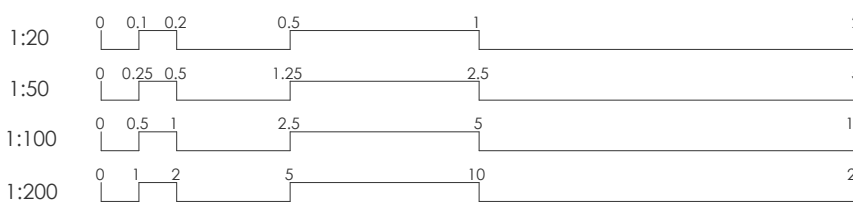
CATCHMENT 1 (STAGE 1)
10 YEAR ARI (10% AEP) POST DEVELOPMENT - DRAINS MODEL



CATCHMENT 1 (STAGE 1)
20 YEAR ARI (5% AEP) POST DEVELOPMENT - DRAINS MODEL



CATCHMENT 1 (STAGE 1)
100 YEAR ARI (1% AEP) POST DEVELOPMENT - DRAINS MODEL



Internal Revisions:

Rev. #	Drafter	Engineer	Revision Description	Date
A	N.E.	K.E.	ISSUE FOR D.A.	28.04.25
B	N.E.	K.E.	ISSUE FOR D.A.	12.06.25

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**PRELIMINARY
NOT FOR CONSTRUCTION**

Project North

Scale @ A1: **AS SHOWN**

Sheet Name:

**CATCHMENT 1 (STAGE 1)
OSD DESIGN COMPUTATION
AND DETAILS SHEET 1**

Sheet Number:

Revision:

D41

B

CATCHMENT 2 (STAGE 2)

OSD DESIGN DETAILS

BASED ON PENRITH CITY COUNCIL STORMWATER DRAINAGE SPECIFICATION FOR BUILDING DEVELOPMENTS, AN OSD SYSTEM IS REQUIRED FOR THE DEVELOPMENT.

TOTAL SITE AREA: 10,866.0 m²

PRE-DEVELOPMENT CATCHMENT CONDITIONS:

IMPERVIOUS AREA = 199.32 m²
PERVIOUS AREA = 10,466.68 m²

POST DEVELOPMENT CATCHMENT CONDITIONS:

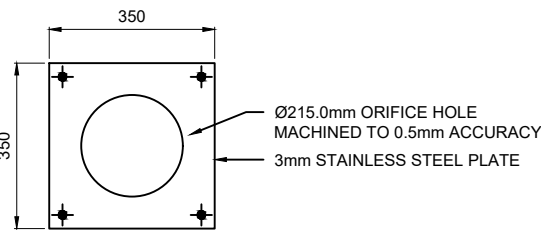
TOTAL AREA DRAINING TO OSD = 9183.15m²
- ROOF AREA (IMPERVIOUS) = 6380.78 m²
- DRIVEWAY AREA (IMPERVIOUS) = 287.64 m²
- HARDSTAND AREA (IMPERVIOUS) = 867.76 m²
- LANDSCAPE (PERVIOUS) = 1645.97 m²

TOTAL AREA BYPASSING OSD = 1482.85m²
- IMPERVIOUS AREA(BYPASSING) = 365.00m²
- PERVIOUS AREA (BYPASSING) = 1117.85m²

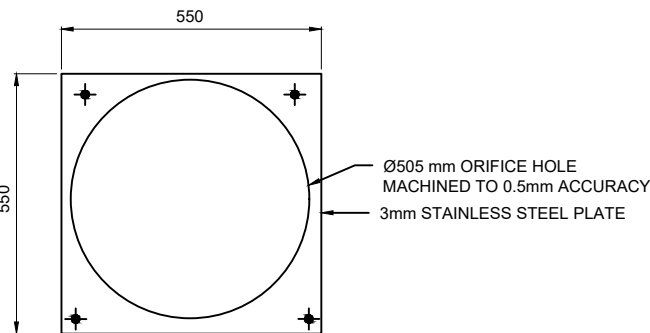
TO SIZE THE OSD SYSTEM, WHERE THE DEVELOPMENT SITE AREA IS GREATER THAN 5000m2, SPECIFIC SITE ANALYSIS SHALL BE UNDERTAKEN USING AN APPROPRIATE COMPUTER MODEL. COUNCIL'S PREFERRED MODEL IS DRAINS. AS A MINIMUM IT WILL BE NECESSARY TO DEMONSTRATE THAT THERE WILL BE NO INCREASE IN RUNOFF FROM THE SITE AS A RESULT OF THE DEVELOPMENT UNDER ALL DURATIONS FOR ALL THE STORMS UP TO AND INCLUDING THE 1% AEP EVENT.

A DRAINS MODEL HAS BEEN CREATED USING ILSAX METHOD. BASED ON THE DESIGN POLICY MENTIONED.

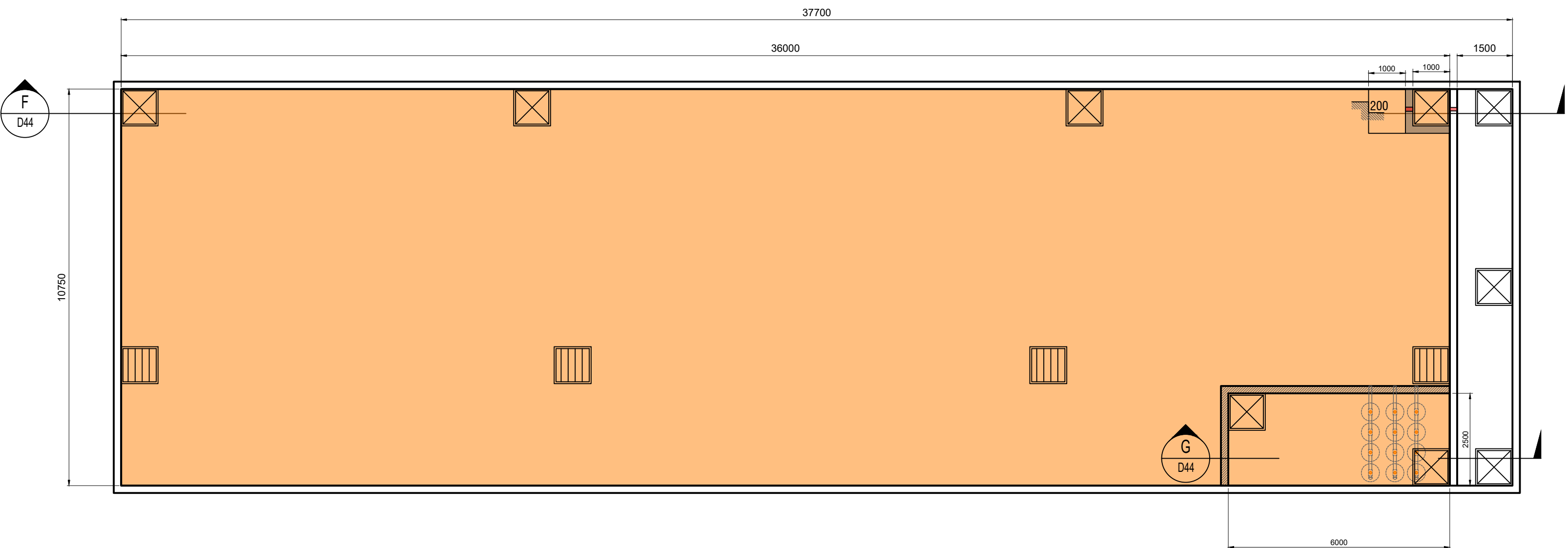
IN ORDER TO REACH AN OPTIMUM DESIGN, TWO-STAGE ORIFICE AND WEIR WALL METHODOLOGY ADOPTED TO SIZE OSD VOLUME AND CALCULATE THE SITE'S PSD VALUES FOR DESIGN STORM EVENTS.



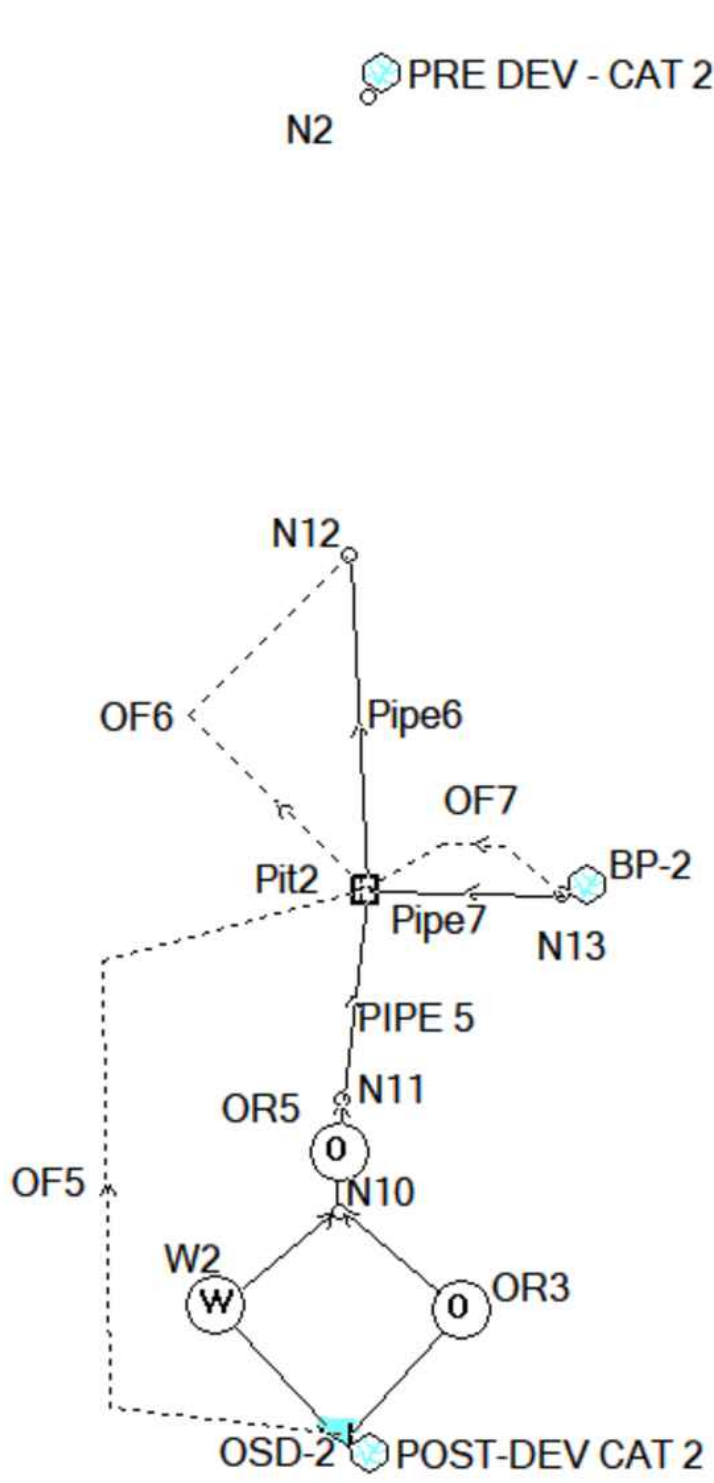
CATCHMENT 2 (STAGE 2)
20% AEP
ORIFICE PLATE ELEVATION
SCALE: NTS



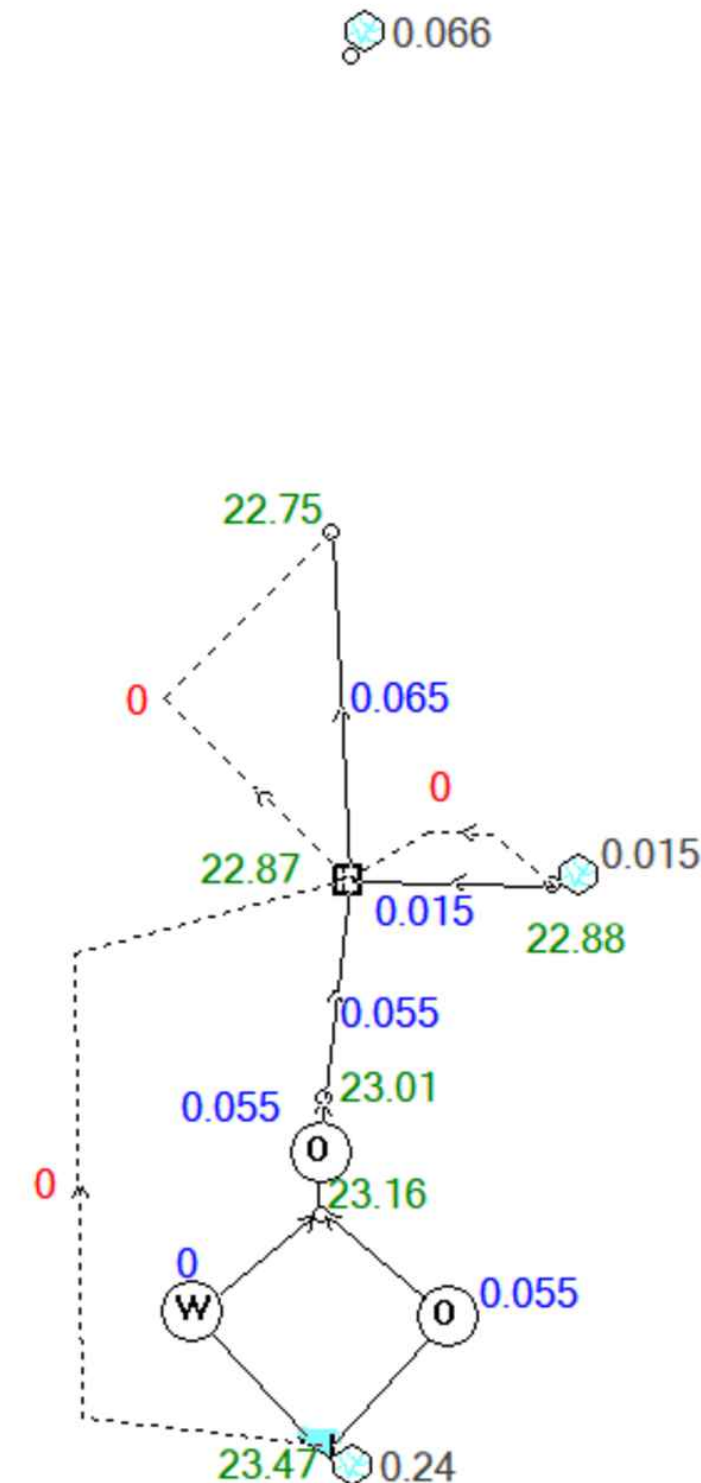
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1% AEP
ORIFICE PLATE ELEVATION
SCALE: NTS



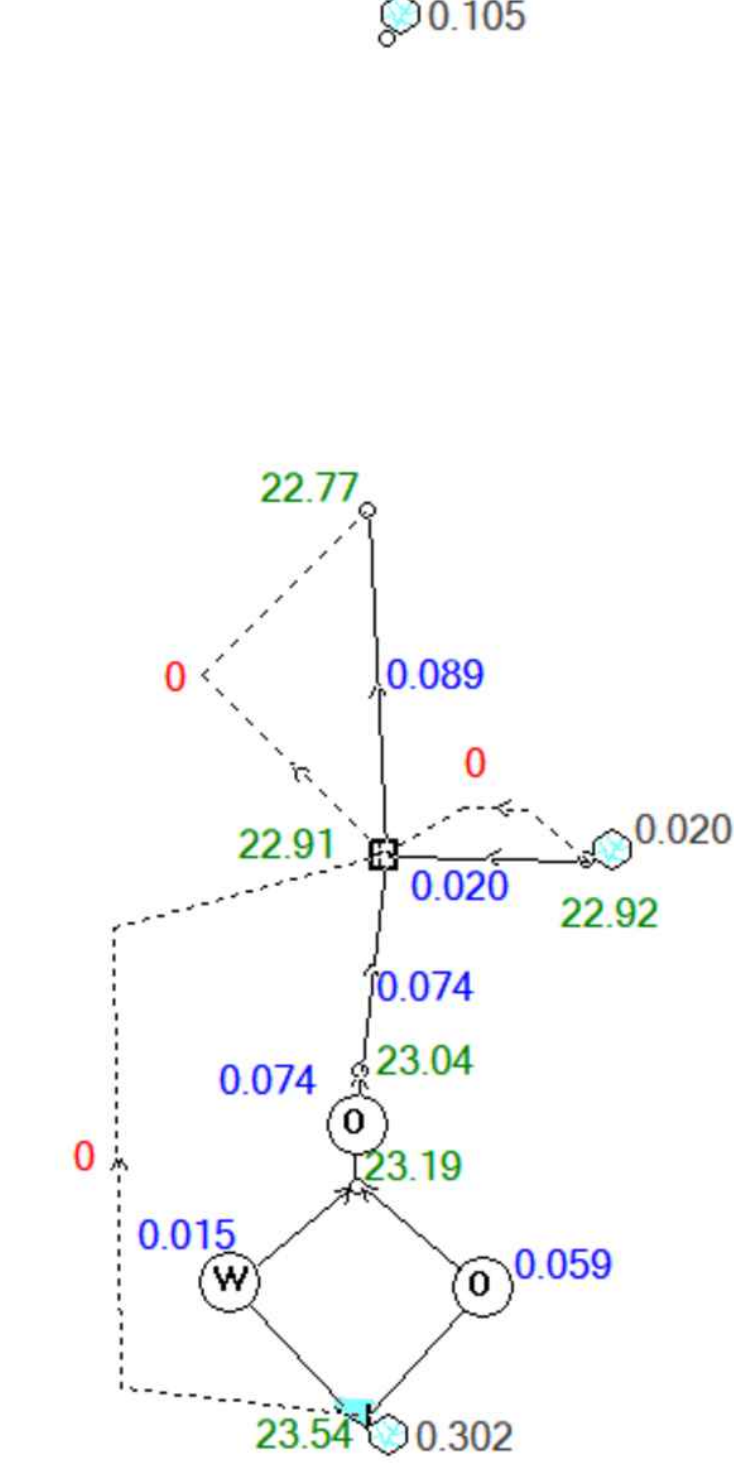
CATCHMENT 2 (STAGE 2)
OSD TANK PLAN VIEW
SCALE NTS



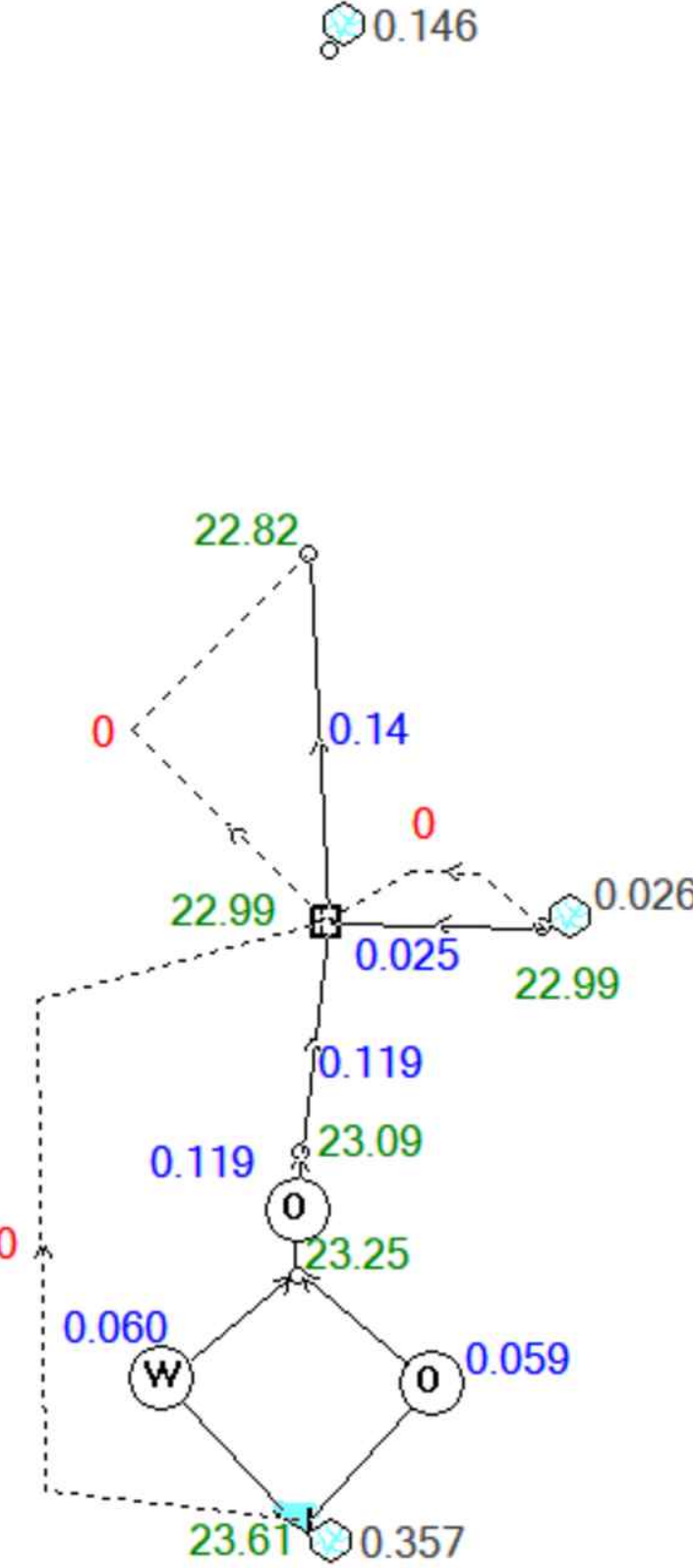
CATCHMENT 2 (STAGE 2)
DRAINS MODEL



CATCHMENT 2 (STAGE 2)
5 YEAR ARI (20% AEP) POST DEVELOPMENT - DRAINS MODEL



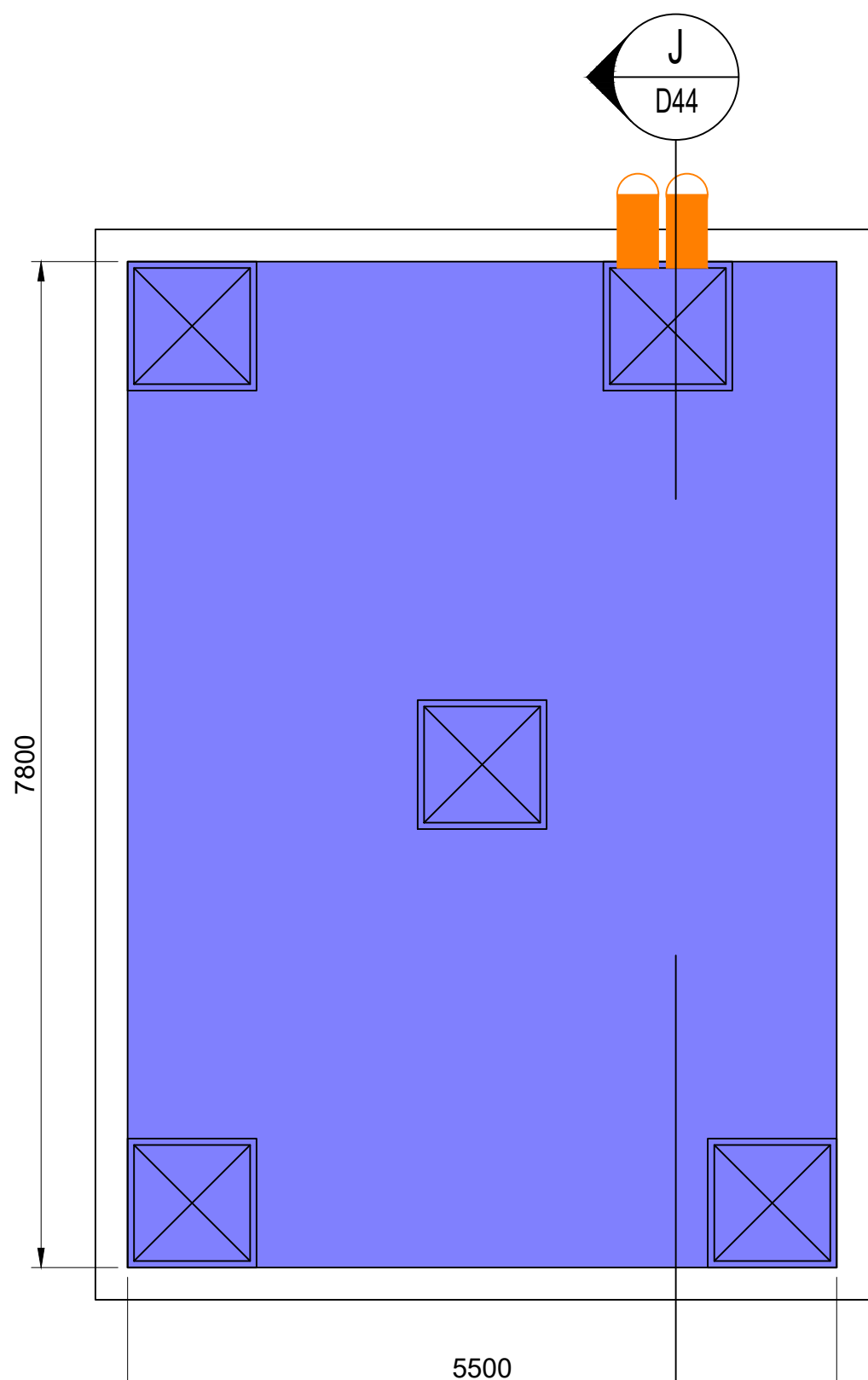
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10 YEAR ARI (10% AEP) POST DEVELOPMENT - DRAINS MODEL



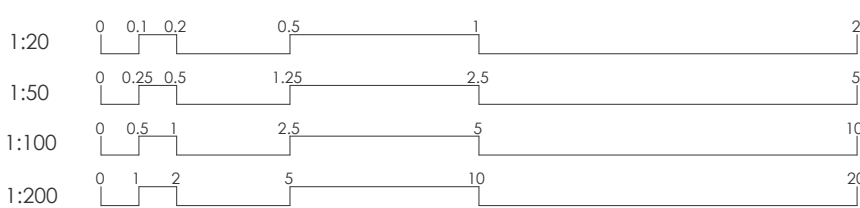
CATCHMENT 2 (STAGE 2)
20 YEAR ARI (5% AEP) POST DEVELOPMENT - DRAINS MODEL



CATCHMENT 2 (STAGE 2)
100 YEAR ARI (1% AEP) POST DEVELOPMENT - DRAINS MODEL



CATCHMENT 2 (STAGE 2)
RAINWATER TANK PLAN VIEW
SCALE NTS



Rev. #	Drafter	Engineer	Revision Description	Date
A	N.E.	K.E.	ISSUE FOR D.A.	28.04.25
B	N.E.	K.E.	ISSUE FOR D.A.	12.06.25

Notes

1. Drawings to be read in conjunction with architectural drawings.
2. Refer to architectural drawings for all setout, levels.
3. Do not scale any dimensions
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PRELIMINARY
NOT FOR CONSTRUCTION

Project North

Scale @ A1: AS SHOWN

Sheet Name:

CATCHMENT 2 (STAGE 2)
OSD DESIGN COMPUTATION
AND DETAILS SHEET 1

Sheet Number:

Revision:

D43

B

Internal Revisions:			
Rev. #	Drafter	Engineer	Date
	Revision	Description	
A	N.E.	K.E.	28.04.25
		ISSUE FOR D.A.	
B	N.E.	K.E.	12.06.25
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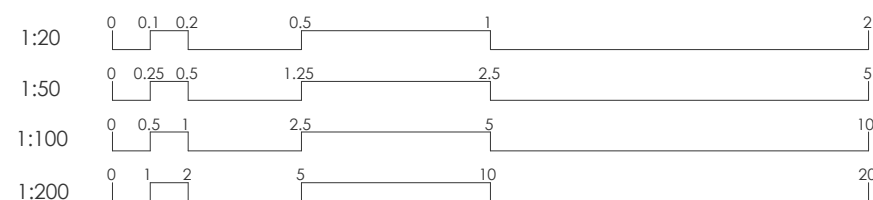
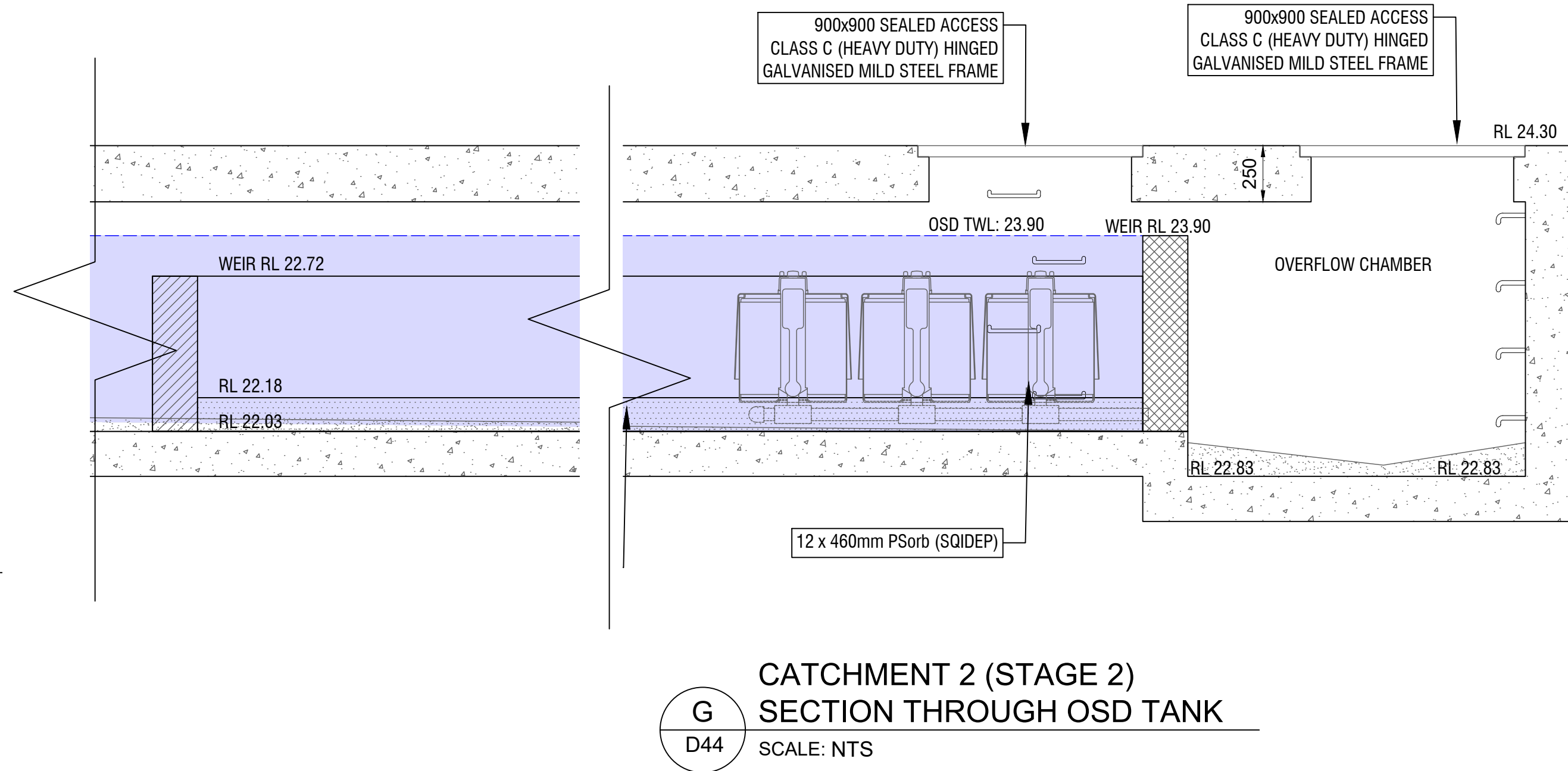
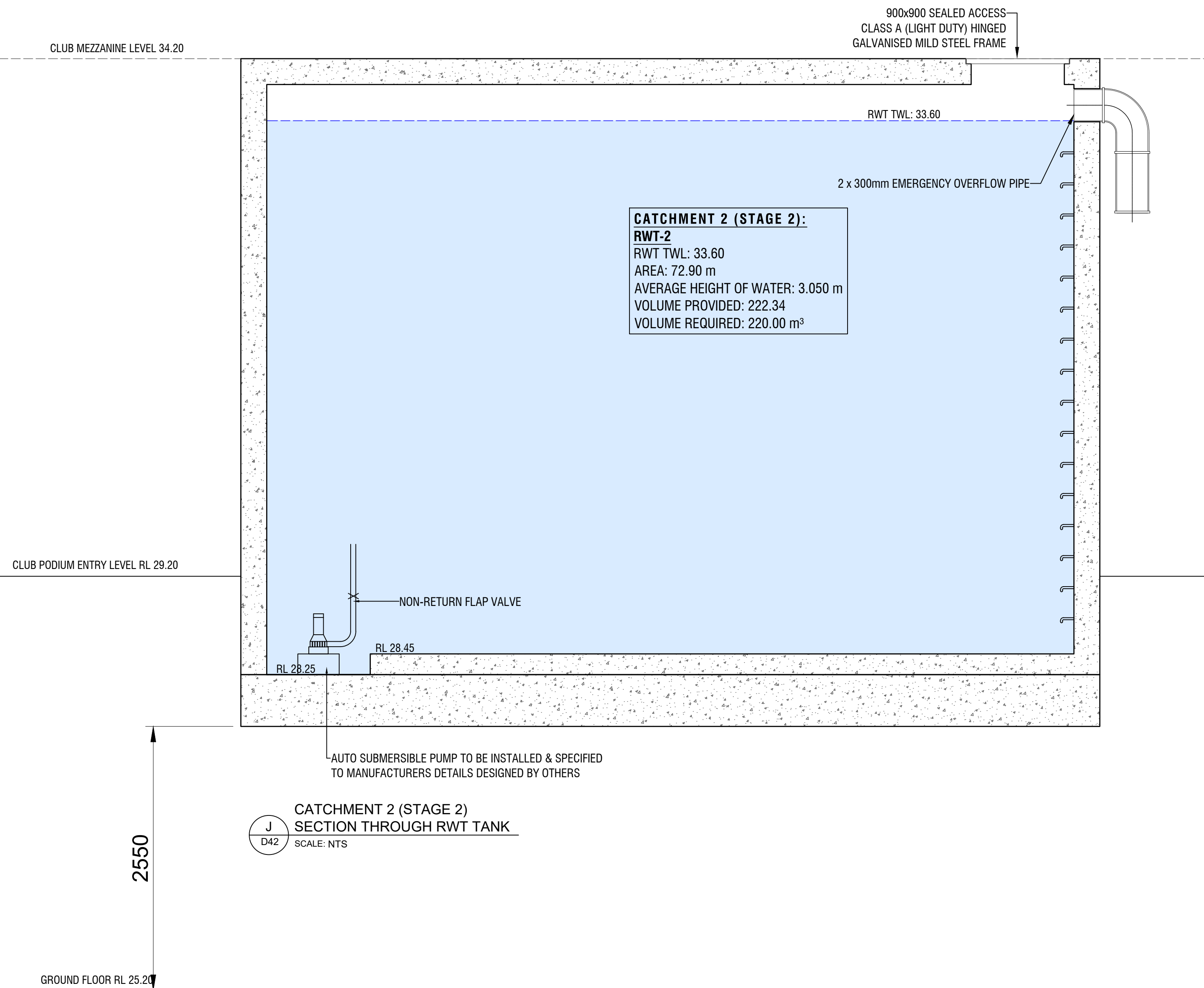
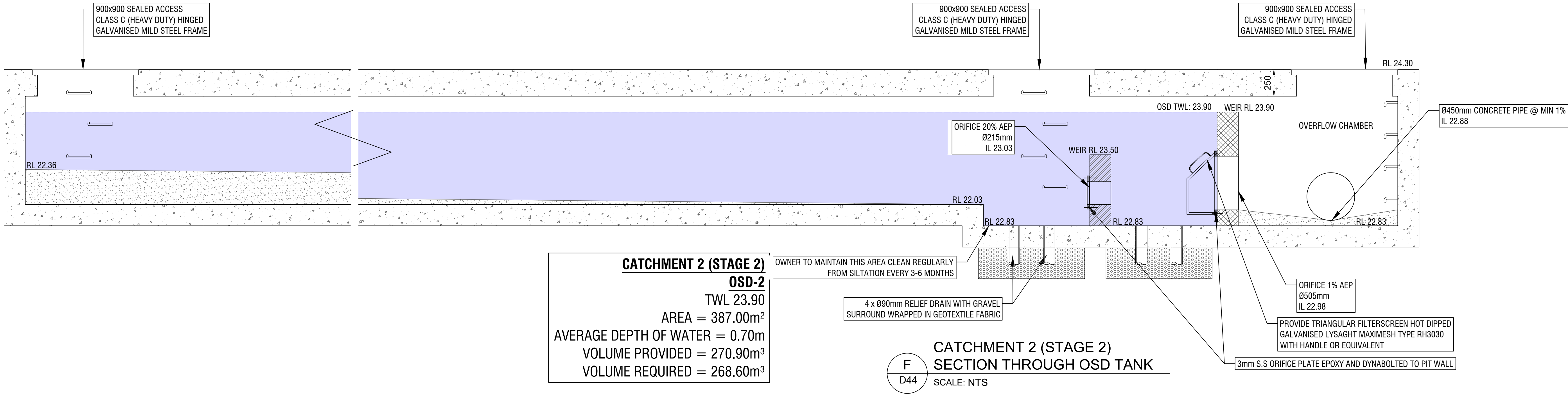
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**CATCHEMNT 2 (STAGE 2)
OSD DESIGN COMPUTATION
AND DETAILS SHEET 2**

Sheet Number:

Revision:

D44
B



CATCHMENT 3 (STAGE 3)

OSD DESIGN DETAILS

BASED ON PENRITH CITY COUNCIL STORMWATER DRAINAGE SPECIFICATION FOR BUILDING DEVELOPMENTS, AN OSD SYSTEM IS REQUIRED FOR THE DEVELOPMENT.

TOTAL SITE AREA: 7,576.50 m²

PRE-DEVELOPMENT CATCHMENT CONDITIONS:
IMPERVIOUS AREA = 781.67 m²
PERVIOUS AREA = 6,797.83m²

POST DEVELOPMENT CATCHMENT CONDITIONS:

TOTAL OVERLAND FLOW PATH AREA: 2489.16 m²

- DRIVEWAY (IMPEVIOUS) = 341.50 m²
- LANDSCAPE (PERVIOUS) = 2147.66 m²

TOTAL AREA DRAINING TO OSD = 4720.24 m²

- ROOF AREA (IMPERVIOUS) = 2304.40 m²
- HARDSTAND AREA (IMPERVIOUS) = 2194.77 m²
- LANDSCAPE (PERVIOUS) = 221.07 m²

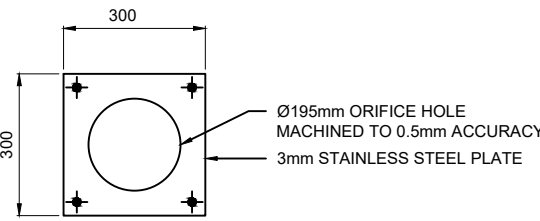
TOTAL AREA BYPASSING OSD = 367.10m²

- IMPERVIOUS AREA = 100.02 m²
- PERVIOUS AREA = 6267.08m²

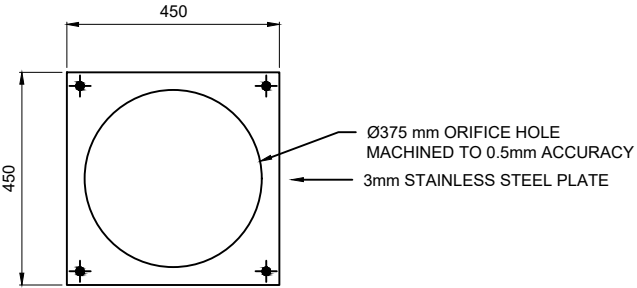
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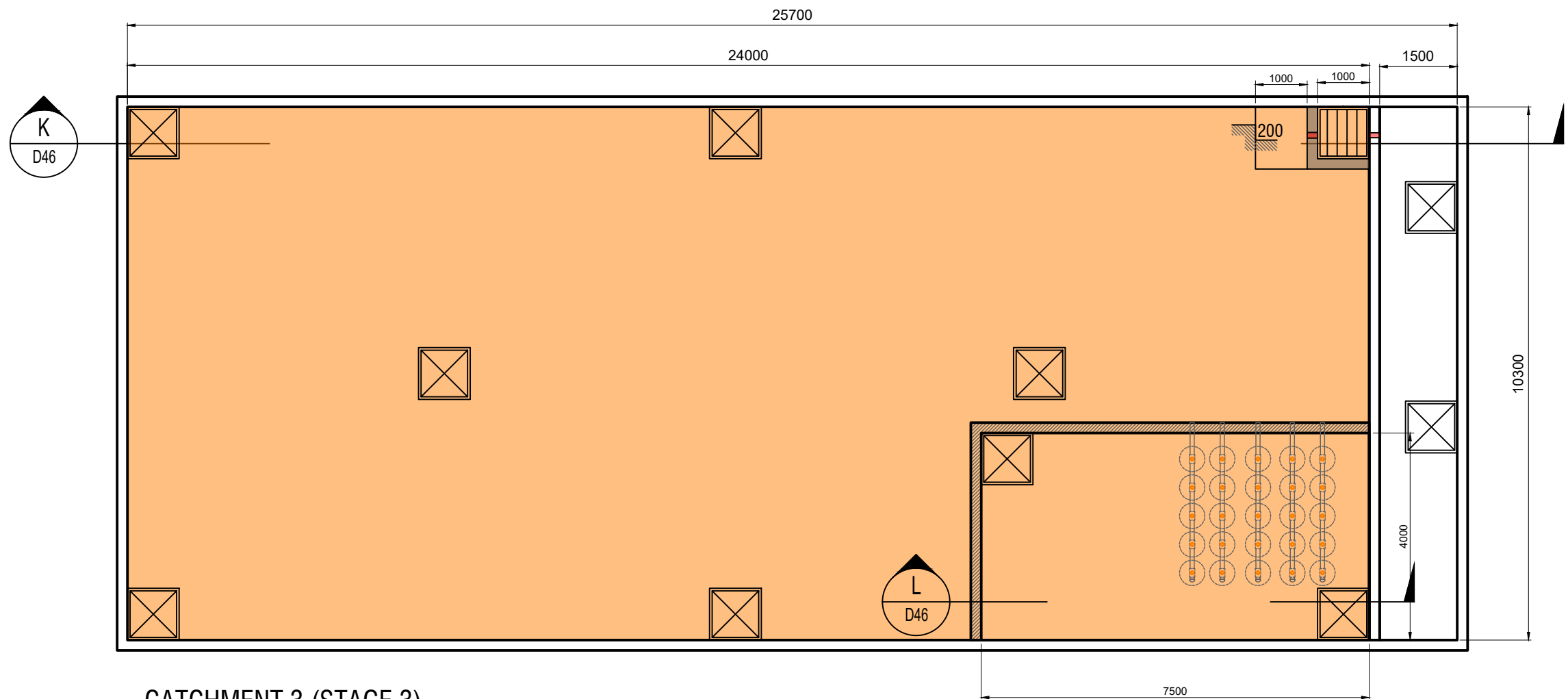
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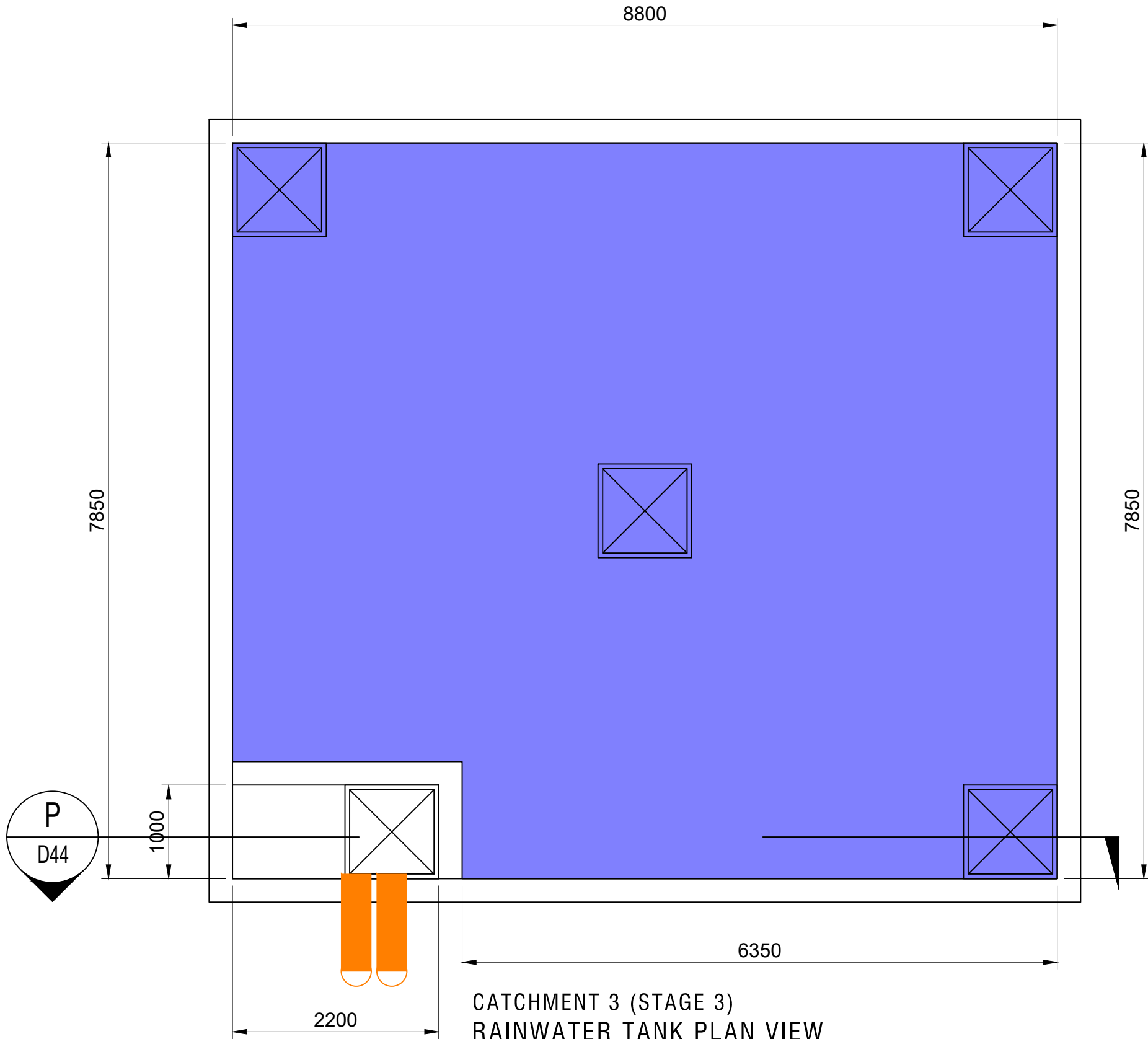
CATCHMENT 3 (STAGE 3)
20% AEP
ORIFICE PLATE ELEVATION
SCALE: NTS



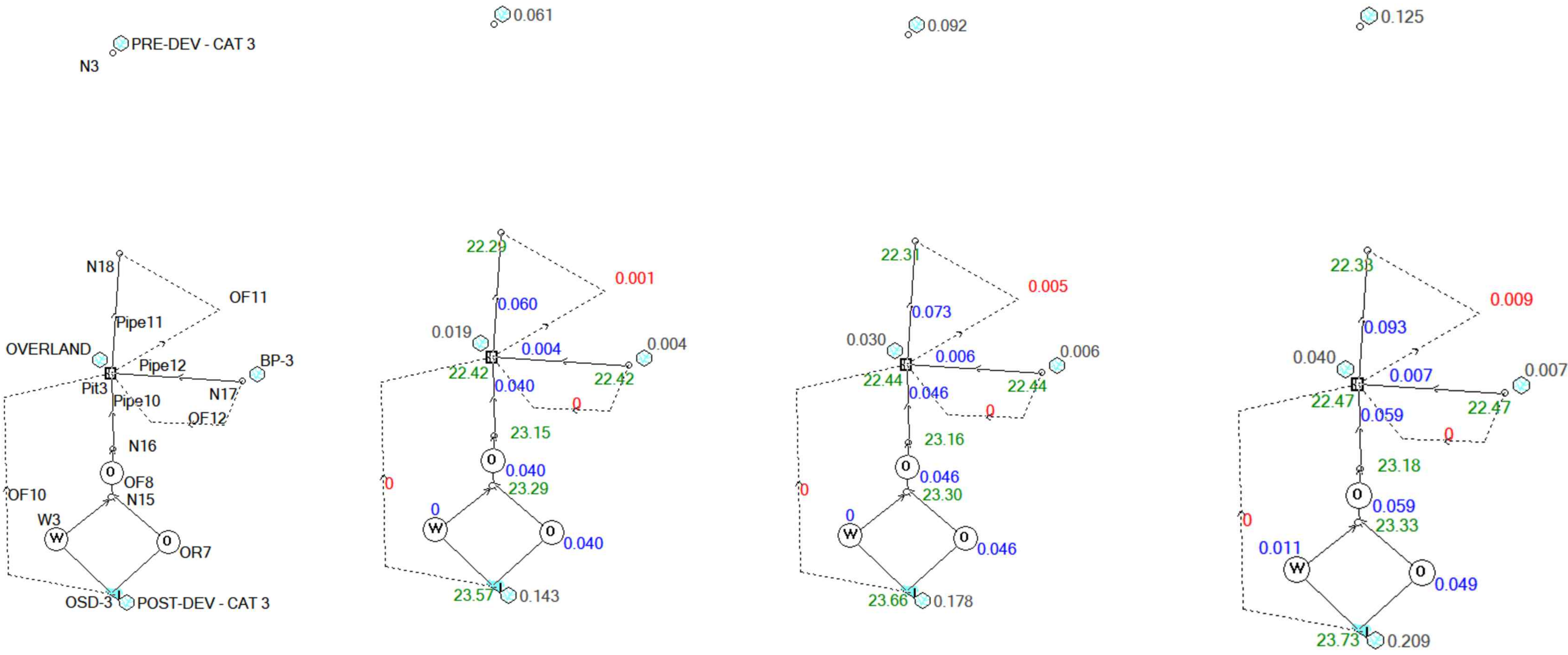
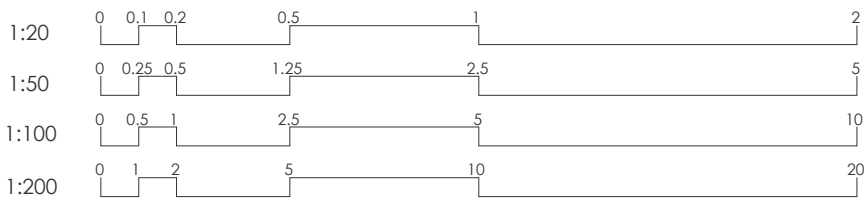
CATCHMENT 3 (STAGE 3)
1% AEP
ORIFICE PLATE ELEVATION
SCALE: NTS



CATCHMENT 3 (STAGE 3)
OSD TANK PLAN VIEW
SCALE NTS



CATCHMENT 3 (STAGE 3)
RAINWATER TANK PLAN VIEW
SCALE NTS

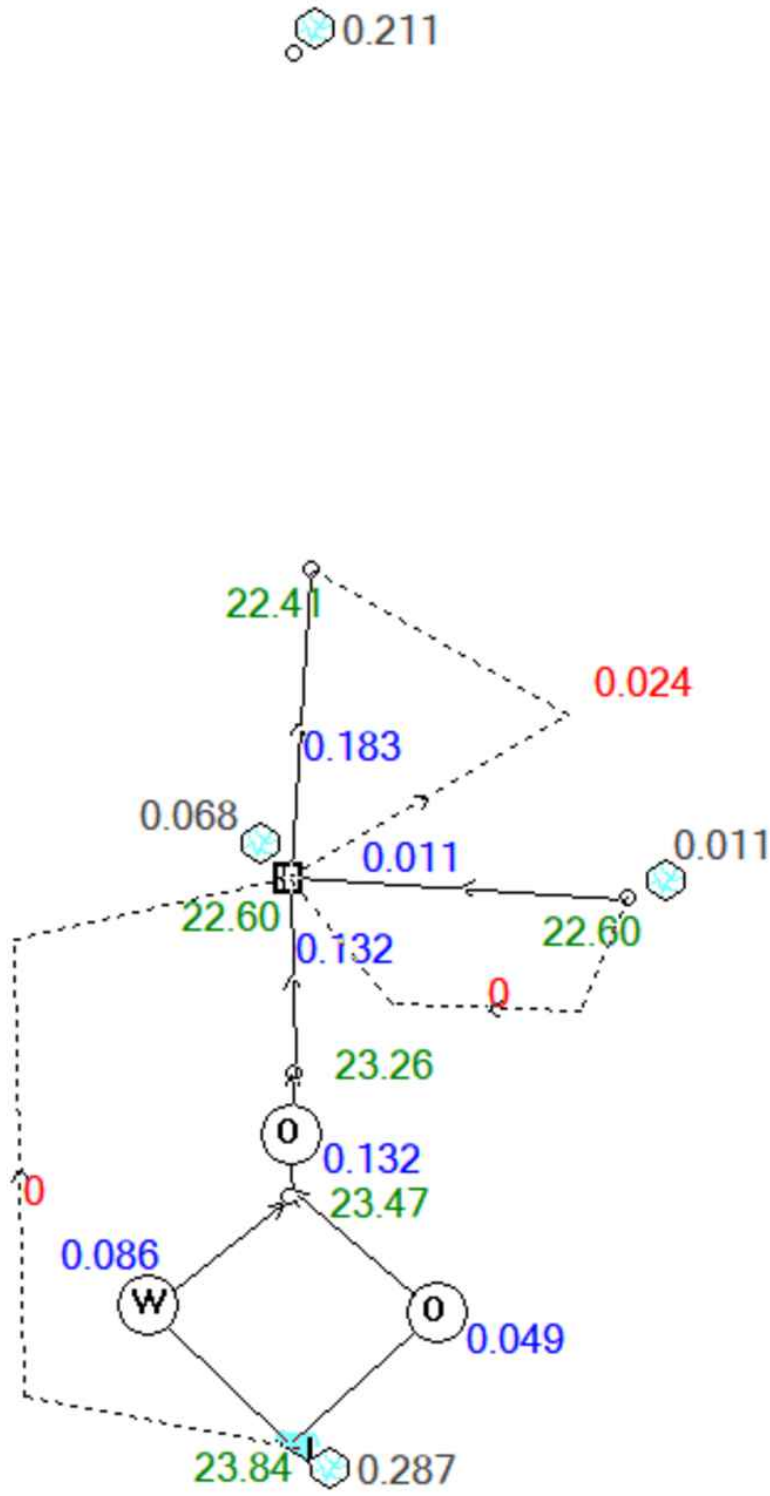


CATCHMENT 3 (STAGE 3)
DRAINS MODEL

CATCHMENT 3 (STAGE 3)
5 YEAR ARI (20% AEP) POST DEVELOPMENT - DRAINS MODEL

CATCHMENT 3 (STAGE 3)
10 YEAR ARI (10% AEP) POST DEVELOPMENT - DRAINS MODEL

CATCHMENT 3 (STAGE 3)
20 YEAR ARI (5% AEP) POST DEVELOPMENT - DRAINS MODEL



CATCHMENT 3 (STAGE 3)
100 YEAR ARI (1% AEP) POST DEVELOPMENT - DRAINS MODEL

Rev. #	Drafter	Engineer	Revision Description	Date
A	N.E.	K.E.	ISSUE FOR D.A.	28.04.25
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Project North

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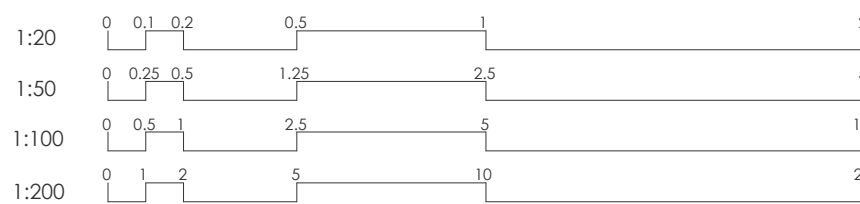
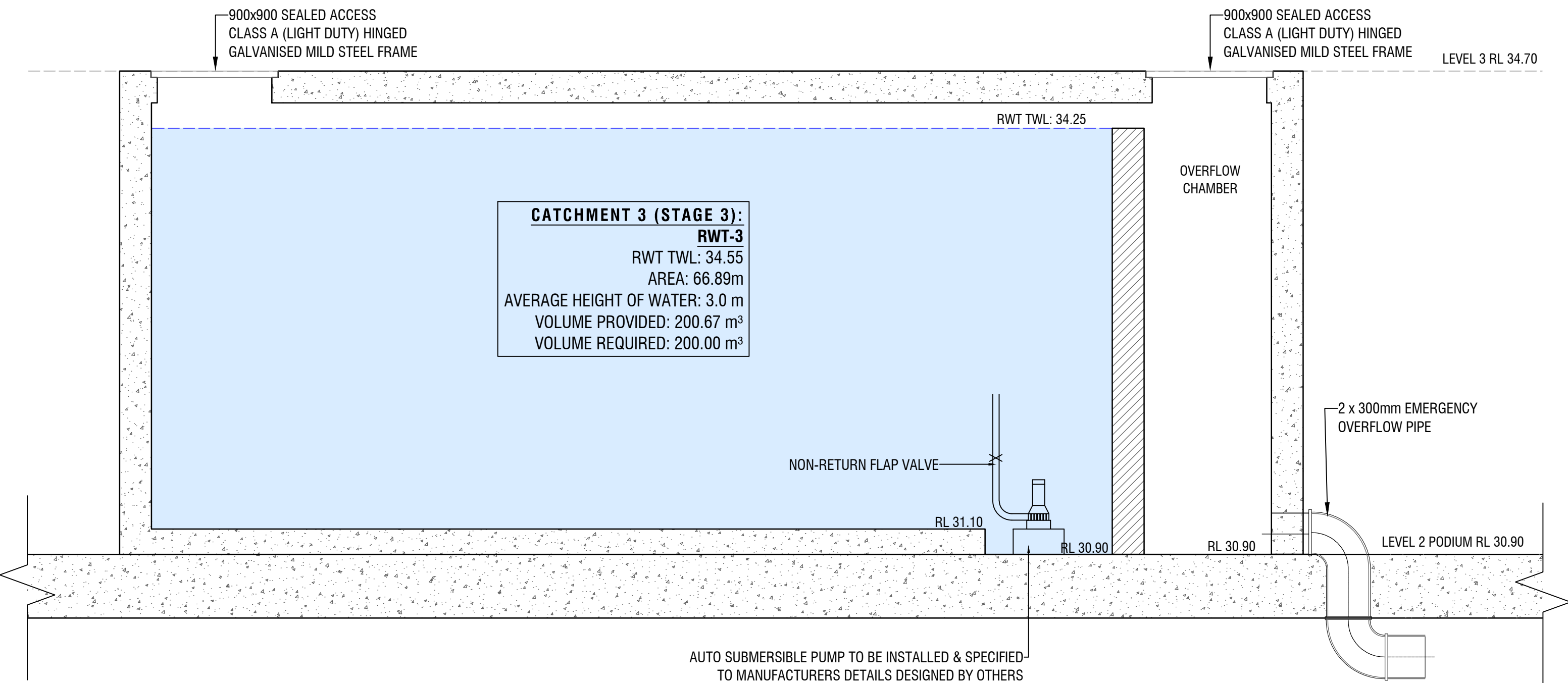
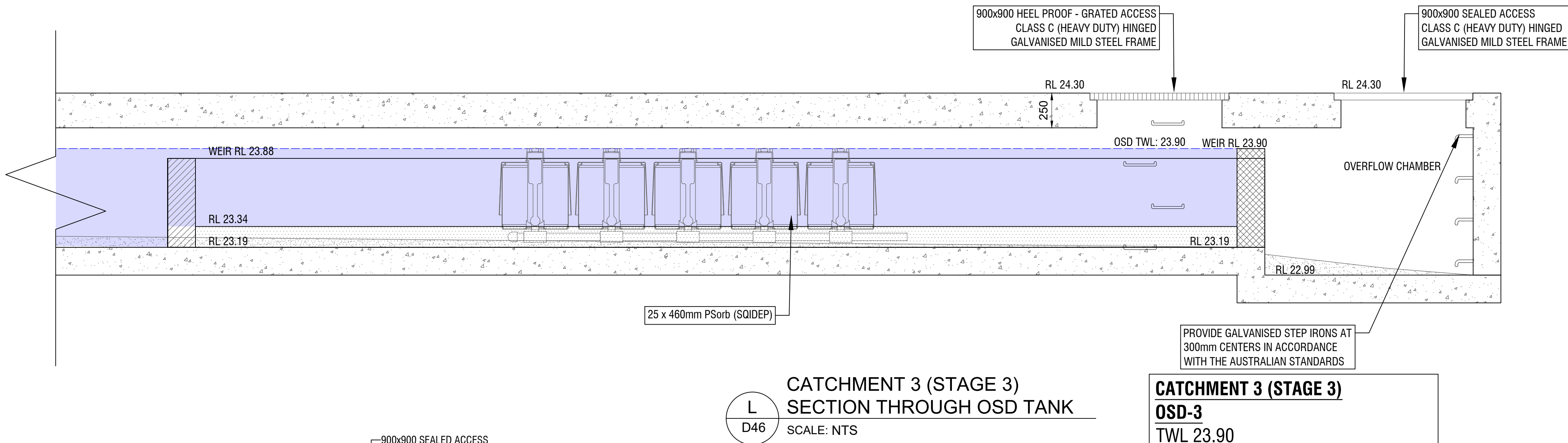
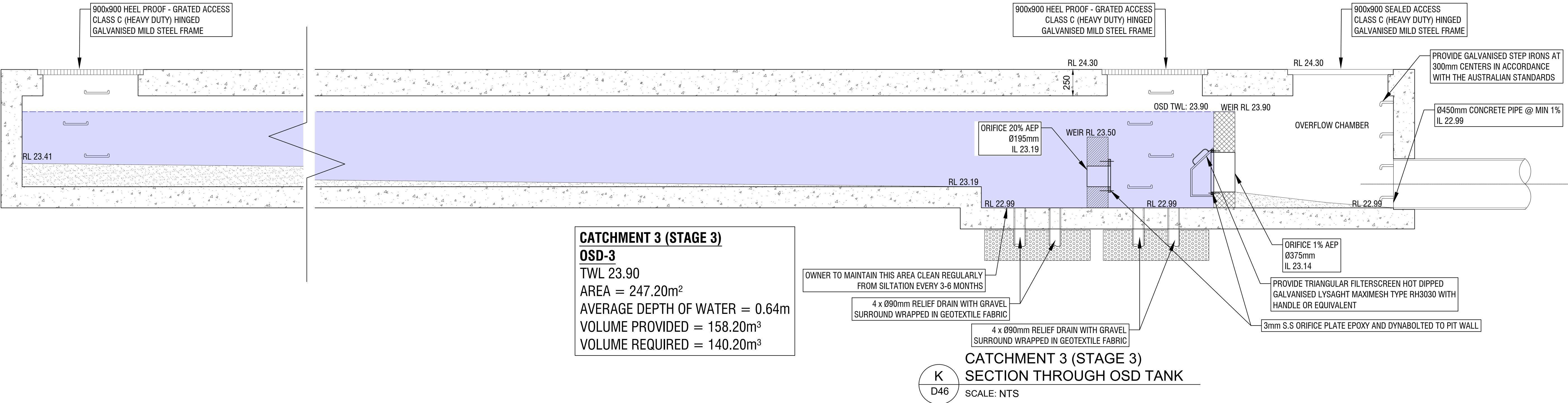
**CATCHMENT 3 (STAGE 3)
OSD DESIGN COMPUTATION
AND DETAILS SHEET 2**

Sheet Number:

Revision:

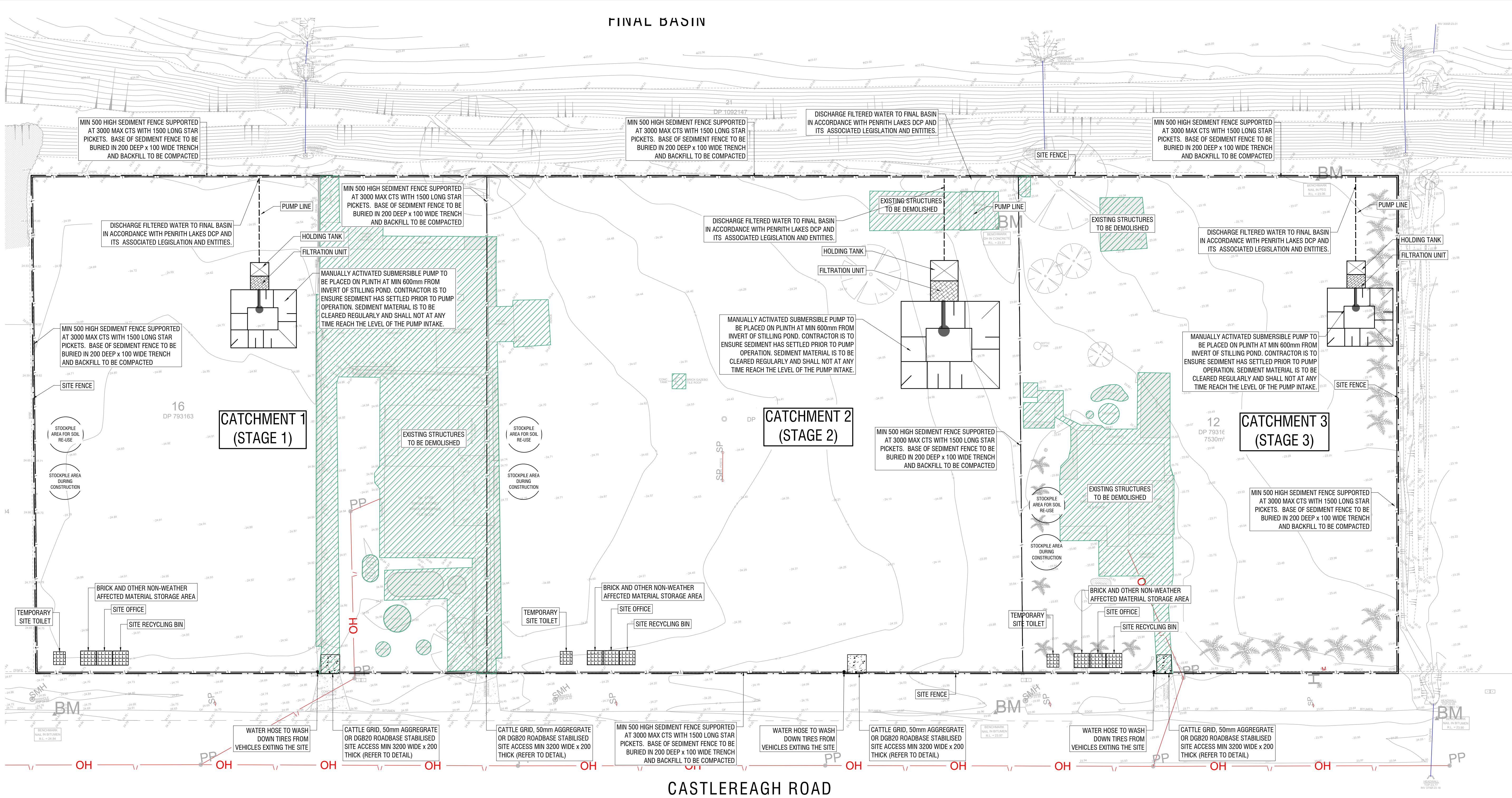
D46

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FINAL BASIN



EROSION AND SEDIMENT CONTROL PLAN

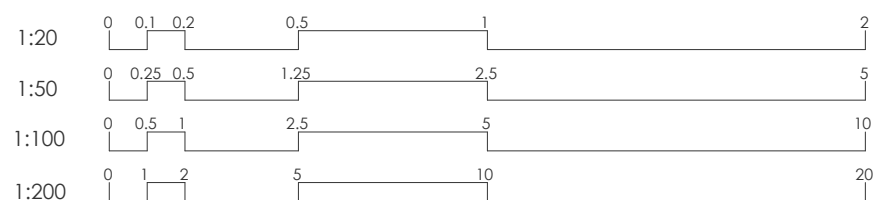
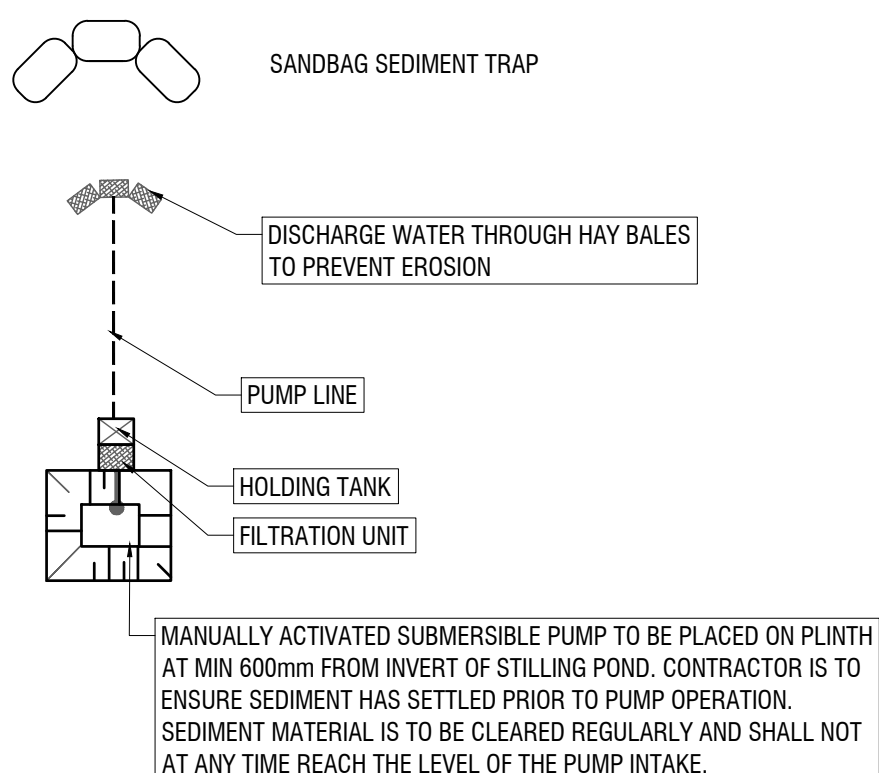
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EROSION CONTROL NOTES

1. ALL EROSION & SEDIMENT CONTROL MEASURES ARE TO BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH 'MANAGING URBAN STORMWATER, 3RD EDITION' PRODUCED BY THE NSW DEPARTMENT OF HOUSING.
2. ALL EROSION AND SILTATION CONTROL DEVICES ARE TO BE PLACED PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION AND REMOVED REGULARLY DURING CONSTRUCTION
3. ALL TREES ARE TO BE PRESERVED UNLESS INDICATED OTHERWISE. ON THE ARCHITECT'S OR LANDSCAPE ARCHITECT'S DRAWINGS. EXISTING GRASS COVER SHALL BE MAINTAINED EXCEPT IN AREAS CLEARED FOR BUILDINGS, PAVEMENTS ETC- CONTRACTOR TO MINIMISE DISTURBED AREAS.
4. INSTALL TEMPORARY SEDIMENT BARRIERS TO ALL INLET PITS LIKELY TO COLLECT SILT LADEN WATER
5. NOT WITHSTANDING DETAILS SHOWN, IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO ENSURE THAT ALL SITE ACTIVITIES COMPLY WITH THE REQUIREMENTS OF THE CLEAN WATERS ACT.
6. ALL DISTURBED AREAS AND STOCKPILES TO BE STABILISED WITHIN 14 DAYS. ALL STOCKPILES TO BE CLEAR FROM DRAINS, GUTTERS AND FOOTPATHS.
7. TOPSOIL TO BE STRIPPED, STOCKPILED AND RE-SPREAD ON COMPLETION OF EARTHWORKS. NONE TO BE REMOVED.
8. NO DISTURBANCE OF SITE PERMITTED OTHER THAN IMMEDIATE AREA OF THE WORKS.
9. DRAINAGE IS TO BE CONNECTED TO STORMWATER SYSTEM AS SOON AS POSSIBLE. NON-COMPLIANCE MAY RESULT IN A \$1500 FINE

SYMBOLS

- EXISTING LEVELS
- SILT FENCE
- DUST PROOF FENCE
- SITE FENCE
- STABILISED SITE ACCESS
- Ø50 PUMP LINE
- EXISTING STRUCTURE TO BE DEMOLISHED



GENERAL INSTRUCTIONS:

SWM01
THESE PLANS PRESENT A CONCEPTUAL SOIL AND WATER MANAGEMENT PLAN (SWMP) ONLY AND SHOWS A POSSIBLE WAY OF MANAGING SOIL AND EROSION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE ESTABLISHMENT AND MANAGEMENT OF THE SITE AND PREPARING A DETAILED PLAN AND OBTAINING APPROVAL FROM THE RELEVANT AUTHORITY PRIOR TO THE COMMENCEMENT OF ANY WORKS.

SWM02
THIS PLAN IS TO BE READ IN CONJUNCTION WITH THE ENGINEERING PLANS AND ANY OTHER PLANS, WRITTEN INSTRUCTIONS, SPECIFICATION OR DOCUMENTATION THAT MAY BE ISSUED AND RELATING TO DEVELOPMENT OF THE SUBJECT SITE.

SWM03
THE CONTRACTOR WILL ENSURE THAT ALL SOIL AND WATER MANAGEMENT WORKS ARE CONSISTENT WITH 'MANAGING URBAN STORMWATER - SOILS AND CONSTRUCTION' - ALSO KNOWN AS 'THE BLUE BOOK'.

SWM04
ALL BUILDERS AND SUB-CONTRACTORS SHALL BE INFORMED OF THEIR RESPONSIBILITIES IN MINIMISING THE POTENTIAL FOR SOIL EROSION AND POLLUTION TO DOWNSLOPE LANDS AND WATERWAYS.

EROSION CONTROL:

SWM05
WATER SHALL BE PREVENTED FROM ENTERING THE PERMANENT DRAINAGE SYSTEM UNTIL SEDIMENT CONCENTRATION IS LESS THEN OR EQUAL TO 50MG/L. IE THE CATCHMENT AREA HAS BEEN PERMANENTLY LANDSCAPED AND/ OR ANY LIKELY SEDIMENT HAS BEEN FILTERED THROUGH AND APPROVED STRUCTURE.

SWM06
ANY SAND USED IN THE CONCRETE CURING PROCESS (SPREAD THE SURFACE WILL BE REMOVED AS SOON AS POSSIBLE AND WITHIN 10 WORKING DAYS FROM PLACEMENT.

SWM07
ACCEPTABLE RECEPTORS WILL BE CONSTRUCTED FOR CONCRETE AND MORTAR SLURRIES, PAINTS, ACID WASHINGS, LIGHT-WEIGHT WASTE MATERIALS AND LITTER.

SWM08
'SEDIMENT' FENCING WILL BE INSTALLED AS INDICATED ON THE PLANS AND AT THE DIRECTION OF SITE SUPERINTENDENT TO ENSURE CONTAINMENT OF SEDIMENT. THE SEDIMENT FENCING WILL OUTLET OR OVERFLOW UNDER STABILISED CONDITIONS INTO THE SEDIMENT BASIN, TO SAFELY CONVEY WATER INTO A SUITABLE FILTERING SYSTEM SHOULD THE PORES IN THE FABRIC BLOCK.

SWM09
THE SEDIMENT BASINS WILL BE CONSTRUCTED WITH THE MINIMUM WET SEDIMENT CAPACITY OF CUM CUBIC METERS AND DESIGNED TO REMAIN STABLE IN AT LEAST THE 1 IN CDSE YEAR CRITICAL DURATION STORM EVENT. ARTIFICIAL FLOCCULATION OF THE FINER PARTICLES MAY NOT BE NECESSARY IN THIS INSTANCE.

SWM10
STOCKPILES SHOULD NOT BE LOCATED WITHIN 5M OF TREES AND HAZARD AREAS, INCLUDING LIKELY AREAS OF CONCENTRATED OR HIGH VELOCITY FLOWS SUCH AS WATERWAYS, DRAINAGE LINES, PAVED AREAS AND DRIVEWAYS. WHERE THEY ARE WITHIN 5M FROM SUCH AREAS, SPECIAL SEDIMENT CONTROL MEASURES SHOULD BE TAKEN TO MINIMISE POSSIBLE POLLUTION TO DOWNSTREAM WATERS. MEASURE SHOULD ALSO BE APPLIED TO PREVENT THE EROSION OF THE STOCKPILE.

SWM11
ALL CUT AND FILL BATTERS ARE TO BE SEEDED AND MULCHED WITHIN 14 DAYS OF COMPLETION OF FORMATION.

SWM12
ANY EXISTING TREES WHICH FORM PART OF THE FINAL LANDSCAPING PLAN WILL BE PROTECTED FROM CONSTRUCTION ACTIVITIES BY -
A. PROTECTING THEM WITH BARRIER FENCING OR SIMILAR MATERIALS INSTALLED OUTSIDE THE DRIP LINE,
B. ENSURING THAT NOTHING IS NAILED TO THEM,
C. PROHIBITING PAVING GRADING SEDIMENT WASH OR PLACING OF STOCKPILES WITHIN THE DRIP LINE EXCEPT UNDER THE FOLLOWING CONDITIONS :
1. ENCROACHMENT ONLY OCCURS ON ONE SIDE AND NO CLOSER TO THE TRUNK THAN EITHER 1.5 METRES OR HALF THE DISTANCE BETWEEN THE OUTER EDGE OF THE DRIP LINE AND THE TRUNK, WHICHEVER IS THE GREATER,
2. A DRAINAGE SYSTEM THAT ALLOWS AIR AND WATER TO CIRCULATE THROUGH THE ROOT ZONE (E.G. A GRAVEL BED) IS PLACED UNDER ALL FILL LAYERS OF MORE THAN 300 MILLIMETRES DEPTH,
3. CARE IS TAKEN.

SWM13
DURING WINDY WEATHER, LARGE DISTURBED UNPROTECTED AREAS SHOULD BE KEPT MOIST (NOT WET) BY SPRINKLING WITH WATER TO KEEP DUST UNDER CONTROL.

SWM14
TEMPORARY PROTECTION FROM EROSION FORCES WILL BE UNDERTAKEN ON LANDS WHERE FINAL SHAPING HAS NOT BEEN COMPLETED BUT WORKS ARE UNLIKELY TO PROCEED FOR PERIODS OF TWO MONTHS OR MORE (E.G. ON TOP SOIL STOCKPILES). THIS MAY BE ACHIEVED WITH A VEGETATIVE COVER, A RECOMMENDED LISTING OF PLANT SPECIES FOR SOIL AND WATER MANAGEMENT NOTES:
TEMPORARY COVER IS -
I) AUTUMN/WINTER SOWING -OATS/RVEYCORN AT 20KG/HA
-JAPANESE MILLET AT 10KG/HA
II) SPRING/SUMMER SOWING -JAPANESE MILLET AT 20KG/HA
-OATS/RVEYCORN AT 10 KG/HA

SWM15
DIVERSION BANKS/ CHANNELS WILL BE REHABILITATED AS SOON AS POSSIBLE AND WITHIN 5 WORKING DAYS FROM THEIR FINAL SHAPING. OTHER THAN IN THE WINTER MONTHS, SUITABLE MATERIALS'S INCLUDE TURF GRASSES SUCH S COUCH OR KIKUYU. DURING WINTER, OR AT OTHER TIMES WHEN TEMPORARY REHABILITATION (MORE THAN 3 MONTHS) IS REQUIRED, IT IS SUGGESTED THAT HESSIAN CLOTH IS USED BUT ONLY IF TACKED WITH APPROPRIATE PEGS AND AN ANIONIC BITUMEN EMULSION. FOOT AND VEHICULAR TRAFFIC SHOULD BE KEPT AWAY FROM THESE AREAS.

SWM16
UNDERTAKE SITE DEVELOPMENT WORKS IN ACCORDANCE WITH THE ENGINEERING PLANS. WHERE POSSIBLE, PHASE DEVELOPMENT SO THAT LAND DISTURBANCE IS CONFINED TO AREAS OF WORKABLE SIZE.

CONSTRUCTION SEQUENCE

SWM17
WHERE PRACTICAL, THE SOIL EROSION HAZARD ON THE SITE SHOULD BE KEPT AS LOW AS POSSIBLE. TO THIS END, WORKS SHOULD BE UNDERTAKEN IN THE FOLLOWING SEQUENCE -
I) INSTALL INLET SEDIMENT TRAPS TO ALL GULLY PITS FRONTING THE SITE.
II) INSTALL A 1.8M CHAIN WIRE FENCE AROUND THE BOUNDARIES AND ATTACH HESSIAN CLOTH OR SIMILAR TO IT ON THE WINDWARD SIDE (TIES AT THE TOP, CENTRE AND BOTTOM AND AT 1M INTERVALS OR AS INSTRUCTED BY THE SUPERINTENDENT),
III) INSTALL GEOFABRIC SEDIMENT FENCE AND SEDIMENT TRAPS AROUND ALL PERMANENT STORMWATER RETICULATION STRUCTURES AS SHOWN ON THE PLAN,
IV) CONSTRUCT STABILISED CONSTRUCTION ENTRANCE AS SHOWN ON THE PLAN OR TO LOCATION AS DETERMINED BY SUPERINTENDENT,
V) INSTALL DIVERSION BANKS ALONG THE BOUNDARY WHERE REQUIRED, REHABILITATE DISTURBED LANDS DOWNSLOPE FROM THE BASINS WITHIN 20 WORKING DAYS,
VI) ENSURE THAT THE SEDIMENT BASIN IS DIRECTED ONTO A TURFED AREA AND DRAINS TO A SUITABLE LOCATION, A TEMPORARY STORMWATER LINE MAY BE NECESSARY TO CONVEY THE FLOWS TO THIS LOCATION, CONSTRUCT DIVERSION CHANNELS AT THE BOUNDARY TO DRAIN INTO THE SEDIMENT BASIN AS SHOWN ON PLANS,
VII) AT COMPLETION STABILISE SITE AND DECOMMISSION SEDIMENT BASIN AND ALL EROSION CONTROL DEVICES.

SWM18
TEMPORARY SOIL AND WATER MANAGEMENT STRUCTURES WILL BE REMOVED ONLY AFTER THE LANDS THEY ARE PROTECTING ARE REHABILITATED.

SWM19
FINAL SITE LANDSCAPING WILL BE UNDERTAKEN AS SOON AS POSSIBLE AND WITHIN 20 WORKING DAYS FROM COMPLETION OF CONSTRUCTION ACTIVITIES.

SITE INSPECTION AND MAINTENANCE

SWM 20
AT LEAST WEEKLY AND AFTER EVERY RAIN FALL EVENT, THE CONTRACTOR WILL INSPECT THE SITE AND ENSURE THAT -
I) DRAINS AND ALL SEDIMENT CONTROL DEVICES OPERATE EFFECTIVELY AND INITIATE REPAIR OR MAINTENANCE AS REQUIRED,
II) RECEPTORS FOR CONCRETE AND MORTAR SLURRIES, PAINTS, ACID WASHINGS, LIGHT-WIGHT WASTE MATERIALS AND LITTER ARE TO BE EMPTIED AS NECESSARY. DISPOSAL OF WASTE SHALL BE IN A MANOR APPROVED BY THE SUPERINTENDENT,
III) SPILL SAND (OR OTHER MATERIALS) IS REMOVED FROM HAZARD AREAS, INCLUDING LIKELY AREAS OF CONCENTRATED OR HIGH VELOCITY FLOWS SUCH AS WATERWAYS, GUTTERS, PAVED AREAS AND DRIVEWAYS,
IV) SEDIMENT IS REMOVED FROM BASINS AND / OR TRAPS WHEN LESS THAN 20M³ OF TRAPPING CAPACITY REMAIN PER 1000M² OF DISTRIBUTED LANDS, AND OR LESS THAN 500 DEPTH REMAINS IN THE SETTLING ZONE. ANY COLLECTED SEDIMENT WILL BE DISPOSED IN AREAS WHERE FURTHER POLLUTION TO DOWN SLOPE LANDS AND WATERWAYS IS UNLIKELY,
V) REHABILITATED LANDS HAVE EFFECTIVELY REDUCED THE EROSION HAZARD AND INITIATE UPGRADING OR REPAIR AS APPROPRIATE.

SWM 21
THE CONTRACTOR SHALL PROVIDE ALL MONITORING CONTROL AND TESTING.

NOTES THIS DRAWING

1. ALL DOCUMENTS WILL BE SUBMITTED TO COUNCIL FOR APPROVAL.

2. ALL SEDIMENT CONTROL MEASURES ARE TO BE IN PLACE.

3. INSTALLATION OF SILT FENCING, SEDIMENTATION BARRIERS AROUND DRAINS.

4. FENCING IS TO BE 1.8m(min) HEIGHT, PLACED AROUND THE SITE UNTIL THE WORK COMPLETE.

5. THE SITE GATES WILL BE LOCATED AT CASTLEREAGH ROAD.

6. THE HARDSTAND AREAS OR CATTLE GRIDS WILL BE PLACED AT THE SITE ENTRANCES AND EXITS. TO REMOVE THE BULK OF DIRT AND MUD THAT MAY ACCUMULATE ON TRUCK TYRES.

7. CONTRACTOR WILL CONDUCT REGULAR STREET SWEEPS ALONG THE ACCESS ROUTE TO ENSURE THE ROADS ADJACENT TO THE SITE ENTRANCES ARE KEPT CLEAN OF ANY DIRT AND DEBRIS.

8. REGULAR ENVIRONMENTAL INSPECTIONS WILL BE CARRIED OUT BY CONTRACTOR'S PERSONNEL TO ENSURE COMPLIANCE WITH THIS PLAN.

STAR PICKETS @ 1.0m c/c
2.0m CLEAR OF TRUNK

BARRIER MESH

TREE PROTECTION DETAIL

MINIMUM TREE PROTECTION

SOIL STOCK PILE

SEDIMENT FENCE

DIVERSION DRAIN
(WHERE POSSIBLE)

STAR PICKET

REINFORCED BACKING

FILTER FABRIC
(SECURE TO BACKING)

SAND BAG AND
PEGS REQUIRED TO
HOLD DOWN FABRIC

FALL 500 MIN
500 MIN
100

HAY BALE

60mm GRAVEL OR
CRUSHED ROCK

STRAW BALE SEDIMENT FILTER

DRAINAGE AREA 0.4Ha MAX. SLOPE GRADIENT 1:2 MAX.
SLOPE LENGTH 40m MAX.

ANGLE FIRST STAKE TOWARDS
PREVIOUSLY LAID STRAW BALE

STAKES DRIVEN 0.6m
INTO THE GROUND

DISTURBED AREA

UNDISTURBED AREA

DIRECTION
OF FLOW

RAMP, TYPICAL BOTH ENDS.

CATCH DRAIN

CATCH DRAIN TO BE PROVIDED
ON BOTH SIDES OF "SHAKE
DOWN" WHERE DIRECTED BY
COUNCIL'S ENGINEER.

CATTLE GRID PLAN

RAMP

50 THICK GRANULAR
BEDDING

2100

2100

2100

CATTLE GRID ALTERNATIVE

GEOTEXTILE FILTER
FABRIC

STAKES

RUNOFF WATER
WITH SEDIMENT

BURIED FABRIC

200

FILTERED
WATER

STAKES

DROP INLET
WITH GRATE

GEOTEXTILE
FILTER FABRIC

GEOTEXTILE FILTER FABRIC DROP
INLET SEDIMENT TRAP

SEDIMENT FENCE

DRAINAGE AREA 0.4Ha MAX. SLOPE GRADIENT 1:2 MAX.
SLOPE LENGTH 60m MAX.

WIRE OR STEEL MESH

DISTURBED AREA

3m MAX.

DIRECTION OF FLOW

DETAIL OF OVERLAP

POSTS DRIVEN 0.6m
INTO GROUND

GEOTEXTILE Filter
Fabric

UNDISTURBED AREA

TEMPORARY CONSTRUCTION EXIT

CONSTRUCTION SITE

EXIT

ENTER

MIN. LENGTH 15m

MIN. WIDTH 3m

0.2m

GEOTEXTILE
FABRIC

50-75mm
GRAVEL

BERM (MIN.
0.3m HIGH)

RUNOFF FROM PAD
DIRECTED TO SEDIMENT
TRAP

EXISTING ROAD WAY

TYPICAL DETAIL OF FILTRATION UNIT

FILTRATION
TANK

180

900

500 mm OF HAY BALES

200 mm OF 20mm AGGREGATE

600 mm OF 10MM AGGREGATE

900

180

OUTLET

800

EARTH

FROM PUMP FROM
SEDIMENTATION POND

INLET

GEO-TECH STYLE
FABRIC

NOTE: HAY TO BE CHANGED EVERY DAY
GEO-TECH, SAND, AND BLUE METAL, TO BE CHANGED WEEKLY

Internal Revisions:			
Rev. #	Drafter	Engineer Revision Description	Date
A	N.E.	K.E. ISSUE FOR D.A.	28.04.25
B	N.E.	K.E. ISSUE FOR D.A.	12.06.25

- Notes
1. Drawings to be read in conjunction with architectural drawings.

2. Refer to architectural drawings for all setout, levels.

3. Do not scale any dimensions

4. Drawings to be read & printed in colour.

