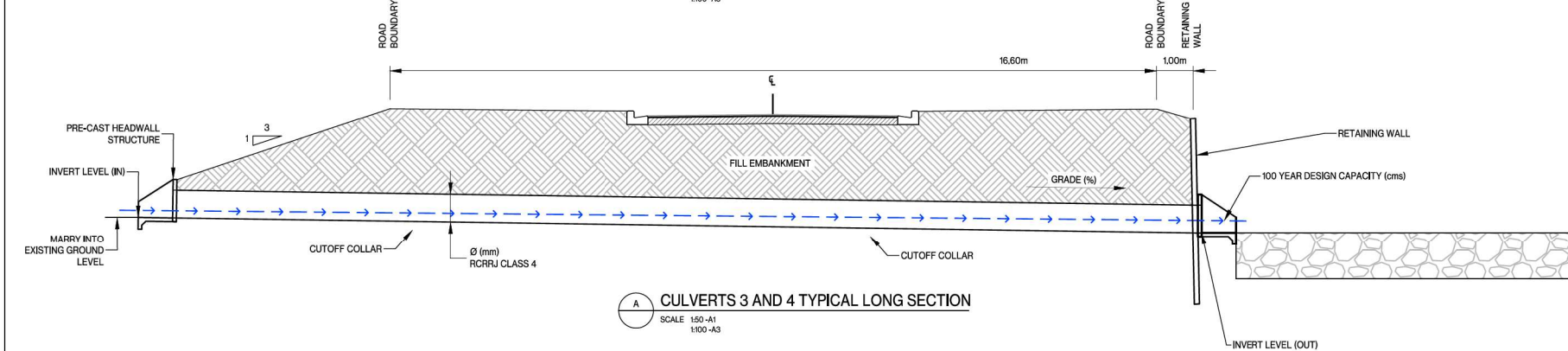
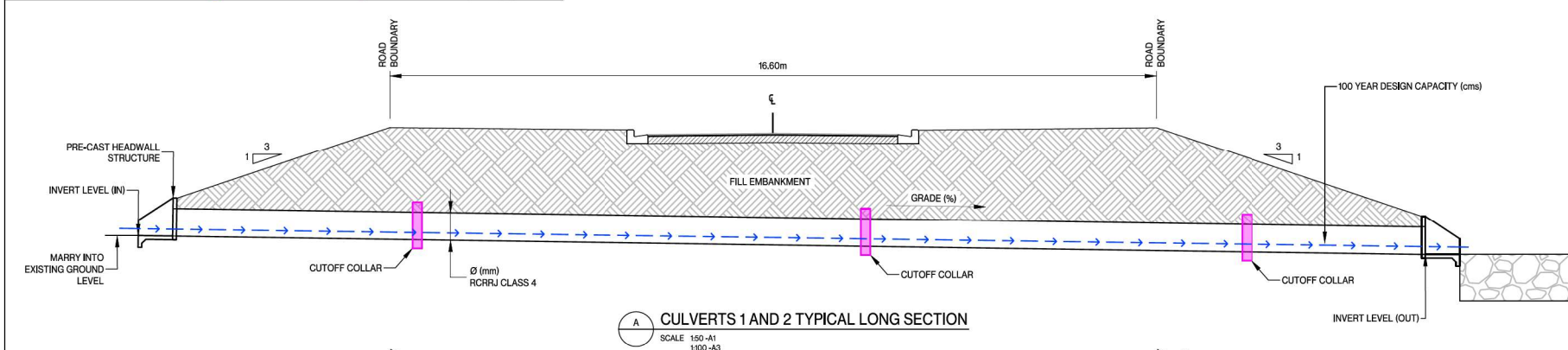
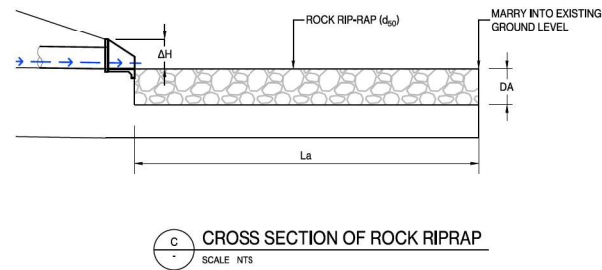
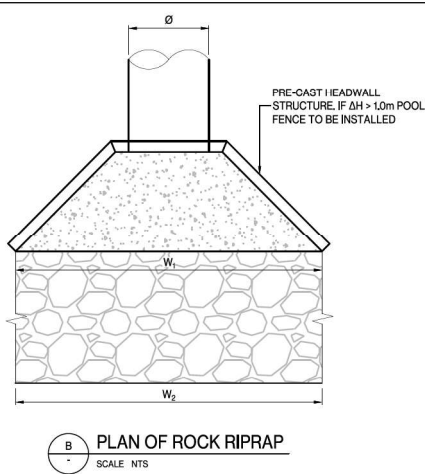
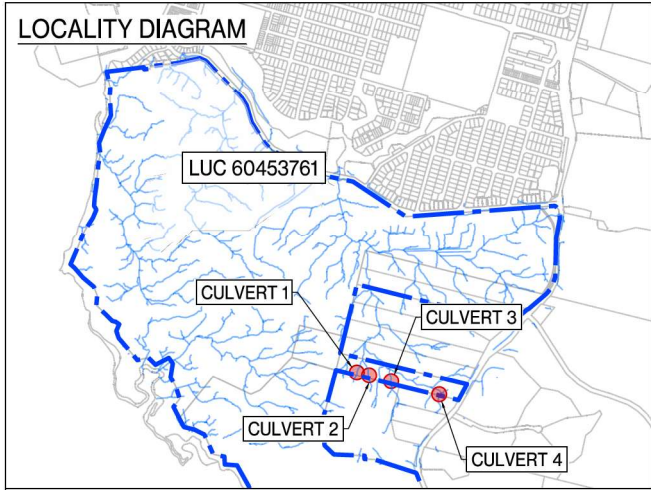




CULVERT DATA

CULVERT	Ø (mm)	INVERT LEVEL (IN)	INVERT LEVEL (OUT)	GRADE (%)	100 YEAR DESIGN CAPACITY (cms)	ΔH (mm)	W ₁ (m)	W ₂ (m)	La (m)	DA (m)	ROCK DIA d ₅₀ (m)
1	600	52.50	48.05	12.71	0.229	910	2.30	2.30	9.68	0.90	0.50
2	750	52.20	51.23	4.22	0.369	1595	3.35	3.35	9.48	0.70	0.40
3	1050	52.40	49.26	12.50	1.540	1550	3.80	3.80	15.00	1.20	0.60
4	600	53.00	50.84	10.39	2.530	910	2.30	2.30	5.33	0.30	0.20

FOR CONSENT

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B	FOR CONSENT	CJM	06/2026
A	FOR CONSENT	CJM	02/2026
REF	REVISIONS	BY	DATE

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T +64 9 917 5000
W www.harrisingrierson.com

PROJECT:

BEACHLANDS
FAST TRACK CONSENT APPLICATION
BEACHLANDS SOUTH, AUCKLAND

TITLE:

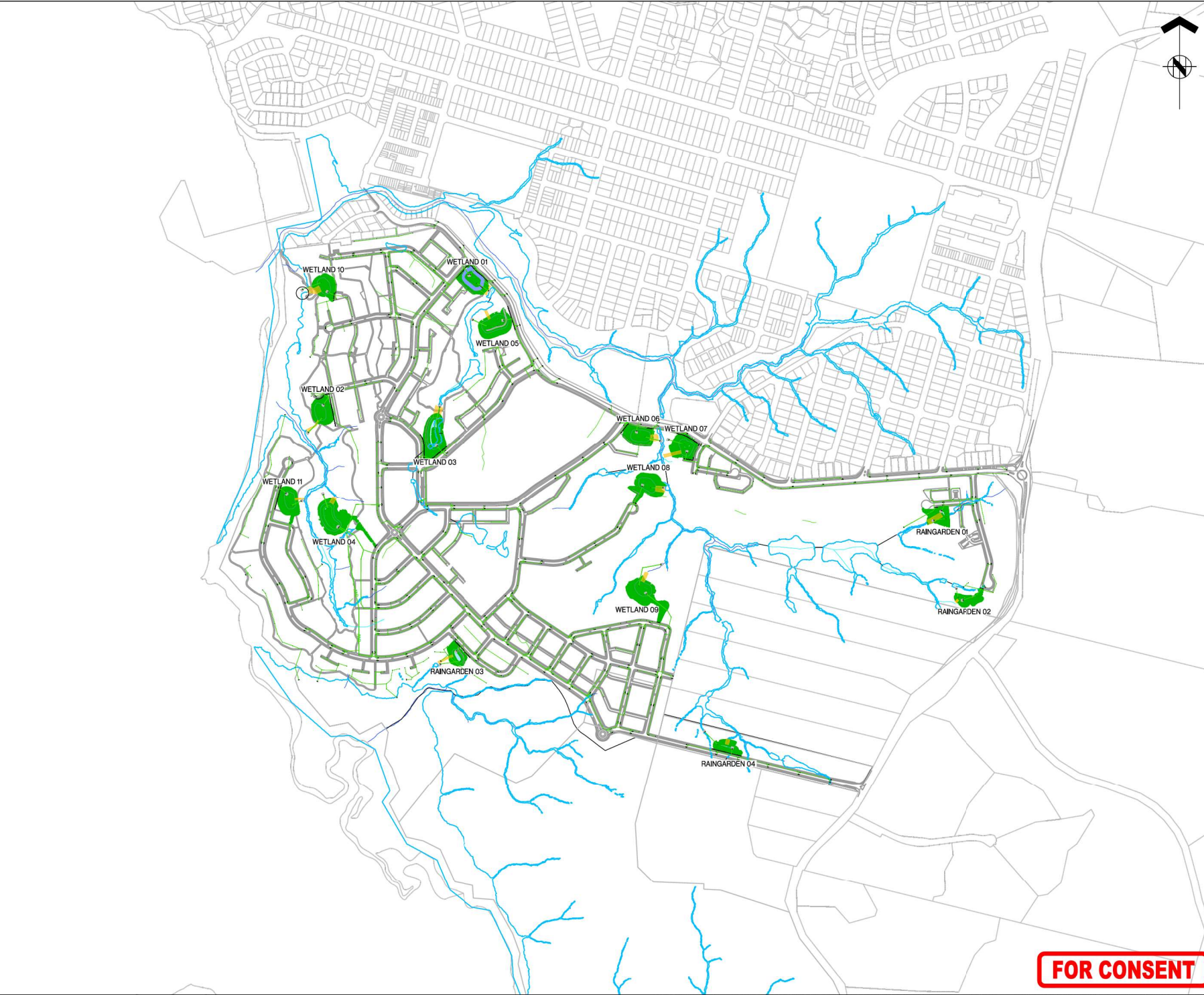
ROAD 20 1% AEP CULVERTS

ORIGINATOR SCT	DATE 04/2026	SIGNED	PILOT BY ABE
DRAWN SCT	DATE 11/2025	SIGNED	PILOT DATE 05/06/26
CHECKED PZS	DATE 04/2026	SIGNED	SURVEY BY SURVEYED BY
APPROVED CJM	DATE 04/2026	SIGNED	SURVEY DATE SURVEYED DATE

ISSUE STATUS:

FAST TRACK CONSENT

PROJECT No: A2515591.00	SCALE: NOT TO SCALE	A1
DRAWING No: A2515591.00-4260	REV	B



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LEGEND:

- FINISHED CONTOURS SHOWN AT 0.25m INTERVALS
- EXISTING CONTOURS SHOWN AT 1m INTERVALS
- PERMANENT WATER LEVEL EXTENTS
- SPILLWAY EXTENTS
- MAINTENANCE ACCESS TRACK
- LOT BOUNDARY
- MAXIMUM WATER LEVEL
- PROPOSED RETAINING WALL
- INTERMITTENT OR PERMANENT STREAM
- MODIFIED NATURAL STREAM
- FLOOD EXTENT
- BOLLARDS

A	FOR CONSENT	JEP	05/2026
REF	REVISIONS	BY	DATE

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PROJECT: **BEACHLANDS
FAST TRACK CONSENT APPLICATION
BEACHLANDS SOUTH, AUCKLAND**

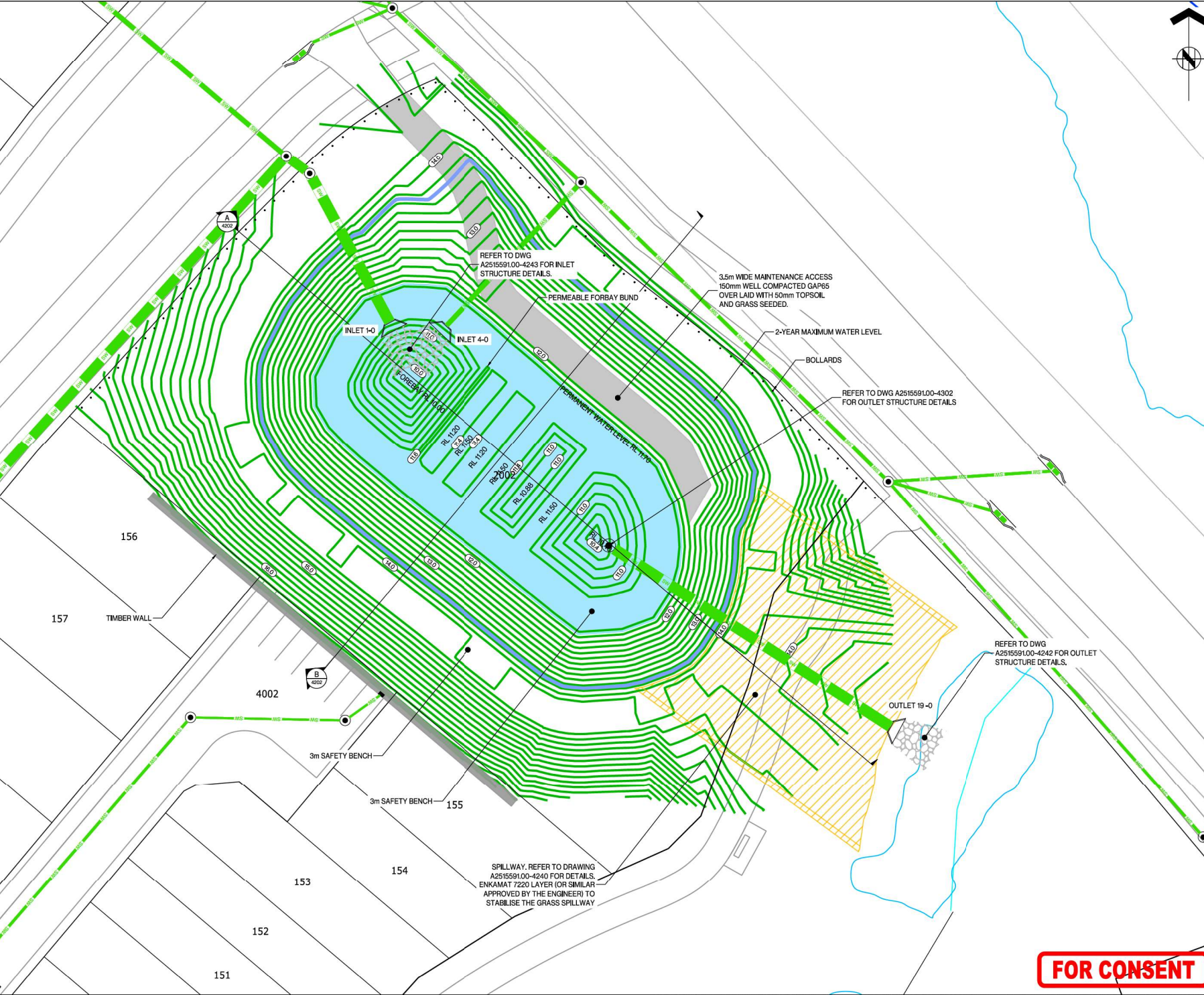
TITLE: **STORMWATER DEVICE
OVERALL LAYOUT PLAN**

ORIGINATOR: JEP	DATE: 05/2026	SIGNED:	PLOT BY: ABE
DRAWN: JEP	DATE: 05/2026	SIGNED:	PLOT DATE: 05/06/26
CHECKED: CJM	DATE: 05/2026	SIGNED:	SURVEY BY:
APPROVED: CJM	DATE: 05/2026	SIGNED:	SURVEY DATE:

ISSUE STATUS: **FAST TRACK CONSENT**

PROJECT No: A2515591.00	SCALE: AS SHOWN	A1
DRAWING No:		REV
A2515591.00-4261		A

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NOTES:

- SEE DRAWING A2515591.00-4202 FOR SECTION DETAILS.
- FOR WETLAND PLANTING REFER TO STUDIO PACIFIC PLANTING PLANS.
- ALL PLANTED AREA ARE TO HAVE 200mm GOOD QUALITY TOPSOIL PLACED PRIOR TO PLANTING.
- ALL WETLAND PLANTS TO BE PRINNED TO PREVENT REMOVAL BY NATIVE BIRDS.
- ACCESS TRACK TO BE 150mm COMPACTED GAP65 OVERLAID WITH 50mm TOPSOIL AND GRASS SEED.

LEGEND:

- FINISHED CONTOURS SHOWN AT 0.25m INTERVALS
- EXISTING CONTOURS SHOWN AT 1m INTERVALS
- PERMANENT WATER LEVEL EXTENTS
- SPILLWAY EXTENTS
- MAINTENANCE ACCESS TRACK
- LOT BOUNDARY
- MAXIMUM WATER LEVEL
- PROPOSED RETAINING WALL
- INTERMITTENT OR PERMANENT STREAM
- MODIFIED NATURAL STREAM
- FLOOD EXTENT
- BOLLARDS

REF	REVISIONS	DATE	BY
A	FOR CONSENT	JEP	05/06/26

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PROJECT:
**BEACHLANDS
 FAST TRACK CONSENT APPLICATION
 BEACHLANDS SOUTH, AUCKLAND**

TITLE:
WETLAND 01 LAYOUT PLAN

ORIGINATOR	DATE	SIGNED	PLOT BY
JEP	05/06/26		ABE

DRAWN	DATE	SIGNED	PLOT DATE
JEP	05/06/26		05/06/26

CHECKED	DATE	SIGNED	SURVEY BY
CJM	05/06/26		

APPROVED	DATE	SIGNED	SURVEY DATE
CJM	05/06/26		

ISSUE STATUS:

FAST TRACK CONSENT

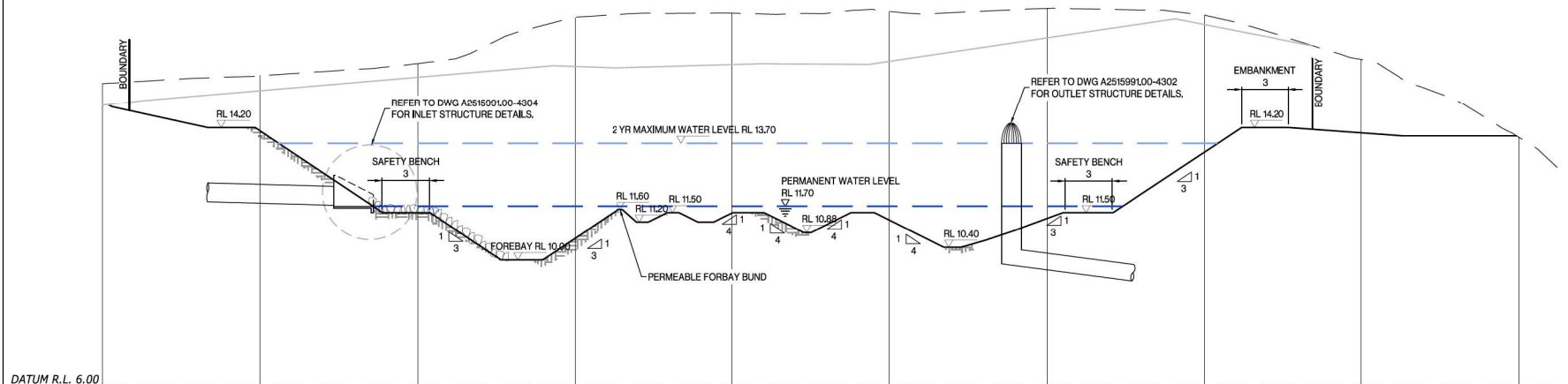
PROJECT No:	SCALE:	REV
A2515591.00	1:200 - A1 1:400 - A3	A1

DRAWING No: **A2515591.00-4262** REV **A**

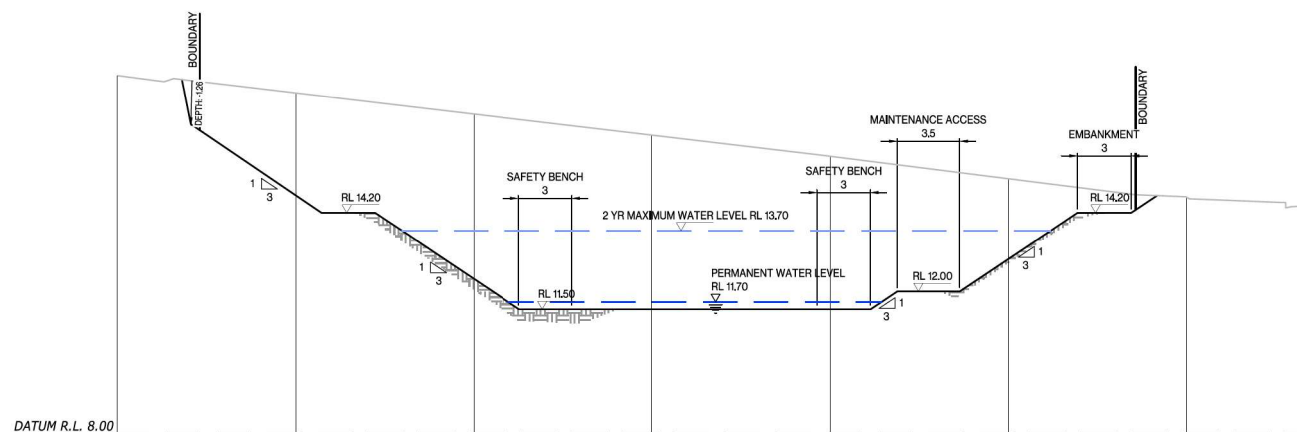
FOR CONSENT

LEGEND:

- INDICATES WETLAND SURFACE
- INDICATES EXISTING GROUND SURFACE
- INDICATES PROPOSED GROUND SURFACE
- MAXIMUM WATER LEVEL
- PERMANENT WATER LEVEL



A WETLAND 01 LONGITUDINAL SECTION
SCALE 1:150H 1:75V - A1
1:300H 1:150V - A3



B WETLAND 01 CROSS SECTION
SCALE 1:150H 1:75V - A1
1:300H 1:150V - A3

REF	REVISIONS	BY	DATE
A	FOR CONSENT	JEP	05/2026

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W www.harrisongrierson.com

PROJECT: BEACHLANDS
FAST TRACK CONSENT APPLICATION
BEACHLANDS SOUTH, AUCKLAND

TITLE: WETLAND 01 SECTIONS

ORIGINATOR JEP	DATE 05/2026	SIGNED	PLOT BY: ABE
DRAWN JEP	DATE 05/2026	SIGNED	PLOT DATE: 05/06/26
CHECKED CJM	DATE 05/2026	SIGNED	SURVEY BY:
APPROVED CJM	DATE 05/2026	SIGNED	SURVEY DATE:

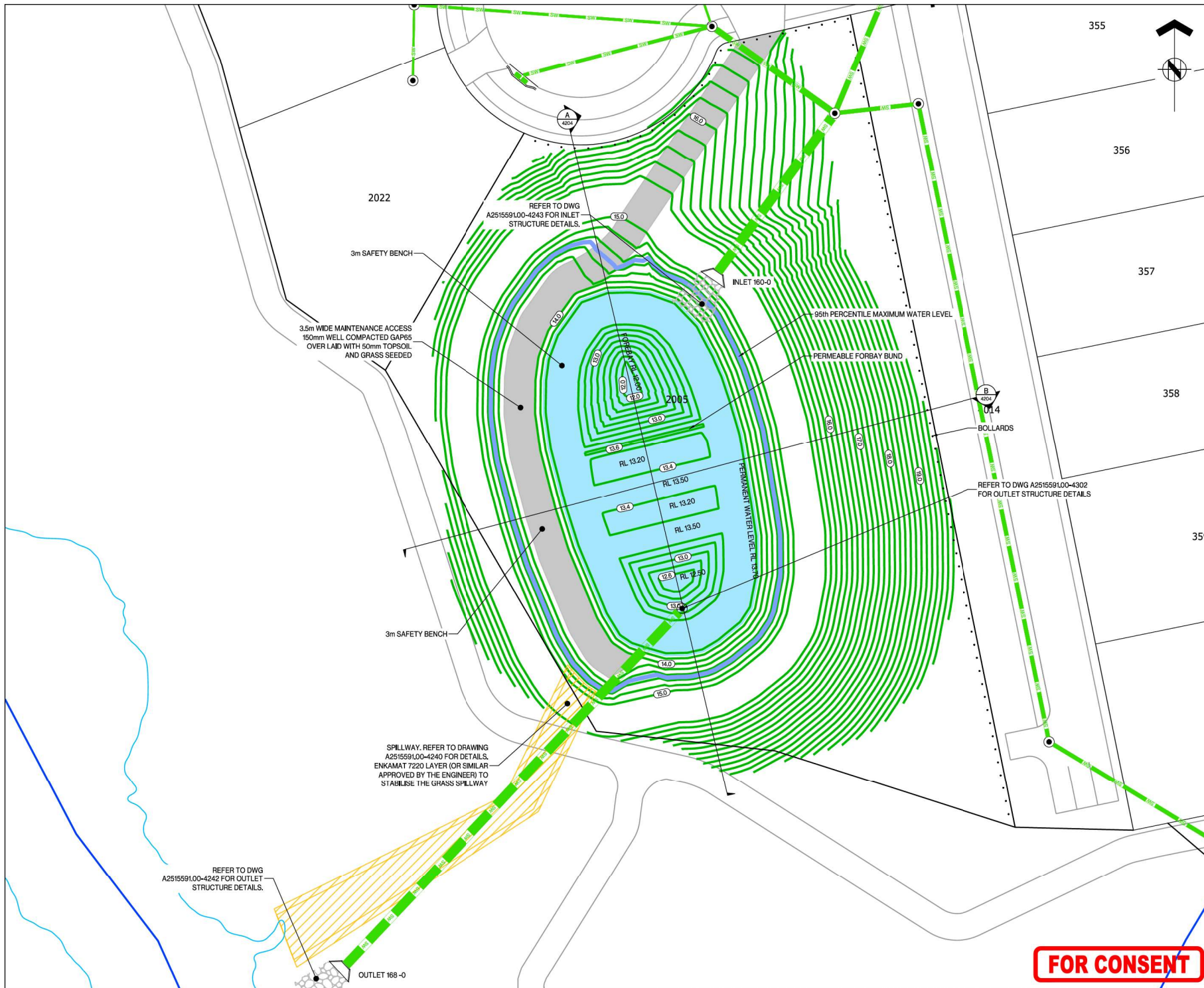
ISSUE STATUS: FAST TRACK CONSENT

PROJECT No: A2515591.00	SCALE: AS SHOWN	A1
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DRAWING No:	REV
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A2515591.00-4263 A

FOR CONSENT



 INDICATES WETLAND SURFACE
 INDICATES EXISTING GROUND SURFACE
 INDICATES PROPOSED GROUND SURFACE
 MAXIMUM WATER LEVEL
 PERMANENT WATER LEVEL



WETLAND 02 LONGITUDINAL SECTION

SCALE 1:150H 1:75V - A1
1:300H 1:150V - A3



WETLAND 02 CROSS SECTION

SCALE 1:150H 1:75V - A1
1:300H 1:150V - A3

A	FOR CONSENT	JEP	05/20/2018
REF	REVISIONS	BY	DATE

PROJECT: BEACHLANDS
FAST TRACK CONSENT APPLICATION
BEACHLANDS SOUTH, AUCKLAND

TITLE: **WETLAND 02 SECTIONS**

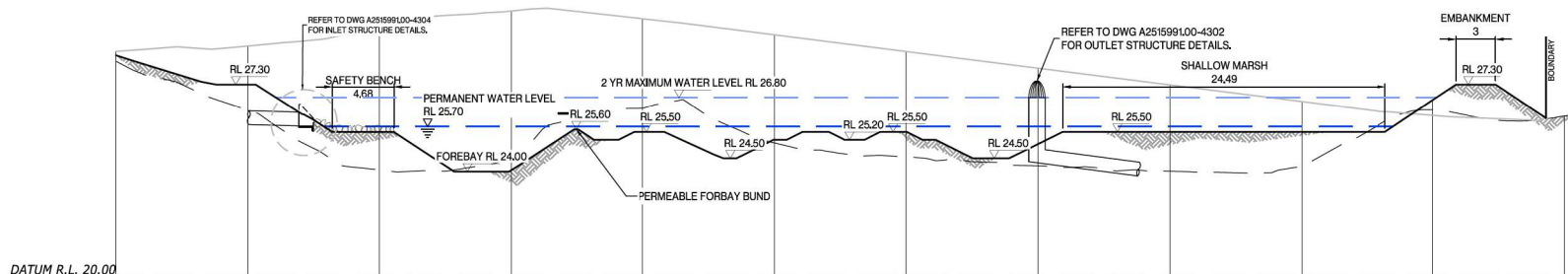
ORIGINATOR: JEP	DATE: 05/20/26	SIGNED:	PLOT BY:
DRAWN: JEP	DATE: 05/20/26	SIGNED:	PLOT DATE: 05/06/26
CHECKED: JEP	DATE: 05/20/26	SIGNED:	SURVEY BY:
APPROVED: C.I.M.	DATE: 05/20/26	SIGNED:	SURVEY DATE:

ISSUE STATUS: **FAST TRACK CONSENT**

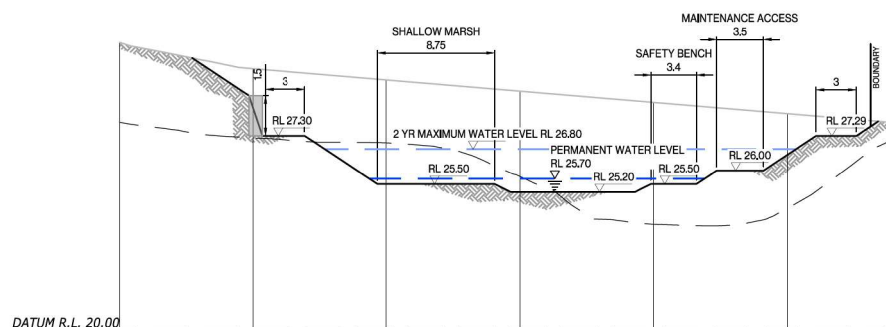
PROJECT No: A2515591.00	SCALES: AS SHOWN	A
DRAWING No: A2515591.00-4265		REV A

FOR CONSENT

- LEGEND:
- INDICATES WETLAND SURFACE
 - INDICATES EXISTING GROUND SURFACE
 - INDICATES PROPOSED GROUND SURFACE
 - MAXIMUM WATER LEVEL
 - PERMANENT WATER LEVEL



A WETLAND 03 LONGITUDINAL SECTION
SCALE 1:200H 1:100V - A1
1:400H 1:200V - A3



B WETLAND 03 CROSS SECTION
SCALE 1:200H 1:100V - A1
1:400H 1:200V - A3

A	FOR CONSENT	JEP	05/2026
REF	REVISIONS	BY	DATE

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PROJECT: BEACHLANDS
FAST TRACK CONSENT APPLICATION
BEACHLANDS SOUTH, AUCKLAND

TITLE: WETLAND 03 SECTIONS

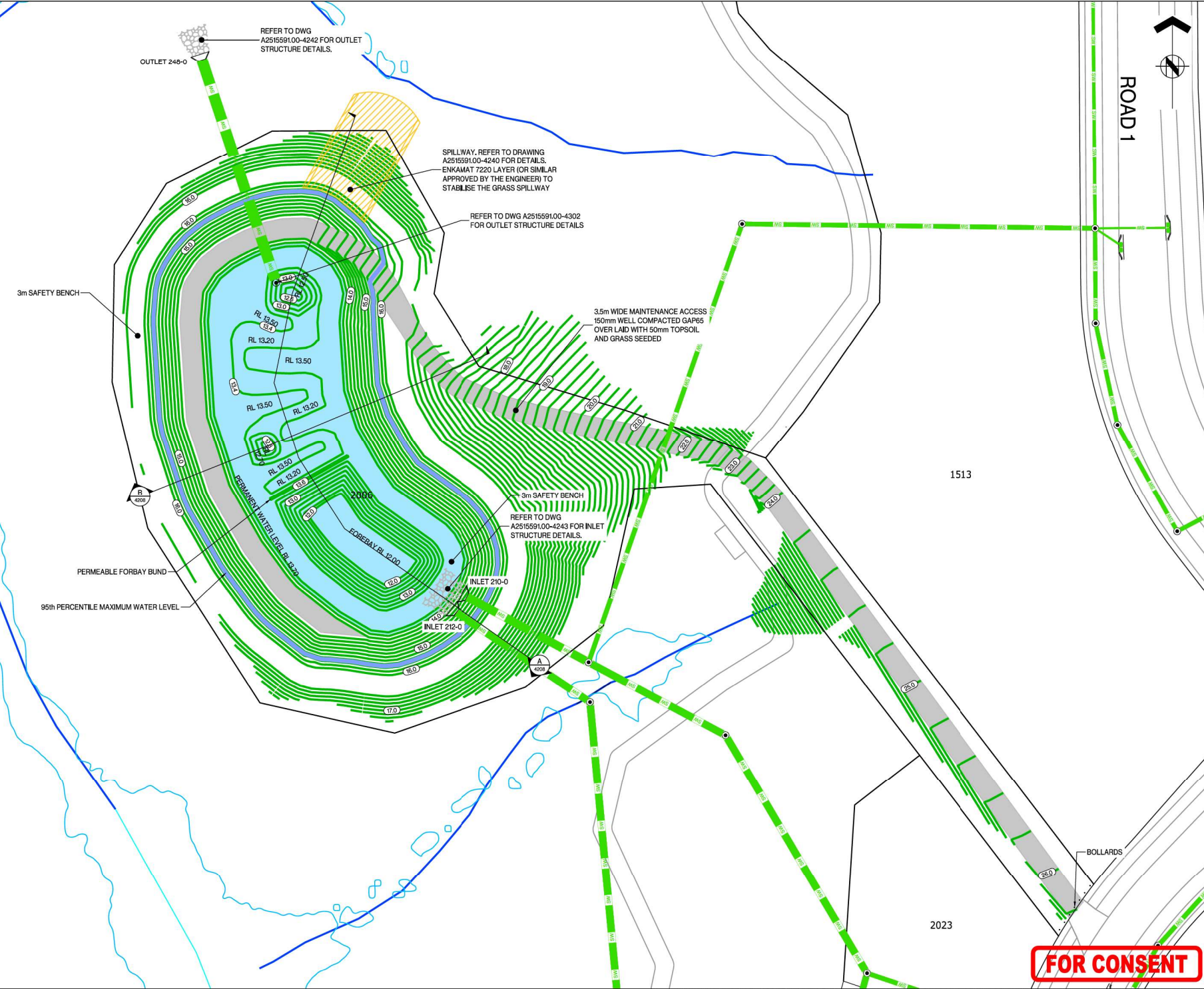
ORIGINATOR JEP	DATE 05/2026	SIGNED	PLOT BY: ABE
DRAWN JEP	DATE 05/2026	SIGNED	PLOT DATE: 05/06/26
CHECKED CJM	DATE 05/2026	SIGNED	SURVEY BY:
APPROVED CJM	DATE 05/2026	SIGNED	SURVEY DATE:

ISSUE STATUS: FAST TRACK CONSENT

PROJECT No: A2515591.00	SCALE: AS SHOWN	A1
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DRAWING No: A2515591.00-4267	REV A
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ENGINEERS NEW ZEALAND

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QUALITY
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NOTES:

- SEE DRAWING A2515591.00-4208 FOR SECTION DETAILS.
- FOR WETLAND PLANTING REFER TO STUDIO PACIFIC PLANTING PLANS.
- ALL PLANTED AREA ARE TO HAVE 200mm GOOD QUALITY TOPSOIL PLACED PRIOR TO PLANTING.
- ALL WETLAND PLANTS TO BE PRUNED TO PREVENT REMOVAL BY NATIVE BIRDS.
- ACCESS TRACK TO BE 150mm COMPACTED GAP65 OVERLAID WITH 50mm TOPSOIL AND GRASS SEED.

LEGEND:

-  FINISHED CONTOURS SHOWN AT 0.25m INTERVALS
-  EXISTING CONTOURS SHOWN AT 1m INTERVALS
-  PERMANENT WATER LEVEL EXTENTS
-  SPILLWAY EXTENTS
-  MAINTENANCE ACCESS TRACK
-  LOT BOUNDARY
-  MAXIMUM WATER LEVEL
-  PROPOSED RETAINING WALL
-  INTERMITTENT OR PERMANENT STREAM
-  MODIFIED NATURAL STREAM
-  FLOOD EXTENT
-  BOLLARDS

REF	REVISIONS	BY	DATE
A	FOR CONSENT	JEP	05/2026

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PROJECT:
BEACHLANDS
FAST TRACK CONSENT APPLICATION
BEACHLANDS SOUTH, AUCKLAND

TITLE:
WETLAND 04 LAYOUT PLAN

ORIGINATOR	DATE	SIGNED	PLLOT BY:
JEP	05/2026		ABE

DRAWN	DATE	SIGNED	PLLOT DATE:
JEP	05/2026		05/06/26

CHECKED	DATE	SIGNED	SURVEY BY:
CJM	05/2025		

APPROVED	DATE	SIGNED	SURVEY DATE:
CJM	05/2026		

ISSUE STATUS:
FAST TRACK CONSENT

PROJECT No:	SCALE:	REV
A2515591.00	1300 - A1 1600 - A3	A1

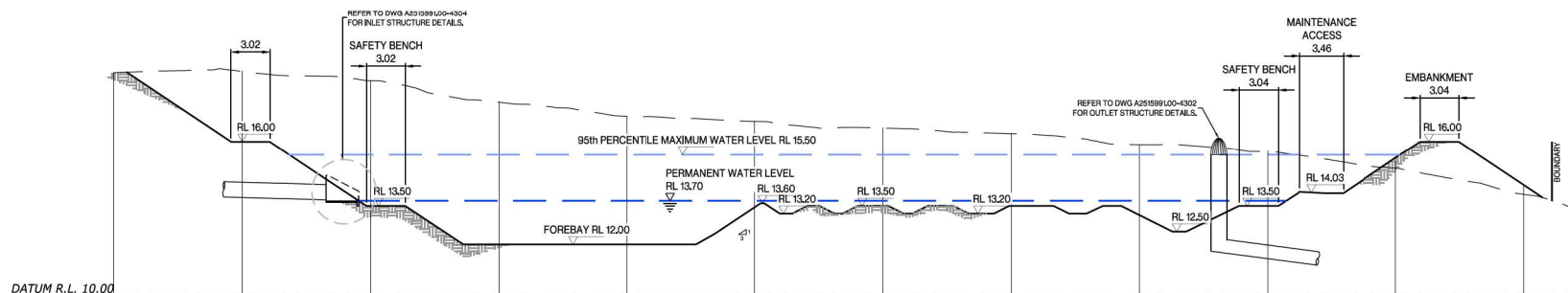
DRAWING No: A2515591.00-4268

REV A

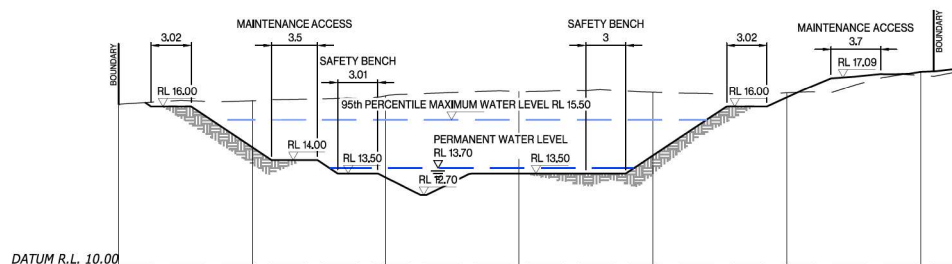
FOR CONSENT

REFER TO APPROVED MASTER DRAWINGS FOR ORIGINAL SIGNATURES FILE: LATE C:\AUTODESK\ACCDOS\ACCDOS\HARRISON GRIERSON\US\BEACHLANDS SOUTH FAST TRACK CONSENT\PROJECT FILES\01_DESIGN\02_CIVIL\04_SHEETS\A2515591.00-4261 STORMWATER DEVICE LAYOUT PLAN.DWG

- LEGEND:
- INDICATES WETLAND SURFACE
 - INDICATES EXISTING GROUND SURFACE
 - INDICATES PROPOSED GROUND SURFACE
 - MAXIMUM WATER LEVEL
 - PERMANENT WATER LEVEL



A WETLAND 04 LONGITUDINAL SECTION
SCALE 1:200H 1:100V - A1
1:400H 1:200V - A3



B WETLAND 04 CROSS SECTION
SCALE 1:200H 1:100V - A1
1:400H 1:200V - A3

A	FOR CONSENT	JEP	05/2026
REF	REVISIONS	BY	DATE

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PROJECT:
BEACHLANDS
FAST TRACK CONSENT APPLICATION
BEACHLANDS SOUTH, AUCKLAND

TITLE:
WETLAND 04 SECTIONS

ORIGINATOR: JEP	DATE: 05/2026	SIGNED:	PLOT BY: ABE
DRAWN: JEP	DATE: 05/2026	SIGNED:	PLOT DATE: 05/06/26
CHECKED: CJM	DATE: 05/2026	SIGNED:	SURVEY BY:
APPROVED: CJM	DATE: 05/2026	SIGNED:	SURVEY DATE:

ISSUE STATUS:
FAST TRACK CONSENT

PROJECT No: A2515591.00	SCALE: AS SHOWN	A1
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DRAWING No: A2515591.00-4269	REV A
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FOR CONSENT

	FINISHED CONTOURS SHOWN AT 0.25m INTERVALS
	EXISTING CONTOURS SHOWN AT 1m INTERVALS
	PERMANENT WATER LEVEL EXTENTS
	SPILLWAY EXTENTS
	MAINTENANCE ACCESS TRACK
	LOT BOUNDARY
	MAXIMUM WATER LEVEL
	PROPOSED RETAINING WALL
	INTERMITTENT OR PERMANENT STREAM
	MODIFIED NATURAL STREAM
	FLOOD EXTENT
	BOLLARDS

A	FOR CONSENT	JEP	05/20/2018
REF	REVISIONS	BY	DATE

**HARRISON
GRIERSON**

PROJECT:

BEACHLANDS
FAST TRACK CONSENT APPLICATION
BEACHLANDS SOUTH, AUCKLAND

TITLE: WETLAND 05 LAYOUT PLAN

ORIGINATOR: JEP	DATE: 05/20/26	SIGNED:	PLOT BY:
DRAWN: JEP	DATE: 05/20/26	SIGNED:	PLOT DATE:
CHECKED: CJM	DATE: 05/20/26	SIGNED:	SURVEY BY:
APPROVED: CJM	DATE: 05/20/26	SIGNED:	SURVEY DATE:

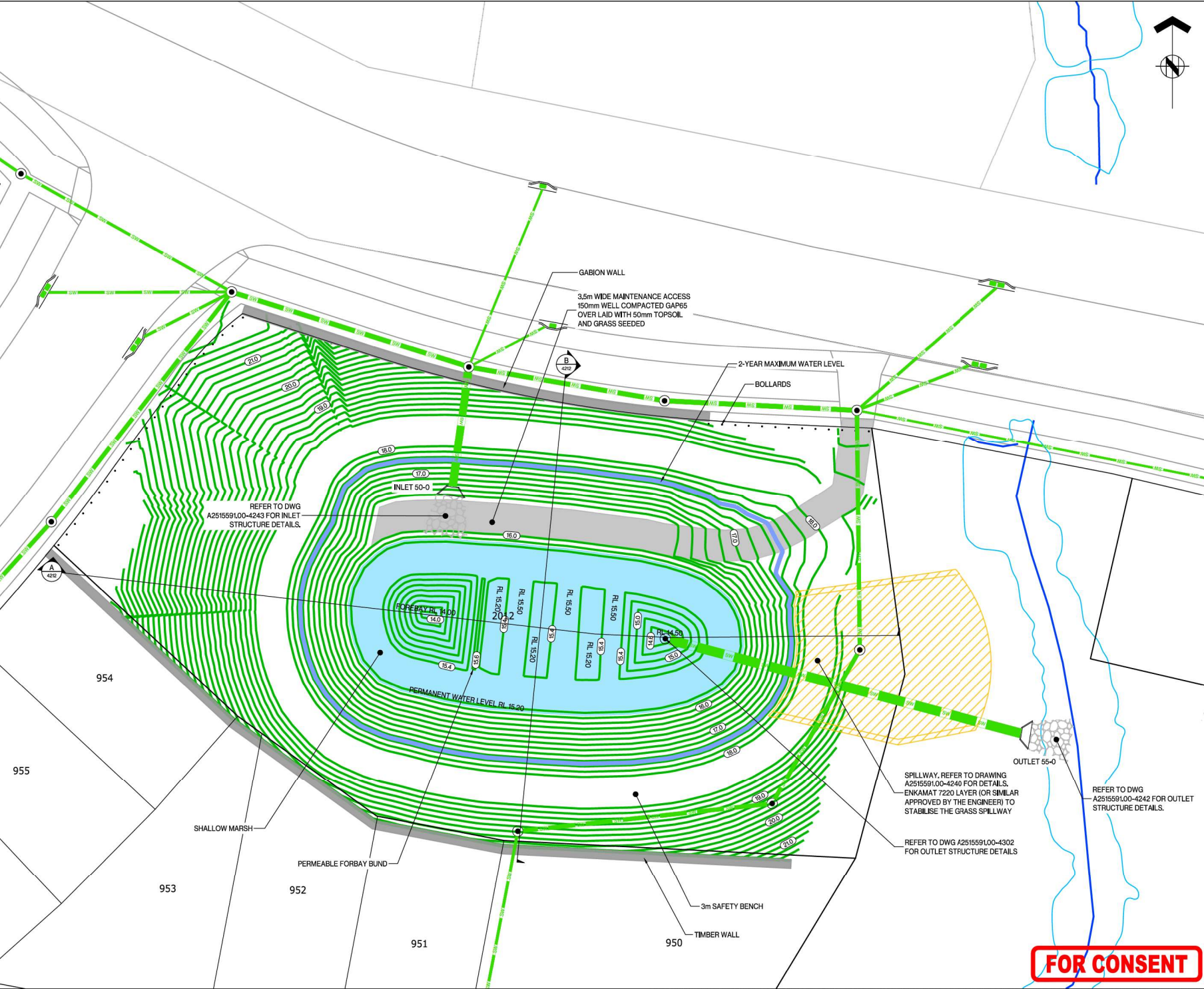
ISSUE STATUS: **FAST TRACK CONSENT**

PROJECT No: A2515591.00	SCALES: 1:200 - A1 1:400 - A3	A1
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DRAWING No:	REV
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A2515591.00-4270 A

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NOTES:

- SEE DRAWING A2515591.00-4212 FOR SECTION DETAILS.
- FOR WETLAND PLANTING REFER TO STUDIO PACIFIC PLANTING PLANS.
- ALL PLANTED AREA ARE TO HAVE 200mm GOOD QUALITY TOPSOIL PLACED PRIOR TO PLANTING.
- ALL WETLAND PLANTS TO BE PRUNED TO PREVENT REMOVAL BY NATIVE BIRDS.
- ACCESS TRACK TO BE 150mm COMPACTED GAP65 OVERLAID WITH 50mm TOPSOIL AND GRASS SEEDED.

LEGEND:

- FINISHED CONTOURS SHOWN AT 0.25m INTERVALS
- EXISTING CONTOURS SHOWN AT 1m INTERVALS
- PERMANENT WATER LEVEL EXTENTS
- SPILLWAY EXTENTS
- MAINTENANCE ACCESS TRACK
- LOT BOUNDARY
- MAXIMUM WATER LEVEL
- PROPOSED RETAINING WALL
- INTERMITTENT OR PERMANENT STREAM
- MODIFIED NATURAL STREAM
- FLOOD EXTENT
- BOLLARDS

REF	REVISIONS	DATE	BY
A	FOR CONSENT	JEP	05/2026

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PROJECT:

BEACHLANDS
FAST TRACK CONSENT APPLICATION
BEACHLANDS SOUTH, AUCKLAND

TITLE:

WETLAND 06 LAYOUT PLAN

ORIGINATOR	DATE	SIGNED	PLLOT BY:
JEP	05/2026		ABE

DRAWN	DATE	SIGNED	PLLOT DATE:
JEP	05/2026		05/06/26

CHECKED	DATE	SIGNED	SURVEY BY:
CJM	05/2026		

APPROVED	DATE	SIGNED	SURVEY DATE:
CJM	05/2026		

ISSUE STATUS:

FAST TRACK CONSENT

PROJECT No:	SCALE:	1200 - A1	1400 - A3
A2515591.00			

DRAWING No:	REV
A2515591.00-4272	A

FOR CONSENT

REFER TO APPROVED MASTER DRAWINGS FOR ORIGINAL SIGNATURES FILE: LATE C:\AUTODESK\ACCDOS\ACCDOS\HARRISON GRIERSON\US\BEACHLANDS SOUTH FAST TRACK CONSENT\PROJECT FILES\01\DESIGN\02\CIVIL\04\SHEETS\A2515591.00-4261 STORMWATER DEVICE LAYOUT PLAN.DWG

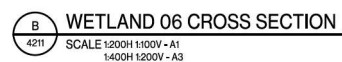
INDICATES WETLAND SURFACE

INDICATES EXISTING GROUND SURFACE

INDICATES PROPOSED GROUND SURFACE

MAXIMUM WATER LEVEL

PERMANENT WATER LEVEL



**HARRISON
GRIERSON**

PROJECT:

BEACHLANDS
FAST TRACK CONSENT APPLICATION
BEACHLANDS SOUTH, AUCKLAND

TITLE: **WETLAND 06 SECTIONS**

ORIGINATOR: JEP	DATE: 05/20/26	SIGNED:	PLOT BY: ABE
DRAWN: JEP	DATE: 05/20/26	SIGNED:	PLOT DATE: 05/06/26
CHECKED: CJM	DATE: 05/20/26	SIGNED:	SURVEY BY:
APPROVED: CJM	DATE: 05/20/26	SIGNED:	SURVEY DATE:

FAST TRACK CONSENT

PROJECT No: A2515591.00	SCALES: AS SHOWN	A1
DRAWING No: A2515591.00-4273		REV A

FOR CONSENT



1. SEE DRAWING A2515591.00-4214 FOR SECTION DETAILS.
2. FOR WETLAND PLANTING REFER TO STUDIO PACIFIC PLANTING PLANS.
3. ALL PLANTED AREA ARE TO HAVE 200mm GOOD QUALITY TOPSOIL PLACED PRIOR TO PLANTING.
4. ALL WETLAND PLANTS TO BE PRINNED TO PREVENT REMOVAL BY NATIVE BIRDS.
5. ACCESS TRACK TO BE 150mm COMPACTED GAP65 OVERLAIAD WITH 50mm TOPSOIL AND GRASS SEED.

	FINISHED CONTOURS SHOWN AT 0.25m INTERVALS
	EXISTING CONTOURS SHOWN AT 1m INTERVALS
	PERMANENT WATER LEVEL EXTENTS
	SPILLWAY EXTENTS
	MAINTENANCE ACCESS TRACK
	LOT BOUNDARY
	MAXIMUM WATER LEVEL
	PROPOSED RETAINING WALL
	INTERMITTENT OR PERMANENT STREAM
	MODIFIED NATURAL STREAM
	FLOOD EXTENT
	BOLLARDS

A	FOR CONSENT	JEP	0520	
REF	REVISIONS	BY	DAT	

**HARRISON
GRIERSON**

962 PROJECT: BEACHLANDS
FAST TRACK CONSENT APPLICATION
BEACHLANDS SOUTH, AUCKLAND

TITLE: WETLAND 07 LAYOUT PLAN

ORIGINATOR: JEP	DATE: 05/20/26	SIGNED:	PLOT BY:
DRAWN: JEP	DATE: 05/20/26	SIGNED:	PLOT DATE: 05/06/26
CHECKED: CJM	DATE: 05/20/26	SIGNED:	SURVEY BY:
APPROVED: CJM	DATE: 05/20/26	SIGNED:	SURVEY DATE:

ISSUE STATUS:		FAST TRACK CONSENT	
PROJECT No: A251559100	SCALES: 1:200 - A1 1:400 - A3	A1	
DRAWING No:		REV	
A2515591.00-4274		A	

FOR CONSENT

INDICATES WETLAND SURFACE

INDICATES EXISTING GROUND SURFACE

INDICATES PROPOSED GROUND SURFACE

MAXIMUM WATER LEVEL

PERMANENT WATER LEVEL



A	FOR CONSENT	JEP	05/20
REF	REVISIONS	BY	DATE

PROJECT:

**BEACHLANDS
FAST TRACK CONSENT APPLICATION
BEACHLANDS SOUTH, AUCKLAND**

TITLE: **WETLAND 07 SECTIONS**

ORIGINATOR: JEP	DATE: 05/20/26	SIGNED:	PLOT BY:
DRAWN: JEP	DATE: 05/20/26	SIGNED:	PLOT DATE: 05/06/26
CHECKED: CJM	DATE: 05/20/26	SIGNED:	SURVEY BY:
APPROVED: CJM	DATE: 05/20/26	SIGNED:	SURVEY DATE:

ISSUE STATUS: **FAST TRACK CONSENT**

PROJECT No:	SCALES: AS SHOWN	A1
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A2515591.00		AT
DRAWING No:		REV
A2515591.00-4275		A

FOR CONSENT

NOTES:

1. SEE DRAWING A2515591.00-4216 FOR SECTION DETAILS.
2. FOR WETLAND PLANTING REFER TO STUDIO PACIFIC PLANTING PLANS.
3. ALL PLANTED AREA ARE TO HAVE 200mm GOOD QUALITY TOPSOIL PLACED PRIOR TO PLANTING.
4. ALL WETLAND PLANTS TO BE PRINNED TO PREVENT REMOVAL BY NATIVE BIRDS.
5. ACCESS TRACK TO BE 150mm COMPACTED GAP65 OVERLaid WITH 50mm TOPSOIL AND GRASS SEED.

LEGEND:

- | | |
|---|--|
|  | FINISHED CONTOURS SHOWN AT 0.25m INTERVALS |
|  | EXISTING CONTOURS SHOWN AT 1m INTERVALS |
|  | PERMANENT WATER LEVEL EXTENTS |
|  | SPILLWAY EXTENTS |
|  | MAINTENANCE ACCESS TRACK |
|  | LOT BOUNDARY |
|  | MAXIMUM WATER LEVEL |
|  | PROPOSED RETAINING WALL |
|  | INTERMITTENT OR PERMANENT STREAM |
|  | MODIFIED NATURAL STREAM |
|  | FLOOD EXTENT |
|  | BOLLARDS |

A	FOR CONSENT	JEP	05/20/2017
REF	REVISIONS	BY	DATE

**HARRISON
GRIERSON**

PROJECT:

BEACHLANDS
FAST TRACK CONSENT APPLICATION
BEACHLANDS SOUTH, AUCKLAND

TITLE: WETLAND 08 LAYOUT PLAN

ORIGINATOR: JEP	DATE: 05/20/26	SIGNED:	PLOT BY:
DRAWN: JEP	DATE: 05/20/26	SIGNED:	PLOT DATE: 05/06/26
CHECKED: CJM	DATE: 05/20/26	SIGNED:	SURVEY BY:
APPROVED: CJM	DATE: 05/20/26	SIGNED:	SURVEY DATE:

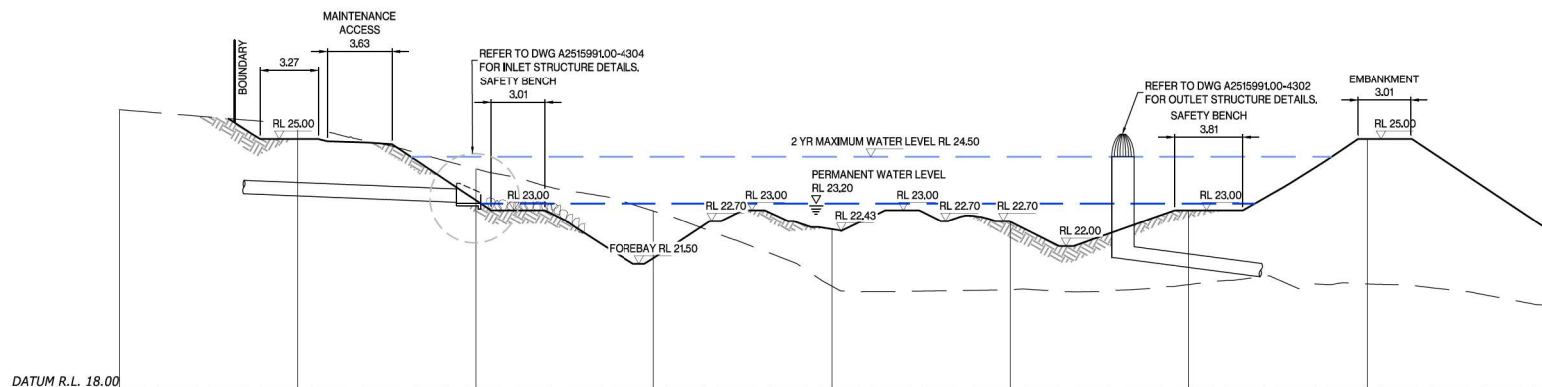
ISSUE STATUS: **FAST TRACK CONSENT**

PROJECT No: A2515591.00	SCALES: 1:200 - A1 1:400 - A3	A1
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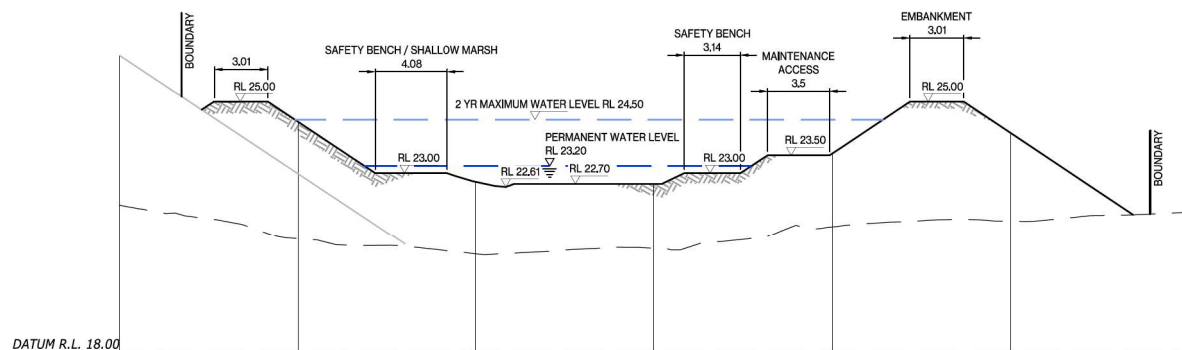
A2515591.00-4276 A

FOR CONSENT

- LEGEND:
- INDICATES WETLAND SURFACE
 - INDICATES EXISTING GROUND SURFACE
 - INDICATES PROPOSED GROUND SURFACE
 - MAXIMUM WATER LEVEL
 - PERMANENT WATER LEVEL



WETLAND 08 LONGITUDINAL SECTION
SCALE 1:150H 1:75V - A1
1:300H 1:150V - A3



WETLAND 08 CROSS SECTION
SCALE 1:150H 1:75V - A1
1:300H 1:150V - A3

A	FOR CONSENT	JEP	05/2026
REF	REVISIONS	BY	DATE

HARRISON GRIERSON
AUCKLAND OFFICE
Level 4, 96 St Georges Bay Road
Parnell, Auckland 1052
T +64 9 917 5000
W www.harrisongrierson.com

PROJECT:
**BEACHLANDS
FAST TRACK CONSENT APPLICATION
BEACHLANDS SOUTH, AUCKLAND**

TITLE:
WETLAND 08 SECTIONS

ORIGINATOR	DATE	SIGNED	PLotted BY
JEP	05/2026		ABE
DRAWN	DATE	SIGNED	PLotted DATE
JEP	05/2026		05/06/26
CHECKED	DATE	SIGNED	SURVEY BY
CJM	05/2026		
APPROVED	DATE	SIGNED	SURVEY DATE
CJM	05/2026		

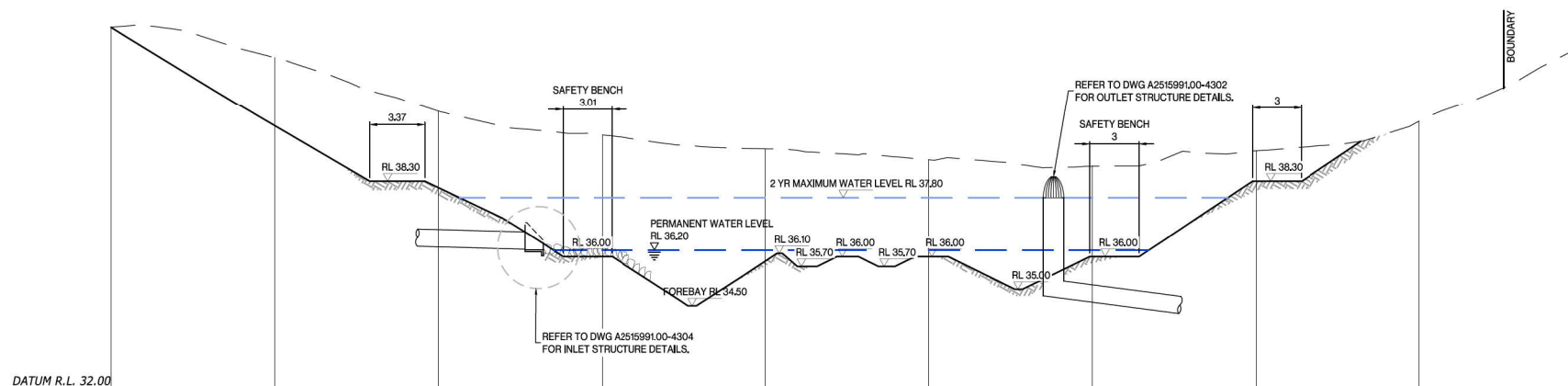
ISSUE STATUS:
FAST TRACK CONSENT

PROJECT No.	SCALE	AS SHOWN	A1
A2515591.00			

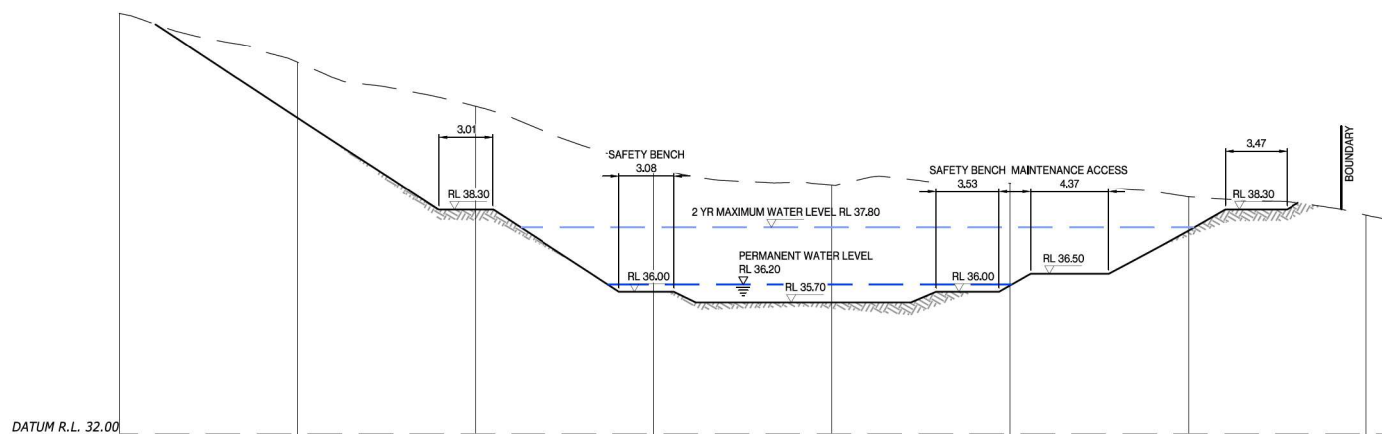
DRAWING No.	REV
A2515591.00-4277	A

FOR CONSENT

- LEGEND:
- INDICATES WETLAND SURFACE
 - INDICATES EXISTING GROUND SURFACE
 - INDICATES PROPOSED GROUND SURFACE
 - MAXIMUM WATER LEVEL
 - PERMANENT WATER LEVEL



A WETLAND 09 LONGITUDINAL SECTION
SCALE 1:150H 1:75V - A1
1:300H 1:150V - A3



B WETLAND 09 CROSS SECTION
SCALE 1:150H 1:75V - A1
1:300H 1:150V - A3

REF	FOR CONSENT	JEP	05/2026
REVISIONS	BY	DATE	

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PROJECT: BEACHLANDS
FAST TRACK CONSENT APPLICATION
BEACHLANDS SOUTH, AUCKLAND

TITLE: WETLAND 09 SECTIONS

ORIGINATOR: JEP	DATE: 05/2025	SIGNED:	PLOT BY: ABE
DRAWN: JEP	DATE: 05/2026	SIGNED:	PLOT DATE: 05/06/26
CHECKED: CJM	DATE: 05/2026	SIGNED:	SURVEY BY:
APPROVED: CJM	DATE: 05/2026	SIGNED:	SURVEY DATE:

ISSUE STATUS: FAST TRACK CONSENT

PROJECT No: A2515591.00 SCALES: AS SHOWN A1

DRAWING No: A2515591.00-4279 REV

FOR CONSENT



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1. SEE DRAWING A2515591.00-4220 FOR SECTION DETAILS.
2. FOR WETLAND PLANTING REFER TO STUDIO PACIFIC PLANTING PLANS.
3. ALL PLANTED AREA ARE TO HAVE 200mm GOOD QUALITY TOPSOIL PLACED PRIOR TO PLANTING.
4. ALL WETLAND PLANTS TO BE PRINNED TO PREVENT REMOVAL BY NATIVE BIRDS.
5. ACCESS TRACK TO BE 150mm COMPACTED GAP65 OVERLAIWD WITH 50mm TOPSOIL AND GRASS SEED.

	FINISHED CONTOURS SHOWN AT 0.25m INTERVALS
	EXISTING CONTOURS SHOWN AT 1m INTERVALS
	PERMANENT WATER LEVEL EXTENTS
	SPILLWAY EXTENTS
	MAINTENANCE ACCESS TRACK
	LOT BOUNDARY
	MAXIMUM WATER LEVEL
	PROPOSED RETAINING WALL
	INTERMITTENT OR PERMANENT STREAM
	MODIFIED NATURAL STREAM
	FLOOD EXTENT
	BOLLARDS

A	FOR DECOMMISSION	JEP	05/20
REF	REVISIONS	BY	DATE

**HARRISON
GRIERSON**

PROJECT: BEACHLANDS
FAST TRACK CONSENT APPLICATION
BEACHLANDS SOUTH, AUCKLAND

TITLE:

WETLAND 10 LAYOUT PLAN

ORIGINATOR: JEP	DATE: 05.2026	SIGNED:	PLOT BY:
DRAWN: JEP	DATE: 05.2026	SIGNED:	PLOT DATE: 05.06.2026
CHECKED: CJM	DATE: 05.2026	SIGNED:	SURVEY BY:
APPROVED: CJM	DATE: 05.2026	SIGNED:	SURVEY DATE:

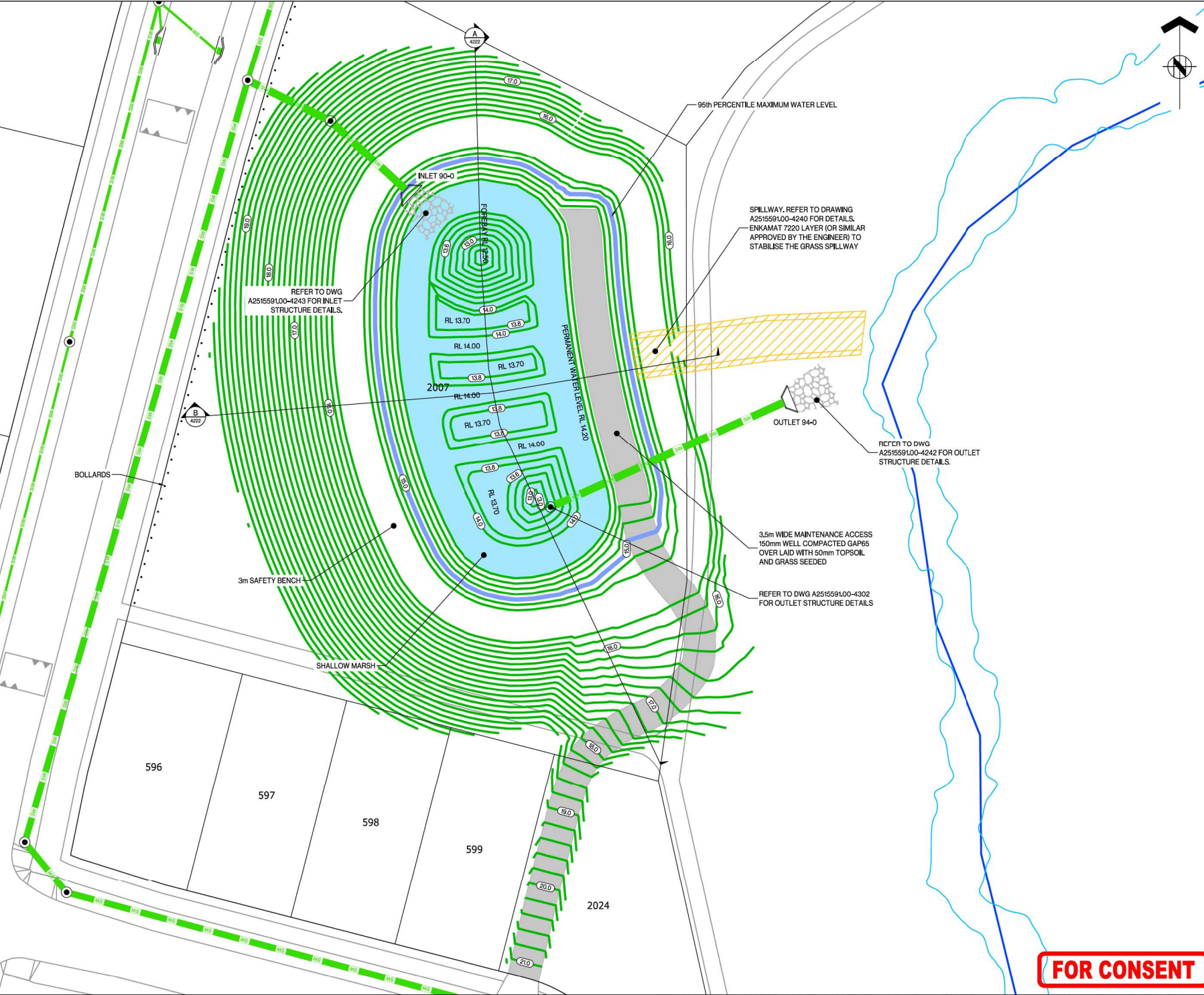
ISSUE STATUS: **FAST TRACK CONSENT**

PROJECT No: A2515591.00	SCALES: 1:200 - A1 1:400 - A3	A
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A2515591.00-4280 A

REFER TO APPROVED MASTER DRAWINGS FOR ORIGINAL SIGNATURES. File: LATE C:\AUTODESK\ACCDOS\ACCDOS\HARRISON GRIERSON US\BEACHLANDS SOUTH EAST TRACK CONSENT\PROJECT FILES\01 DESIGN\02 CIVIL\04 SHEETS\A2515681.00-4261 STORMWATER DEVICE LAYOUT PLANDWG

FOR CONSENT



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- NOTES:**
- SEE DRAWING A2515591.00-4222 FOR SECTION DETAILS.
 - FOR WETLAND PLANTING REFER TO STUDIO PACIFIC PLANTING PLANS.
 - ALL PLANTED AREA ARE TO HAVE 200mm GOOD QUALITY TOPSOIL PLACED PRIOR TO PLANTING.
 - ALL WETLAND PLANTS TO BE PRINNED TO PREVENT REMOVAL BY NATIVE BIRDS.
 - ACCESS TRACK TO BE 150mm COMPACTED GAP65 OVERLAID WITH 50mm TOPSOIL AND GRASS SEED.

- LEGEND:**
- FINISHED CONTOURS SHOWN AT 0.25m INTERVALS
 - EXISTING CONTOURS SHOWN AT 1m INTERVALS
 - PERMANENT WATER LEVEL EXTENTS
 - SPILLWAY EXTENTS
 - MAINTENANCE ACCESS TRACK
 - LOT BOUNDARY
 - MAXIMUM WATER LEVEL
 - PROPOSED RETAINING WALL
 - INTERMITTENT OR PERMANENT STREAM
 - MODIFIED NATURAL STREAM
 - FLOOD EXTENT
 - BOLLARDS

A	FOR CONSENT	JEP	05/2026
REF	REVISIONS	BY	DATE

HARRISON GRIERSON AUCKLAND OFFICE
Level 4, 96 St. Georges Bay Road
Parnell, Auckland 1052
T +64 9 917 5000
W www.harrisingrierson.com

PROJECT: **BEACHLANDS
FAST TRACK CONSENT APPLICATION
BEACHLANDS SOUTH, AUCKLAND**

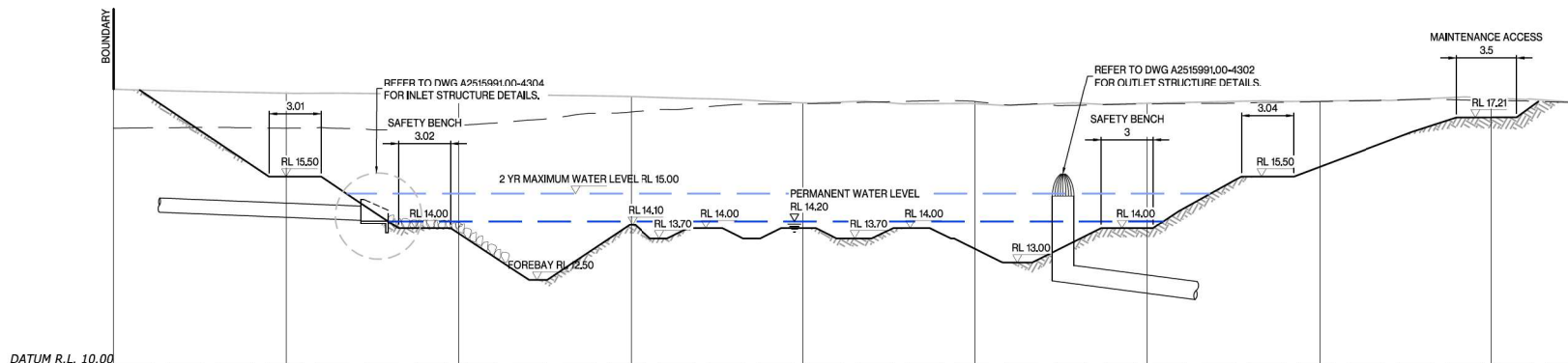
TITLE: **WETLAND 11 LAYOUT PLAN**

ORIGINATOR JEP	DATE 05/2026	SIGNED	PLOT BY: ABE
DRAWN JEP	DATE 05/2026	SIGNED	PLOT DATE: 05/06/26
CHECKED CJM	DATE 05/2026	SIGNED	SURVEY BY:
APPROVED CJM	DATE 05/2026	SIGNED	SURVEY DATE:

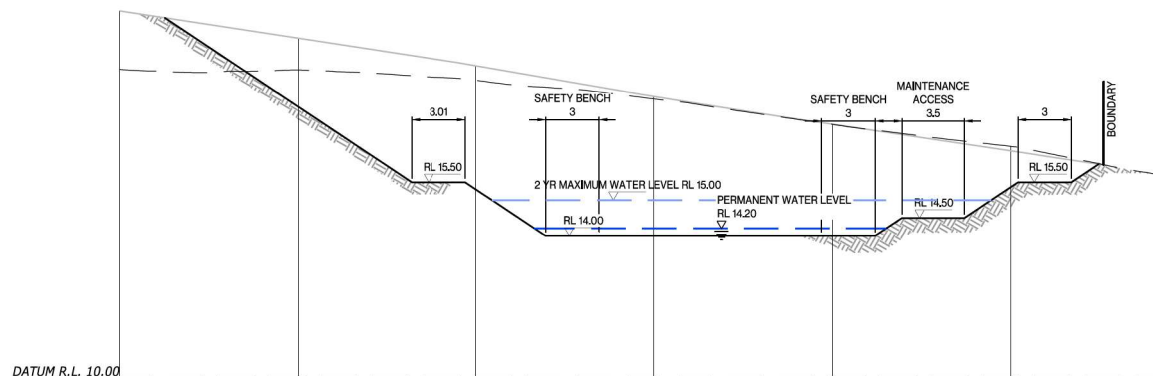
ISSUE STATUS: FAST TRACK CONSENT			
PROJECT No: A2515591.00	SCALE: 1200 - A1 1:400 - A3	REV	A1
DRAWING No: A2515591.00-4282		REV	A

FOR CONSENT

- LEGEND:
- INDICATES WETLAND SURFACE
 - INDICATES EXISTING GROUND SURFACE
 - INDICATES PROPOSED GROUND SURFACE
 - MAXIMUM WATER LEVEL
 - PERMANENT WATER LEVEL



A WETLAND 11 LONGITUDINAL SECTION
4221 SCALE 1:150H 1:75V - A1
1:300H 1:150V - A3



B WETLAND 11 CROSS SECTION
4221 SCALE 1:150H 1:75V - A1
1:300H 1:150V - A3

A	FOR CONSENT	JEP	05/2026
REF	REVISIONS	BY	DATE

HARRISON GRIERSON AUCKLAND OFFICE
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Parnell, Auckland 1052
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PROJECT: BEACHLANDS
FAST TRACK CONSENT APPLICATION
BEACHLANDS SOUTH, AUCKLAND

TITLE: WETLAND 11 SECTIONS

ORIGINATOR JEP	DATE 05/2026	SIGNED	PLOT BY: ABE
DRAWN JEP	DATE 05/2026	SIGNED	PLOT DATE: 05/06/26
CHECKED CJM	DATE 05/2026	SIGNED	SURVEY BY:
APPROVED CJM	DATE 05/2026	SIGNED	SURVEY DATE:

ISSUE STATUS: FAST TRACK CONSENT

PROJECT No: A2515591.00	SCALE: AS SHOWN	A1
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DRAWING No:	REV
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A2515591.00-4283 A

FOR CONSENT

1. SEE DRAWING A2515591.00-4224 FOR SECTION DETAILS.
2. FOR WETLAND PLANTING REFER TO STUDIO PACIFIC PLANTING PLANS.
3. ALL PLANTED AREA ARE TO HAVE 200mm GOOD QUALITY TOPSOIL PLACED PRIOR TO PLANTING.
4. ALL WETLAND PLANTS TO BE PRINNED TO PREVENT REMOVAL BY NATIVE BIRDS.
5. ACCESS TRACK TO BE 150mm COMPACTED GAP65 OVERLaid WITH 50mm TOPSOIL AND GRASS SEED.

	FINISHED CONTOURS SHOWN AT 0.25m INTERVALS
	EXISTING CONTOURS SHOWN AT 1m INTERVALS
	PERMANENT WATER LEVEL EXTENTS
	SPILLWAY EXTENTS
	MAINTENANCE ACCESS TRACK
	LOT BOUNDARY
	MAXIMUM WATER LEVEL
	PROPOSED RETAINING WALL
	INTERMITTENT OR PERMANENT STREAM
	MODIFIED NATURAL STREAM
	FLOOD EXTENT
	BOILARDS

A	FOR CONSENT	JEP	05/20/2017
REF	REVISIONS	BY	DATE

**HARRISON
GRIERSON**

PROJECT: BEACHLANDS
FAST TRACK CONSENT APPLICATION
BEACHLANDS SOUTH, AUCKLAND

TITLE:

RAINGARDEN 01 LAYOUT PLAN

ORIGINATOR: JEP	DATE: 05/20/26	SIGNED:	PLOT BY: A
DRAWN: JEP	DATE: 05/20/26	SIGNED:	PLOT DATE: 05/06/26
CHECKED: CJM	DATE: 05/20/26	SIGNED:	SURVEY BY:
APPROVED: CJM	DATE: 05/20/26	SIGNED:	SURVEY DATE:

ISSUE STATUS: **FAST TRACK CONSENT**

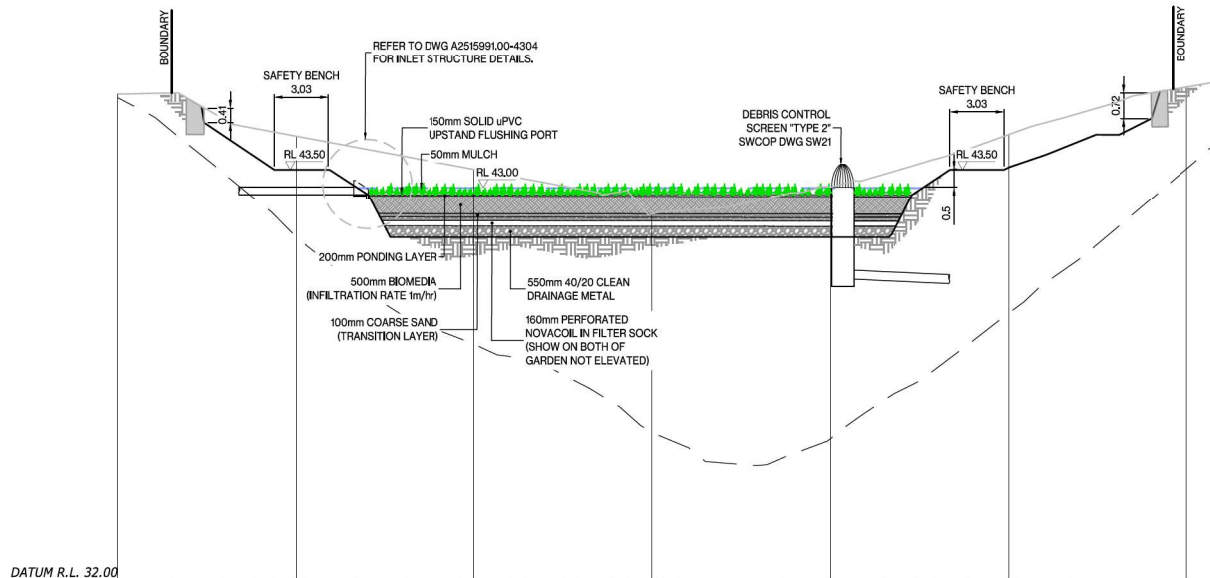
PROJECT No: A251550100	SCALES: 1:200 - A1 1:100 - A2	A1
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A2515591.00	1:400 - AS	
DRAWING No:		REV

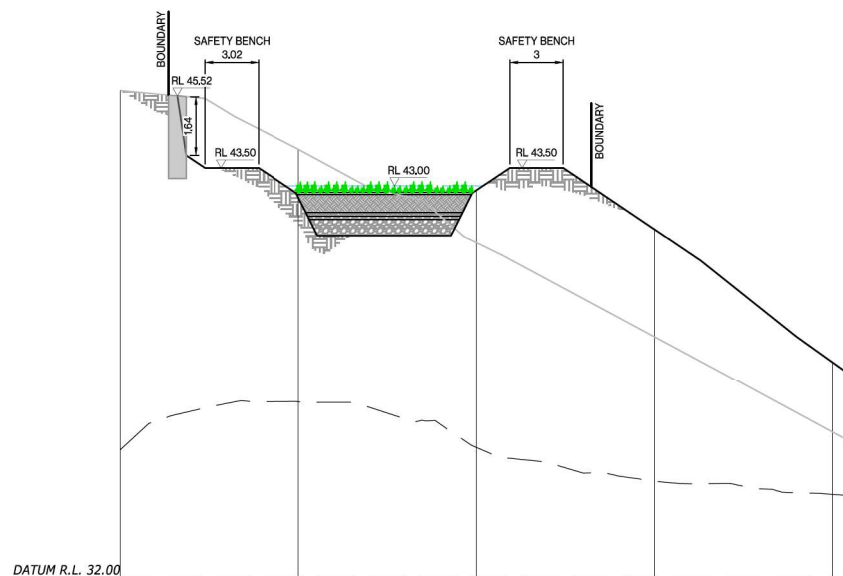
A2515591.00-4284 A

FOR CONSENT

- LEGEND:
- INDICATES WETLAND SURFACE
 - INDICATES EXISTING GROUND SURFACE
 - INDICATES PROPOSED GROUND SURFACE
 - MAXIMUM WATER LEVEL
 - PERMANENT WATER LEVEL



A
4223
RAINGARDEN 1 LONGITUDINAL SECTION
SCALE 1:150H 1:75V - A1
1:300H 1:150V - A3



B
4223
RAINGARDEN 1 CROSS SECTION
SCALE 1:150H 1:75V - A1
1:300H 1:150V - A3

REF	REVISIONS	DATE
A	FOR CONSENT	JEP 05/2026

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Parnell, Auckland 1052
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PROJECT:
BEACHLANDS
FAST TRACK CONSENT APPLICATION
BEACHLANDS SOUTH, AUCKLAND

TITLE:
RAINGARDEN 01 SECTIONS

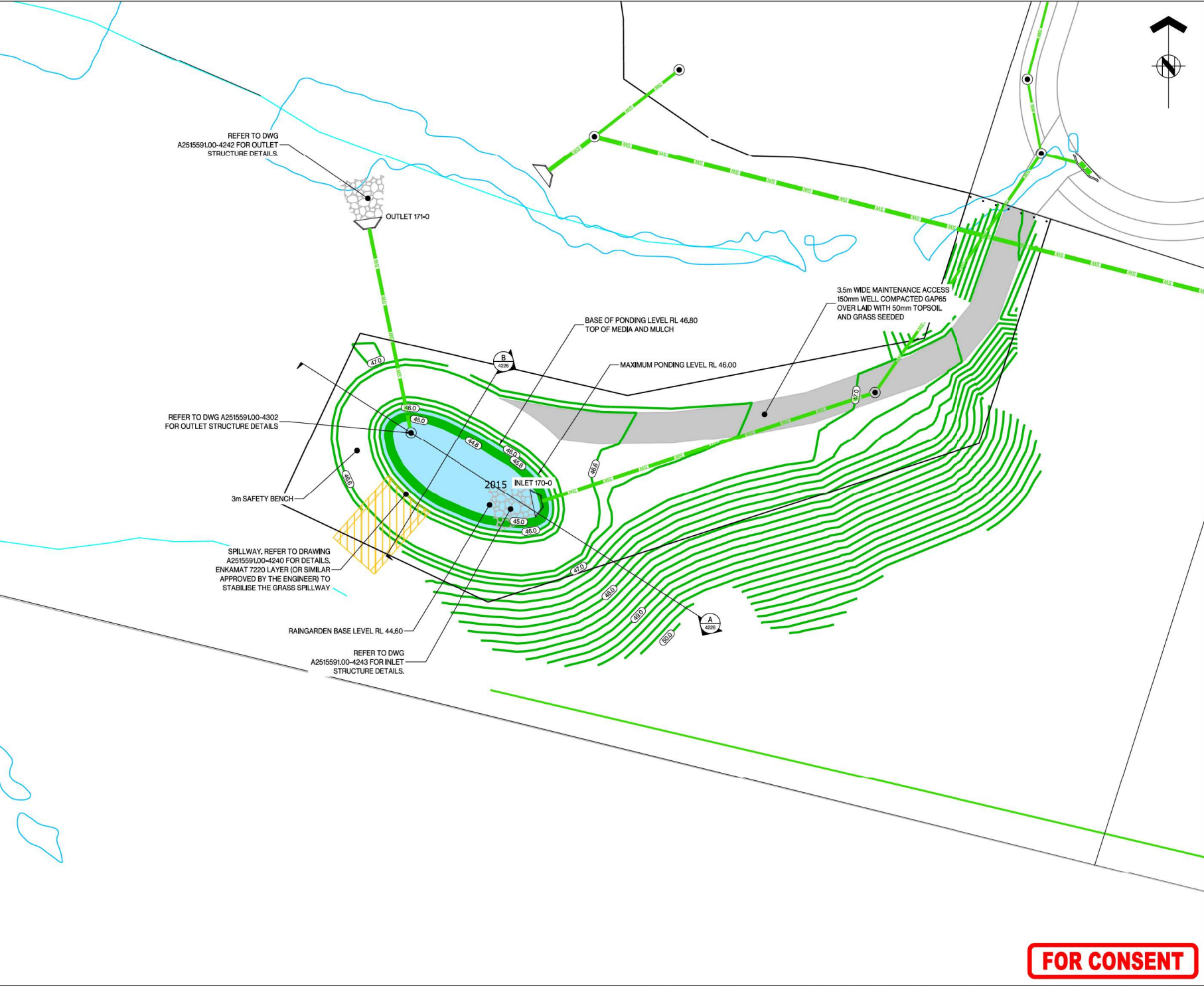
ORIGINATOR JEP	DATE 05/2026	SIGNED	PLOT BY: ABE
DRAWN JEP	DATE 05/2026	SIGNED	PLOT DATE: 05/06/26
CHECKED CJM	DATE 05/2026	SIGNED	SURVEY BY:
APPROVED CJM	DATE 05/2026	SIGNED	SURVEY DATE:

ISSUE STATUS:
FAST TRACK CONSENT

PROJECT No: A2515591.00 SCALES: AS SHOWN A1

DRAWING No: A2515591.00-4285 A

FOR CONSENT





ASSOCIATION OF CONSULTING
ENGINEERS NEW ZEALAND

ISO 9001
QUALITY
ASSURED

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NOTES:

- SEE DRAWING A2515591.00-4226 FOR SECTION DETAILS.
- FOR WETLAND PLANTING REFER TO STUDIO PACIFIC PLANTING PLANS.
- ALL PLANTED AREA ARE TO HAVE 200mm GOOD QUALITY TOPSOIL PLACED PRIOR TO PLANTING.
- ALL WETLAND PLANTS TO BE PRINNED TO PREVENT REMOVAL BY NATIVE BIRDS.
- ACCESS TRACK TO BE 150mm COMPACTED GAP65 OVERLAID WITH 50mm TOPSOIL AND GRASS SEEDED.

LEGEND:

- FINISHED CONTOURS SHOWN AT 0.25m INTERVALS
- EXISTING CONTOURS SHOWN AT 1m INTERVALS
- PERMANENT WATER LEVEL EXTENTS
- SPILLWAY EXTENTS
- MAINTENANCE ACCESS TRACK
- LOT BOUNDARY
- MAXIMUM WATER LEVEL
- PROPOSED RETAINING WALL
- INTERMITTENT OR PERMANENT STREAM
- MODIFIED NATURAL STREAM
- FLOOD EXTENT
- BOLLARDS

REF	REVISIONS	DATE
A	FOR CONSENT	JEP 05/2026

HARRISON GRIERSON

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Parnell, Auckland 1052
T +64 9 917 5000
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PROJECT: BEACHLANDS
FAST TRACK CONSENT APPLICATION
BEACHLANDS SOUTH, AUCKLAND

TITLE: RAINGARDEN 02 LAYOUT PLAN

ORIGINATOR	DATE	SIGNED	PLLOT BY:
JEP	05/2026		ABE

DRAWN	DATE	SIGNED	PLLOT DATE:
JEP	05/2026		05/06/26

CHECKED	DATE	SIGNED	SURVEY BY:
CJM	05/2026		

APPROVED	DATE	SIGNED	SURVEY DATE:
CJM	05/2026		

ISSUE STATUS: FAST TRACK CONSENT

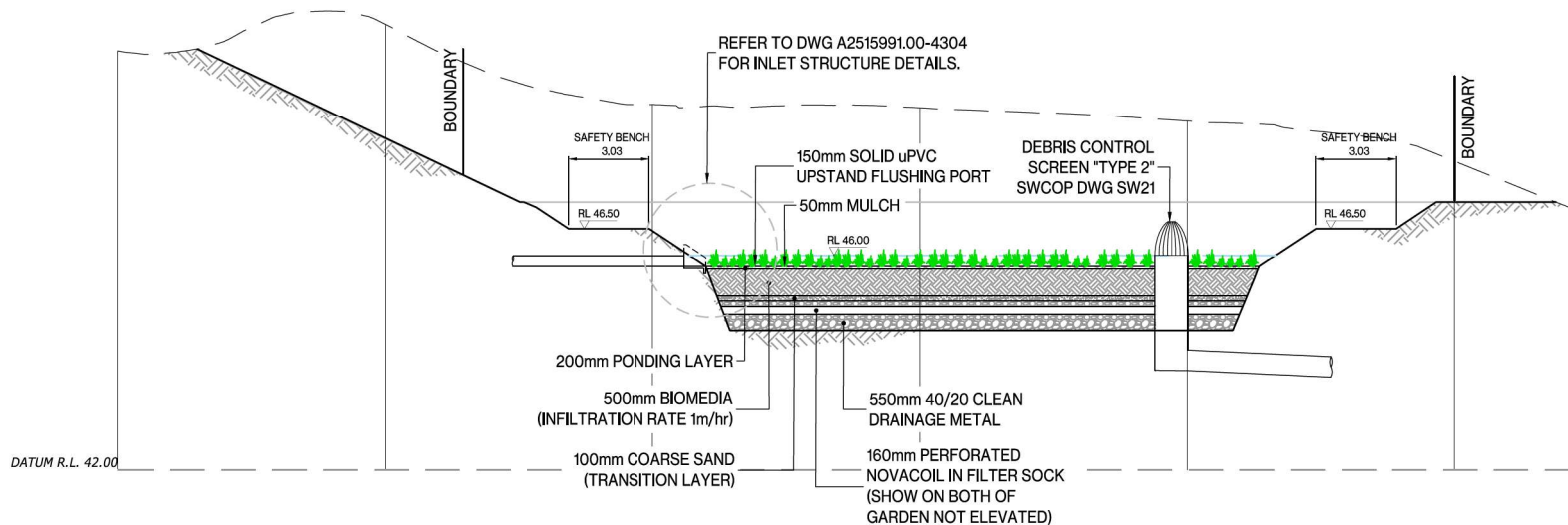
PROJECT No:	SCALE:	REV
A2515591.00	1:200 - A1 1:400 - A3	A1

DRAWING No:	REV
A2515591.00-4286	A

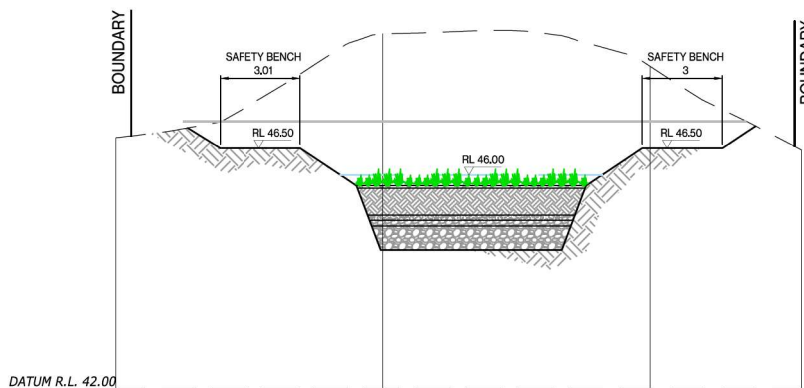
FOR CONSENT

REFER TO APPROVED MASTER DRAWINGS FOR ORIGINAL SIGNATURES FILE: LATE C:\AUTODESK\ACCDOS\ACCDOS\HARRISON GRIERSON\US\BEACHLANDS SOUTH FAST TRACK CONSENT\PROJECT FILES\01 DESIGN\02 CIVIL\04 SHEETS\A2515591.00-4281 STORMWATER DEVICE LAYOUT PLAN.DWG

- LEGEND:
- INDICATES WETLAND SURFACE
 - INDICATES EXISTING GROUND SURFACE
 - INDICATES PROPOSED GROUND SURFACE
 - MAXIMUM WATER LEVEL
 - PERMANENT WATER LEVEL



A RAINGARDEN 2 LONGITUDINAL SECTION
SCALE 1:100H 1:50V - A1
1:200H 1:100V - A3



B RAINGARDEN 2 CROSS SECTION
SCALE 1:100H 1:50V - A1
1:200H 1:100V - A3

A	FOR CONSENT	JEP	05/2026
REF	REVISIONS	BY	DATE

HARRISON GRIERSON AUCKLAND OFFICE
Level 4, 96 St. Georges Bay Road
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PROJECT: BEACHLANDS
FAST TRACK CONSENT APPLICATION
BEACHLANDS SOUTH, AUCKLAND

TITLE: RAINGARDEN 02 SECTIONS

ORIGINATOR JEP	DATE 05/2026	SIGNED	PLOT BY: ABE
DRAWN JEP	DATE 05/2026	SIGNED	PLOT DATE: 05/06/26
CHECKED CJM	DATE 05/2026	SIGNED	SURVEY BY:
APPROVED CJM	DATE 05/2026	SIGNED	SURVEY DATE:

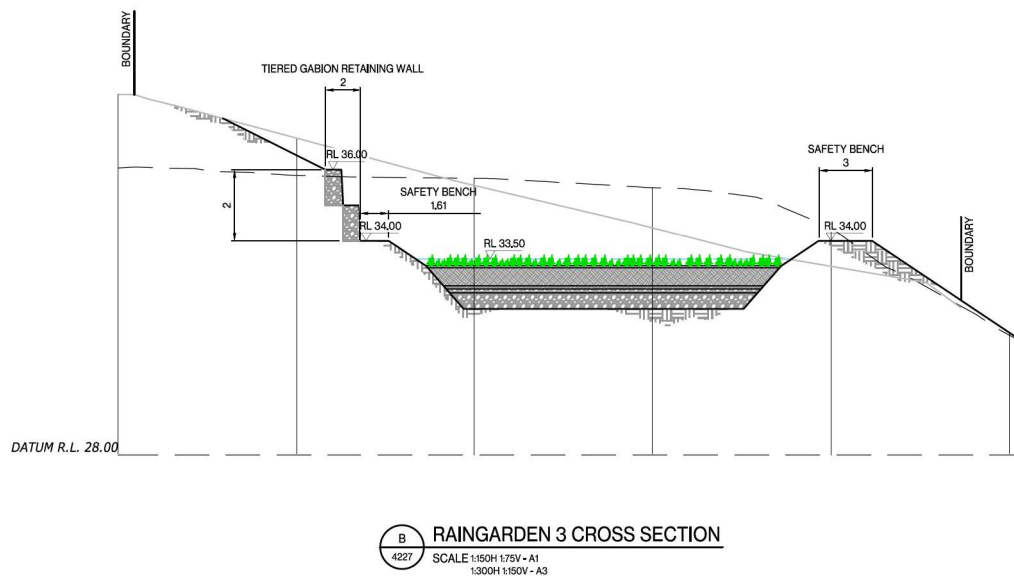
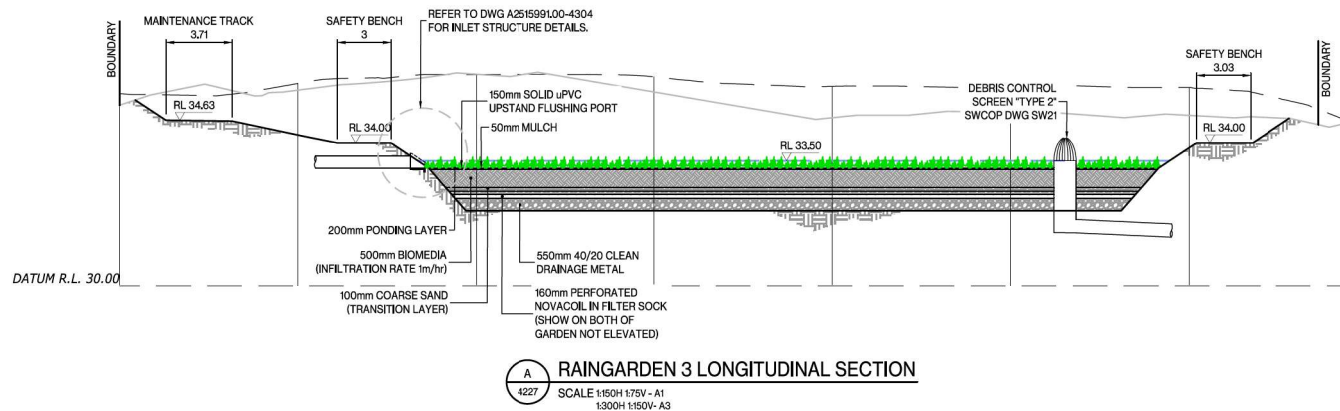
ISSUE STATUS: FAST TRACK CONSENT

PROJECT No: A2515591.00 SCALES: AS SHOWN A1

DRAWING No: A2515591.00-4287 REV

FOR CONSENT

- LEGEND:
- INDICATES WETLAND SURFACE
 - INDICATES EXISTING GROUND SURFACE
 - INDICATES PROPOSED GROUND SURFACE
 - MAXIMUM WATER LEVEL
 - PERMANENT WATER LEVEL



REF	REVISIONS	BY	DATE
A	FOR CONSENT	JEP	05/2026

HARRISON GRIERSON AUCKLAND OFFICE
Level 4, 96 St. Georges Bay Road
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PROJECT: BEACHLANDS
FAST TRACK CONSENT APPLICATION
BEACHLANDS SOUTH, AUCKLAND

TITLE: RAINGARDEN 03 SECTIONS

ORIGINATOR: JEP	DATE: 05/2026	SIGNED:	PLOT BY: ABE
DRAWN: JEP	DATE: 05/2026	SIGNED:	PLOT DATE: 05/06/26
CHECKED: CJM	DATE: 05/2026	SIGNED:	SURVEY BY:
APPROVED: CJM	DATE: 05/2026	SIGNED:	SURVEY DATE:

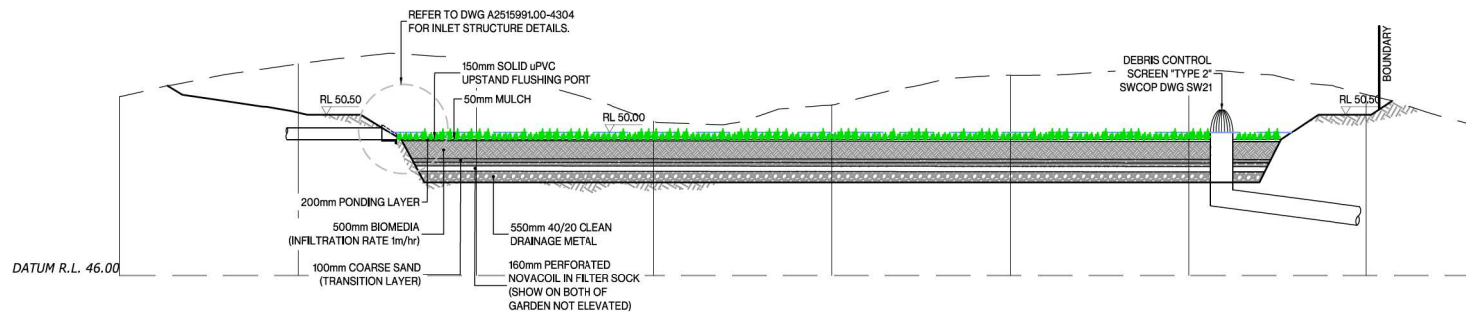
ISSUE STATUS: FAST TRACK CONSENT

PROJECT No: A2515591.00	SCALE: AS SHOWN	A1
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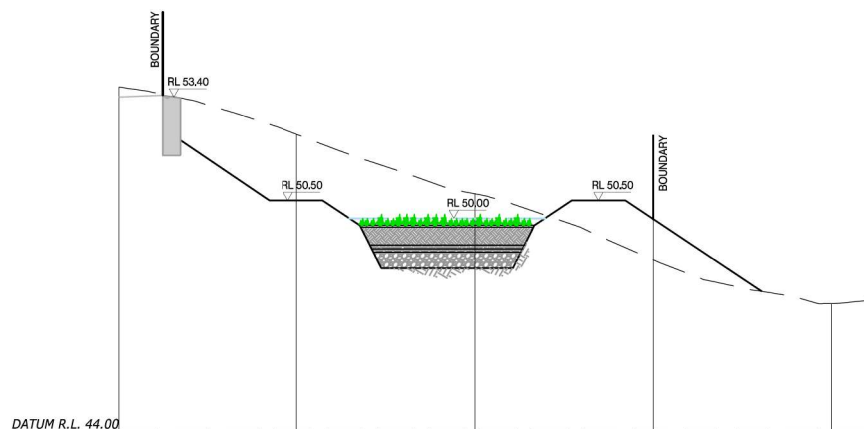
DRAWING No: A2515591.00-4289 A

FOR CONSENT

- LEGEND:
- INDICATES WETLAND SURFACE
 - INDICATES EXISTING GROUND SURFACE
 - INDICATES PROPOSED GROUND SURFACE
 - MAXIMUM WATER LEVEL
 - PERMANENT WATER LEVEL



RAINGARDEN 4 LONGITUDINAL SECTION
SCALE 1:150H 1:300V - A1
1:300H 1:600V - A3



RAINGARDEN 4 CROSS SECTION
SCALE 1:150H 1:300V - A1
1:300H 1:600V - A3

HARRISON GRIERSON AUCKLAND OFFICE
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PROJECT: **BEACHLANDS
FAST TRACK CONSENT APPLICATION
BEACHLANDS SOUTH, AUCKLAND**

TITLE: **RAINGARDEN 04 SECTIONS**

ORIGINATOR: JEP	DATE: 05.2026	SIGNED:	PLOT BY: ABE
DRAWN: JEP	DATE: 05.2026	SIGNED:	PLOT DATE: 05.06.26
CHECKED: CJM	DATE: 05.2026	SIGNED:	SURVEY BY:
APPROVED: CJM	DATE: 05.2026	SIGNED:	SURVEY DATE:

ISSUE STATUS: **FAST TRACK CONSENT**

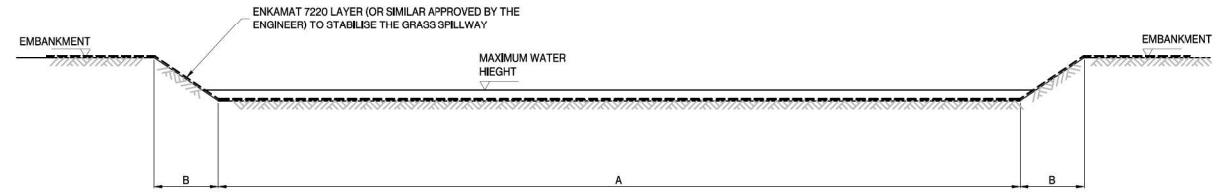
PROJECT No: A2515591.00	SCALE: AS SHOWN	A1
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DRAWING No: **A2515591.00-4291** REV **A**

FOR CONSENT

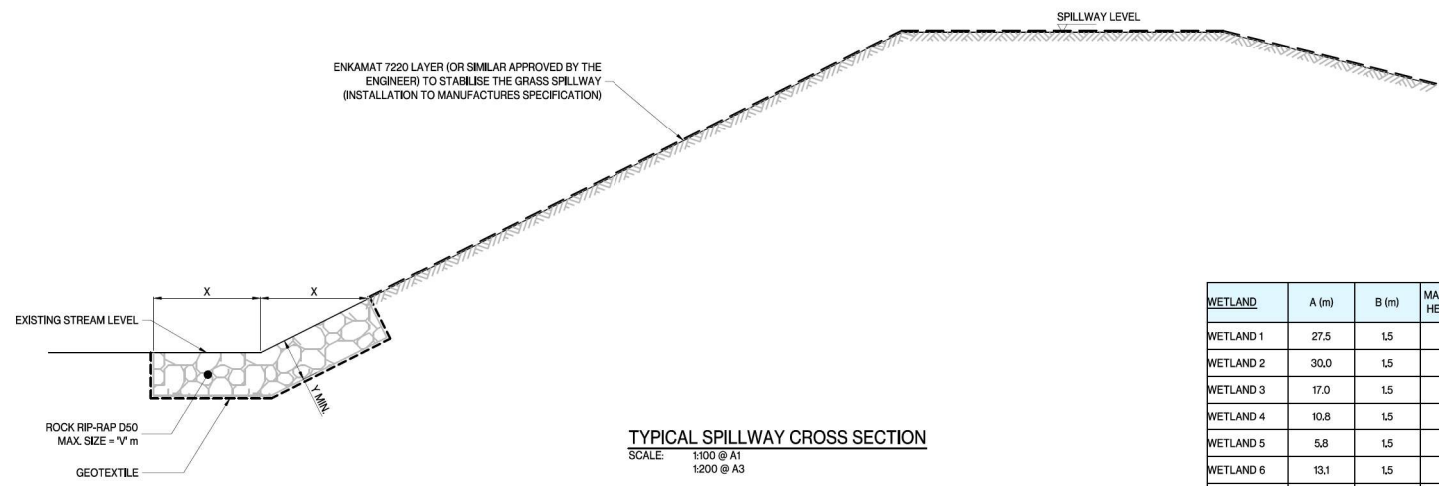
NOTES

- ENKAMAT TO BE LAID ON 100mm OF TOPSOIL SHAPED TO FINAL SURFACE GRADES.
- MAT SURFACE SHOULD BE PINNED A 1m CENTRES TO ENSURE FIXED TO UNDERLYING TOPSOIL SURFACE.
- AFTER PINNING THE AREA SHALL BE GRASSED SEED AT A RATE OF 20-30 g/m².
- TOPSOIL IS THEN RAKED INTO THE MAT UNTIL THE AREA IS COMPLETELY COVERED WITH 20mm TOPSOIL PRIOR TO THE TOPSOIL SPREAD, THE SURFACE IS TO BE INSPECTED BY THE ENGINEER.
- MAT IS TO BE LAID FROM THE DOWNSTREAM TO UPSTREAM AND OVERLY DISTRIBUTED CONTACT WITH SUBSOIL.
- THE MAT IS TO BE SECURED WITH PEGS OR PINS, ALL EDGES TOP/BOTTOM AND SIDES SHOULD BE FIRMLY ANCHORED IN SPADE DEEP TRENCHES WITH PINS. ALL OVER LAPS MINIMUM OF 300mm SHOULD BE PINNED TIGHTLY.



TYPICAL WETLAND SPILLWAY

SCALE: 1:100 H 1:50 V - A1
1:200 H 1:100 V - A3



WETLAND	A (m)	B (m)	MAX WATER HEIGHT (m)	X (m)	Y (m)	V (m)
WETLAND 1	27.5	1.5	0.2	4.7	0.6	0.4
WETLAND 2	30.0	1.5	0.1	4.3	0.5	0.3
WETLAND 3	17.0	1.5	0.2	4.5	0.5	0.3
WETLAND 4	10.8	1.5	0.1	4.3	0.5	0.3
WETLAND 5	5.8	1.5	0.1	4.3	0.5	0.3
WETLAND 6	13.1	1.5	0.1	4.3	0.5	0.3
WETLAND 7	7.2	1.5	0.2	4.7	0.6	0.4
WETLAND 8	13.7	1.5	0.1	4.3	0.5	0.3
WETLAND 9	9.0	1.5	0.1	4.3	0.5	0.3
WETLAND 10	16.1	1.5	0.1	4.3	0.5	0.3
WETLAND 11	3.9	1.5	0.1	4.3	0.5	0.3
RAINGARDEN	A (m)	B (m)	MAX WATER HEIGHT (m)	X (m)	Y (m)	V (m)
RAINGARDEN 1	12.5	1.5	0.2	4.7	0.6	0.4
RAINGARDEN 2	5.0	1.5	0.2	4.4	0.5	0.3
RAINGARDEN 3	4.7	1.5	0.5	4.5	0.5	0.3
RAINGARDEN 4	9.3	1.5	0.1	4.5	0.5	0.3

FOR CONSENT

HARRISON GRIERSON

AUCKLAND OFFICE
Level 4, 96 St. Georges Bay Road
Parnell, Auckland 1052
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W www.harrisingrierson.com

PROJECT:

BEACHLANDS
FAST TRACK CONSENT APPLICATION
BEACHLANDS SOUTH, AUCKLAND

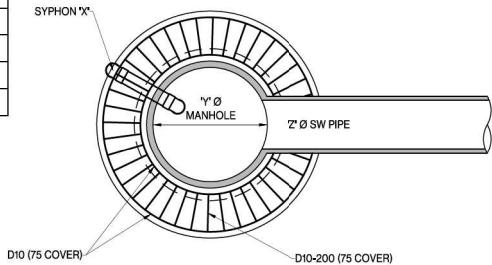
TITLE:

1% AEP EMERGENCY SPILLWAYS
STORMWATER WETLAND DETAILS
SHEET 1 OF 8

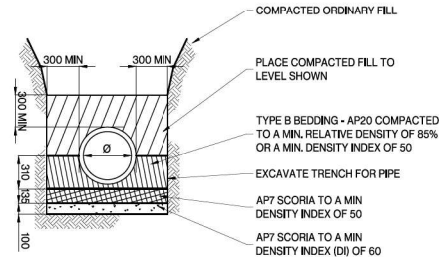
ORIGINATOR	DATE	SIGNED	PLOT BY:
SCT	04.2026		ABE
DRAWN	DATE	SIGNED	PLOT DATE:
SCT	11.2025		08.06.26
CHECKED	DATE	SIGNED	SURVEY BY:
PZS	04.2026		SURVEYED BY
APPROVED	DATE	SIGNED	SURVEY DATE:
CJM	04.2026		SURVEYED DATE

FAST TRACK CONSENT			
PROJECT No:	SCALE:	NOT TO SCALE	A1
A2515591.00			
DRAWING No:			REV
A2515591.00-4300			A

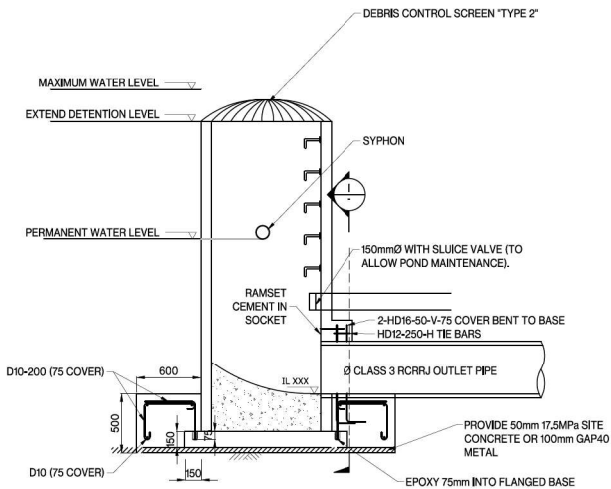
WETLAND	MANHOLE SIZE Y (mm)	SYPHON SIZE X (mm)	ORIFICE SIZE X1 (mm)	OUTLET PIPE Z (mm)
WETLAND 01	DN1400	150	110	1200
WETLAND 02	DN1050	100	100	1050
WETLAND 03	DN1050	150	125	1050
WETLAND 04	DN1050	225	180	1800
WETLAND 05	DN1050	150	125	1200
WETLAND 06	DN1050	100	85	1050
WETLAND 07	DN1050	100	75	825
WETLAND 08	DN1050	100	75	750
WETLAND 09	DN1050	100	85	1050
WETLAND 10	DN1050	100	85	675
WETLAND 11	DN1050	100	90	825



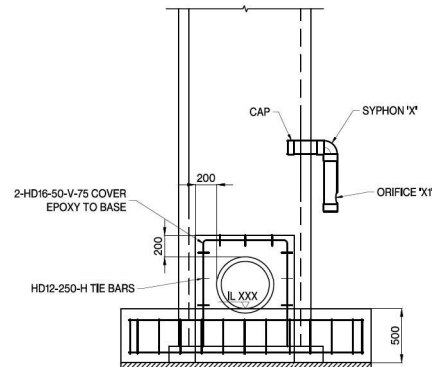
WETLAND OUTLET BASE STRUCTURE PLAN VIEW
SCALE: N.T.S



TYPICAL PIPE BEDDING DETAILS (CONVENTIONALLY LAID)
SCALE: N.T.S



WETLAND OUTLET STRUCTURE DETAIL
SCALE: N.T.S



SECTION VIEW
SCALE: 1:20=41146:43

NOTES

- OUTLET SIZING TO BE CONFIRMED AT ENGINEERING PLAN APPROVAL STAGE.

A	FOR CONSENT	SCT	05/2026
REF	REVISIONS	BY	DATE

HARRISON GRIERSON AUCKLAND OFFICE
Level 4, 96 St. Georges Bay Road
Parnell, Auckland 1052
T +64 9 917 5000
W www.harrisonsongrierson.com

PROJECT: BEACHLANDS
FAST TRACK CONSENT APPLICATION
BEACHLANDS SOUTH, AUCKLAND

TITLE: 1% AEP EMERGENCY SPILLWAYS
STORMWATER WETLAND DETAILS
SHEET 2 OF 8

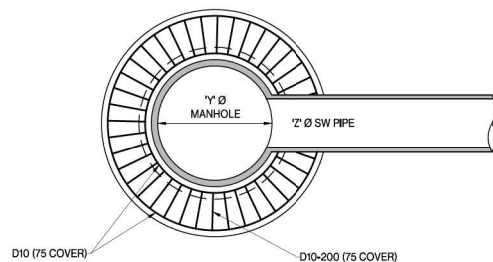
ORIGINATOR	DATE	SIGNED	PLOT BY
SCT	04/2026		ABE
DRAWN	DATE	SIGNED	PLOT DATE
SCT	11/2025		08/06/26
CHECKED	DATE	SIGNED	SURVEY BY
PZS	04/2026		
APPROVED	DATE	SIGNED	SURVEY DATE
CJM	04/2026		

ISSUE STATUS: FAST TRACK CONSENT

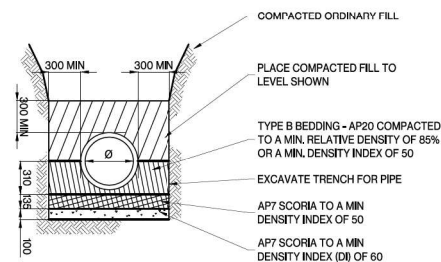
PROJECT No:	SCALE: AS SHOWN	A1
A2515591.00		
DRAWING No:		REV
A2515591.00-4301		A

FOR CONSENT

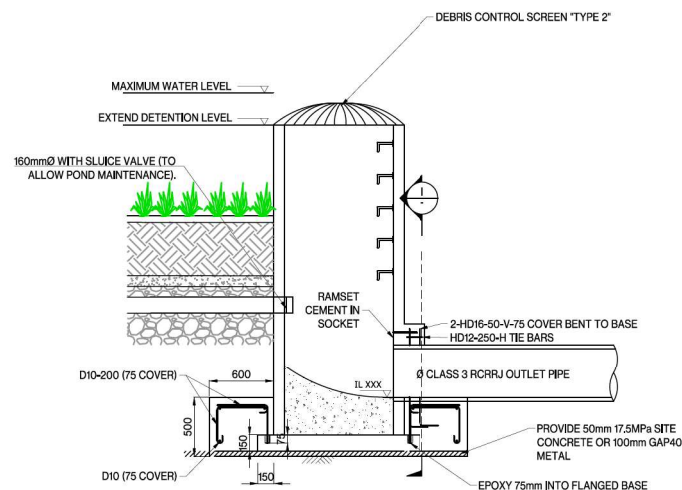
RAIN GARDEN	MANHOLE SIZE Y(mm)	OUTLET PIPE Z (mm)
RAIN GARDEN 01	DN1050	450
RAIN GARDEN 02	DN1050	375
RAIN GARDEN 03	DN1050	675
RAIN GARDEN 04	DN1050	525



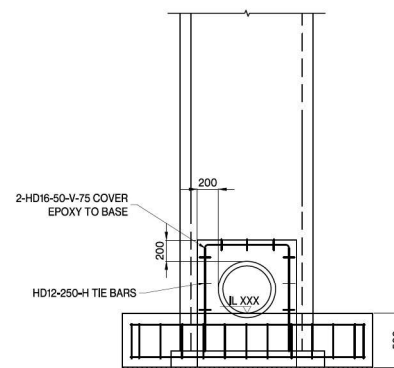
RAINGARDEN OUTLET BASE STRUCTURE PLAN VIEW
SCALE: N.T.S.



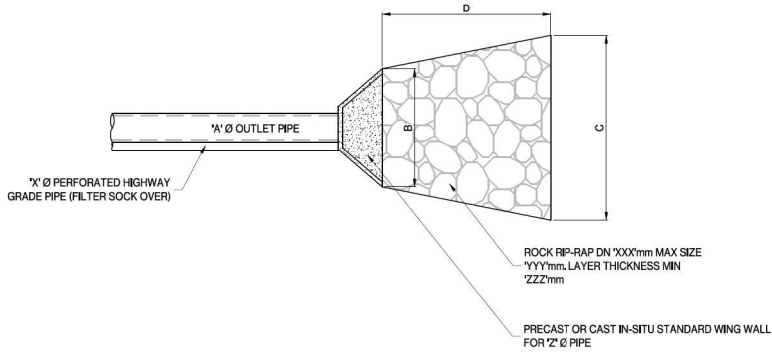
TYPICAL PIPE BEDDING DETAILS (CONVENTIONALLY LAID)
SCALE: N.T.S.



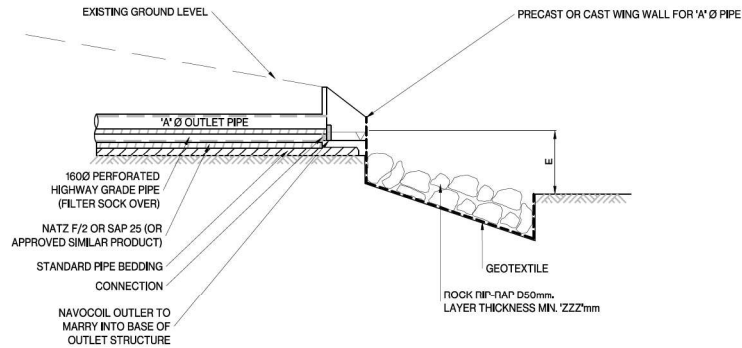
RAINGARDEN OUTLET STRUCTURE DETAIL
SCALE: N.T.S.



SECTION VIEW
SCALE 1/20-A11:40-A3



WETLAND OUTLET STRUCTURE - PLAN
N.T.S



WETLAND OUTLET STRUCTURE - TYPICAL SECTION
N.T.S

WETLAND/RG	OUTLET NUMBER	A (m)	B (m)	C (m)	D (m)	E (m)	XXX (m)	YYY (m)
WETLAND 1	19-0	1200	4.1	4.1	11.17	1.875	0.4	0.7
WETLAND 3	79-0	1050	3.8	3.8	7.38	1.55	0.2	0.5
WETLAND 4	248-0	1600	4.8	4.8	14.04	2.4	0.4	0.9
WETLAND 5	46-0	1200	4.1	4.1	7.59	1.875	0.2	0.5
WETLAND 6	55-0	1050	3.8	3.8	6.59	1.55	0.2	0.4
WETLAND 7	35-0	825	3.35	3.35	8.22	1.595	0.3	0.5
WETLAND 8	65-0	750	3.35	3.35	10.38	1.595	0.4	0.8
WETLAND 11	94-0	825	3.35	3.35	5.1	1.595	0.2	0.3
RAINGARDEN	OUTLET NUMBER	A (m)	B (m)	C (m)	D (m)	E (m)	XXX (m)	YYY (m)
RAINGARDEN 2	171-0	375	2.3	2.3	4.7	0.91	0.2	0.3
RAINGARDEN 4	192-0	525	2.3	2.3	6.83	0.91	0.3	0.5



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ENGINEERS NEW ZEALAND

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A	FOR CONSENT	CJM	05/2026
REF	REVISIONS	BY	DATE

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GRIERSON**

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W www.harrisongrierson.com

PROJECT: BEACHLANDS
FAST TRACK CONSENT APPLICATION
BEACHLANDS SOUTH, AUCKLAND

TITLE: WETLAND & RAINGARDEN OUTLET
STORMWATER WETLAND DETAILS
SHEET 4 OF 8

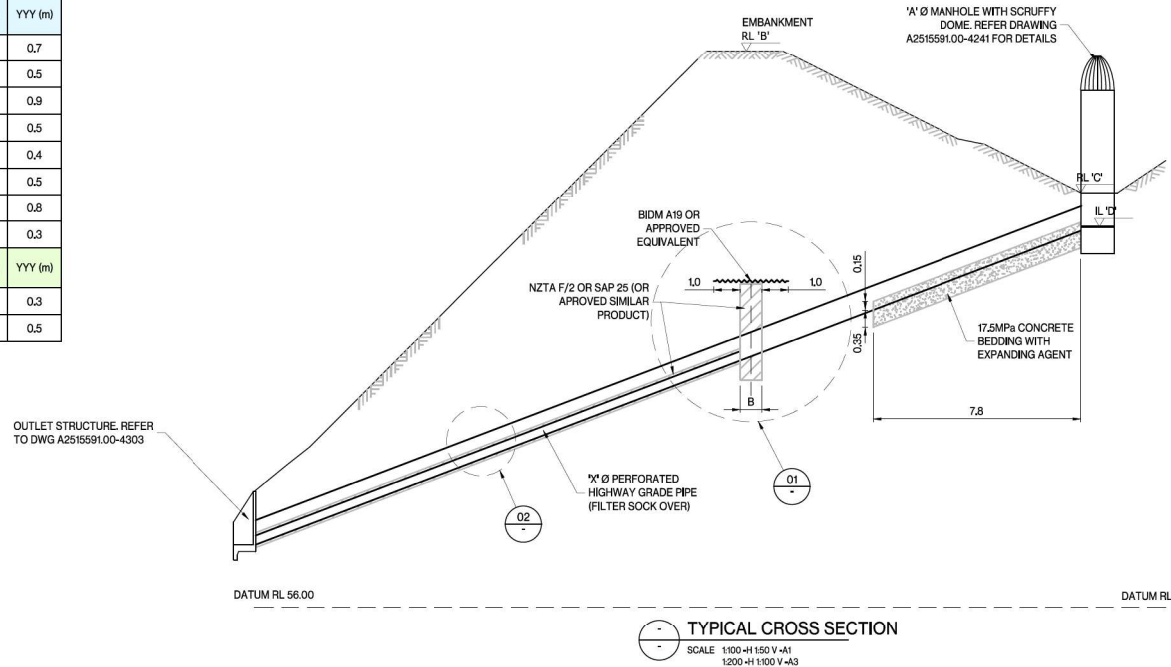
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DRAWN: SCT	DATE: 11/2025	SIGNED:	PLotted DATE: 08/06/26
CHECKED: PZS	DATE: 04/2026	SIGNED:	SURVEYED BY: SURVEYED BY
APPROVED: CJM	DATE: 04/2026	SIGNED:	SURVEY DATE: SURVEYED DATE

ISSUE STATUS: FAST TRACK CONSENT

PROJECT No: A2515591.00	SCALES: AS SHOWN	A1
DRAWING No:		REV
A2515591.00-4303		A

FOR CONSENT

WETLAND/RQ	OUTLET NUMBER	A (m)	B (m)	C (m)	D (m)	E (m)	XXX (m)	YYY (m)
WETLAND 1	19-0	1200	4.1	4.1	11.17	1.875	0.4	0.7
WETLAND 3	79-0	1050	3.8	3.8	7.38	1.55	0.2	0.5
WETLAND 4	248-0	1600	4.8	4.8	14.04	2.4	0.4	0.9
WETLAND 5	46-0	1200	4.1	4.1	7.59	1.875	0.2	0.5
WETLAND 6	55-0	1050	3.8	3.8	6.59	1.55	0.2	0.4
WETLAND 7	35-0	825	3.35	3.35	8.22	1.595	0.3	0.5
WETLAND 8	65-0	750	3.35	3.35	10.38	1.595	0.4	0.8
WETLAND 11	94-0	825	3.35	3.35	5.1	1.595	0.2	0.3
RAINGARDEN	OUTLET NUMBER	A (m)	B (m)	C (m)	D (m)	E (m)	XXX (m)	YYY (m)
RAINGARDEN 2	17-0	375	2.3	2.3	4.7	0.91	0.2	0.3
RAINGARDEN 4	192-0	525	2.3	2.3	6.83	0.91	0.3	0.5

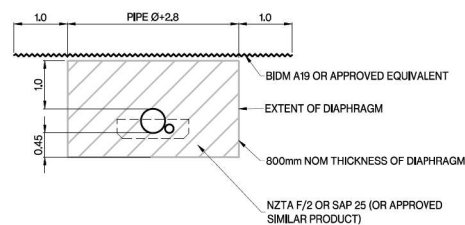


A	FOR CONSENT	SCT	05.2026
REF	REVISIONS	BY	DATE

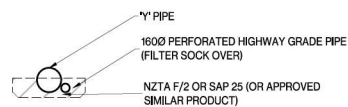
PROJECT:

BEACHLANDS
FAST TRACK CONSENT APPLICATION
BEACHLANDS SOUTH, AUCKLAND

ORIGINATOR: SCT	DATE: 04.2026	SIGNED:	PLOT BY: ABR
DRAWN: SCT	DATE: 11.2025	SIGNED:	PLOT DATE: 09.06.2025
CHECKED: PZS	DATE: 04.2026	SIGNED:	SURVEY BY: SURVEYED BY
APPROVED: CJM	DATE: 04.2026	SIGNED:	SURVEY DATE: SURVEYED DATE



01 DETAIL 01
- SCALE NTS



02 DETAIL 02
- SCALE NTS

FOR CONSENT

A	FOR CONSENT	SCT	05/20	
REF	REVISIONS	BY	DAT	

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PROJECT:

BEACHLANDS
FAST TRACK CONSENT APPLICATION
BEACHLANDS SOUTH, AUCKLAND

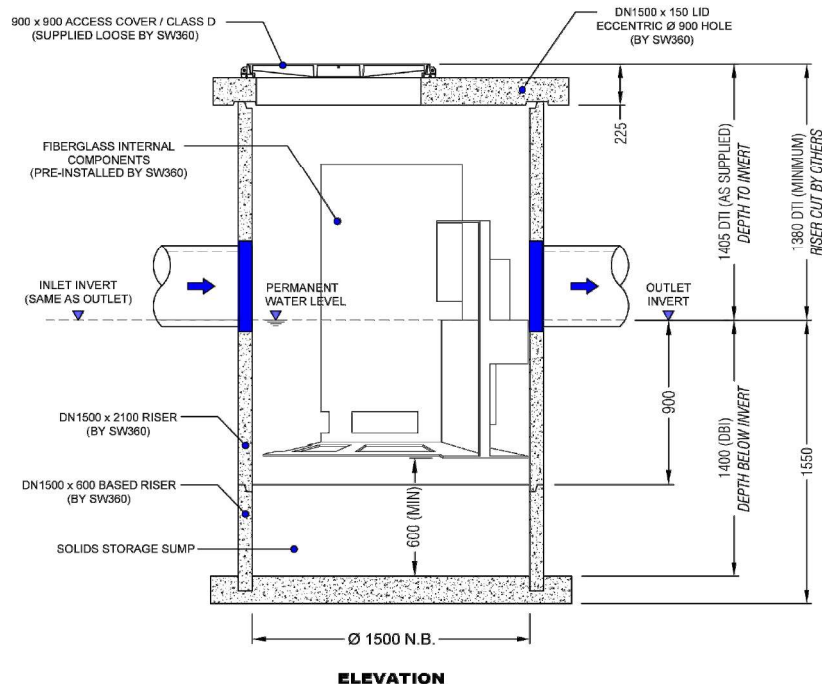
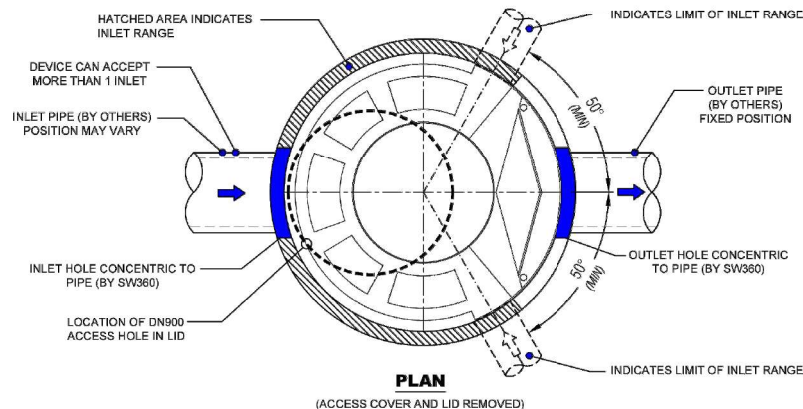
TITLE:

STORMWATER WETLAND DETAILS
SHEET 7 OF 8

ORIGINATOR: SCT	DATE: 04.2026	SIGNED:	PLOT BY: A
DRAWN: SCT	DATE: 11.2025	SIGNED:	PLOT DATE: 09.06
CHECKED: PZS	DATE: 04.2026	SIGNED:	SURVEY BY: SURVEYED
APPROVED: CJM	DATE: 04.2026	SIGNED:	SURVEY DATE: SURVEYED DA

ISSUE STATUS: **FAST TRACK CONSENT**

PROJECT No: A2515591.00	SCALE: AS SHOWN	A
DRAWING No: A2515591.00-4306		REV A



TO BE COMPLETED BY CUSTOMER / CONTRACTOR

COMPANY :		P.O. NUMBER :	
SITE ADDRESS :			
SITE CONTACT & PHONE :			
PREFERRED DELIVERY DATE (TBC SW360) :			
FILTER REFERENCE (IF APPLICABLE) :		LID LEVEL (INPUT REQUIRED) :	
INLET PIPE DATA: DN750 (max)	DIA :	IL :	MATERIAL :
OUTLET PIPE DATA: DN750 (max)	DIA :	IL :	MATERIAL :
INLET PIPE ORIENTATION :	AS DRAWN : Yes / No	IF NO THEN PLEASE: SKETCH ORIENTATION ON THE DRAWING	IF MULTIPLE INLETS ARE REQUIRED THEN PLEASE: SKETCH ADDITIONAL PIPES WITH ORIENTATIONS ON THE DRAWING
COMPLETED BY :		SIGNED :	DATE :

NOTES

1. MANHOLE COMPONENTS AND CONCRETE LID FITTED WITH SWIFTLIFT ANCHOR POINTS. SPREADER BAR RECOMMENDED FOR MANHOLE LIFTS.
2. UNIT SUPPLIED WITH INLET AND OUTLET HOLES CORE DRILLED.
3. SEALING / GROUTING OF MANHOLE COMPONENTS AND PIPES BY CONTRACTOR. ENSURING LOCAL CODES AND REGULATIONS ARE COMPLIED WITH.
4. ANY RISERS REQUIRED TO INCREASE THE DEPTH TO INVERT (DTI) FROM THAT AS DRAWN TO BE SUPPLIED BY THE CONTRACTOR.
5. FOR A DTI EXCEEDING 5m PLEASE CONTACT **0800STORMWATER**.
6. CONTRACTOR TO TAKE APPROPRIATE MEASURES TO PROTECT DEVICE FROM CONSTRUCTION RELATED EROSION RUNOFF.
7. BACKFILL, BEDDING AND BUOYANCY DESIGN BY ENGINEER OF RECORD.
8. CONCRETE MANHOLE RISERS ARE DESIGNED AND MANUFACTURED IN ACCORDANCE WITH AS/NZS 4058 : 2007.
9. CONCRETE MANHOLE BASES ARE DESIGNED AND MANUFACTURED IN ACCORDANCE WITH NZS 3101 : 2006 & NZS 3109 : 1997.
10. CONCRETE LID DESIGNED AND MANUFACTURED TO HN-HO-72.
11. FOR REQUIREMENTS OUTSIDE OF DRAWING SPECIFICATIONS PLEASE CONTACT **0800STORMWATER**.

APPROX WEIGHTS

DN1500 X 600 MHB: **1675 Kg**
DN1500 X 2100 RISER (INCL INSERT): **2100 Kg**
DN1500 CONCRETE LID: **950 Kg**



0800 STORMWATER
sales@stormwater360.co.nz
www.stormwater360.co.nz

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CASCADE SEPARATOR™
HYDRODYNAMIC SEPARATOR
DN1500 / CS-5
GENERAL ARRANGEMENT

SCALE : N.T.S. DRG No : CS-MH-CS5-1500-T-20 REV : 1 DATE : 09.02.20

JOB NO :	REV	REVISION DETAIL	DATE
PROJECT :	1	REVISED	18.02.20
DRN :	G.S. 21.01.20	0	APPROVED 09.02.20
CKD :	K.J. 09.02.20		

FOR CONSENT

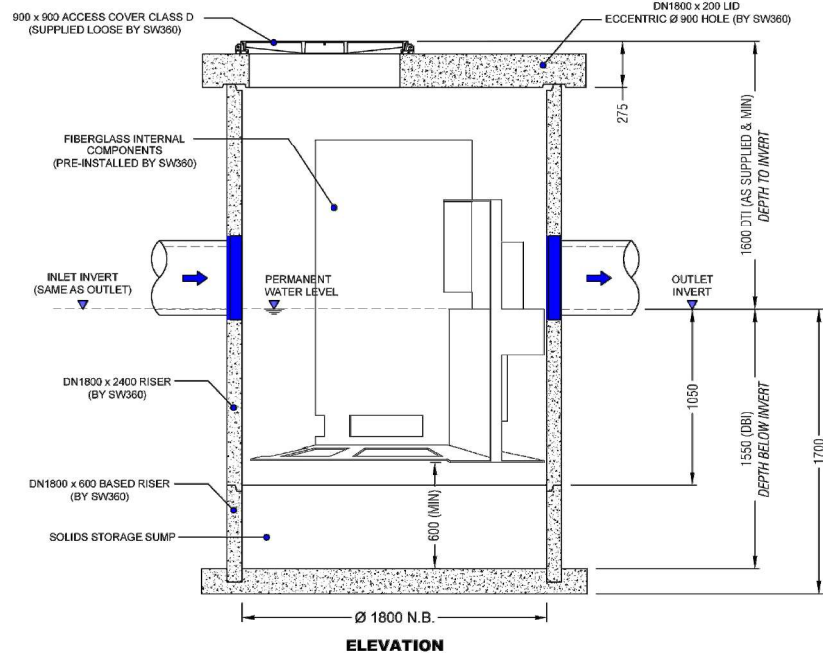
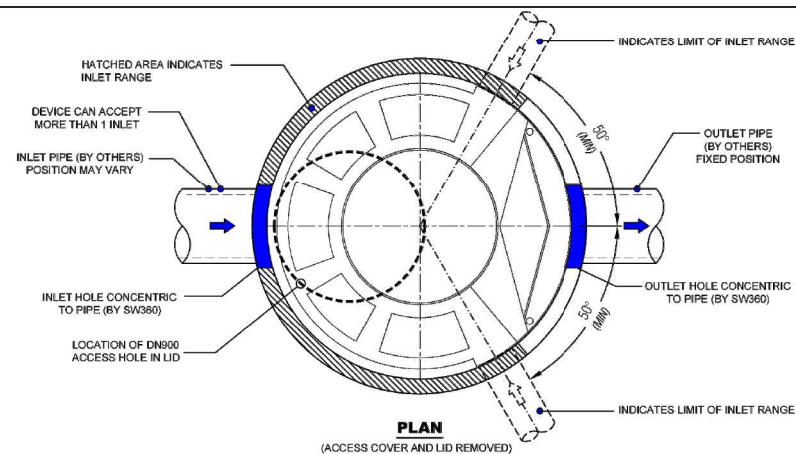
HARRISON GRIERSON
AUCKLAND OFFICE
Level 4, 96 St. Georges Bay Road
Parnell, Auckland 1052
T +64 9 917 5000
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PROJECT:
BEACHLANDS
FAST TRACK CONSENT APPLICATION
BEACHLANDS SOUTH, AUCKLAND

TITLE:
STORMWATER DETAILS
SHEET 1 OF 6

ORIGINATOR	DATE	SIGNED	PLOT BY
SCT	04.2026		REF
DRAWN	DATE	SIGNED	PLOT DATE
SCT	11.2025		29.05.26
CHECKED	DATE	SIGNED	SURVEY BY
PZS	04.2026		
APPROVED	DATE	SIGNED	SURVEY DATE
CJM	04.2026		

FAST TRACK CONSENT
PROJECT No: A2515591.00
DRAWING No: A2515591.00-4900
REV A



TO BE COMPLETED BY CUSTOMER / CONTRACTOR

COMPANY :		P.O. NUMBER :	
SITE ADDRESS :			
SITE CONTACT & PHONE :			
PREFERRED DELIVERY DATE (TBC SW360) :			
FILTER REFERENCE (IF APPLICABLE) :		LID LEVEL (INPUT REQUIRED) :	
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OUTLET PIPE DATA: DN1050 (max)	DIA :	IL :	MATERIAL :
INLET PIPE ORIENTATION :	AS DRAWN : Yes / No	IF NO THEN PLEASE: SKETCH ORIENTATION ON THE DRAWING	IF MULTIPLE INLETS ARE REQUIRED THEN PLEASE: SKETCH ADDITIONAL PIPES WITH ORIENTATIONS ON THE DRAWING
COMPLETED BY :		SIGNED :	DATE :

NOTES

1. MANHOLE COMPONENTS AND CONCRETE LID FITTED WITH SWIFTLIFT ANCHOR POINTS. SPREADER BAR RECOMMENDED FOR MANHOLE LIFTS.
2. UNIT SUPPLIED WITH INLET AND OUTLET HOLES CORE DRILLED.
3. SEALING / GROUTING OF MANHOLE COMPONENTS AND PIPES BY CONTRACTOR. ENSURING LOCAL CODES AND REGULATIONS ARE COMPLIED WITH.
4. ANY RISERS REQUIRED TO INCREASE THE DEPTH TO INVERT (DTI) FROM THAT AS DRAWN TO BE SUPPLIED BY THE CONTRACTOR.
5. FOR A DTI EXCEEDING 5m PLEASE CONTACT **0800STORMWATER**.
6. CONTRACTOR TO TAKE APPROPRIATE MEASURES TO PROTECT DEVICE FROM CONSTRUCTION RELATED EROSION RUNOFF.
7. BACKFILL, BEDDING AND BUOYANCY DESIGN BY ENGINEER OF RECORD.
8. CONCRETE MANHOLE RISERS ARE DESIGNED AND MANUFACTURED IN ACCORDANCE WITH AS/NZS 4086 : 2007.
9. CONCRETE MANHOLE BASES ARE DESIGNED AND MANUFACTURED IN ACCORDANCE WITH NZS 3101 : 2006 & NZS 3109 : 1997.
10. CONCRETE LID DESIGNED AND MANUFACTURED TO HN-HO-72.
11. FOR REQUIREMENTS OUTSIDE OF DRAWING SPECIFICATIONS PLEASE CONTACT **0800STORMWATER**.

APPROX WEIGHTS

DN1800 X 600 MHB: 2320 Kg
DN1800 X 2400 RISER (INCL INSERT): 3400 Kg
DN1800 CONCRETE LID: 1850 Kg



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HYDRODYNAMIC SEPARATOR
DN1800 / CS-6
GENERAL ARRANGEMENT

SCALE : N.T.S. DRG No : CS-MH-CS6-1800-T-20 REV : 1 DATE : 09.02.20

JOB NO :		REV	REVISION DETAIL	DATE
PROJECT :		1	REVISED	18.02.20
DRN :	G.S. 22.01.20	0	APPROVED	09.02.20
CKD :	K.J. 09.02.20			

PROJECT:
BEACHLANDS
FAST TRACK CONSENT APPLICATION
BEACHLANDS SOUTH, AUCKLAND

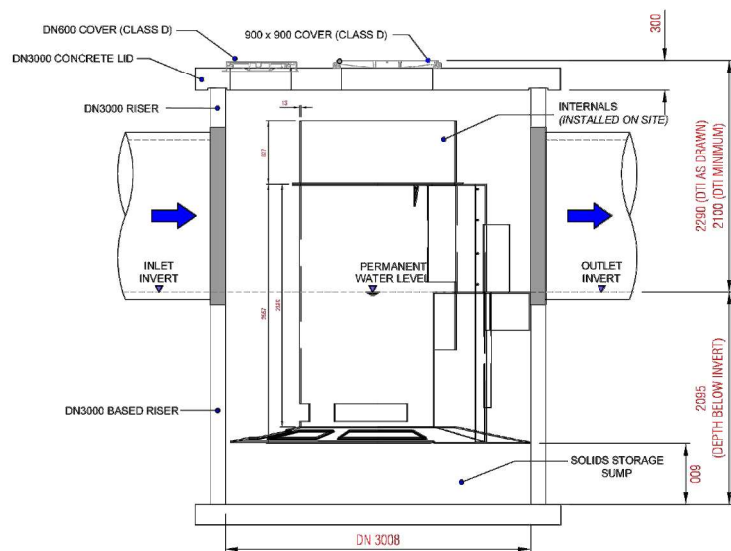
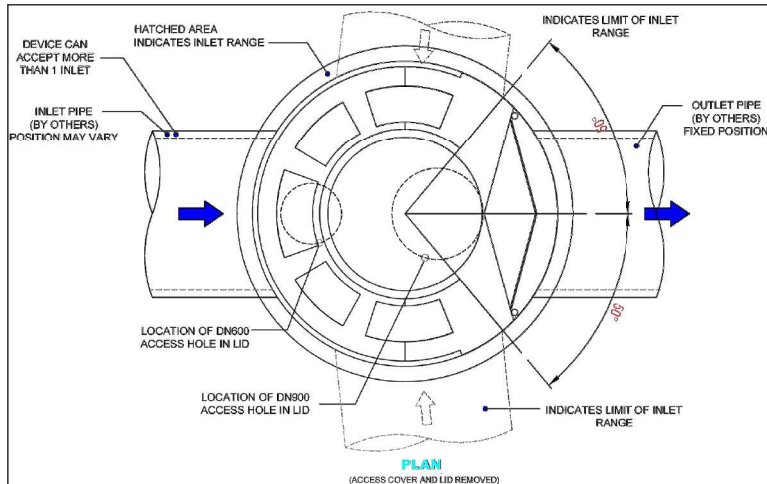
TITLE:
STORMWATER DETAILS
SHEET 2 OF 6

ORIGINATOR SCT	DATE 04.2026	SIGNED	PLOT BY REF
DRAWN SCT	DATE 11.2025	SIGNED	PLOT DATE 29.05.26
CHECKED JZS	DATE 04.2026	SIGNED	SURVEY BY SURVEYED BY
APPROVED CJM	DATE 04.2026	SIGNED	SURVEY DATE SURVEYED DATE

FAST TRACK CONSENT

PROJECT No: A2515591.00	SCALE: NOT TO SCALE	A1
DRAWING No: A2515591.00-4901	REV	A

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ELEVATION



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CASCADE SEPARATOR™
HYDRODYNAMIC SEPARATOR
DN3000 / CS-10
SPECIFICATION DRAWING

SCALE: N.T.S.

DRG No: CS-MH-CS10-3000-T-20

REV: 0

DATE: 18/09/24

JOB NO:	REV	REVISION DETAIL	DATE
PROJECT:	0	APPROVED	18/09/24
DRN:	DDB	18/09/24	
CKD:	K.J.	18/09/24	

PRELIMINARY DESIGN DETAILS

CONSULTING ENGINEER:	SW360 DESIGN ENGINEER:
SW360 PROJECT NUMBER:	DESIGN REVISION: DATE:
SITE ADDRESS / PROJECT NAME:	
WATER QUALITY FLOW RATE:	CATCHMENT AREA:
PEAK FLOW RATE:	EXTERNAL BYPASS: YES or NO
INLET PIPE 1 DATA: DN1200 (max)	DIA : IL : MATL: ORIENTATION: (DEG FROM OUTLET)
INLET PIPE 2 DATA: DN1200 (max)	DIA : IL : MATL: ORIENTATION: (DEG FROM OUTLET)
OUTLET PIPE DATA: DN1200 (max)	DIA : IL : MATL:
FILTER REFERENCE (IF APPLICABLE):	REQUIRED DTI (DEPTH TO INVERT):

DESIGN NOTES:

APPROX WEIGHTS

DN3000 MHB:	XX Kg
DN3000 RISER:	XX Kg
DN3000 CONC LID:	XX Kg
INSERT:	XX Kg

NOTES

- DRAWING SHOWN IS THE GENERAL ARRANGEMENT FOR A CS10 MODEL CASCADE. FOR ASSISTANCE WITH DESIGN, SELECTION AND OTHER LAYOUT OPTIONS PLEASE CONTACT THE DESIGN TEAM AT STORMWATER360 ON 0800STORMWATER.
- CS10 WILL REQUIRE SITE INSTALLATION OF THE FIBREGLASS INTERNALS.
- ASSEMBLY INSTRUCTIONS AND DRAWINGS TO BE PROVIDED PRIOR TO SUPPLY. ENGINEERING SUPERVISION AVAILABLE AS REQUIRED.
- MANHOLE COMPONENTS AND CONCRETE LID FITTED WITH SWIFTLIFT ANCHOR POINTS. SPREADER BAR RECOMMENDED FOR MANHOLE LIFTS.
- UNIT SUPPLIED WITH INLET AND OUTLET HOLES CORE DRILLED.
- SEALING / GROUTING OF MANHOLE COMPONENTS AND PIPES BY CONTRACTOR. ENSURING LOCAL CODES AND REGULATIONS ARE COMPLIED WITH.
- RISERS REQUIRED TO INCREASE THE DEPTH TO INVERT (DTI) FROM THAT AS DRAWN TO BE SUPPLIED BY THE CONTRACTOR.
- FOR A DEPTH TO INVERT (DTI) EXCEEDING 5m ADDITION LOAD CHECKS MAY BE REQUIRED.
- CONTRACTOR TO TAKE APPROPRIATE MEASURES TO PROTECT DEVICE FROM CONSTRUCTION RELATED EROSION RUNOFF.
- BACKFILL, BEDDING AND BUOYANCY DESIGN BY ENGINEER OF RECORD.
- CONCRETE MANHOLE RISERS ARE DESIGNED AND MANUFACTURED IN ACCORDANCE WITH AS/NZS 4058 : 2007
- CONCRETE MANHOLE BASES ARE DESIGNED AND MANUFACTURED IN ACCORDANCE WITH NZS 3101 : 2006 & NZS 3109 : 1997
- CONCRETE LID DESIGNED AND MANUFACTURED TO HN-HO-72
- FOR REQUIREMENTS OUTSIDE OF DRAWING SPECIFICATIONS PLEASE CONTACT 0800STORMWATER.

HARRISON GRIERSON
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PROJECT:
BEACHLANDS
FAST TRACK CONSENT APPLICATION
BEACHLANDS SOUTH, AUCKLAND

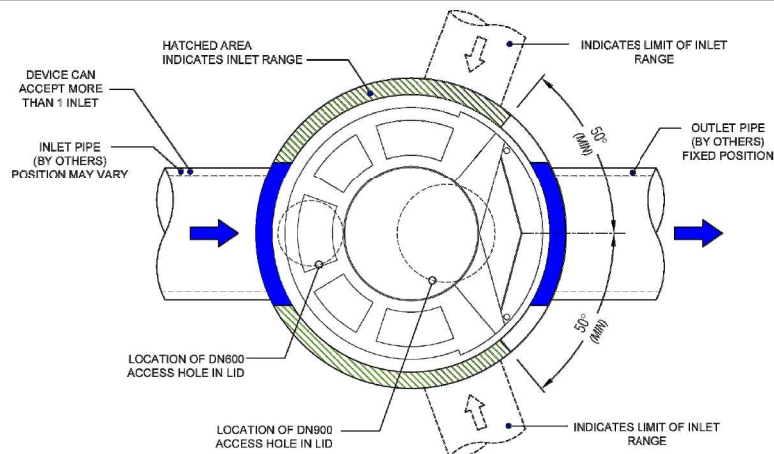
TITLE:
STORMWATER DETAILS
SHEET 3 OF 6

ORIGINATOR SCT	DATE 04.2026	SIGNED	PLOT BY: RER
DRAWN SCT	DATE 11.2025	SIGNED	PLOT DATE: 29.05.26
CHECKED J2S	DATE 04.2026	SIGNED	SURVEY BY: SURVEYED BY
APPROVED CJM	DATE 04.2026	SIGNED	SURVEY DATE: SURVEYED DATE

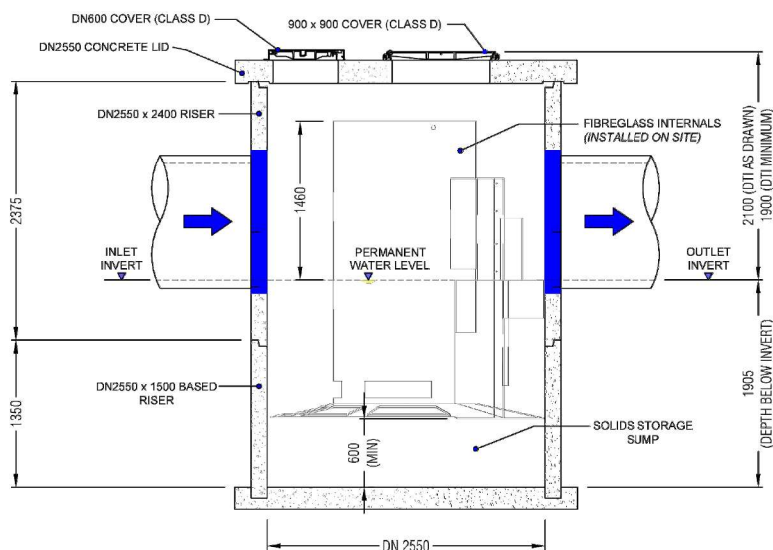
FAST TRACK CONSENT

PROJECT No: A2515591.00	SCALE: AS SHOWN	A1
DRAWING No: A2515591.00-4902	REV	A

FOR CONSENT



PLAN
(ACCESS COVER AND LID REMOVED)



ELEVATION

PRELIMINARY DESIGN DETAILS

CONSULTING ENGINEER:			SW360 DESIGN ENGINEER:	
SW360 PROJECT NUMBER:			DESIGN REVISION:	DATE:
SITE ADDRESS / PROJECT NAME:				
WATER QUALITY FLOW RATE:			CATCHMENT AREA:	
PEAK FLOW RATE:			EXTERNAL BYPASS: YES or NO	
INLET PIPE 1 DATA: <i>DN1200 (max)</i>	DIA :	IL :	MATL:	ORIENTATION: <i>(DEG FROM OUTLET)</i>
INLET PIPE 2 DATA: <i>DN1200 (max)</i>	DIA :	IL :	MATL:	ORIENTATION: <i>(DEG FROM OUTLET)</i>
OUTLET PIPE DATA: <i>DN1200 (max)</i>	DIA :	IL :	MATL:	
FILTER REFERENCE <i>(IF APPLICABLE)</i> :			REQUIRED DTI <i>(DEPTH TO INVERT)</i> :	

DESIGN NOTES:

APPROX WEIGHTS

DN2550 x 1500 MHB:	8950 Kg
DN2550 x 2400 RISER:	7800 Kg
DN2550 CONCRETE LID:	3600 Kg
FIBREGLASS INSERT:	150 Kg

NOTES

- DRAWING SHOWN IS THE GENERAL ARRANGEMENT FOR A CS8 MODEL CASCADE. FOR ASSISTANCE WITH DESIGN, SELECTION AND OTHER LAYOUT OPTIONS PLEASE CONTACT THE DESIGN TEAM AT STORMWATER360 ON **0800STORMWATER**.
- CS8 WILL REQUIRE SITE INSTALLATION OF THE FIBREGLASS INTERNALS.
- ASSEMBLY INSTRUCTIONS AND DRAWINGS TO BE PROVIDED PRIOR TO SUPPLY. ENGINEERING SUPERVISION AVAILABLE AS REQUIRED.
- MANHOLE COMPONENTS AND CONCRETE LID FITTED WITH SWIFTLIFT ANCHOR POINTS. SPREADER BAR RECOMMENDED FOR MANHOLE LIFTS.
- UNIT SUPPLIED WITH INLET AND OUTLET HOLES CORE DRILLED.
- SEALING / GROUTING OF MANHOLE COMPONENTS AND PIPES BY CONTRACTOR. ENSURING LOCAL CODES AND REGULATIONS ARE COMPLIED WITH.
- RISERS REQUIRED TO INCREASE THE DEPTH TO INVERT (DTI) FROM THAT AS DRAWN TO BE SUPPLIED BY THE CONTRACTOR.
- FOR A DEPTH TO INVERT (DTI) EXCEEDING 5m ADDITION LOAD CHECKS MAY BE REQUIRED.
- CONTRACTOR TO TAKE APPROPRIATE MEASURES TO PROTECT DEVICE FROM CONSTRUCTION RELATED EROSION RUNOFF.
- BACKFILL, BEDDING AND BUOYANCY DESIGN BY ENGINEER OF RECORD.
- RISERS REQUIRED TO INCREASE THE DEPTH TO INVERT (DTI) FROM THAT AS DRAWN TO BE SUPPLIED BY THE CONTRACTOR.
- CONCRETE MANHOLE RISERS ARE DESIGNED AND MANUFACTURED IN ACCORDANCE WITH AS/NZS 4058 : 2007
- CONCRETE MANHOLE BASES ARE DESIGNED AND MANUFACTURED IN ACCORDANCE WITH NZS 3101 : 2006 & NZS 3109 : 1997
- CONCRETE LID DESIGNED AND MANUFACTURED TO HN-HO-72
- FOR REQUIREMENTS OUTSIDE OF DRAWING SPECIFICATIONS PLEASE CONTACT **0800STORMWATER**.



Diagram illustrating the layout of a circular device (likely a manhole or access point) showing the location of DN600 and DN900 access holes in the lid, and the range of inlet and outlet pipes.

Key features and labels:

- HATCHED AREA INDICATES INLET RANGE:** The area between the inlet pipes is hatched.
- INDICATES LIMIT OF INLET RANGE:** Dashed lines with arrows pointing to the outer edge of the hatched area.
- DEVICE CAN ACCEPT MORE THAN 1 INLET:** Text indicating the device's capacity.
- INLET PIPE (BY OTHERS) POSITION MAY VARY:** Text indicating the flexibility of the inlet pipe position.
- OUTLET PIPE (BY OTHERS) FIXED POSITION:** Text indicating the fixed position of the outlet pipe.
- LOCATION OF DN600 ACCESS HOLE IN LID:** Points to the smaller access hole on the left.
- LOCATION OF DN900 ACCESS HOLE IN LID:** Points to the larger access hole on the right.
- 50° (MIN):** Angle indicating the range of the inlet pipes.

Technical drawing of a manhole assembly showing internal components, inlet and outlet invert levels, and dimensions.

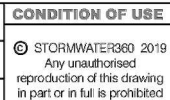
Labels and Dimensions:

- DN2300 x 600 (BY SW360)
- INTERNAL COMPONENTS (BY SW360)
- INLET INVERT
- PERMANENT WATER LEVEL
- OUTLET INVERT
- DN2300 x 2400 (BY SW360)
- DN2300 x 600 (BY SW360)
- DN 2300
- Dimensions: 300, 600, 2105, 2440, 520, 200, 1755, 635, 115

TO BE COMPLETED BY CUSTOMER / CONTRACTOR			
COMPANY :		P.O. NUMBER :	
SITE ADDRESS :			
SITE CONTACT & PHONE :			
PREFERRED DELIVERY DATE (TBC SW360) :			
FILTER REFERENCE (IF APPLICABLE) :		LID LEVEL (INPUT REQUIRED) :	
INLET PIPE DATA: DN1050 (max)	DIA :	IL :	MATERIAL :
OUTLET PIPE DATA: DN1050 (max)	DIA :	IL :	MATERIAL :
INLET PIPE ORIENTATION :	AS DRAWN : Yes / No	IF <u>NO</u> THEN PLEASE: SKETCH ORIENTATION ON THE DRAWING	IF <u>MULTIPLE</u> INLETS ARE REQUIRED THEN PLEASE: SKETCH ADDITIONAL PIPES WITH ORIENTATIONS ON THE DRAWING
COMPLETED BY :		SIGNED :	DATE :

1. MANHOLE COMPONENTS AND CONCRETE LID FITTED WITH SWIFTLIFT ANCHOR POINTS. SPREADER BAR RECOMMENDED FOR MANHOLE LIFTS.
2. UNIT SUPPLIED WITH INLET AND OUTLET HOLES CORE DRILLED.
3. SEALING / GROUTING OF MANHOLE COMPONENTS AND PIPES BY CONTRACTOR, ENSURING LOCAL CODES AND REGULATIONS ARE COMPLIED WITH.
4. ANY RISERS REQUIRED TO INCREASE THE DEPTH TO INVERT (DTI) FROM THAT AS DRAWN TO BE SUPPLIED BY THE CONTRACTOR.
5. FOR A DTI EXCEEDING 5m PLEASE CONTACT **0800STORMWATER**
6. CONTRACTOR TO TAKE APPROPRIATE MEASURES TO PROTECT DEVICE FROM CONSTRUCTION RELATED EROSION RUNOFF.
7. BACKFILL, BEDDING AND BUOYANCY DESIGN BY ENGINEER OF RECORD.
8. CONCRETE MANHOLE RISERS ARE DESIGNED AND MANUFACTURED IN ACCORDANCE WITH AS/NZS 4088 - 2007
9. CONCRETE MANHOLE LIDS ARE DESIGNED AND MANUFACTURED IN ACCORDANCE WITH NZS 3101 - 2006 & NZS 3109 - 1997
10. CONCRETE LID DESIGNED AND MANUFACTURED TO HN-HO-72
11. FOR REQUIREMENTS OUTSIDE OF DRAWING SPECIFICATIONS PLEASE CONTACT **0800STORMWATER**.

DN2300 X 700 MHB: **5300 Kg**
 DN2300 X 2400 RISER (INCL INSERT): **7500 Kg**
 DN2300 X 500 RISER: **1400 Kg**
 DN2300 CONCRETE LID: **3600 Kg**



SCALE: N.T.S.	DRG No: CS-MH-CS7 5-2300-T-20	REV: C	DATE: 09.02.20
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JOB NO :		REV	REVISION DETAIL	DATE
PROJECT :		A	DRAFT	21.08.2022
		B	NEW INTERNALS	22.11.2022
DRN :	G.S. 21.06.20	C	M/H UPDATED	20.02.2023
CKD :	K.J. 22.11.24			

PROJECT:

BEACHLANDS
FAST TRACK CONSENT APPLICATION
BEACHLANDS SOUTH, AUCKLAND

TITLE:

STORMWATER DETAILS

SHEET 5 OF 6

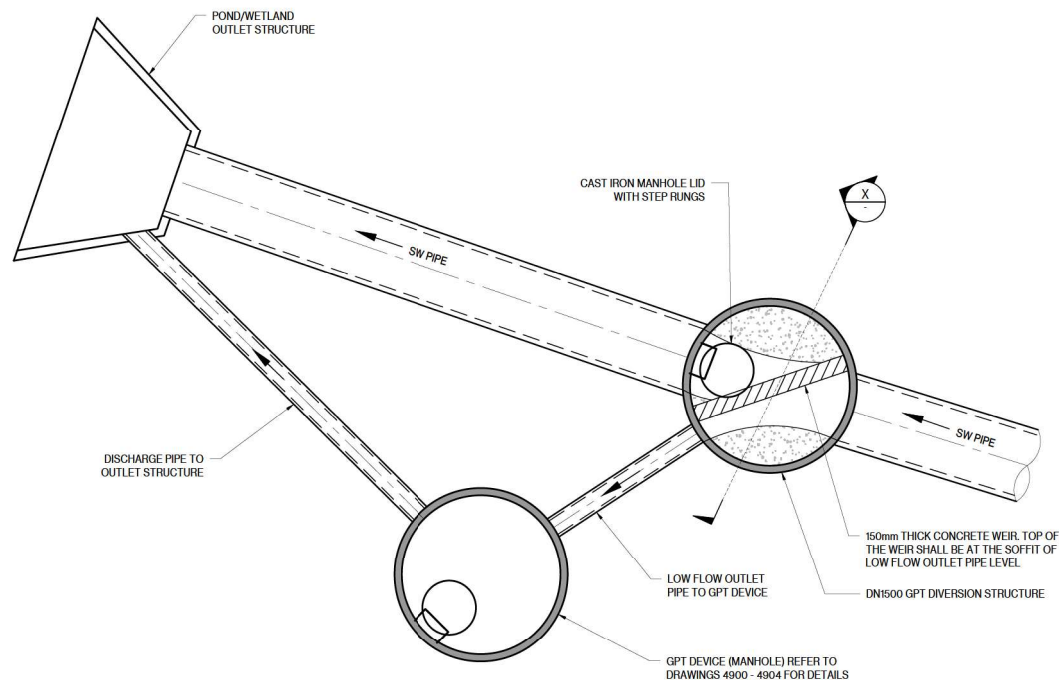
ORIGINATOR: SCT	DATE: 04.2026	SIGNED:	PLOT BY:
DRAWN: SCT	DATE: 11.2025	SIGNED:	PLOT DATE: 29.05
CHECKED: PZS	DATE: 04.2026	SIGNED:	SURVEY BY: SURVEYED
APPROVED: CJM	DATE: 04.2026	SIGNED:	SURVEY DATE: SURVEYED DA

PROJECT No: A2515591.00	SCALES: AS SHOWN	A
DRAWING No: A2515591.00-4904		REV A

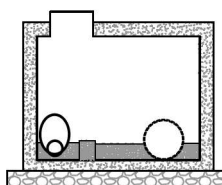
FOR CONSENT

NOTES

1. FOR PIPE SIZE SEE STORMWATER LAYOUT DRAWINGS.
2. SIZING OF GPT DIVERSION IS BASED ON 10mm RAIN EVENT FOR POND CATCHMENT. SIZINGS TO BE CONFIRMED AT ENGINEERING APPROVAL STAGE.
3. DIVERSION MANHOLE SIZE VARIES DEPENDANT UPON CATCHMENT.



GPT DIVERSION STRUCTURE TYPICAL DETAILS
SCALE 1:25-A1, 1:50-A3



SECTION X
SCALE 1:25-A1, 1:50-A3

A	FOR CONSENT	SCT	0220
RFF	REVISIONS	RY	DAT

**HARRISON
GRIERSON**

PROJECT:

BEACHLANDS
FAST TRACK CONSENT APPLICATION
BEACHLANDS SOUTH, AUCKLAND

TITLE: TYPICAL GPT DIVERSION
STORMWATER DETAILS
SHEET 6 OF 6

ORIGINATOR: SCT	DATE: 04.2026	SIGNED:	PLOT BY:
DRAWN: JXA	DATE: 11.2025	SIGNED:	PLOT DATE: 29.05.2025
CHECKED: PZS	DATE: 04.2026	SIGNED:	SURVEY BY: SURVEYED BY
APPROVED: CJM	DATE: 04.2026	SIGNED:	SURVEY DATE: SURVEYED DATE

FAST TRACK CONSENT

PROJECT No: A2515591.00	SCALE: AS SHOWN	A1
DRAWING No: A2515591.00-4905		REV A

FOR CONSENT

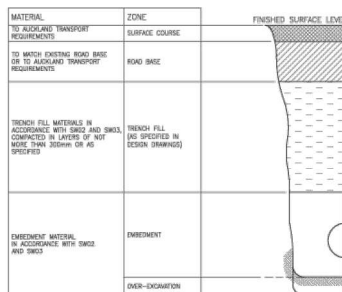


ISO 9001
QUALITY
ASSURED

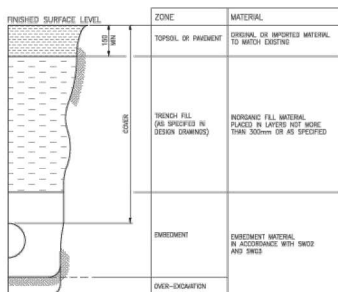
THIS DRAWING AND DESIGN REMAINS THE PROPERTY OF, AND MAY NOT BE REPRODUCED OR ALTERED, WITHOUT THE WRITTEN PERMISSION OF HARRISON GRIERSON CONSULTANTS LIMITED. NO LIABILITY SHALL BE ACCEPTED FOR UNAUTHORIZED USE OF THIS DRAWING.

NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETRES.
2. EMBANKMENT, TRENCH FILL AND COMPACTION SHALL MEET THE REQUIREMENT OF DESIGN DIMENSIONS OR SPECIFICATIONS.
3. BEDS OF EXCAVATION SHALL BE NOT VERTICAL TO AT LEAST 150mm ABOVE THE PIPE.



VEHICULAR LOADING (CARRIAGEWAY)



NO VEHICULAR LOADING (NON CARRIAGEWAY)

INCLUDES LOCATIONS WHERE OCCASIONAL VEHICLE LOADING OCCURS

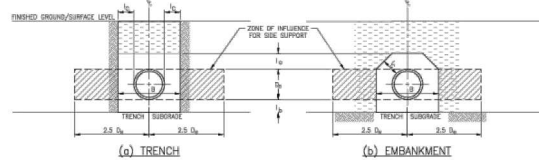
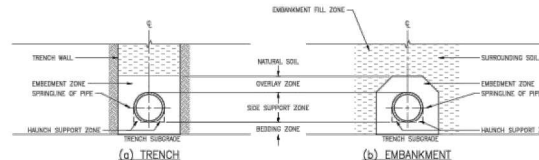
STORMWATER CODE OF PRACTICE
ENVIRONMENTAL - SW
REVISION: 3
REV DATE: 1 JULY 2023
CND FILENAME: AC-STD-SWD2_VA1.DWG

AUCKLAND COUNCIL
EMBEDMENT & TRENCHFILL
TYPICAL ARRANGEMENT

ENVIRONMENTAL - SW
DESIGNER: J. L. L. L.
CHECKED: J. L. L. L.
APPROVED: J. L. L. L.
1 OF 1
3

NOTES:

1. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH SWD1.
2. FLEXIBLE PIPES INCLUDES PVC, HDPE, PP AND PE.
3. PLACEMENT OF EMBANKMENT, TRENCHFILL, & COMPACTION SHALL MEET THE REQUIREMENTS OF DIMENSIONS AND SPECIFICATIONS.
4. EXCAVATE OR COMPACT TRENCH FLOOR TO PROVIDE A FLAT FIRM BASE TO SUPPORT BEDDING MATERIAL AND MINIMIZE PIPELINE SETTLEMENT. REPLACE EXCAVATED MATERIAL WITH SUITABLE GRANULAR MATERIAL FOR BEDDING.
5. ENSURE THAT THE BEDDING IS DEEP ENOUGH SO THAT PIPE JOINT PROJECTIONS (SADDLES, FLANGES) DO NOT TOUCH THE TRENCH FLOOR (SEE CROSS-BELOW).
6. BEDDING MATERIALS SHALL BE GW/SAP 20.
7. THIS DRAWING IS BASED ON AS/NZS 2384 PART 2: 2002. TYPICAL TRENCH FILL PROFILE IS INDICATED AND APPROVED WITH THE PERMISSION OF STANDARDS NEW ZEALAND.



D _p (mm)	MINIMUM DIMENSION (mm)			
	I _b	I _c	I _d	B=D _p +2I _c
75 < D _p ≤ 100	75	100	100	275 - 300
100 < D _p ≤ 300	100	150	150	400 - 600
300 < D _p ≤ 450	100	200	150	700 - 850
450 < D _p ≤ 800	150	300	150	1000 - 1000
800 < D _p ≤ 1000	150	350	200	1600 - 2000
1000 < D _p ≤ 4000	150	0.25D _p	300	2350 - 6000

DEFINITIONS OF SYMBOLS USED:
I_b TRENCH WIDTH
I_c EXTERNAL DIAMETER OF PIPELINE
I_d DEPTH OF BEDDING UNDER SPANSEL OF PIPELINE
I_e MINIMUM DISTANCE BETWEEN SPANSELS OF PIPE AND PERMANENT SIDE OF TRENCH
I_f MINIMUM DEPTH OF COVER OVER SLOTT OF PIPELINE

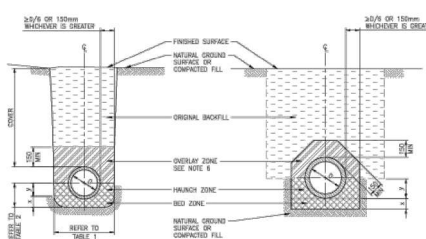
STORMWATER CODE OF PRACTICE
ENVIRONMENTAL - SW
REVISION: 4
REV DATE: 1 JULY 2023
CND FILENAME: AC-STD-SWD2_VA1.DWG

AUCKLAND COUNCIL
PIPE EMBEDMENTS
STANDARD EMBEDMENT FOR FLEXIBLE PIPES

ENVIRONMENTAL - SW
DESIGNER: J. L. L. L.
CHECKED: J. L. L. L.
APPROVED: J. L. L. L.
1 OF 1
4

NOTES:

1. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH SWD1.
2. CONCRETE PIPE CLASS SHALL BE DESIGNED IN ACCORDANCE WITH AS/NZS 3720:2007, USING H2 BEDDING TO CONSTRUCTION OF PIPE CONSTRUCTION LENGTH. MINOR CRACKS ARE PERMITTED.
3. PLACEMENT OF EMBANKMENT, TRENCHFILL, & COMPACTION SHALL MEET THE REQUIREMENTS OF DIMENSIONS AND SPECIFICATIONS.
4. EXCAVATE OR COMPACT TRENCH FLOOR TO PROVIDE A FLAT FIRM BASE TO SUPPORT BEDDING MATERIAL AND MINIMIZE PIPELINE SETTLEMENT. REPLACE EXCAVATED MATERIAL WITH SUITABLE GRANULAR MATERIAL FOR BEDDING.
5. ENSURE BEDDING IS DEEP ENOUGH THAT PIPE JOINT PROJECTIONS (SADDLES, FLANGES) DO NOT TOUCH TRENCH FLOOR (SEE CROSS-BELOW).
6. OVERLAY ZONE AGREEABLE TO BE IN ACCORDANCE WITH AS/NZS 3720:2007.
7. MATERIAL SHALL BE COMPACTED AS NECESSARY TO PREVENT EXCESSIVE SETTLEMENT IN THE GROUND SURFACE LEVEL OVER THE INSTALLED PIPE.
8. WHERE REQUIRED BY SITE CONDITIONS SPECIFIC DESIGN OF PIPE EMBARKMENT MAY BE REQUIRED. THIS SHOULD BE UNDERSTANDING IN ACCORDANCE WITH AS/NZS 3720:2007 TO THE APPROVAL OF AUCKLAND COUNCIL.
9. EMBARKMENT FOR "RIGID PIPES" OTHER THAN CONCRETE IS SUBJECT TO SPECIFIC DESIGN AND APPROVAL.



H2 TYPE BEDDING - CONCRETE PIPES

TABLE 1

MAXIMUM PERMISSIBLE TRENCH WIDTHS (IF TRENCH WIDER, USE EMBANKMENT CONDITION)												
NORMAL INTERNAL PIPE DIAMETER (mm)	150	225	300	375	450	525	600	675	750	825	900	>1000
MAXIMUM TRENCH WIDTH (mm)	600	800	700	800	900	1000	1100	1200	1300	1400	1500	1800

TABLE 2

H2 SUPPORT TYPE	MINIMUM DEPTH (mm)	
	RED ZONE (mm)	HAUNCH ZONE (mm)
100 ≤ D ≤ 1500	100	0.30
1500 ≤ D ≤ 1800	150	0.30

STORMWATER CODE OF PRACTICE
ENVIRONMENTAL - SW
REVISION: 4
REV DATE: 1 JULY 2023
CND FILENAME: AC-STD-SWD2_VA1.DWG

AUCKLAND COUNCIL
PIPE EMBEDMENTS
STANDARD EMBEDMENT FOR CONCRETE PIPES

ENVIRONMENTAL - SW
DESIGNER: J. L. L. L.
CHECKED: J. L. L. L.
APPROVED: J. L. L. L.
1 OF 1
4

NOTES:

1. REFER SWD1 SECTION 4.3.5.3 FOR MINIMUM PIPE DIMENSIONS.
2. REFER SWD1 SECTION 4.3.11 FOR PUBLIC/PRIVATE DEMARCATION REQUIREMENTS.
3. REFER SWD1 SECTION 4.3.12 FOR LATERAL CONNECTION REQUIREMENTS.
4. REFER SWD1 SECTION 4.3.13 FOR CATCHMENT CONNECTIONS DETAILS.
5. THE CENTERLINE OF THE LATERAL SHALL BE ABOVE THE SPRING LINE OF THE PUBLIC MAIN IT CONNECTS TO.
6. THE LATERAL CONNECTION SHALL BE FULLY SUPPORTED WITH COMPACTED BEDDING MATERIAL, WHICH SHALL EXTEND FROM THE BEDDING OF THE PUBLIC MAIN TO AT LEAST THE SPRING LINE OF THE LATERAL CONNECTION PIPE THROUGH ITS LENGTH UNTIL BEYOND THE TRENCH WALL OF THE PUBLIC MAIN.

NOTES FOR CONNECTION TO A PVC PUBLIC MAIN:

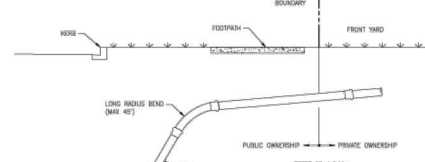
1. LATERAL CONNECTIONS SHALL BE CONSTRUCTED USING A REINFORCED MORTAR BEDDING OR Y-JUNCTION FITTING WHERE SUCH FITTINGS ARE NORMALLY AVAILABLE WITHIN THE LOCAL MARKET. SADDLE CONNECTIONS ARE PERMITTED ONLY WHEN SWD1 TEE OR Y-JUNCTIONS ARE UNAVAILABLE.

NOTES FOR CONNECTION TO A REINFORCED CONCRETE PUBLIC MAIN:

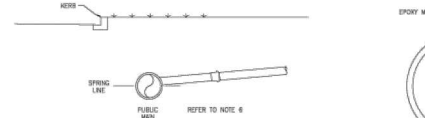
1. LATERAL CONNECTIONS SHALL BE CONSTRUCTED USING A FLANGED WROUGHT IRON SADDLE INSERT APPROPRIATELY SIZED TO MATCH THE PUBLIC MAIN.
2. THE HOLE INTO THE EXISTING PUBLIC MAIN SHALL BE DRILLED.
3. THE SADDLE INSERT SHALL BE SEALED WITH EPOXY MORTAR TO THE PUBLIC MAIN.
4. THERE SHALL BE NO PROHIBITION OF THE SADDLE INSERT INSIDE THE BORE OF THE PUBLIC MAIN.

NOTES FOR CONNECTION TO A PE PUBLIC MAIN:

1. LATERAL CONNECTIONS SHALL BE CONSTRUCTED USING A JOINT CUT IN WITH EPOXY/RESIN COUPLERS. ALTERNATIVELY A SADDLE MAY BE ELECTROFUSED OVER THE PIPE. SPECIFIC APPROVAL FROM AUCKLAND COUNCIL IS REQUIRED TO INSTALL INTO A PE MAIN.
2. ELECTROFUSION FITTINGS SHALL BE SELECTED TO MATCH SIZE AND RADIUS OF HOST PIPE AND SHALL BE INSTALLED DIRECTLY IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATION.



LATERAL CONNECTION - DEEP PUBLIC MAIN
(SINGLE LOT CONNECTION SHOWN)



LATERAL CONNECTION - SHALLOW PUBLIC MAIN

CONNECTION WHERE SADDLE IS NOT
COMMERCIALY AVAILABLE

STORMWATER CODE OF PRACTICE
ENVIRONMENTAL - SW
REVISION: 5
REV DATE: 1 JULY 2023
CND FILENAME: AC-STD-SWD2_VA1.DWG

AUCKLAND COUNCIL
STORMWATER LATERAL CONNECTIONS
DIRECT CONNECTIONS

ENVIRONMENTAL - SW
DESIGNER: J. L. L. L.
CHECKED: J. L. L. L.
APPROVED: J. L. L. L.
1 OF 1
5

FOR CONSENT

FOR CONSENT

HARRISON GRIERSON
AUCKLAND OFFICE
Level 4, 96 St. Georges Bay Road
Parnell, Auckland 1052
T +64 9 917 5000
W www.harrisongrierison.com

PROJECT: **BEACHLANDS
FAST TRACK CONSENT APPLICATION
BEACHLANDS SOUTH, AUCKLAND**

TITLE: **STORMWATER STANDARD DETAILS
SHEET 1 OF 5**

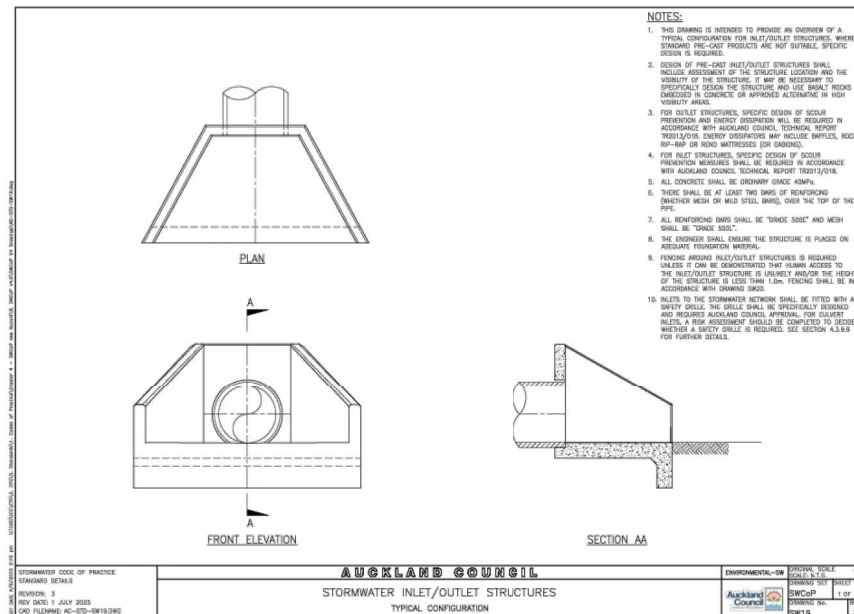
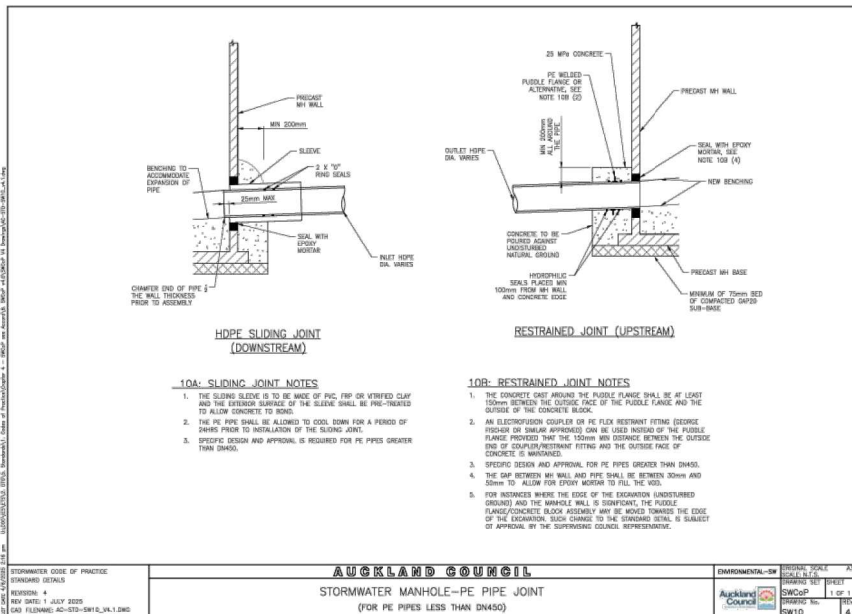
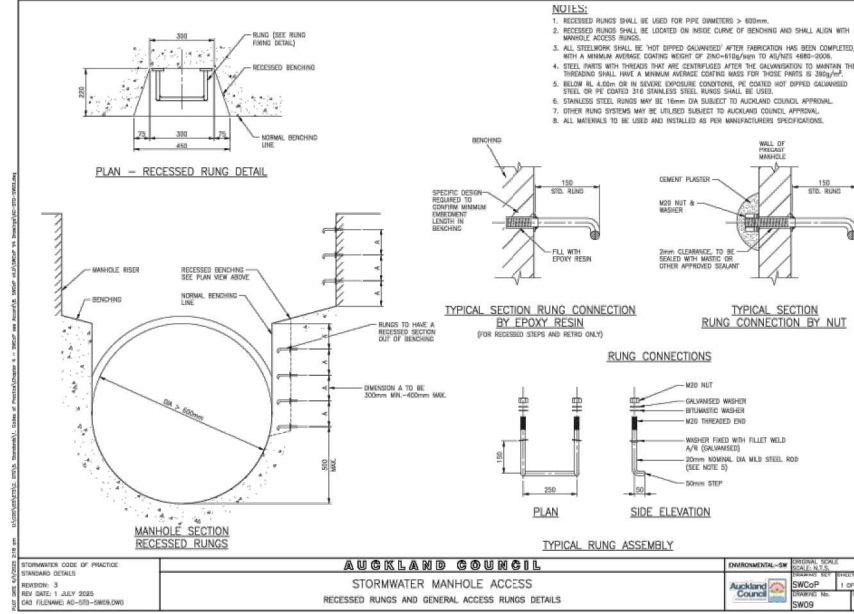
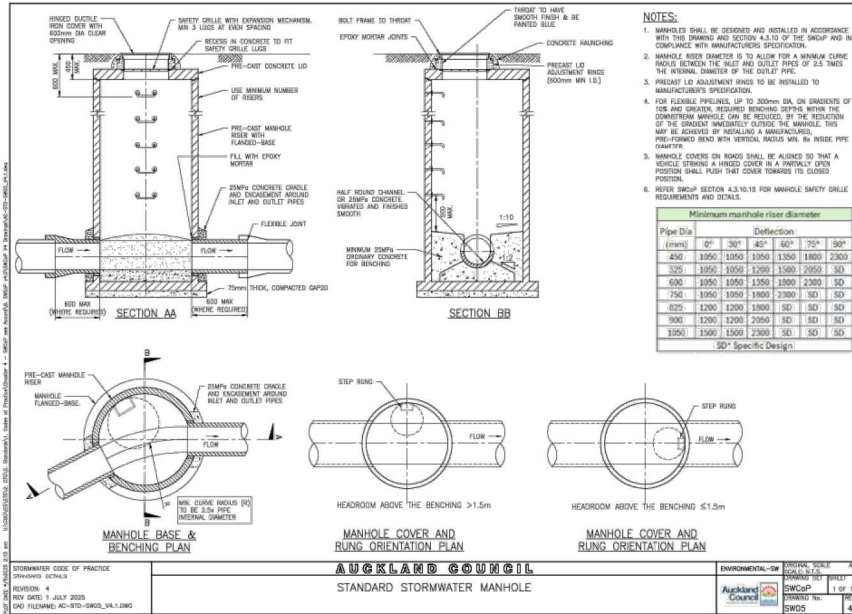
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DRAWN: SCT	DATE: 11.2025	SIGNED:	PLOT DATE: 23/04/26
CHECKED: PZS	DATE: 04.2026	SIGNED:	SURVEY BY: SURVEYED BY
APPROVED: CJM	DATE: 04.2026	SIGNED:	SURVEY DATE: SURVEYED DATE

FAST TRACK CONSENT

PROJECT No: A2515591.00
DRAWING No: A2515591.00

SCALES: NOT TO SCALE
A1
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FOR CONSENT

REF	REVISIONS	BY	DATE
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PROJECT:

BEACHLANDS

FAST TRACK CONSENT APPLICATION

BEACHLANDS SOUTH, AUCKLAND

TITLE:

STORMWATER STANDARD DETAILS

SHEET 2 OF 5

ORIGINATOR	DATE	SIGNED	PLAT BY
SCT	04/2026		ENW

DRAWN	DATE	SIGNED	PLAT DATE
SCT	11/2025		23/04/26

CHECKED	DATE	SIGNED	SURVEY BY
P23	04/2026		SURVEYED BY

APPROVED	DATE	SIGNED	SURVEY DATE
CJM	04/2026		SURVEYED DATE

FAST TRACK CONSENT

PROJECT No:

A2515591.00

SCALES:

NOT TO SCALE

PROJECT No:

A2515591.00-4911

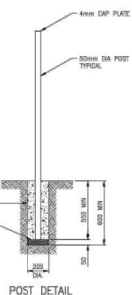
REVISIONS

DATE

FILE NAME

NOTES:

1. FENCE PANELS SHALL BE HOT DIPPED GALVANISED AND POWDER COATED BLACK.
2. FENCE PANELS SHALL NOT HAVE MORE THAN 100mm GAP FROM GROUND LEVEL TO INSTALLED PANEL.
3. POSTS SHALL BE 50mm DIA HOT DIPPED GALVANISED PIPE AND POWDER COATED BLACK.
4. POSTS SHALL BE INSTALLED VERTICAL.

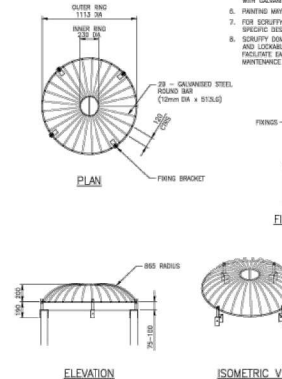


AUCKLAND COUNCIL
STORMWATER INLET/OUTLET STRUCTURES
STANDARD SAFETY FENCE DETAIL

ENVIRONMENTAL-SW	ORIGINAL SCALE	A
	SCALE: N.T.S.	
	DRAWING SET	SHEET
	SWCoP	1 OF 1
	DRAWING No.	REVISION
	DATE	

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1. THE SCRUFFY DOME GRILLE PROVIDES A DENNIS SCREEN. TYPICAL LOCATIONS FOR SCRUFFY DOMES INCLUDE PARKS, WETLANDS AND OVERLAND FLOW PATHS.
2. LOCKABLE HINGED VERSIONS ARE AVAILABLE AND MAY BE SPECIFIED WHERE NEEDED.
3. A MINIMUM OF 450mm SLUMP DEPTH SHALL BE PROMOTED IN THE MANHOLE.
4. THERE SHALL BE NO SCRUFFY DOME GRILLES IN FOOTPATHS, OVERLANDS OR ROADSIDE.
5. SCRUFFY DOME BRACKETS SHALL BE BOLTED TO THE RISER TO ALLOW CALIBRATED TEST RESULTS (CLEAR OF RISER REINFORCING).
6. PAINTING MAY BE REQUIRED IN CERTAIN LOCATIONS.
7. FOR SCRUFFY DOMES ON RISERS GREATER THAN 1050mm DIA. SPECIFIC DESIGN IS REQUIRED.
8. SCRUFFY DOMES IN PONDS AND WETLANDS MUST BE HINGED AND LOCKABLE. OUTLET RISER MUST BE LOCATED SUCH AS TO FACILITATE EASY AND SAFE ACCESS FOR CLEARING AND MAINTENANCE DURING STORM EVENTS.



TYPE 1

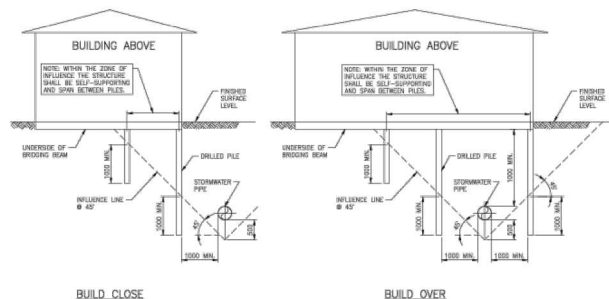
TYPE :

AUCKLAND COUNCIL
DEBRIS CONTROL SCREEN FOR 1050 DIA RISER
SCRUFFY DOME TYPICAL DETAIL

ENVIRONMENTAL-SW	ORIGINAL SCALE SCALE- NET 9	
	DRAWING SET SWCoP	SHEET 1 OF
	DRAWING No.	

1000

7. SPECIFIC APPROVAL IS REQUIRED TO SHOW COMPLIANT OF THIS STANDARD AND SHALL BE USED FOR ALL WORKS. APPROVALS SHALL BE OBTAINED FROM A CITY-DEPT-SIZE AGENCIES TO BE EXPEDITED AND IF NO APPROVALS ARE OBTAINED WITHIN 10 BUSINESS DAYS, IT WILL GUARANTEE APPROVAL.
8. SPECIFIC APPROVALS FOR WORKS ARE PROVIDED IN THE VIEW OF ENDING PUBLIC STORMWATER ADEQUACY, ANY NECESSARY APPROVALS SHALL BE OBTAINED FROM THE AGENCIES MENTIONED, IN ACCORDANCE WITH SECTION 4.3.2.3 OF THE SPECIFICATION.
9. SPECIFIC APPROVALS ARE PERMITTED WITHIN THE OFFICE OF STORMWATER STRUCTURES, BUT WITHIN 50' OF ALL OTHER STRUCTURES.
10. SPECIFIC APPROVAL IS REQUIRED FROM AUGLAND COUNTY FOR OWNED PILES IN PARTICULAR DRAINAGE, WITHIN THE SPECIFICATION.
11. PILES THAT MAY BE REQUIRED TO REST HORIZONTAL, VERTICAL, OR AT AN ANGLE, SHALL BE APPROVED BY THE SPECIFICATION.
12. PILING/LOADING LOCATION POINT MUST BE BELOW 40' ZONE OF PROTECTION.
13. ALL MANHOLES SHALL HAVE 24 HOURS UNRESTRICTED ACCESS.
14. MANHOLES IN BASEMENTS, OR IN LOCATIONS WHERE SUFFICIENT SPACE IS NOT AVAILABLE, SHALL BE APPROVED BY THE SPECIFICATION.
15. ALL "PIPE WORK" SHALL BE REQUIRED SPECIFIC APPROVAL BY THE SPECIFICATION.
16. APPROVALS SHALL BE OBTAINED FROM THE SPECIFICATION.
17. REFER TO SECTION 4.3.2.3 OF THE SPECIFICATION FOR "PIPE WORK" OVER 100'.
18. FOR ALL "PIPE WORK" THAT IS 4" OR LARGER THAN 100' REQUIREMENTS.
19. APPROVALS SHALL BE OBTAINED FROM THE SPECIFICATION.
20. SPECIFIC APPROVAL FROM AUGLAND COUNTY IS REQUIRED FOR WORKS WITHIN 50' FEET OF A RISING MAIN.



'WORKS CLOSE' NOTES:

'WORKS OVER' NOTES:

MANHOLE CONSTRUCTION CLEARANCE

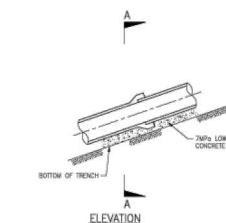
AUCKLAND COUNCIL

STORMWATER PIPE AND MANHOLE CONSTRUCTION CLEARANCE REQUIREMENTS
MANHOLES NEAR BUILDINGS AND BUILDING CLOSE TO OR OVER PIPES

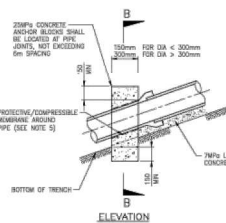
ENVIRONMENTAL-SW	ORIGINAL SCALE SCALE: N.T.S.	A
	DRAWING SET	SHEET
	SWCoP	1 OF 1
DRAWING No.		REV

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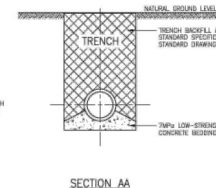
1. USE LOW-STRENGTH CONCRETE (750psi) BEDDING FOR PIPES ON GRADIENTS BETWEEN 10% AND 20%.
2. ANCHOR BLOCS FOR PIPES ON GRADIENTS STEEPER THAN 20% (USE 1 IN 1).
3. SPACING JOINTS AND SPACING JOINTS MAY BE NEEDED FOR PIPES ON GRADIENTS >30% OR WHERE GROUNDWATER IS CONSIDERED SIGNIFICANT.
4. ANCHOR BLOC TO BE CONSTRUCTED ON LOWER SIDE OF JOINT.
5. USE 1/2" MIN. THICKNESS OF 100% ASPHALT FOR THE CONCRETE INTERFERENCE WRAPPING SHALL BE COMPRESSIBLE MATERIAL, (e.g. DENFO TYPE OR POLYETHYLENE FILM).
6. IF PIPE IS TO BE EMBEDDED IN LOW-STRENGTH CONCRETE, A TRANSVERSE EXPANSION JOINT SHALL BE PROVIDED AT EACH JOINT.
7. FOR FLEXIBLE PIPELINES, UP TO 3000psi SD, ON GRADIENTS OF 1% AND GREATER, BEDDING SHALL BE CONSTRUCTED IN 12" INCREMENTS. ANCHORS CAN BE REDUCED TO 6" INCREMENTS IF THE REDUCTION OF THE GROUND IMMEDIATELY OUTSIDE THE MANHOLE, SHALL BE AVOIDED. INSTALL A 1/2" MIN. THICKNESS OF 100% ASPHALT INTERFERENCE WRAPPING SHALL BE COMPRESSIBLE MATERIAL, (e.g. DENFO TYPE OR POLYETHYLENE FILM).
8. WATERSTOPS ARE TO BE INSTALLED AT INTERVALS THAT PREVENT GROUNDWATER TRANSFER THROUGH JOINTS.



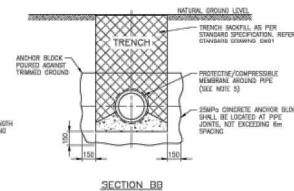
BEDDING FOR PIPES ON GRADIENTS BETWEEN 10% AND 20%



ANCHOR BLOCKS FOR PIPES ON GRADIENT > 20%



SECTION AA



SECTION BB

AUCKLAND COUNCIL
STORMWATER LINES
STEEP GRADIENTS, WATERSTOPS AND ANCHOR BLOCKS

WATERSTOP PLAN

WATERSTON	1 DAY
	ENVIRONMENTAL

[illegible]

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FOR CONSENT

A	FOR CONSENT	SCT	02/20/
REF	REVISIONS	BY	DAT

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PROJECT:

BEACHLANDS
FAST TRACK CONSENT APPLICATION
BEACHLANDS SOUTH, AUCKLAND

TITLE

STORMWATER STANDARD DETAILS
SHEET 3 OF 5

ORIGINATOR: SCT	DATE: 04.2026	SIGNED:	PLOT BY:
DRAWN: SCT	DATE: 11.2025	SIGNED:	PLOT DATE: 23/04/2025
CHECKED: PZS	DATE: 04.2026	SIGNED:	SURVEY BY: SURVEYED
APPROVED: CJM	DATE: 04.2026	SIGNED:	SURVEY DATE: SURVEYED DA

ISSUE STATUS	
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FAST TRACK CONSENT

PROJECT No: A2515591.00	SCALES: NOT TO SCALE	A1
DRAWING No:		REV

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ALTERNATIVE CONNECTION SCENARIO
(REFER NOTE 4)

NOTES:

1. MINIMUM PIPELINE DIAMETER ARE SUBJECT TO 4.3.9.5
2. MINIMUM CONNECTION TO PUBLIC MAINS REQUIREMENTS ARE SUBJECT TO 4.3.11 & 4.3.12
3. MINIMUM REQUIREMENTS FOR MANHOLE AND NON-ACCESS CHAMBERS ARE SUBJECT TO 4.3.10
4. ALTERNATIVE CONNECTION SCENARIO TO BE USED ONLY WHEN NOT PRACTICABLE TO INSTALL PIPELINE IN SHARED ACCESS WAY AREA AND IS SUBJECT TO APPROVAL BY AUCKLAND COUNCIL.

LEGEND:



STANDARD DETAILS
REVISION: 4
REV DATE: 1 JULY 2025
CAD FILENAME: AC-STD-SR24_V

AUCKLAND COUNCIL
STORMWATER BOUNDARIES – CONNECTIONS



FOR CONSENT

A	FOR CONSENT	SC1	02/20/2018
REF	REVISIONS	BY	DATE

**HARRISON
GRIERSON**

PROJECT:

**BEACHLANDS
FAST TRACK CONSENT APPLICATION
BEACHLANDS SOUTH, AUCKLAND**

TITLE: STORMWATER STANDARD DETAILS
SHEET 4 OF 5

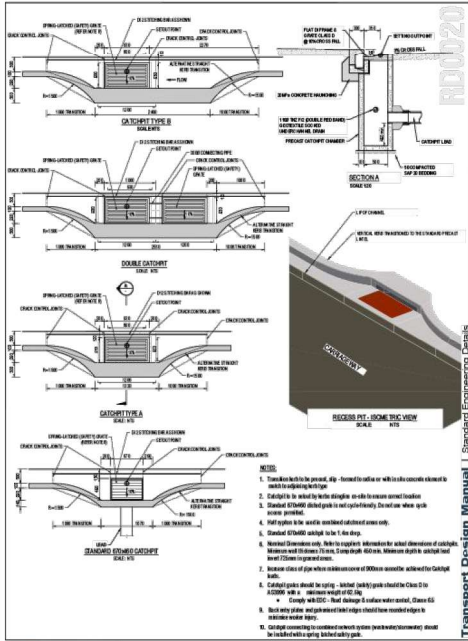
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APPROVED: CJM	DATE: 04.2026	SIGNED:	SURVEY DATE: SURVEYED DATE

ISSUE STATUS:

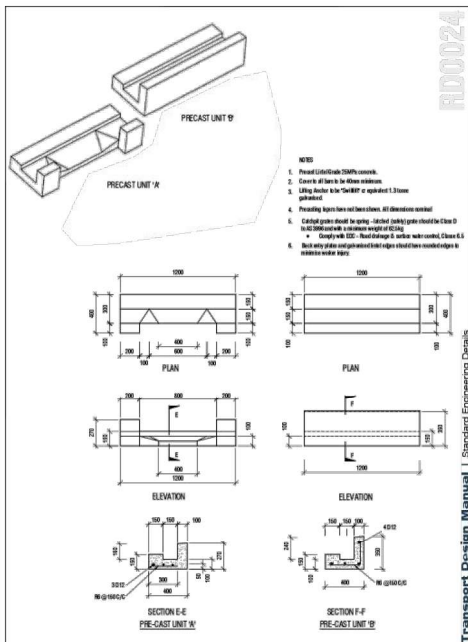
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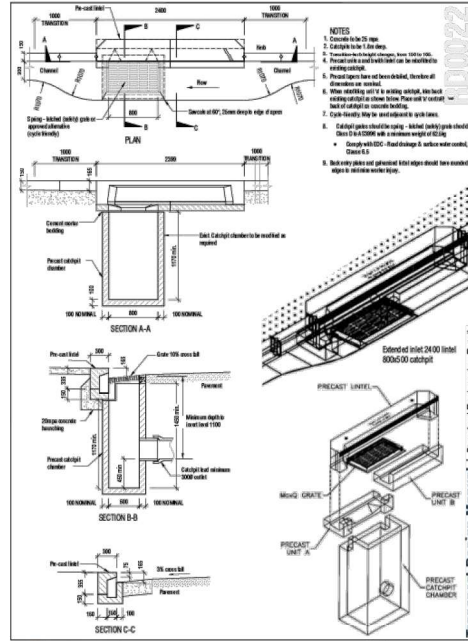
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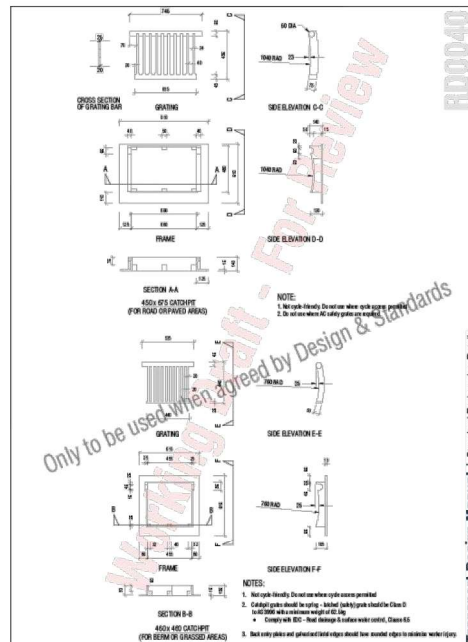
TDM TECHNICAL STANDARDS
Semi recessed catchpit
30/11/2021
RD0020 C



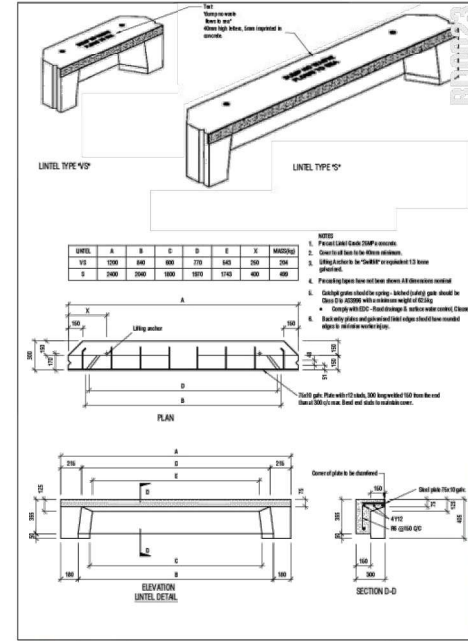
TDM TECHNICAL STANDARDS
Street catchpit 800 x 500 precast unit details
30/11/2021
RD0024 B



TDM TECHNICAL STANDARDS
Street catchpit 800 x 500
30/11/2021
RD0022 B



TDM TECHNICAL STANDARDS
Catchpit grating and frames
30/11/2021
RD0040 B



TDM TECHNICAL STANDARDS
Street catchpit 800 x 500 precast unit details
30/11/2021
RD0023 B

FOR CONSENT

A	FOR CONSENT	SC1	02/2026
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BEACHLANDS SOUTH, AUCKLAND

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STORMWATER STANDARD DETAILS
SHEET 5 OF 5

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CJM	04/2026		SURVEYED DATE

FAST TRACK CONSENT

PROJECT No:	SCALE: AS SHOWN	A1
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DRAWING No:		REV
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