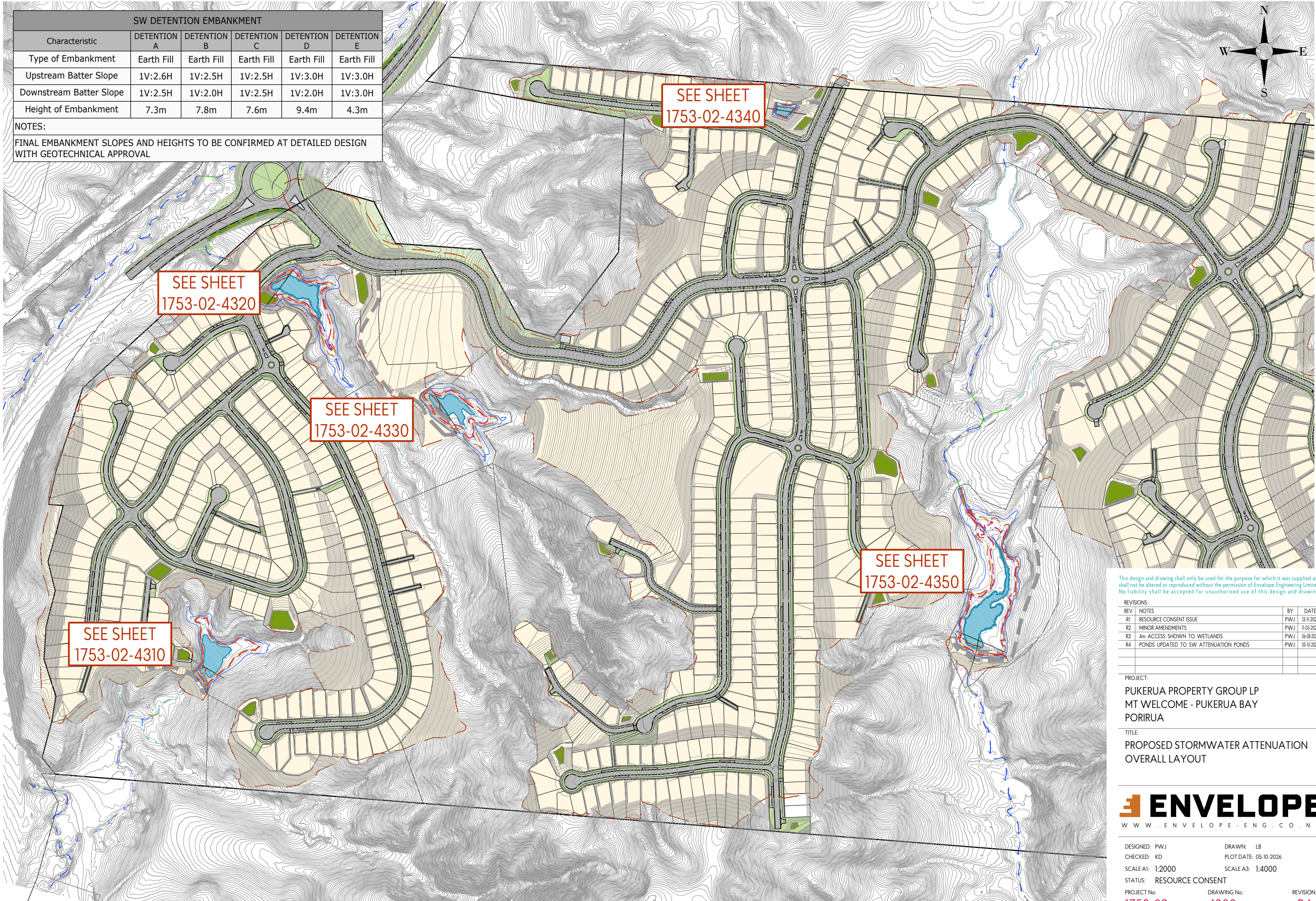




SW DETENTION EMBANKMENT					
Characteristic	DETENTION A	DETENTION B	DETENTION C	DETENTION D	DETENTION E
Type of Embankment	Earth Fill	Earth Fill	Earth Fill	Earth Fill	Earth Fill
Upstream Batter Slope	1V:2.6H	1V:2.5H	1V:2.5H	1V:3.0H	1V:3.0H
Downstream Batter Slope	1V:2.5H	1V:2.0H	1V:2.5H	1V:2.0H	1V:3.0H
Height of Embankment	7.3m	7.8m	7.6m	9.4m	4.3m
NOTES:					
FINAL EMBANKMENT SLOPES AND HEIGHTS TO BE CONFIRMED AT DETAILED DESIGN WITH GEOTECHNICAL APPROVAL					

This design and drawing shall only be used for the purpose for which it was supplied and shall not be altered or reproduced without the permission of Envelope Engineering Limited. No liability shall be accepted for unauthorised use of this design and drawing.

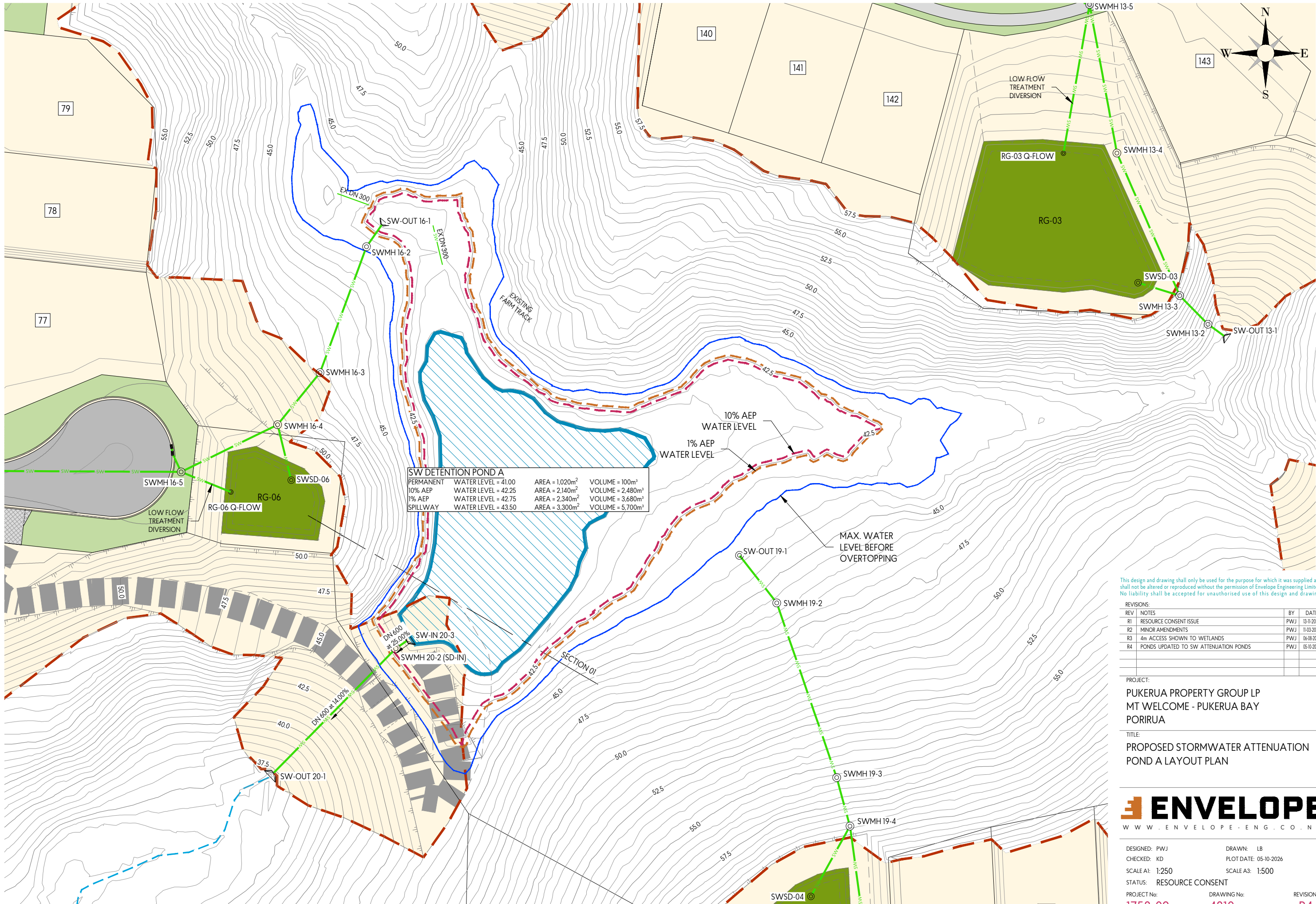
REVISIONS:		BY	DATE
REV	NOTES		
R1	RESOURCE CONSENT ISSUE	PWJ	13-11-2025
R2	MINOR AMENDMENTS	PWJ	11-03-2026
R3	4m ACCESS SHOWN TO WETLANDS	PWJ	06-08-2026
R4	PONDS UPDATED TO SW ATTENUATION PONDS	PWJ	06-10-2026

PROJECT:
PUKERUA PROPERTY GROUP LP
MT WELCOME - PUKERUA BAY
PORIRUA

TITLE:
PROPOSED STORMWATER ATTENUATION
OVERALL LAYOUT



DESIGNED: PWJ	DRAWN: LB	
CHECKED: KD	PLOT DATE: 05-10-2026	
SCALE A1: 1:2000	SCALE A3: 1:4000	
STATUS: RESOURCE CONSENT		
PROJECT No: 1753-02	DRAWING No: 4300	REVISION: R4



SW DETENTION POND A			
PERMANENT	WATER LEVEL = 41.00	AREA = 1,020m ²	VOLUME = 100m ³
10% AEP	WATER LEVEL = 42.25	AREA = 2,140m ²	VOLUME = 2,480m ³
1% AEP	WATER LEVEL = 42.75	AREA = 2,340m ²	VOLUME = 3,680m ³
SPILLWAY	WATER LEVEL = 43.50	AREA = 3,300m ²	VOLUME = 5,700m ³

This design and drawing shall only be used for the purpose for which it was supplied and shall not be altered or reproduced without the permission of Envelope Engineering Limited. No liability shall be accepted for unauthorised use of this design and drawing.

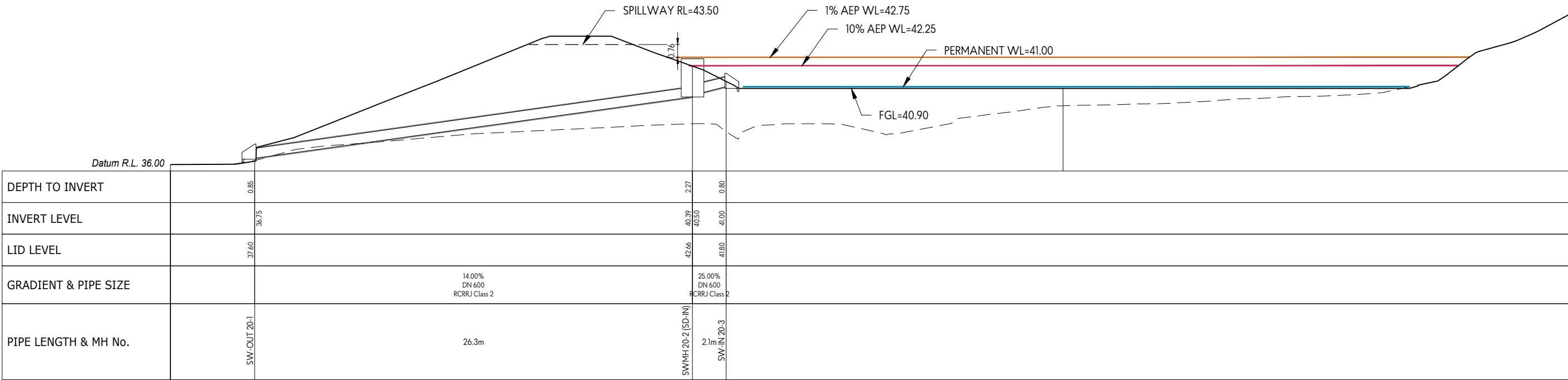
REVISIONS:		BY	DATE
REV	NOTES		
R1	RESOURCE CONSENT ISSUE	PWJ	13-11-2025
R2	MINOR AMENDMENTS	PWJ	11-03-2026
R3	4m ACCESS SHOWN TO WETLANDS	PWJ	06-08-2026
R4	PONDS UPDATED TO SW ATTENUATION PONDS	PWJ	06-10-2026

PROJECT:
PUKERUA PROPERTY GROUP LP
MT WELCOME - PUKERUA BAY
PORIRUA

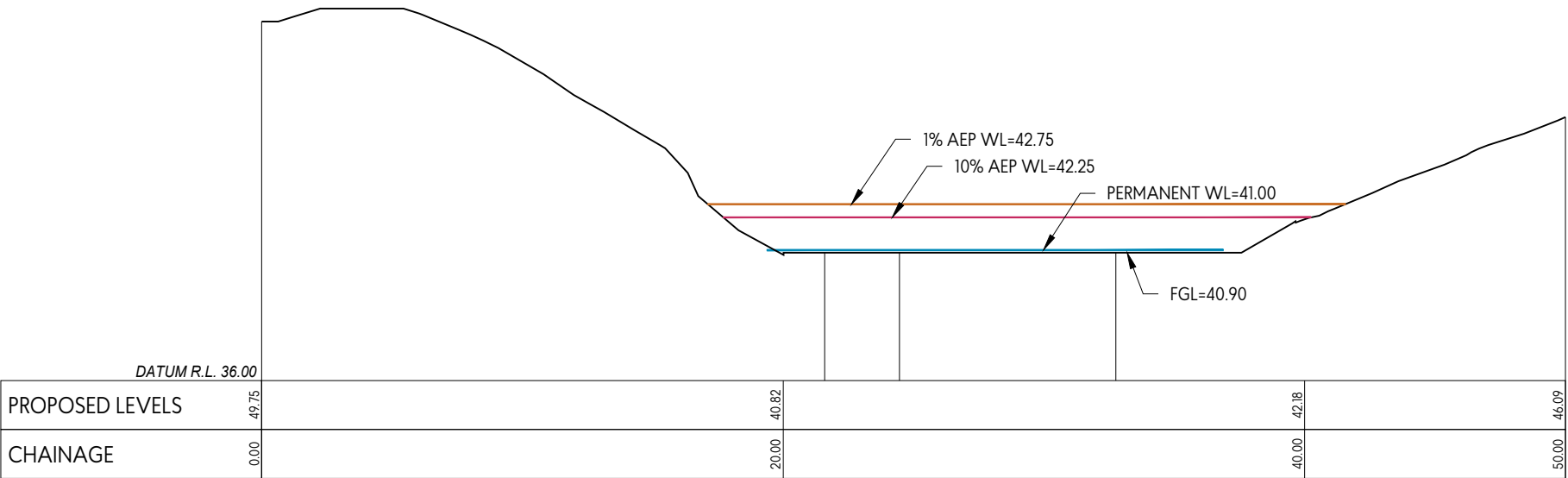
TITLE:
PROPOSED STORMWATER ATTENUATION
POND A LAYOUT PLAN



DESIGNED: PWJ	DRAWN: LB	
CHECKED: KD	PLOT DATE: 05-10-2026	
SCALE A1: 1:250	SCALE A3: 1:500	
STATUS: RESOURCE CONSENT		
PROJECT No: 1753-02	DRAWING No: 4310	REVISION: R4



SW DETENTION A OUTLET - SW LINE 20



SW DETENTION A SECTION 01

This design and drawing shall only be used for the purpose for which it was supplied and shall not be altered or reproduced without the permission of Envelope Engineering Limited. No liability shall be accepted for unauthorised use of this design and drawing.

REVISIONS:			
REV	NOTES	BY	DATE
R1	RESOURCE CONSENT ISSUE	PWJ	13-11-2025
R2	MINOR AMENDMENTS	PWJ	11-03-2026
R3	4m ACCESS SHOWN TO WETLANDS	PWJ	06-08-2026
R4	PONDS UPDATED TO SW ATTENUATION PONDS	PWJ	06-10-2026

PROJECT:
PUKERUA PROPERTY GROUP LP
MT WELCOME - PUKERUA BAY
PORIRUA

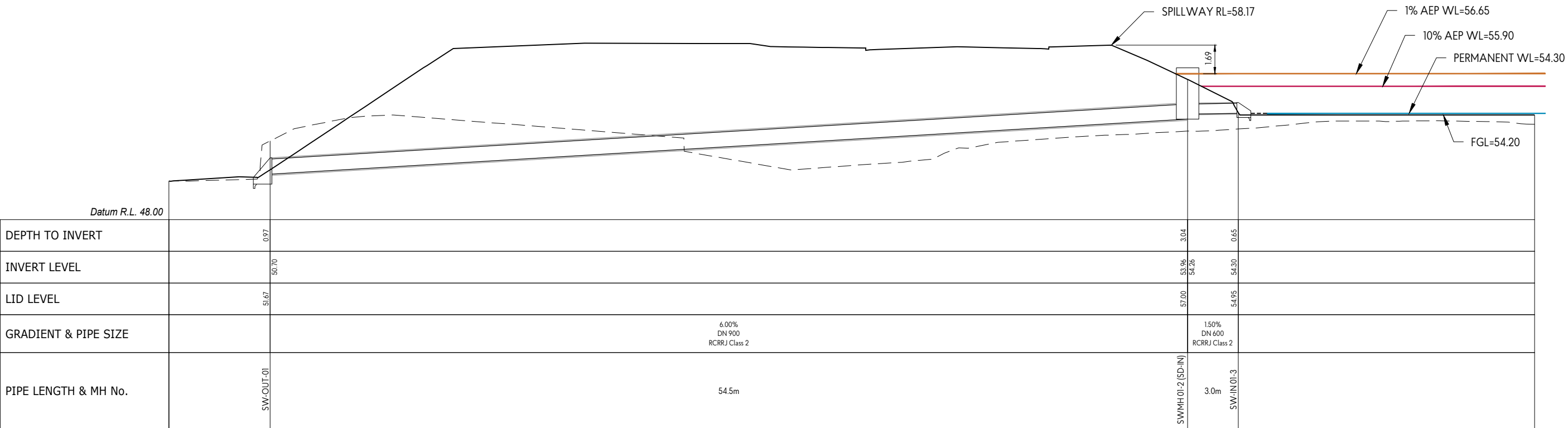
TITLE:
PROPOSED STORMWATER ATTENUATION
POND A SECTIONS



DESIGNED: PWJ
CHECKED: KD
SCALE A1: 1:125
STATUS: RESOURCE CONSENT
PROJECT No: 1753-02

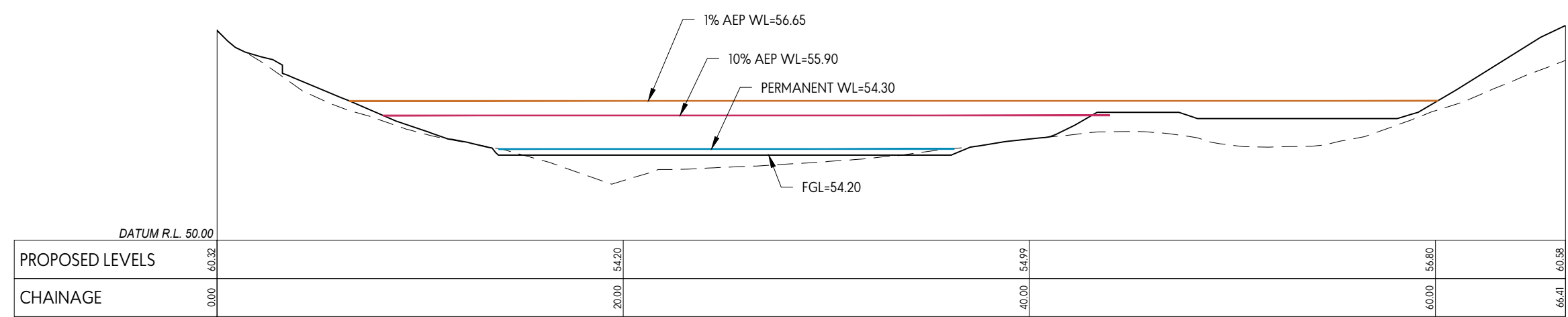
DRAWN: LB
PLOT DATE: 05-10-2026
SCALE A3: 1:250
DRAWING No: 4311

REVISION: R4



SW DETNETION B OUTLET - SW LINE 01

- NOTES:
- 1. PIPE SIZES SHOWN FOR HYDRAULIC FLOW.
 - 2. FINAL PIPE SIZING AND FISH PASSAGE TO BE DESIGNED AT DETAILED DESIGN (EPA) PHASE.



SW DETENTION B SECTION 01

This design and drawing shall only be used for the purpose for which it was supplied and shall not be altered or reproduced without the permission of Envelope Engineering Limited. No liability shall be accepted for unauthorised use of this design and drawing.

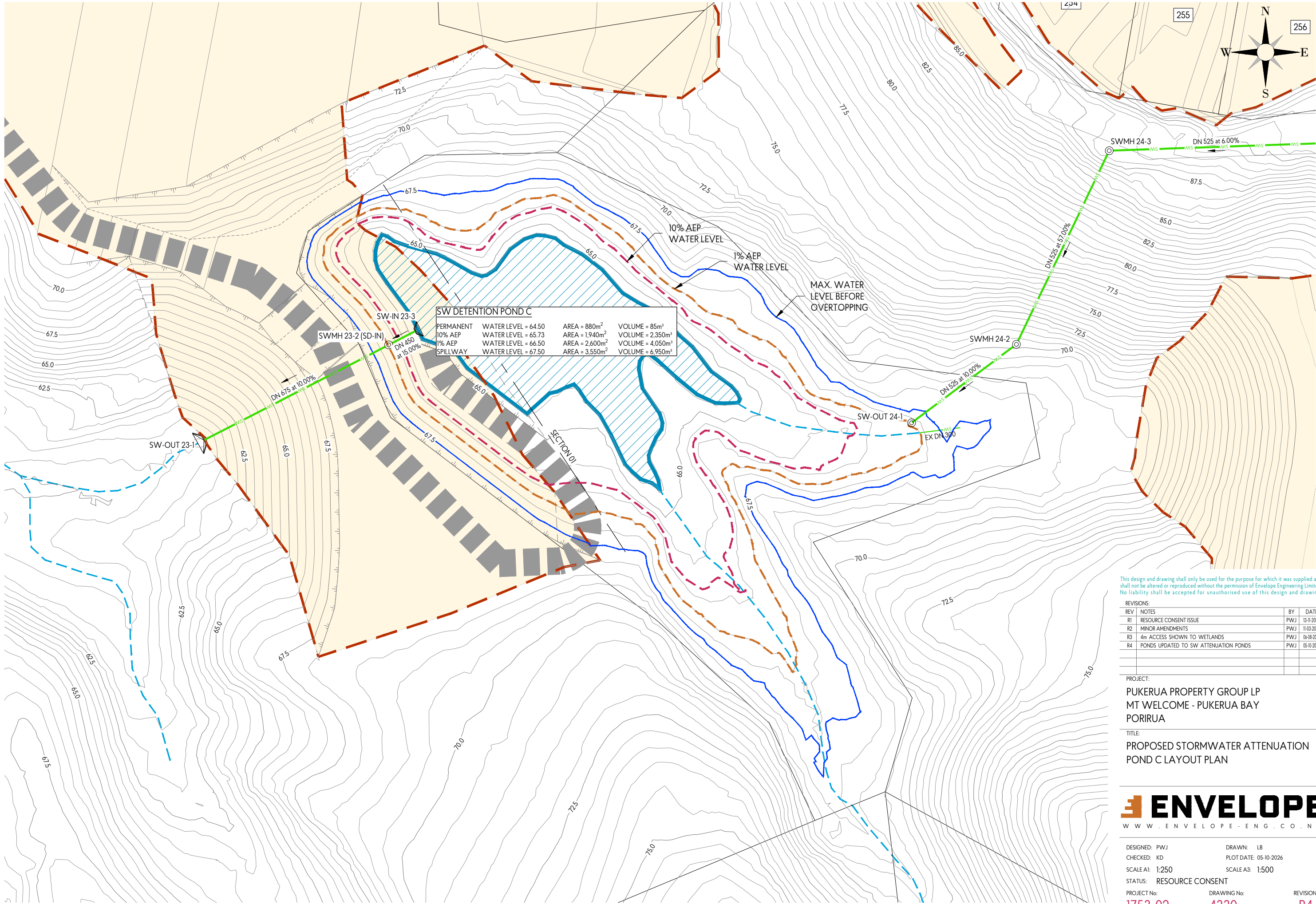
REVISIONS:			
REV	NOTES	BY	DATE
R1	RESOURCE CONSENT ISSUE	PWJ	13-11-2025
R2	MINOR AMENDMENTS	PWJ	11-03-2026
R3	4m ACCESS SHOWN TO WETLANDS	PWJ	06-08-2026
R4	PONDS UPDATED TO SW ATTENUATION PONDS	PWJ	05-10-2026

PROJECT:
PUKERUA PROPERTY GROUP LP
MT WELCOME - PUKERUA BAY
PORIRUA

TITLE:
PROPOSED STORMWATER ATTENUATION
POND B SECTIONS



DESIGNED: PWJ	DRAWN: LB	
CHECKED: KD	PLOT DATE: 05-10-2026	
SCALE A1: 1:125	SCALE A3: 1:250	
STATUS: RESOURCE CONSENT		
PROJECT No: 1753-02	DRAWING No: 4321	REVISION: R4



This design and drawing shall only be used for the purpose for which it was supplied and shall not be altered or reproduced without the permission of Envelope Engineering Limited. No liability shall be accepted for unauthorised use of this design and drawing.

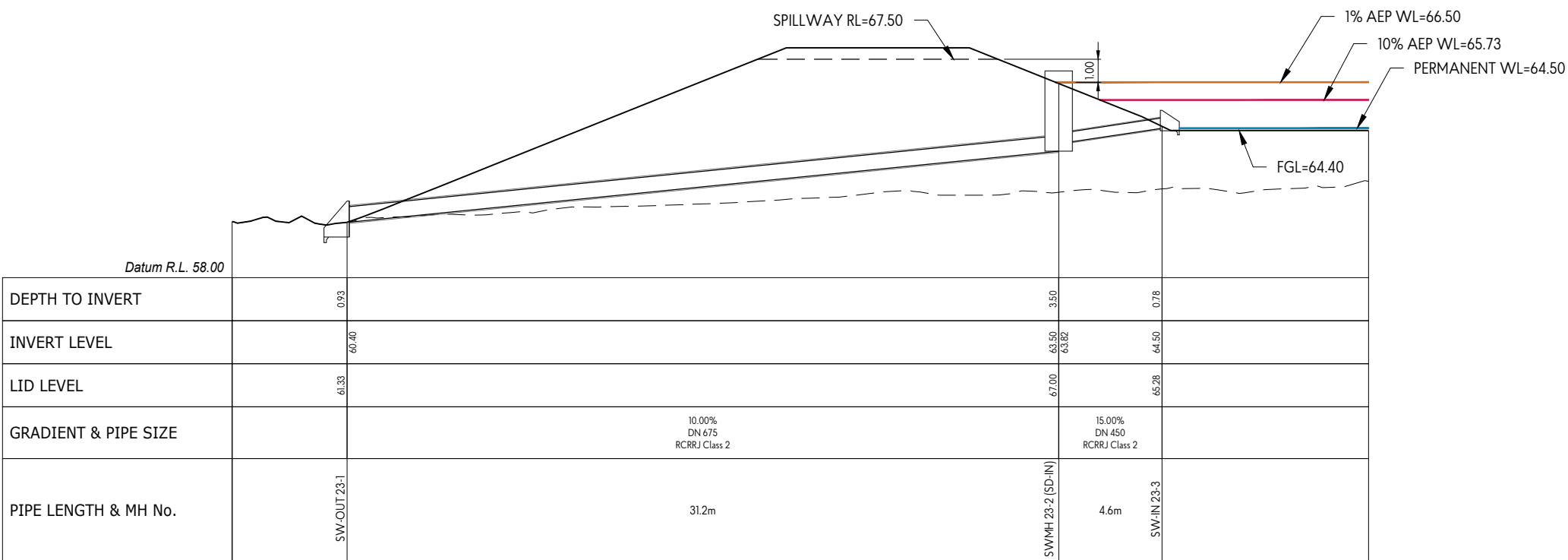
REVISIONS:			
REV	NOTES	BY	DATE
R1	RESOURCE CONSENT ISSUE	PWJ	13-11-2025
R2	MINOR AMENDMENTS	PWJ	11-03-2026
R3	4m ACCESS SHOWN TO WETLANDS	PWJ	06-08-2026
R4	PONDS UPDATED TO SW ATTENUATION PONDS	PWJ	05-10-2026

PROJECT:
PUKERUA PROPERTY GROUP LP
MT WELCOME - PUKERUA BAY
PORIRUA

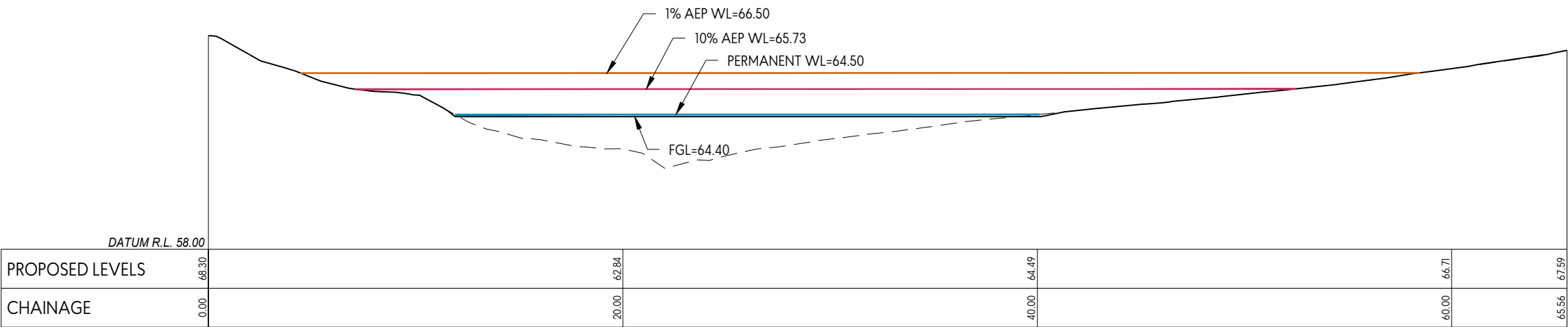
TITLE:
PROPOSED STORMWATER ATTENUATION
POND C LAYOUT PLAN



DESIGNED: PWJ	DRAWN: LB
CHECKED: KD	PLOT DATE: 05-10-2026
SCALE A1: 1:250	SCALE A3: 1:500
STATUS: RESOURCE CONSENT	
PROJECT No: 1753-02	DRAWING No: 4330
	REVISION: R4



SW DETENTION C OUTLET - SW LINE 23



SW DETENTION C SECTION 01

This design and drawing shall only be used for the purpose for which it was supplied and shall not be altered or reproduced without the permission of Envelope Engineering Limited. No liability shall be accepted for unauthorised use of this design and drawing.

REVISIONS:			
REV	NOTES	BY	DATE
R1	RESOURCE CONSENT ISSUE	PWJ	13-11-2025
R2	MINOR AMENDMENTS	PWJ	11-03-2026
R3	4m ACCESS SHOWN TO WETLANDS	PWJ	06-08-2026
R4	PONDS UPDATED TO SW ATTENUATION PONDS	PWJ	06-10-2026

PROJECT:
PUKERUA PROPERTY GROUP LP
MT WELCOME - PUKERUA BAY
PORIRUA

TITLE:
PROPOSED STORMWATER ATTENUATION
POND C SECTIONS



DESIGNED: PWJ	DRAWN: LB
CHECKED: KD	PLOT DATE: 05-10-2026
SCALE A1: 1:125	SCALE A3: 1:250
STATUS: RESOURCE CONSENT	
PROJECT No: 1753-02	DRAWING No: 4331
	REVISION: R4



SW DETENTION POND D			
PERMANENT	WATER LEVEL = 108.80	AREA = 200m ²	VOLUME = 20m ³
10% AEP	WATER LEVEL = 109.17	AREA = 270m ²	VOLUME = 130m ³
1% AEP	WATER LEVEL = 109.36	AREA = 310m ²	VOLUME = 180m ³
SPILLWAY	WATER LEVEL = 109.70	AREA = 395m ²	VOLUME = 261m ³

This design and drawing shall only be used for the purpose for which it was supplied and shall not be altered or reproduced without the permission of Envelope Engineering Limited. No liability shall be accepted for unauthorised use of this design and drawing.

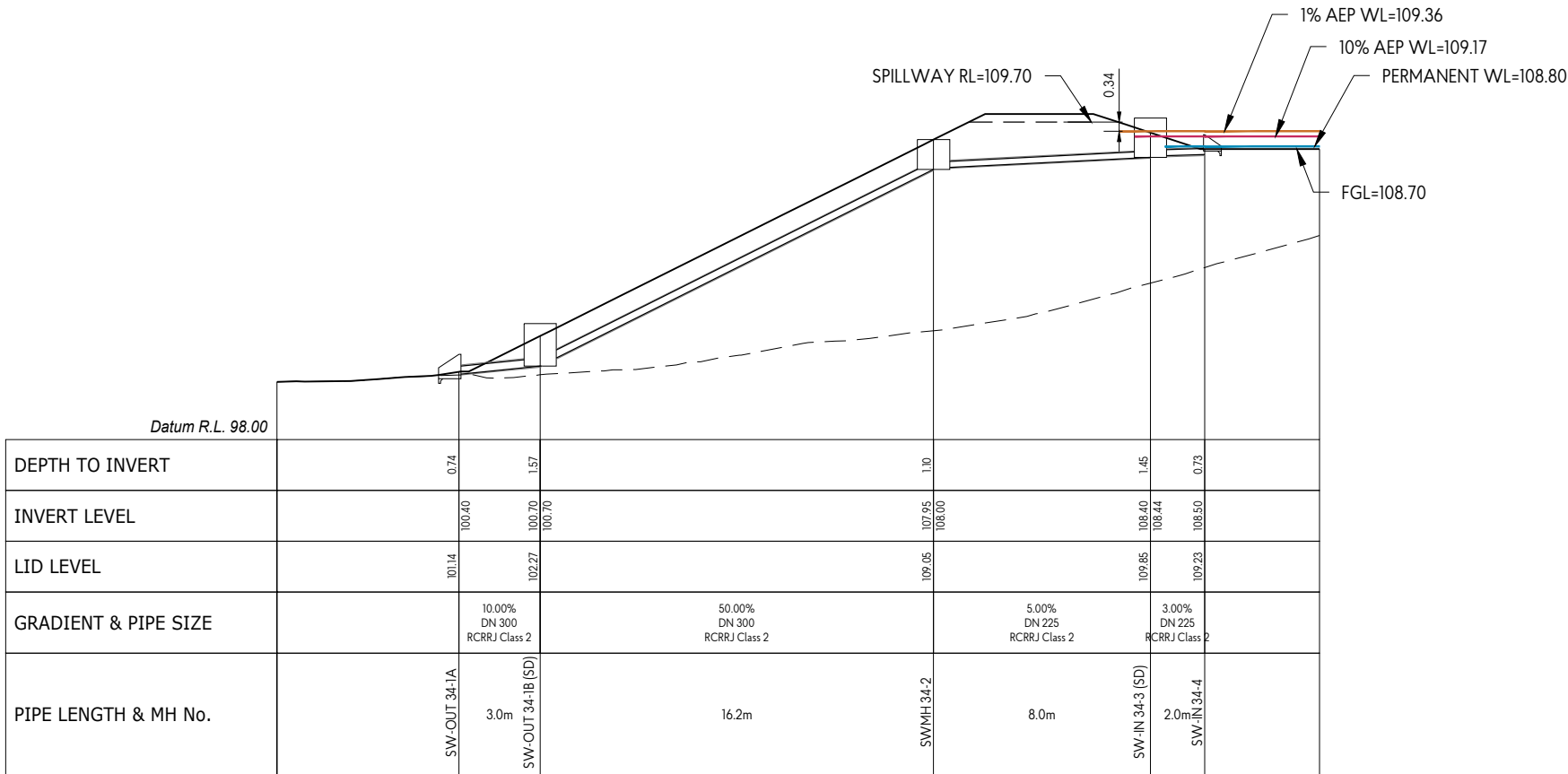
REVISIONS:			
REV	NOTES	BY	DATE
R1	RESOURCE CONSENT ISSUE	PWJ	13-11-2025
R2	MINOR AMENDMENTS	PWJ	11-03-2026
R3	4m ACCESS SHOWN TO WETLANDS	PWJ	06-08-2026
R4	PONDS UPDATED TO SW ATTENUATION PONDS	PWJ	05-10-2026

PROJECT:
PUKERUA PROPERTY GROUP LP
MT WELCOME - PUKERUA BAY
PORIRUA

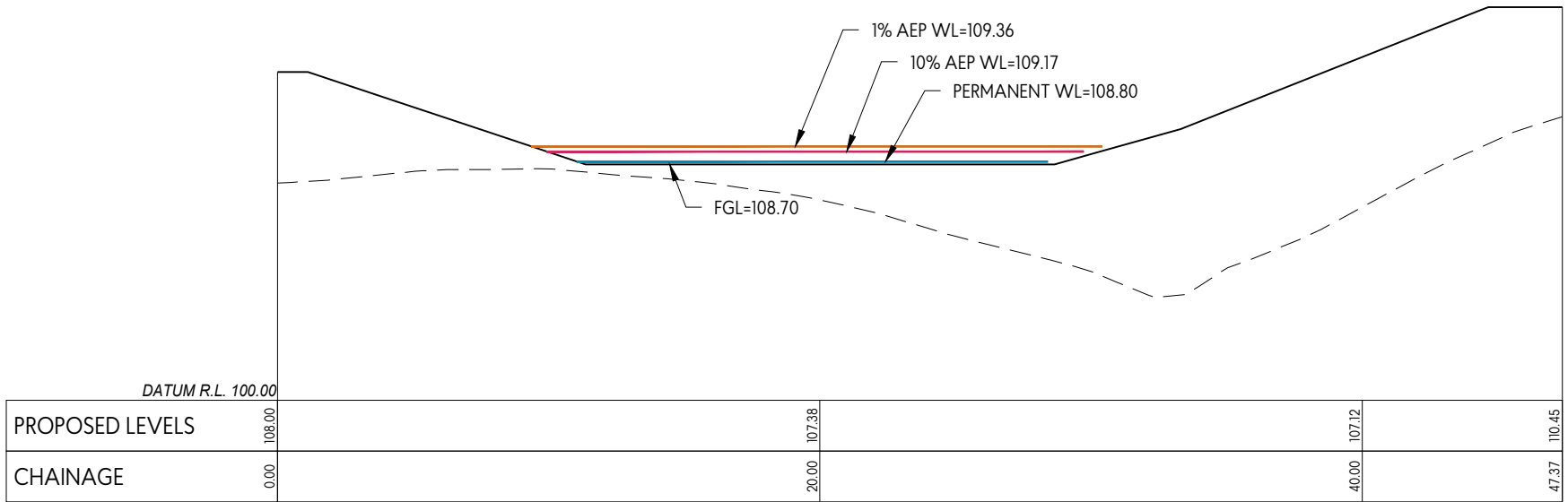
TITLE:
PROPOSED STORMWATER ATTENUATION
POND D LAYOUT PLAN



DESIGNED: PWJ	DRAWN: LB	REVISION:
CHECKED: KD	PLOT DATE: 05-10-2026	
SCALE A1: 1:250	SCALE A3: 1:500	
STATUS: RESOURCE CONSENT		
PROJECT No: 1753-02	DRAWING No: 4340	R4



SW DETENTION D OUTLET - SW LINE 34



SW DETENTION D SECTION 01

This design and drawing shall only be used for the purpose for which it was supplied and shall not be altered or reproduced without the permission of Envelope Engineering Limited. No liability shall be accepted for unauthorised use of this design and drawing.

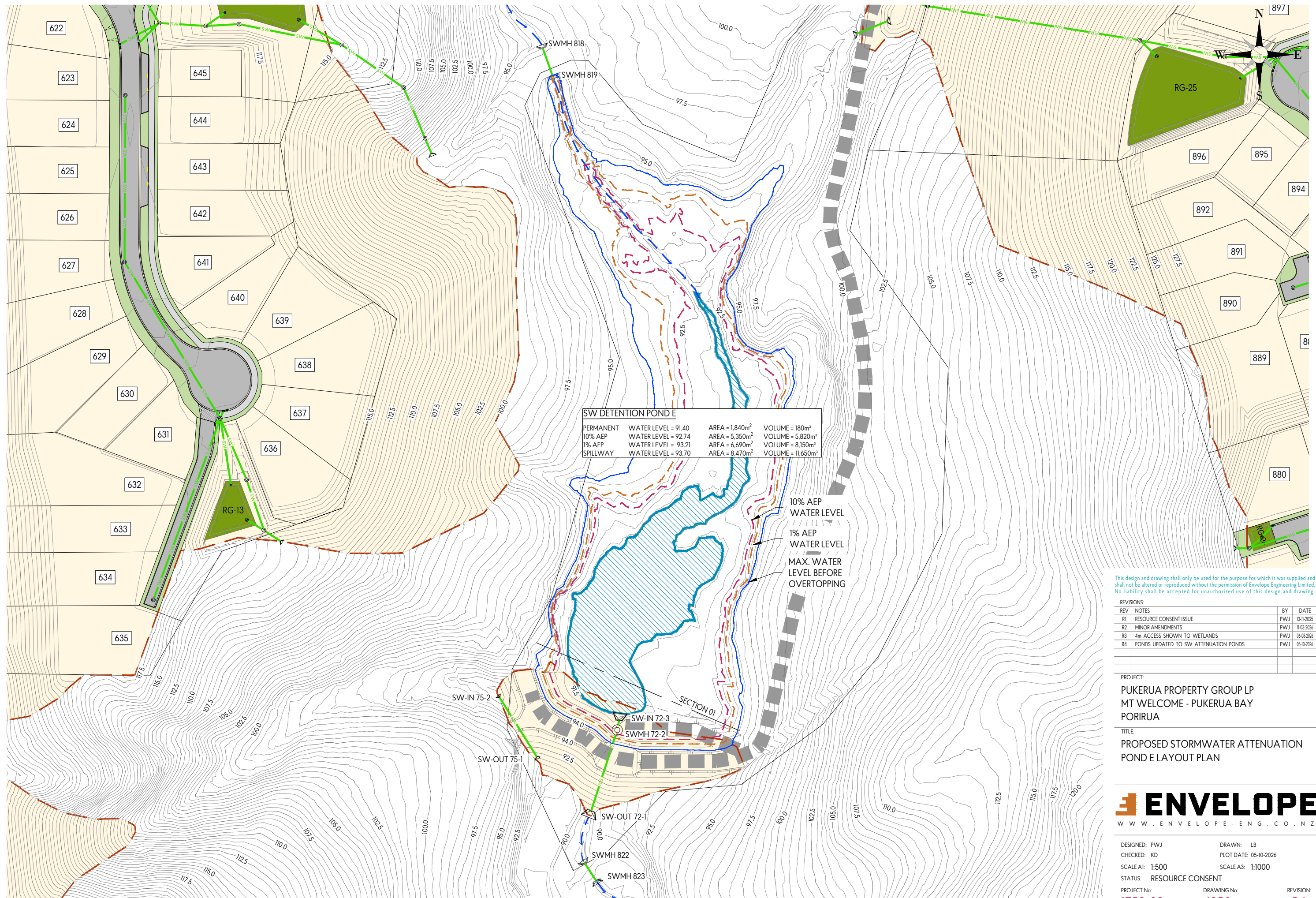
REVISIONS:			
REV	NOTES	BY	DATE
R1	RESOURCE CONSENT ISSUE	PWJ	13-11-2025
R2	MINOR AMENDMENTS	PWJ	11-03-2026
R3	4m ACCESS SHOWN TO WETLANDS	PWJ	06-08-2026
R4	PONDS UPDATED TO SW ATTENUATION PONDS	PWJ	05-10-2026

PROJECT:
PUKERUA PROPERTY GROUP LP
MT WELCOME - PUKERUA BAY
PORIRUA

TITLE:
PROPOSED STORMWATER ATTENUATION
POND D SECTIONS



DESIGNED: PWJ	DRAWN: LB	
CHECKED: KD	PLOT DATE: 05-10-2026	
SCALE A1: 1:125	SCALE A3: 1:250	
STATUS: RESOURCE CONSENT		
PROJECT No: 1753-02	DRAWING No: 4341	REVISION: R4



This design and drawing shall only be used for the purpose for which it was supplied and shall not be altered or reproduced without the permission of Envelope Engineering Limited. No liability shall be accepted for unauthorised use of this design and drawing.

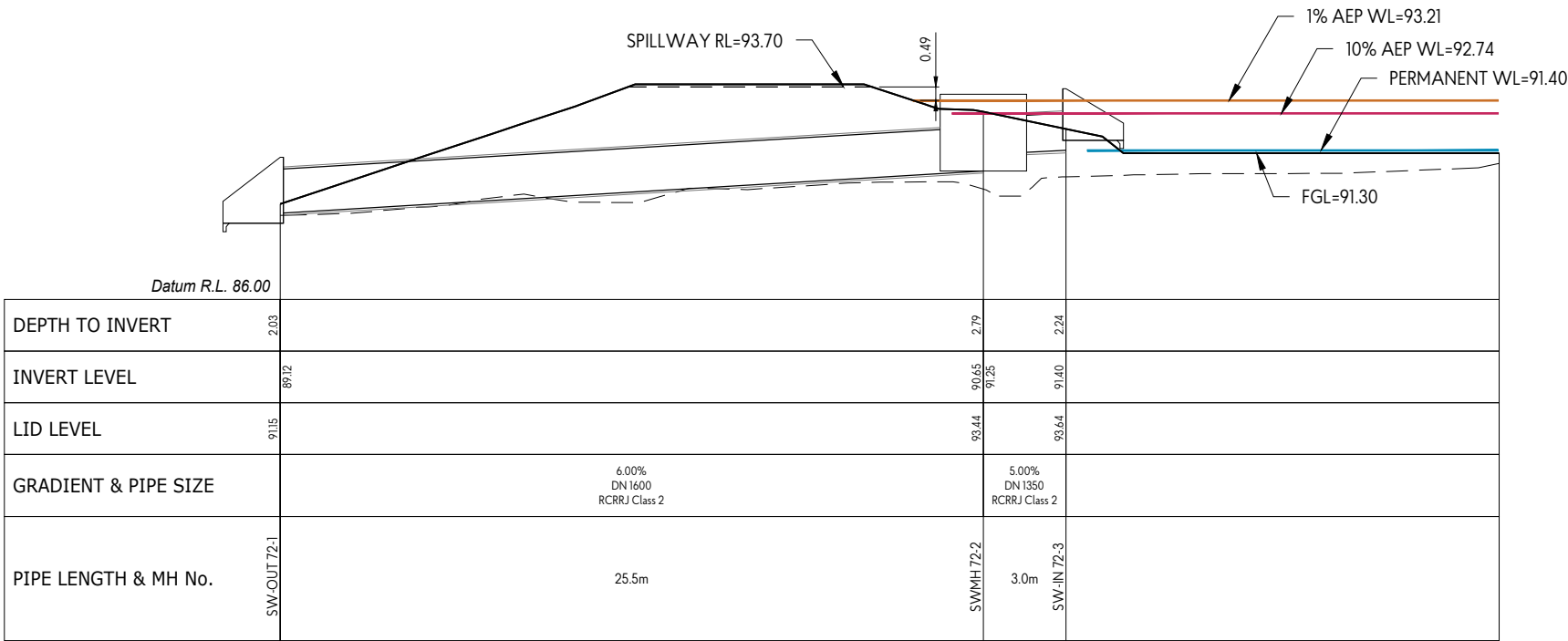
REVISIONS:			
REV	NOTES	BY	DATE
R1	RESOURCE CONSENT ISSUE	PWJ	13-11-2025
R2	MINOR AMENDMENTS	PWJ	11-03-2026
R3	4m ACCESS SHOWN TO WETLANDS	PWJ	06-09-2026
R4	PONDS UPDATED TO SW ATTENUATION PONDS	PWJ	05-10-2026

PROJECT:
PUKERUA PROPERTY GROUP LP
MT WELCOME - PUKERUA BAY
PORIRUA

TITLE:
PROPOSED STORMWATER ATTENUATION
POND E LAYOUT PLAN



DESIGNED: PWJ	DRAWN: LB
CHECKED: KD	PLOT DATE: 05-10-2026
SCALE A1: 1:500	SCALE A3: 1:1000
STATUS: RESOURCE CONSENT	
PROJECT No:	DRAWING No:
1753-02	4350
	REVISION: R4



SW DETENTION E OUTLET - SW LINE 72

- NOTES:
- 1. PIPE SIZES SHOWN FOR HYDRAULIC FLOW.
 - 2. FINAL PIPE SIZING AND FISH PASSAGE TO BE DESIGNED AT DETAILED DESIGN (EPA) PHASE.

This design and drawing shall only be used for the purpose for which it was supplied and shall not be altered or reproduced without the permission of Envelope Engineering Limited. No liability shall be accepted for unauthorised use of this design and drawing.

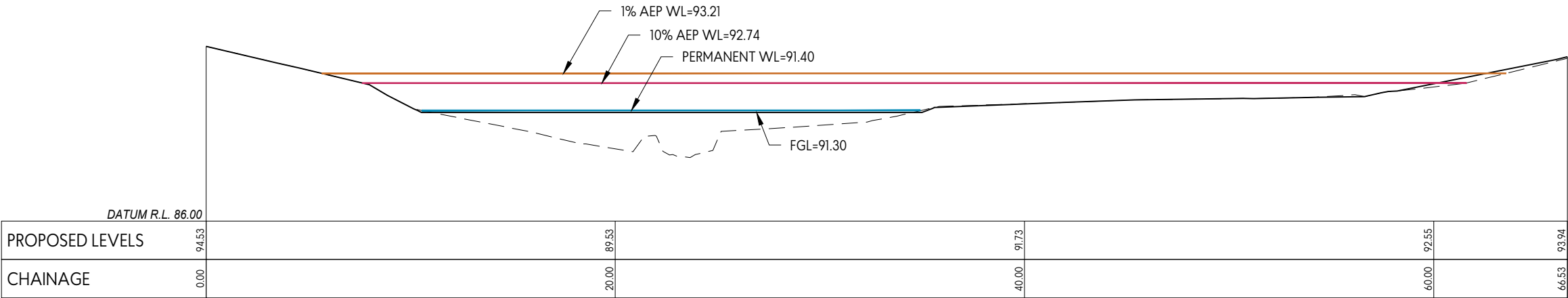
REVISIONS:			
REV	NOTES	BY	DATE
R1	RESOURCE CONSENT ISSUE	PWJ	13-11-2025
R2	MINOR AMENDMENTS	PWJ	11-03-2026
R3	4m ACCESS SHOWN TO WETLANDS	PWJ	06-08-2026
R4	PONDS UPDATED TO SW ATTENUATION PONDS	PWJ	06-10-2026

PROJECT:
PUKERUA PROPERTY GROUP LP
MT WELCOME - PUKERUA BAY
PORIRUA

TITLE:
PROPOSED STORMWATER ATTENUATION
POND E SECTIONS



DESIGNED: PWJ	DRAWN: LB	
CHECKED: KD	PLOT DATE: 05-10-2026	
SCALE A1: 1:125	SCALE A3: 1:250	
STATUS: RESOURCE CONSENT		
PROJECT No: 1753-02	DRAWING No: 4351	REVISION: R4



SW DETENTION E SECTION 01