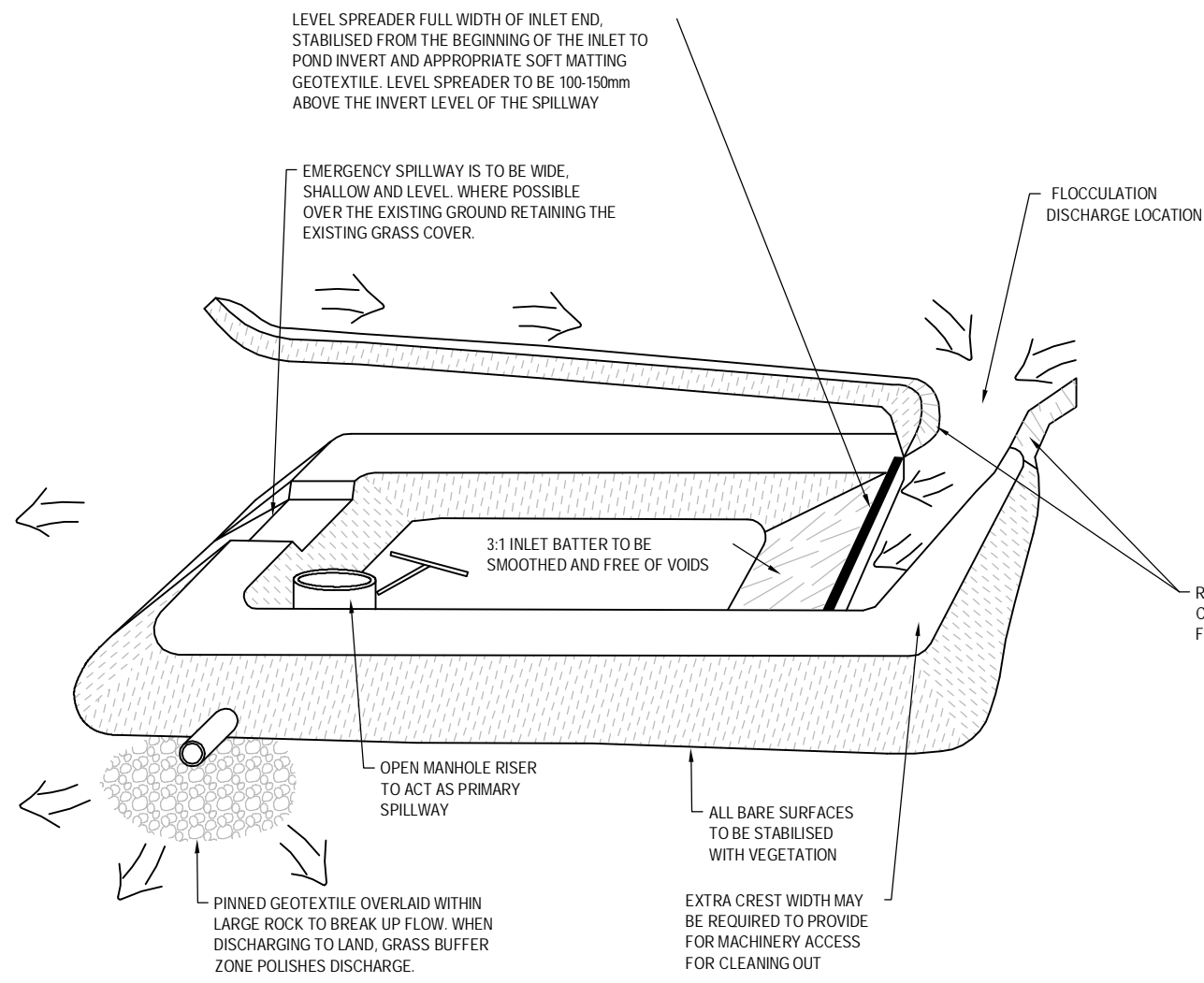
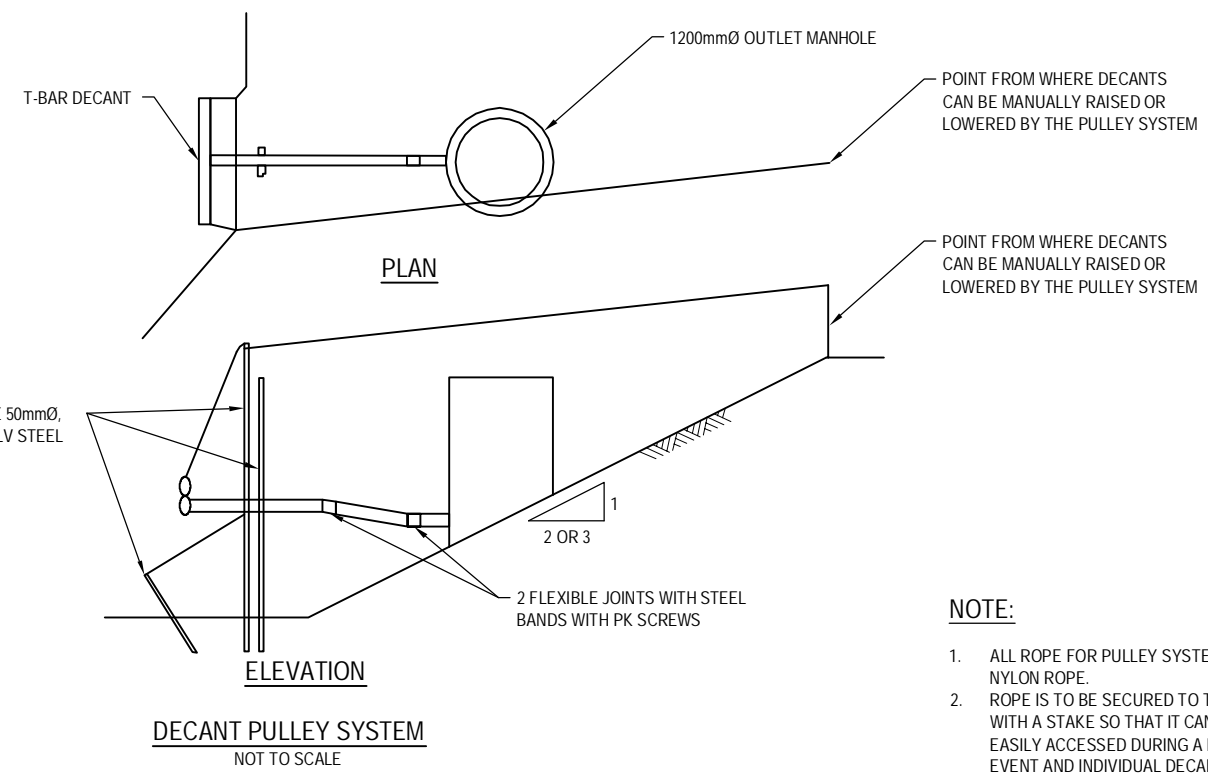


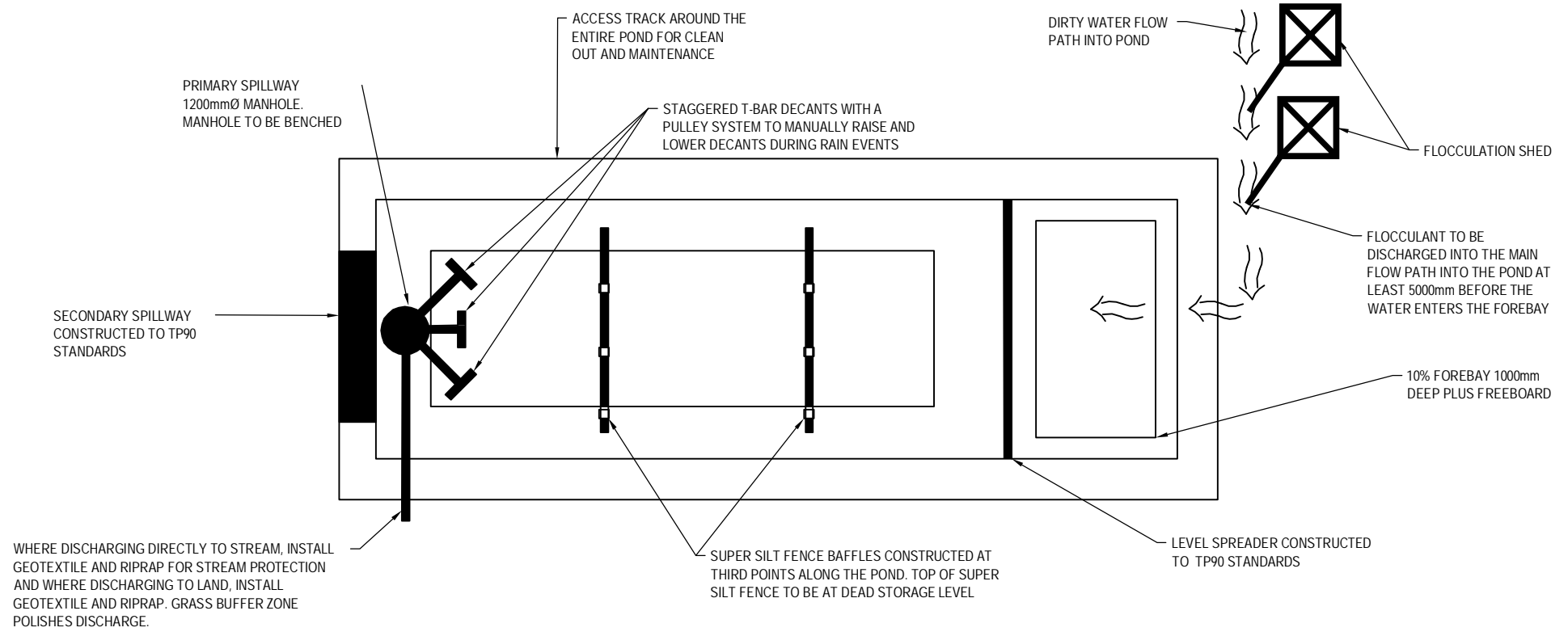
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SEDIMENT RETENTION POND
NOT TO SCALE



- NOTE:**
1. ALL ROPE FOR PULLEY SYSTEM TO BE NYLON ROPE.
 2. ROPE IS TO BE SECURED TO THE BANK WITH A STAKE SO THAT IT CAN BE EASILY ACCESSED DURING A RAIN EVENT AND INDIVIDUAL DECANTS CAN BE MANUALLY RAISED OR LOWERED.



SEDIMENT RETENTION POND TYPICAL DETAILS
NOT TO SCALE

AMD	DATE	DESIGN REVIEW	REVD. D. MGR.	APPD. A. MGR.	PURPOSE OF ISSUE / AMENDMENT
0	30/08/13	GR	MW	TI	ISSUE FOR NOR / CONSENT



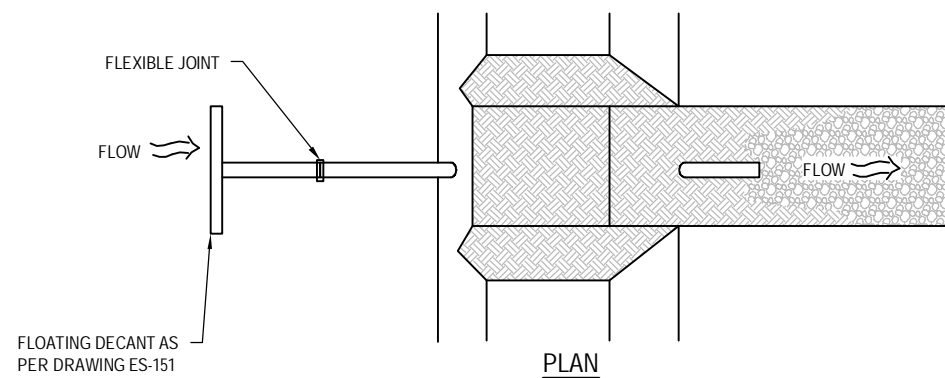
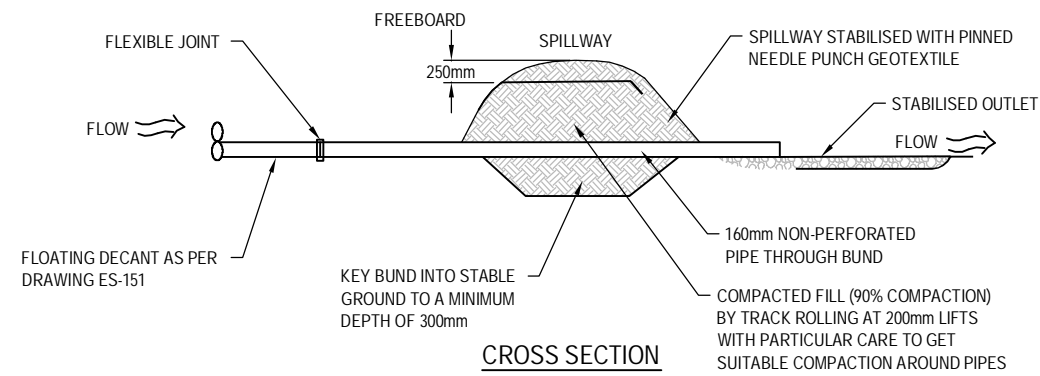
DISCLAIMER
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ARA TŪHONO - PŪHOI TO WELLSFORD
PŪHOI TO WARKWORTH - FOR RMA APPROVALS

DRAWN: SP / AN	DRAFTING CHECK: RS	REVIEWED DISCIPLINE MANAGER: MW	APPROVED ALLIANCE MANAGER: TI
DESIGNED: RS	DESIGN REVIEW: GR		

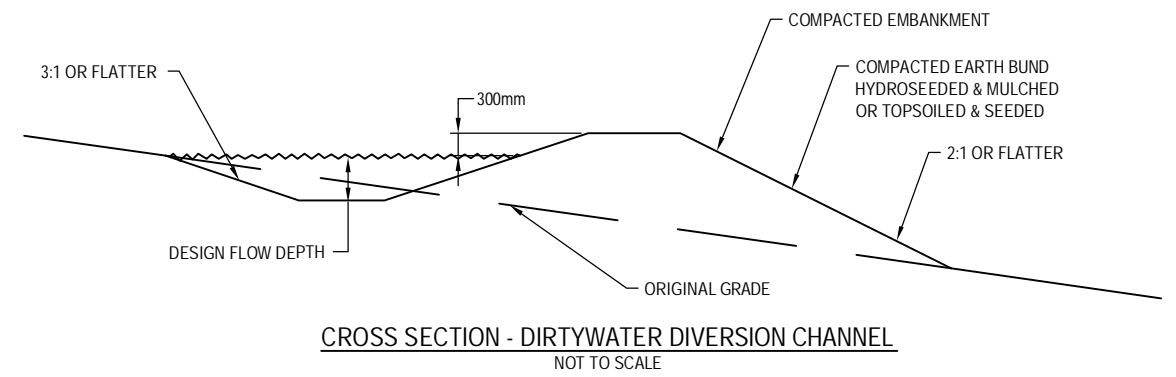
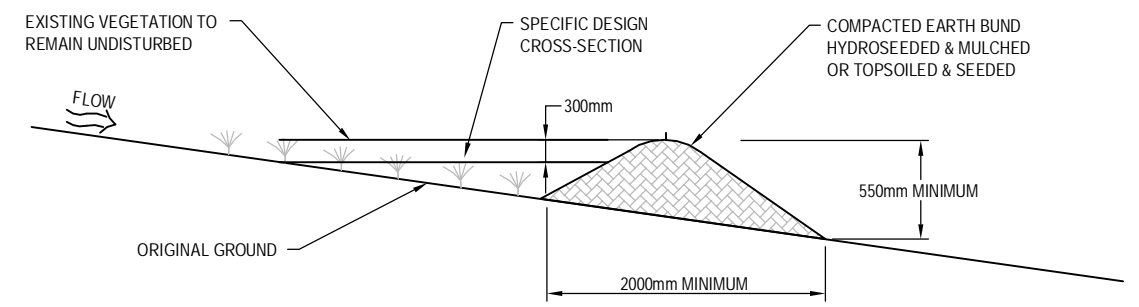
CONSTRUCTION WATER MANAGEMENT
TYPICAL CONCEPT DESIGN DETAILS
CONCEPT PLAN - SHEET 1 OF 5

SCALE: NOT TO SCALE	CONTRACT No: PA3748	DRAWING No: ES-151	AMD: 0
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DECANTING EARTH BUND
NOT TO SCALE

NOTE:
1. CHEMICAL TREATMENT (FLOCCULATION) TO BE PROVIDED FOR ALL DECANTING EARTH BUNDS



AMD	DATE	DESIGN REVIEW	REVD. D. MGR.	APP'D. A. MGR.	PURPOSE OF ISSUE / AMENDMENT
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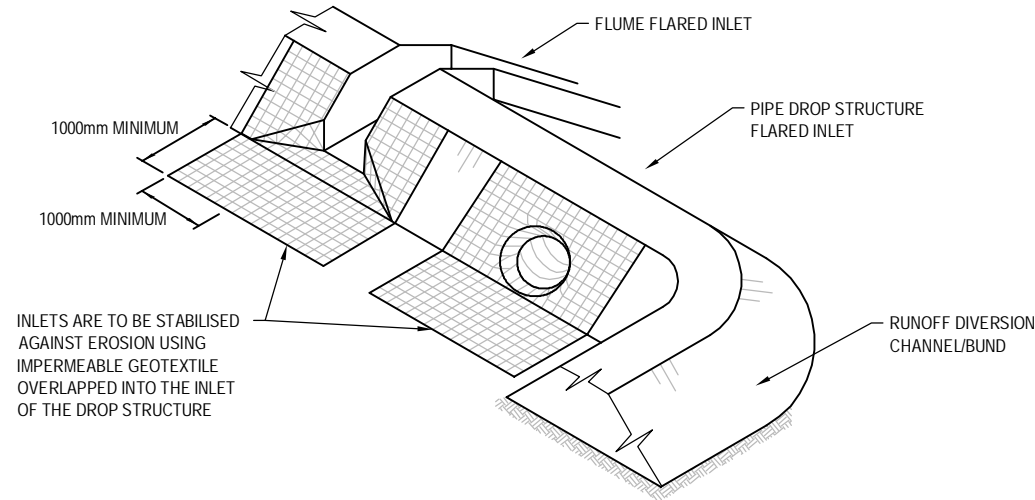
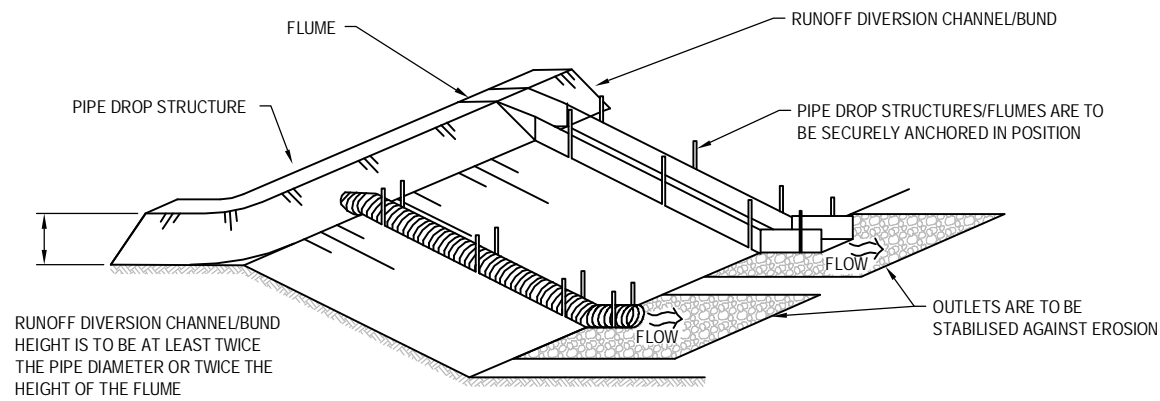


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ARA TŪHONO - PŪHOI TO WELLSFORD			
PŪHOI TO WARKWORTH - FOR RMA APPROVALS			
DRAWN: SP / AN	DRAFTING CHECK: RS	REVIEWED DISCIPLINE MANAGER: MW	APPROVED ALLIANCE MANAGER: TI
DESIGNED: RS	DESIGN REVIEW: GR		

CONSTRUCTION WATER MANAGEMENT			
TYPICAL CONCEPT DESIGN DETAILS			
CONCEPT PLAN - SHEET 2 OF 5			
SCALE: NOT TO SCALE	CONTRACT No: PA3748	DRAWING No: ES-152	AMDT: 0

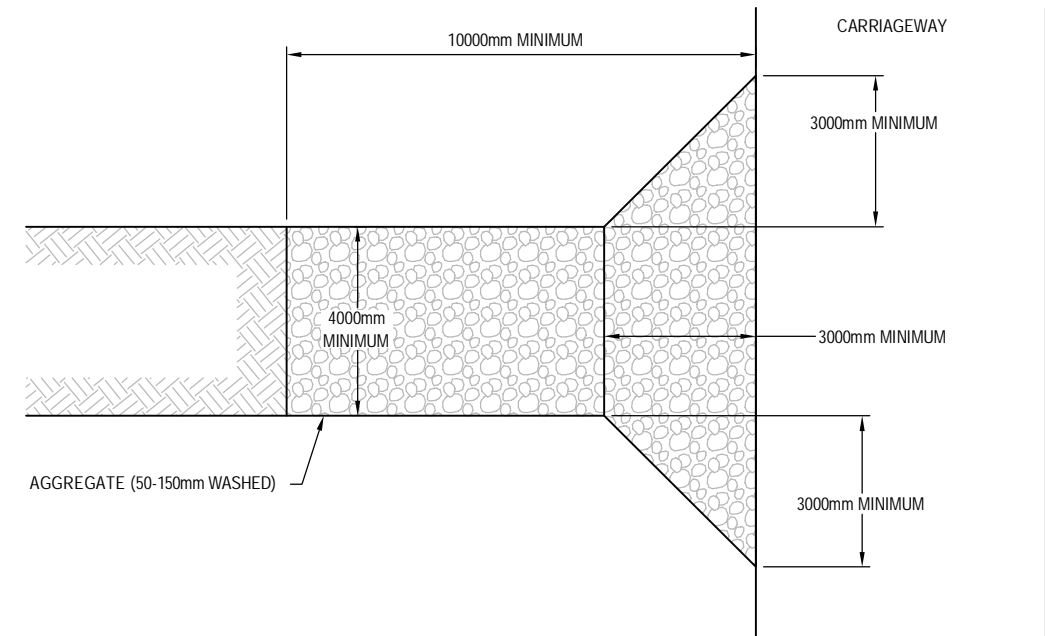
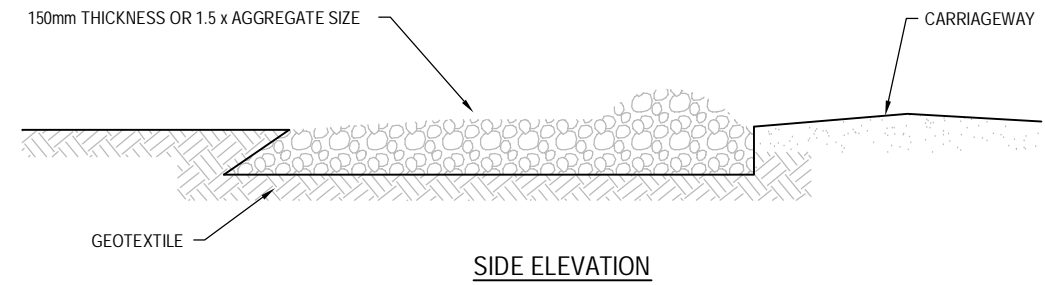
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TP90 DESIGN CRITERIA FOR PIPE DROP STRUCTURE	
PIPE DIAMETER (mm)	MAXIMUM CATCHMENT AREA (ha)
150	0.05
300	0.20
450	0.60
500	1.00
600	1.00

SPECIFIC DESIGNS ARE REQUIRED FOR FLUME SIZING

PIPE DROP / FLUME STRUCTURE
NOT TO SCALE



STABILISED CONSTRUCTION ENTRANCE
NOT TO SCALE

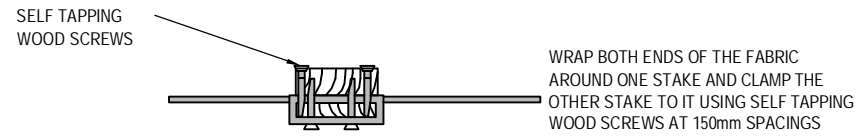
AMD	DATE	DESIGN REVIEW	REVD. D. MGR.	APPD. A. MGR.	PURPOSE OF ISSUE / AMENDMENT
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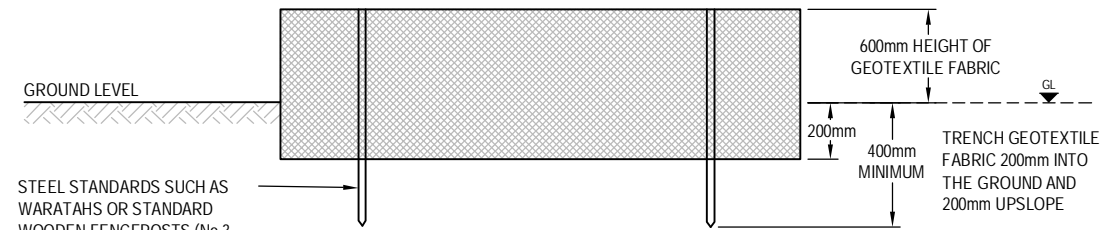
ARA TŪHONO - PŪHOI TO WELLSFORD			
PŪHOI TO WARKWORTH - FOR RMA APPROVALS			
DRAWN: SP / AN	DRAFTING CHECK: RS	REVIEWED DISCIPLINE MANAGER: MW	APPROVED ALLIANCE MANAGER: TI
DESIGNED: RS	DESIGN REVIEW: GR		

CONSTRUCTION WATER MANAGEMENT			
TYPICAL CONCEPT DESIGN DETAILS			
CONCEPT PLAN - SHEET 3 OF 5			
SCALE: NOT TO SCALE	CONTRACT No: PA3748	DRAWING No: ES-153	AMDT: 0

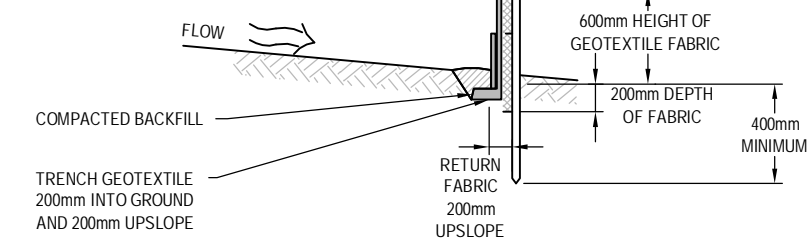


STANDARD DETAIL FOR FABRIC JOIN

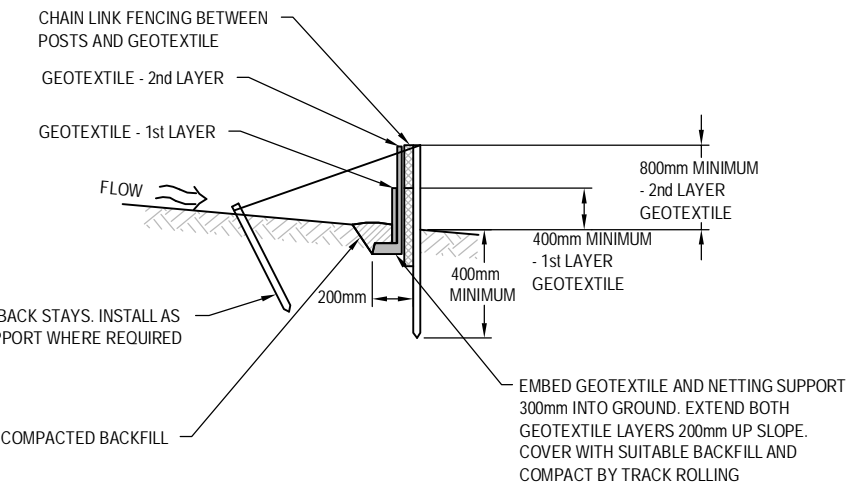
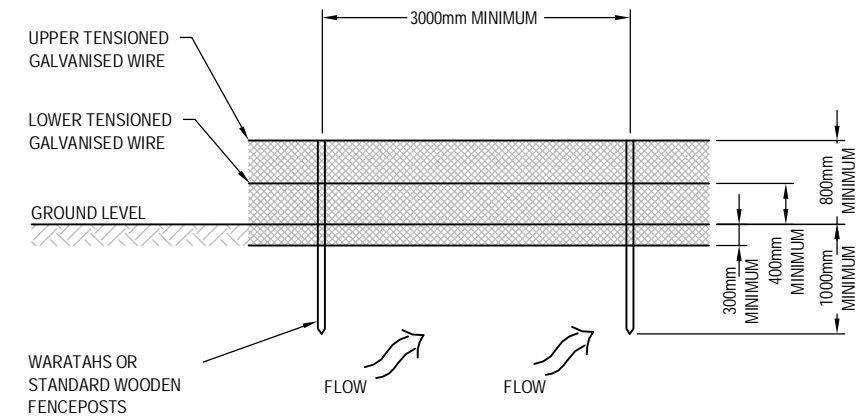
POST SPACING CAN BE INCREASED FROM 2000mm TO 4000mm IF SUPPORTED BY A 2.5mm DIAMETER HIGH TENSILE WIRE ALONG THE TOP WITH CLIPS EVERY 200mm



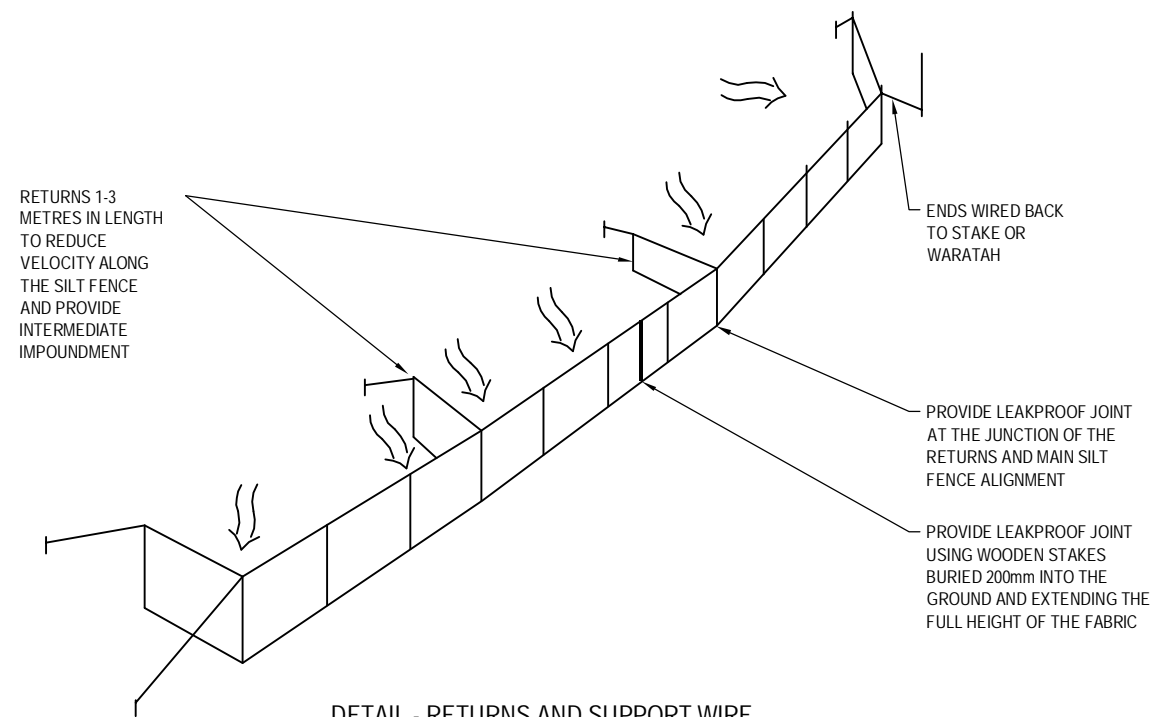
GEOTEXTILE FIXED FIRMLY TO WARATAH



SILT FENCE
NOT TO SCALE



SUPER SILT FENCE
NOT TO SCALE



DETAIL - RETURNS AND SUPPORT WIRE FOR SILT FENCE & SUPER SILT FENCE
NOT TO SCALE

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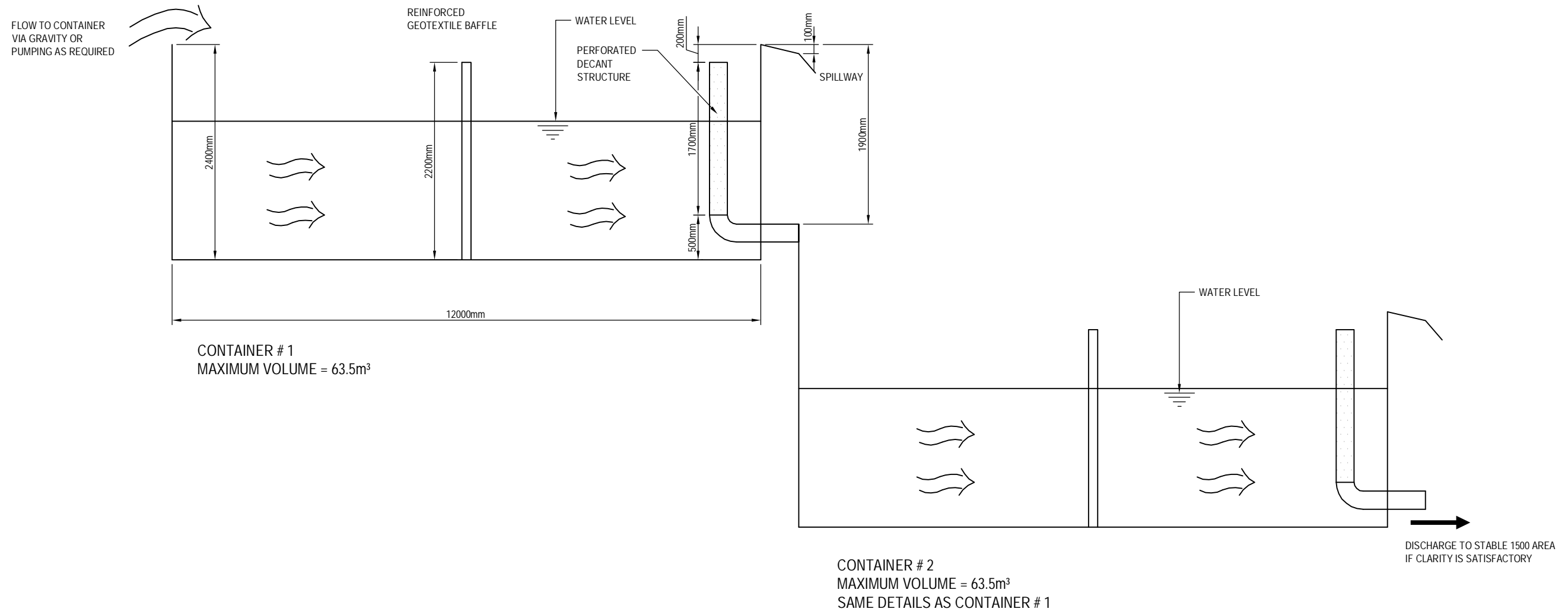
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ARA TŪHONO - PŪHOI TO WELLSFORD			
PŪHOI TO WARKWORTH - FOR RMA APPROVALS			
DRAWN: SP / AN	DRAFTING CHECK: RS	REVIEWED DISCIPLINE MANAGER: MW	APPROVED ALLIANCE MANAGER: TI
DESIGNED: RS	DESIGN REVIEW: GR		

CONSTRUCTION WATER MANAGEMENT			
TYPICAL CONCEPT DESIGN DETAILS			
CONCEPT PLAN - SHEET 4 OF 5			
SCALE: NOT TO SCALE	CONTRACT No: PA3748	DRAWING No: ES-154	AMD: 0

NOTES

1. DRAWINGS NOT TO SCALE. SCHEMATIC ONLY.
2. BAFFLE DESIGNED FROM REINFORCED GEOTEXTILE TO ALLOW FLOWS TO PASS.
3. STRUCTURAL INTEGRITY OF CONTAINERS WOULD REMAIN.
4. CONTAINER # 1 WILL BE POSITIONED 1900mm HIGHER THAN CONTAINER # 2. IF CONTOURS DO NOT ALLOW THIS THEN CONTAINER # 1 WILL BE ARTIFICIALLY RAISED BY 1900mm.
5. WATER CLARITY CAN BE CHECKED IN CONTAINER # 2 AND FLOCCULANT ADDED MANUALLY IF NECESSARY TO ACHIEVE WATER CLARITY.



CONTAINER IMPOUNDMENT SYSTEM
NOT TO SCALE

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AMD	DATE	DESIGN REVIEW	REVD. D. MGR.	APPD. A. MGR.	PURPOSE OF ISSUE / AMENDMENT
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ARA TŪHONO - PŪHOI TO WELLSFORD			
PŪHOI TO WARKWORTH - FOR RMA APPROVALS			
DRAWN SP / AN	DRAFTING CHECK RS	REVIEWED DISCIPLINE MANAGER MW	APPROVED ALLIANCE MANAGER TI
DESIGNED RS	DESIGN REVIEW GR		

CONSTRUCTION WATER MANAGEMENT			
TYPICAL CONCEPT DESIGN DETAILS			
CONCEPT PLAN - SHEET 5 OF 5			
SCALE NOT TO SCALE	CONTRACT No. PA3748	DRAWING No. ES-155	AMDT 0