

DRWG No.	DRAWING TITLE
ES-001	CONSTRUCTION WATER MANAGEMENT CONSTRUCTION WATER MANAGEMENT - DRAWING INDEX, NOTES AND LEGEND
ES-010	CONSTRUCTION WATER MANAGEMENT - CONCEPT PLAN - SHEET LAYOUT
ES-011	CONSTRUCTION WATER MANAGEMENT - CONCEPT PLAN - SHEET 1 OF 15
ES-012	CONSTRUCTION WATER MANAGEMENT - CONCEPT PLAN - SHEET 2 OF 15
ES-013	CONSTRUCTION WATER MANAGEMENT - CONCEPT PLAN - SHEET 3 OF 15
ES-014	CONSTRUCTION WATER MANAGEMENT - CONCEPT PLAN - SHEET 4 OF 15
ES-015	CONSTRUCTION WATER MANAGEMENT - CONCEPT PLAN - SHEET 5 OF 15
ES-016	CONSTRUCTION WATER MANAGEMENT - CONCEPT PLAN - SHEET 6 OF 15
ES-017	CONSTRUCTION WATER MANAGEMENT - CONCEPT PLAN - SHEET 7 OF 15
ES-018	CONSTRUCTION WATER MANAGEMENT - CONCEPT PLAN - SHEET 8 OF 15
ES-019	CONSTRUCTION WATER MANAGEMENT - CONCEPT PLAN - SHEET 9 OF 15
ES-020	CONSTRUCTION WATER MANAGEMENT - CONCEPT PLAN - SHEET 10 OF 15
ES-021	CONSTRUCTION WATER MANAGEMENT - CONCEPT PLAN - SHEET 11 OF 15
ES-022	CONSTRUCTION WATER MANAGEMENT - CONCEPT PLAN - SHEET 12 OF 15
ES-023	CONSTRUCTION WATER MANAGEMENT - CONCEPT PLAN - SHEET 13 OF 15
ES-024	CONSTRUCTION WATER MANAGEMENT - CONCEPT PLAN - SHEET 14 OF 15
ES-025	CONSTRUCTION WATER MANAGEMENT - CONCEPT PLAN - SHEET 15 OF 15
ES-051	CONSTRUCTION WATER MANAGEMENT - STREAM DIVERSION METHODOLOGY - CONCEPT PLAN - SHEET 1 OF 2
ES-052	CONSTRUCTION WATER MANAGEMENT - STREAM DIVERSION METHODOLOGY - CONCEPT PLAN - SHEET 2 OF 2
ES-071	CONSTRUCTION WATER MANAGEMENT - CONCEPT PLAN - OKAHU VIADUCT METHODOLOGY - SHEET 1 OF 2
ES-072	CONSTRUCTION WATER MANAGEMENT - CONCEPT PLAN - OKAHU VIADUCT METHODOLOGY - SHEET 2 OF 2
ES-081	CONSTRUCTION WATER MANAGEMENT - CONCEPT PLAN - CONSTRUCTION YARD OUTLINE
ES-091	CONSTRUCTION WATER MANAGEMENT - CONCEPT PLAN - SPOIL SITE SL10 STAGING PLAN - SHEET 1 OF 5
ES-092	CONSTRUCTION WATER MANAGEMENT - CONCEPT PLAN - SPOIL SITE SL10 STAGING PLAN - SHEET 2 OF 5
ES-093	CONSTRUCTION WATER MANAGEMENT - CONCEPT PLAN - SPOIL SITE SL10 STAGING PLAN - SHEET 3 OF 5
ES-094	CONSTRUCTION WATER MANAGEMENT - CONCEPT PLAN - SPOIL SITE SL10 STAGING PLAN - SHEET 4 OF 5
ES-095	CONSTRUCTION WATER MANAGEMENT - CONCEPT PLAN - SPOIL SITE SL10 STAGING PLAN - SHEET 5 OF 5
ES-100	EXISTING SLOPE AND HYDROGEOLOGICAL PLAN - SHEET LAYOUT
ES-101	EXISTING SLOPE AND HYDROGEOLOGICAL PLAN - SHEET 1 OF 17
ES-102	EXISTING SLOPE AND HYDROGEOLOGICAL PLAN - SHEET 2 OF 17
ES-103	EXISTING SLOPE AND HYDROGEOLOGICAL PLAN - SHEET 3 OF 17
ES-104	EXISTING SLOPE AND HYDROGEOLOGICAL PLAN - SHEET 4 OF 17
ES-105	EXISTING SLOPE AND HYDROGEOLOGICAL PLAN - SHEET 5 OF 17
ES-106	EXISTING SLOPE AND HYDROGEOLOGICAL PLAN - SHEET 6 OF 17
ES-107	EXISTING SLOPE AND HYDROGEOLOGICAL PLAN - SHEET 7 OF 17
ES-108	EXISTING SLOPE AND HYDROGEOLOGICAL PLAN - SHEET 8 OF 17
ES-109	EXISTING SLOPE AND HYDROGEOLOGICAL PLAN - SHEET 9 OF 17
ES-110	EXISTING SLOPE AND HYDROGEOLOGICAL PLAN - SHEET 10 OF 17
ES-111	EXISTING SLOPE AND HYDROGEOLOGICAL PLAN - SHEET 11 OF 17
ES-112	EXISTING SLOPE AND HYDROGEOLOGICAL PLAN - SHEET 12 OF 17
ES-113	EXISTING SLOPE AND HYDROGEOLOGICAL PLAN - SHEET 13 OF 17
ES-114	EXISTING SLOPE AND HYDROGEOLOGICAL PLAN - SHEET 14 OF 17
ES-115	EXISTING SLOPE AND HYDROGEOLOGICAL PLAN - SHEET 15 OF 17
ES-116	EXISTING SLOPE AND HYDROGEOLOGICAL PLAN - SHEET 16 OF 17
ES-117	EXISTING SLOPE AND HYDROGEOLOGICAL PLAN - SHEET 17 OF 17
ES-151	CONSTRUCTION WATER MANAGEMENT - TYPICAL CONCEPT DESIGN DETAILS - CONCEPT PLAN - SHEET 1 OF 5
ES-152	CONSTRUCTION WATER MANAGEMENT - TYPICAL CONCEPT DESIGN DETAILS - CONCEPT PLAN - SHEET 2 OF 5
ES-153	CONSTRUCTION WATER MANAGEMENT - TYPICAL CONCEPT DESIGN DETAILS - CONCEPT PLAN - SHEET 3 OF 5
ES-154	CONSTRUCTION WATER MANAGEMENT - TYPICAL CONCEPT DESIGN DETAILS - CONCEPT PLAN - SHEET 4 OF 5
ES-155	CONSTRUCTION WATER MANAGEMENT - TYPICAL CONCEPT DESIGN DETAILS - CONCEPT PLAN - SHEET 5 OF 5

GENERAL LEGEND

ROAD PLAN

EXISTING FEATURES

OPERATIONAL WATER MANAGEMENT

CONSTRUCTION WATER MANAGEMENT

GENERAL NOTES

- ALL MEASUREMENTS ARE IN METRES UNLESS OTHERWISE STATED.
- ALL NAMED ROADS SHALL BE ASSUMED TO BE PUBLIC UNLESS STATED OTHERWISE.
- AERIAL IMAGE FROM AUCKLAND COUNCIL AERIAL SURVEY, 2012.
- DIGITAL TERRAIN MODEL DERIVED FROM AERIAL PHOTOGRAMETRIC SURVEY (MARCH 2010) TO NZTM PROJECTION.
- EXISTING PROPERTY BOUNDARIES SOURCED FROM LINZ, APRIL 2013 UPDATE.
- DOES NOT DIFFERENTIATE BETWEEN INTERMITTENT AND PERMANENT STREAM, REFER TO DRAWING FE-101.

CONSTRUCTION WATER MANAGEMENT NOTES

- THIS CONSTRUCTION WATER MANAGEMENT PLAN IS CONCEPTUAL ONLY AND IS TO BE UPDATED / AMENDED BY THE CONTRACTOR DURING THE CONSTRUCTION PHASE. STAGING OF WORKS MAY INVOLVE RELOCATION OF THE SEDIMENT RETENTION DEVICES AFTER EACH STAGE.
- THE CONSTRUCTION WATER MANAGEMENT MEASURES SHOWN ON DRAWINGS ES-017 TO ES-023 ASSUME THE CONSTRUCTION STAGE WHEN CULVERTS AND PERMANENT STREAM DIVERSIONS ARE COMPLETED AND OPERATIONAL.
- THE CONSTRUCTION WATER MANAGEMENT PLANS IN DRAWINGS ES-017 TO ES-020 INCLUSIVE, SHOW THE WATER MANAGEMENT CONCEPTS ADOPTED FOR THE 'HILL FOCUS AREA' OF THE ASSESSMENT AND GENERALLY COVER THE MOIRS HILL ROAD SECTOR AS SHOWN ON DRAWING ES-010. THE PRINCIPLES PROVIDED IN THESE DRAWINGS ARE TO BE APPLIED TO OTHER SECTORS AS APPROPRIATE.
- THE CONSTRUCTION WATER MANAGEMENT PLANS IN DRAWINGS ES-020 TO ES-023 INCLUSIVE, SHOW THE WATER MANAGEMENT CONCEPTS ADOPTED FOR THE 'FLAT FOCUS AREA' OF THE ASSESSMENT AND GENERALLY COVER THE PERRY ROAD SECTOR AS SHOWN ON DRAWING ES-010. THE PRINCIPLES PROVIDED IN THESE DRAWINGS ARE TO BE APPLIED TO OTHER SECTORS AS APPROPRIATE.
- THE CONSTRUCTION WATER MANAGEMENT PLAN FOR SPOIL SITE SL10, ON DRAWINGS ES-091 TO ES-095, HAS BEEN PROVIDED AS AN EXAMPLE. THIS METHODOLOGY IS APPLIED TO ALL OTHER SPOIL SITES.

LIST OF ACRONYMS

- CESCP - CONSTRUCTION EROSION AND SEDIMENT CONTROL PLAN
- CIS - CONTAINER IMPOUNDMENT SYSTEM
- CWAR - CONSTRUCTION WATER ASSESSMENT REPORT
- CWD - CLEAN WATER DIVERSION
- DEB - DECANTING EARTH BUND
- DWD - DIRTY WATER DIVERSION
- ESC - EROSION AND SEDIMENT CONTROL
- MHWS - MEAN HIGH WATER SPRINGS
- TP90 - TECHNICAL PUBLICATION 90
- SRP - SEDIMENT RETENTION POND
- SSF - SUPER SILT FENCE

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



DISCLAIMER
The information shown on this drawing is solely for the purposes of supporting RMA applications for statutory approvals. All information shown is subject to review for compliance with approved consents and the outcomes of final design.

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

CONSTRUCTION WATER MANAGEMENT DRAWING INDEX, NOTES AND LEGEND			
SCALE NOT TO SCALE	CONTRACT No PA3748	DRAWING No ES-001	AMD 0