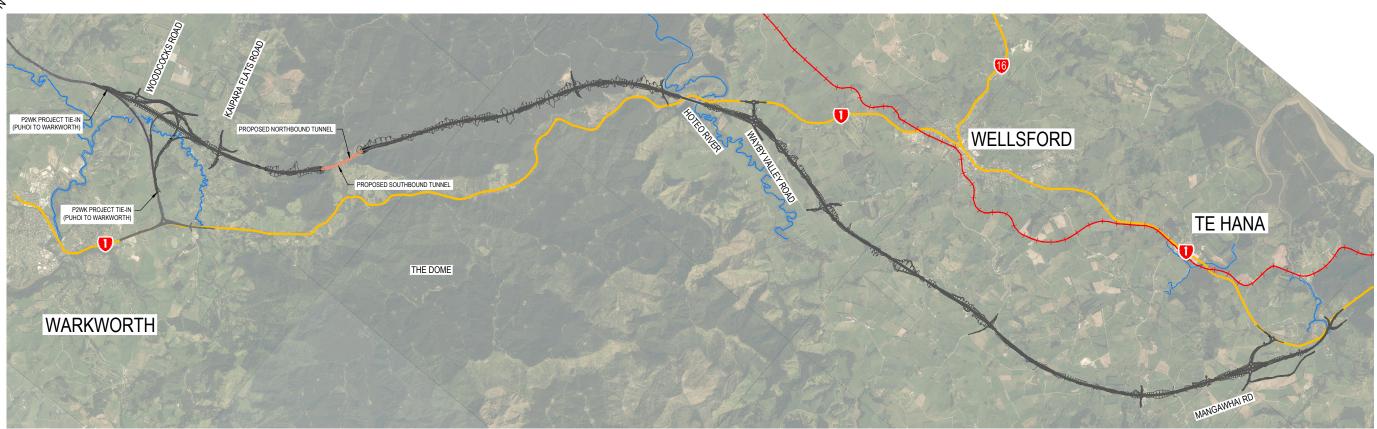






WARKWORTH TO WELLSFORD PROJECT VOLUME 3 - DRAWING SET





DRAWING NUMBER	DRAWING TITLE
	GENERAL
G-001	COVER SHEET & LOCATION OF PROPOSED PROJECT
G-002	DRAWING INDEX - SHEET 1 OF 2
G-003	DRAWING INDEX - SHEET 2 OF 2
G-010	GENERAL NOTES AND LEGEND - SHEET 1 OF 1
	ENGINEERING DESIGN DRAWINGS
	PROPOSED DESIGNATION & INDICATIVE ALIGNMENT
R-001	PROPOSED DESIGNATION & INDICATIVE ALIGNMENT NOTES AND LEGEND - SHEET 1 OF 1
R-100	PROPOSED DESIGNATION & INDICATIVE ALIGNMENT PLAN - SHEET LAYOUT (1:5000) - SHEET 1 OF
R-101	PROPOSED DESIGNATION & INDICATIVE ALIGNMENT PLAN - SHEET 1 OF 9
R-102	PROPOSED DESIGNATION & INDICATIVE ALIGNMENT PLAN - SHEET 2 OF 9
R-103	PROPOSED DESIGNATION & INDICATIVE ALIGNMENT PLAN - SHEET 3 OF 9
R-104	PROPOSED DESIGNATION & INDICATIVE ALIGNMENT PLAN - SHEET 4 OF 9
R-105	PROPOSED DESIGNATION & INDICATIVE ALIGNMENT PLAN - SHEET 5 OF 9
R-106	PROPOSED DESIGNATION & INDICATIVE ALIGNMENT PLAN - SHEET 6 OF 9
R-107	PROPOSED DESIGNATION & INDICATIVE ALIGNMENT PLAN - SHEET 7 OF 9
R-108	PROPOSED DESIGNATION & INDICATIVE ALIGNMENT PLAN - SHEET 8 OF 9
R-109	PROPOSED DESIGNATION & INDICATIVE ALIGNMENT PLAN - SHEET 9 OF 9
R-130	SOUTHBOUND ALIGNMENT MCS0 - SHEET LAYOUT PLAN (1:5000) - SHEET 1 OF 1
R-131	SOUTHBOUND ALIGNMENT MCS0 - PLAN AND LONGITUDINAL SECTION - SHEET 1 OF 9
R-132	SOUTHBOUND ALIGNMENT MCS0 - PLAN AND LONGITUDINAL SECTION - SHEET 2 OF 9
R-133	SOUTHBOUND ALIGNMENT MCS0 - PLAN AND LONGITUDINAL SECTION - SHEET 3 OF 9
R-134	SOUTHBOUND ALIGNMENT MCS0 - PLAN AND LONGITUDINAL SECTION - SHEET 4 OF 9
R-135	SOUTHBOUND ALIGNMENT MCS0 - PLAN AND LONGITUDINAL SECTION - SHEET 5 OF 9
R-136	SOUTHBOUND ALIGNMENT MCS0 - PLAN AND LONGITUDINAL SECTION - SHEET 6 OF 9
R-137	SOUTHBOUND ALIGNMENT MCS0 - PLAN AND LONGITUDINAL SECTION - SHEET 7 OF 9
R-138	SOUTHBOUND ALIGNMENT MCS0 - PLAN AND LONGITUDINAL SECTION - SHEET 8 OF 9
R-139	SOUTHBOUND ALIGNMENT MCS0 - PLAN AND LONGITUDINAL SECTION - SHEET 9 OF 9
R-181	TYPICAL CROSS SECTIONS - SHEET 1 OF 2
R-182	TYPICAL CROSS SECTIONS - SHEET 2 OF 2
	BRIDGE STRUCTURES
S-001	STRUCTURES LOCATION PLAN - SHEET 1 OF 1
S-051	BRIDGE 05 - PLAN AND ELEVATION - SHEET 1 OF 1
S-061	BRIDGE 06 - PLAN AND ELEVATION - SHEET 1 OF 1
S-111	BRIDGE 11 - PLAN AND ELEVATION - SHEET 1 OF 2
S-112	BRIDGE 11 - PLAN AND ELEVATION - SHEET 2 OF 2
S-201	BRIDGE 20 - PLAN AND ELEVATION - SHEET 1 OF 1
S-211	BRIDGE 21 - PLAN AND ELEVATION - SHEET 1 OF 2
S-212	BRIDGE 21 - PLAN AND ELEVATION - SHEET 2 OF 2
S-221	BRIDGE 22 - PLAN AND ELEVATION - SHEET 1 OF 1
	OPERATIONAL WATER MANAGEMENT
SW-001	OPERATIONAL WATER MANAGEMENT NOTES AND LEGEND - SHEET 1 OF 1
SW-011	OPERATIONAL WATER MANAGEMENT - WATER MANAGEMENT PLAN - SHEET 1 OF 23
SW-012	OPERATIONAL WATER MANAGEMENT - WATER MANAGEMENT PLAN - SHEET 2 OF 23
SW-013	OPERATIONAL WATER MANAGEMENT - WATER MANAGEMENT PLAN - SHEET 3 OF 23
SW-014	OPERATIONAL WATER MANAGEMENT - WATER MANAGEMENT PLAN - SHEET 4 OF 23
SW-015	OPERATIONAL WATER MANAGEMENT - WATER MANAGEMENT PLAN - SHEET 5 OF 23
SW-016	OPERATIONAL WATER MANAGEMENT - WATER MANAGEMENT PLAN - SHEET 6 OF 23
SW-017	OPERATIONAL WATER MANAGEMENT - WATER MANAGEMENT PLAN - SHEET 7 OF 23
SW-018	OPERATIONAL WATER MANAGEMENT - WATER MANAGEMENT PLAN - SHEET 8 OF 23
SW-019	OPERATIONAL WATER MANAGEMENT - WATER MANAGEMENT PLAN - SHEET 9 OF 23
SW-020	OPERATIONAL WATER MANAGEMENT - WATER MANAGEMENT PLAN - SHEET 10 OF 23
SW-021	OPERATIONAL WATER MANAGEMENT - WATER MANAGEMENT PLAN - SHEET 11 OF 23
	OPERATIONAL WATER MANAGEMENT - WATER MANAGEMENT PLAN - SHEET 12 OF 23
SW-022	OPERATIONAL WATER MANAGEMENT - WATER MANAGEMENT PLAN - SHEET 13 OF 23
SW-022 SW-023	
	OPERATIONAL WATER MANAGEMENT - WATER MANAGEMENT PLAN - SHEET 14 OF 23
SW-023	OPERATIONAL WATER MANAGEMENT - WATER MANAGEMENT PLAN - SHEET 14 OF 23 OPERATIONAL WATER MANAGEMENT - WATER MANAGEMENT PLAN - SHEET 15 OF 23
SW-023 SW-024 SW-025	OPERATIONAL WATER MANAGEMENT - WATER MANAGEMENT PLAN - SHEET 15 OF 23
SW-023 SW-024 SW-025 SW-026	
SW-023 SW-024 SW-025 SW-026 SW-027	OPERATIONAL WATER MANAGEMENT - WATER MANAGEMENT PLAN - SHEET 15 OF 23 OPERATIONAL WATER MANAGEMENT - WATER MANAGEMENT PLAN - SHEET 16 OF 23 OPERATIONAL WATER MANAGEMENT - WATER MANAGEMENT PLAN - SHEET 17 OF 23
SW-023 SW-024 SW-025 SW-026 SW-027 SW-028	OPERATIONAL WATER MANAGEMENT - WATER MANAGEMENT PLAN - SHEET 15 OF 23 OPERATIONAL WATER MANAGEMENT - WATER MANAGEMENT PLAN - SHEET 16 OF 23 OPERATIONAL WATER MANAGEMENT - WATER MANAGEMENT PLAN - SHEET 17 OF 23 OPERATIONAL WATER MANAGEMENT - WATER MANAGEMENT PLAN - SHEET 18 OF 23
SW-023 SW-024 SW-025 SW-026 SW-027	OPERATIONAL WATER MANAGEMENT - WATER MANAGEMENT PLAN - SHEET 15 OF 23 OPERATIONAL WATER MANAGEMENT - WATER MANAGEMENT PLAN - SHEET 16 OF 23 OPERATIONAL WATER MANAGEMENT - WATER MANAGEMENT PLAN - SHEET 17 OF 23

RAWING NUMBER	DRAWING TITLE
SW-031	OPERATIONAL WATER MANAGEMENT - WATER MANAGEMENT PLAN - SHEET 21 OF 23
SW-032	OPERATIONAL WATER MANAGEMENT - WATER MANAGEMENT PLAN - SHEET 22 OF 23
SW-033	OPERATIONAL WATER MANAGEMENT - WATER MANAGEMENT PLAN - SHEET 23 OF 23
	ENVIRONMENTAL SPECIALIST DRAWINGS
	CONSTRUCTION WATER MANAGEMENT
CW-001	CONSTRUCTION WATER MANAGEMENT - DRAWING INDEX, NOTES AND LEGEND
CW-011	CONSTRUCTION WATER MANAGEMENT - CONCEPT PLAN - SHEET 1 OF 23
CW-012	CONSTRUCTION WATER MANAGEMENT - CONCEPT PLAN - SHEET 2 OF 23
CW-013	CONSTRUCTION WATER MANAGEMENT - CONCEPT PLAN - SHEET 3 OF 23
CW-014	CONSTRUCTION WATER MANAGEMENT - CONCEPT PLAN - SHEET 4 OF 23
CW-015	CONSTRUCTION WATER MANAGEMENT - CONCEPT PLAN - SHEET 5 OF 23
CW-016	CONSTRUCTION WATER MANAGEMENT - CONCEPT PLAN - SHEET 6 OF 23
CW-017	CONSTRUCTION WATER MANAGEMENT - CONCEPT PLAN - SHEET 7 OF 23
CW-018	CONSTRUCTION WATER MANAGEMENT - CONCEPT PLAN - SHEET 8 OF 23
CW-019	CONSTRUCTION WATER MANAGEMENT - CONCEPT PLAN - SHEET 9 OF 23
CW-020	CONSTRUCTION WATER MANAGEMENT - CONCEPT PLAN - SHEET 10 OF 23
CW-021	CONSTRUCTION WATER MANAGEMENT - CONCEPT PLAN - SHEET 11 OF 23
CW-022	CONSTRUCTION WATER MANAGEMENT - CONCEPT PLAN - SHEET 12 OF 23
CW-022	CONSTRUCTION WATER MANAGEMENT - CONCEPT PLAN - SHEET 13 OF 23
CW-024	CONSTRUCTION WATER MANAGEMENT - CONCEPT PLAN - SHEET 14 OF 23
CW-025	CONSTRUCTION WATER MANAGEMENT - CONCEPT PLAN - SHEET 15 OF 23
CW-026	CONSTRUCTION WATER MANAGEMENT - CONCEPT PLAN - SHEET 16 OF 23
CW-020	CONSTRUCTION WATER MANAGEMENT - CONCEPT PLAN - SHEET 17 OF 23
CW-027 CW-028	CONSTRUCTION WATER MANAGEMENT - CONCEPT PLAN - SHEET 18 OF 23
CW-029	CONSTRUCTION WATER MANAGEMENT - CONCEPT PLAN - SHEET 19 OF 23
CW-030	CONSTRUCTION WATER MANAGEMENT - CONCEPT PLAN - SHEET 20 OF 23
CW-031	CONSTRUCTION WATER MANAGEMENT - CONCEPT PLAN - SHEET 21 OF 23
CW-032	CONSTRUCTION WATER MANAGEMENT - CONCEPT PLAN - SHEET 22 OF 23
CW-033	CONSTRUCTION WATER MANAGEMENT - CONCEPT PLAN - SHEET 23 OF 23
CW-071	CONSTRUCTION WATER MANAGEMENT - CONCEPTUAL CONSTRUCTION YARD OUTLINE
CW-072	CONSTRUCTION WATER MANAGEMENT - TYPICAL CONCEPT DESIGN DETAILS - SHEET 1 OF 5
CW-073	CONSTRUCTION WATER MANAGEMENT - TYPICAL CONCEPT DESIGN DETAILS - SHEET 2 OF 5
CW-074	CONSTRUCTION WATER MANAGEMENT - TYPICAL CONCEPT DESIGN DETAILS - SHEET 3 OF 5
CW-075	CONSTRUCTION WATER MANAGEMENT - TYPICAL CONCEPT DESIGN DETAILS - SHEET 4 OF 5
CW-076	CONSTRUCTION WATER MANAGEMENT - TYPICAL CONCEPT DESIGN DETAILS - SHEET 5 OF 5
CW-081	SOIL DISPOSAL SITE ESTABLISHMENT CONCEPTUAL - METHODOLOGY STAGING PLAN - SHEET 1 OF 4
CW-082	SOIL DISPOSAL SITE ESTABLISHMENT CONCEPTUAL - METHODOLOGY STAGING PLAN - SHEET 2 OF 4
CW-083	SOIL DISPOSAL SITE ESTABLISHMENT CONCEPTUAL - METHODOLOGY STAGING PLAN - SHEET 3 OF 4
CW-084	SOIL DISPOSAL SITE ESTABLISHMENT CONCEPTUAL - METHODOLOGY STAGING PLAN - SHEET 4 OF 4
CW-086	INDICATIVE ESC MEASURES - BRIDGE 11 - PLAN AND ELEVATION - SHEET 1 OF 2
CW-087	INDICATIVE ESC MEASURES - BRIDGE 11 - PLAN AND ELEVATION - SHEET 2 OF 2
	GROUND WATER DRAWINGS
GW-011	GROUND WATER - GEOLOGICAL LONGITUDINAL SECTION - SHEET 1 OF 10
	GROUND WATER - GEOLOGICAL LONGITUDINAL SECTION - SHEET 2 OF 10
GW-012	
GW-012 GW-013	GROUND WATER - GEOLOGICAL LONGITUDINAL SECTION - SHEET 3 OF 10
GW-013	GROUND WATER - GEOLOGICAL LONGITUDINAL SECTION - SHEET 3 OF 10
GW-013 GW-014	GROUND WATER - GEOLOGICAL LONGITUDINAL SECTION - SHEET 3 OF 10 GROUND WATER - GEOLOGICAL LONGITUDINAL SECTION - SHEET 4 OF 10
GW-013 GW-014 GW-015	GROUND WATER - GEOLOGICAL LONGITUDINAL SECTION - SHEET 3 OF 10 GROUND WATER - GEOLOGICAL LONGITUDINAL SECTION - SHEET 4 OF 10 GROUND WATER - GEOLOGICAL LONGITUDINAL SECTION - SHEET 5 OF 10
GW-013 GW-014 GW-015 GW-016	GROUND WATER - GEOLOGICAL LONGITUDINAL SECTION - SHEET 3 OF 10 GROUND WATER - GEOLOGICAL LONGITUDINAL SECTION - SHEET 4 OF 10 GROUND WATER - GEOLOGICAL LONGITUDINAL SECTION - SHEET 5 OF 10 GROUND WATER - GEOLOGICAL LONGITUDINAL SECTION - SHEET 6 OF 10
GW-013 GW-014 GW-015 GW-016 GW-017 GW-018	GROUND WATER - GEOLOGICAL LONGITUDINAL SECTION - SHEET 3 OF 10 GROUND WATER - GEOLOGICAL LONGITUDINAL SECTION - SHEET 4 OF 10 GROUND WATER - GEOLOGICAL LONGITUDINAL SECTION - SHEET 5 OF 10 GROUND WATER - GEOLOGICAL LONGITUDINAL SECTION - SHEET 6 OF 10 GROUND WATER - GEOLOGICAL LONGITUDINAL SECTION - SHEET 7 OF 10 GROUND WATER - GEOLOGICAL LONGITUDINAL SECTION - SHEET 8 OF 10
GW-013 GW-014 GW-015 GW-016 GW-017	GROUND WATER - GEOLOGICAL LONGITUDINAL SECTION - SHEET 3 OF 10 GROUND WATER - GEOLOGICAL LONGITUDINAL SECTION - SHEET 4 OF 10 GROUND WATER - GEOLOGICAL LONGITUDINAL SECTION - SHEET 5 OF 10 GROUND WATER - GEOLOGICAL LONGITUDINAL SECTION - SHEET 6 OF 10 GROUND WATER - GEOLOGICAL LONGITUDINAL SECTION - SHEET 7 OF 10
GW-013 GW-014 GW-015 GW-016 GW-017 GW-018 GW-019	GROUND WATER - GEOLOGICAL LONGITUDINAL SECTION - SHEET 3 OF 10 GROUND WATER - GEOLOGICAL LONGITUDINAL SECTION - SHEET 4 OF 10 GROUND WATER - GEOLOGICAL LONGITUDINAL SECTION - SHEET 5 OF 10 GROUND WATER - GEOLOGICAL LONGITUDINAL SECTION - SHEET 6 OF 10 GROUND WATER - GEOLOGICAL LONGITUDINAL SECTION - SHEET 7 OF 10 GROUND WATER - GEOLOGICAL LONGITUDINAL SECTION - SHEET 8 OF 10 GROUND WATER - GEOLOGICAL LONGITUDINAL SECTION - SHEET 9 OF 10
GW-013 GW-014 GW-015 GW-016 GW-017 GW-018 GW-019 GW-020	GROUND WATER - GEOLOGICAL LONGITUDINAL SECTION - SHEET 3 OF 10 GROUND WATER - GEOLOGICAL LONGITUDINAL SECTION - SHEET 4 OF 10 GROUND WATER - GEOLOGICAL LONGITUDINAL SECTION - SHEET 5 OF 10 GROUND WATER - GEOLOGICAL LONGITUDINAL SECTION - SHEET 6 OF 10 GROUND WATER - GEOLOGICAL LONGITUDINAL SECTION - SHEET 7 OF 10 GROUND WATER - GEOLOGICAL LONGITUDINAL SECTION - SHEET 8 OF 10 GROUND WATER - GEOLOGICAL LONGITUDINAL SECTION - SHEET 9 OF 10 GROUND WATER - GEOLOGICAL LONGITUDINAL SECTION - SHEET 10 OF 10 MARINE ECOLOGY DRAWINGS
GW-013 GW-014 GW-015 GW-016 GW-017 GW-018 GW-019 GW-020	GROUND WATER - GEOLOGICAL LONGITUDINAL SECTION - SHEET 3 OF 10 GROUND WATER - GEOLOGICAL LONGITUDINAL SECTION - SHEET 4 OF 10 GROUND WATER - GEOLOGICAL LONGITUDINAL SECTION - SHEET 5 OF 10 GROUND WATER - GEOLOGICAL LONGITUDINAL SECTION - SHEET 6 OF 10 GROUND WATER - GEOLOGICAL LONGITUDINAL SECTION - SHEET 7 OF 10 GROUND WATER - GEOLOGICAL LONGITUDINAL SECTION - SHEET 8 OF 10 GROUND WATER - GEOLOGICAL LONGITUDINAL SECTION - SHEET 9 OF 10 GROUND WATER - GEOLOGICAL LONGITUDINAL SECTION - SHEET 10 OF 10 MARINE ECOLOGY DRAWINGS MARINE ECOLOGICAL ASSESSMENT KAIPARA HARBOUR
GW-013 GW-014 GW-015 GW-016 GW-017 GW-018 GW-019 GW-020 ME-011 ME-012	GROUND WATER - GEOLOGICAL LONGITUDINAL SECTION - SHEET 3 OF 10 GROUND WATER - GEOLOGICAL LONGITUDINAL SECTION - SHEET 4 OF 10 GROUND WATER - GEOLOGICAL LONGITUDINAL SECTION - SHEET 5 OF 10 GROUND WATER - GEOLOGICAL LONGITUDINAL SECTION - SHEET 6 OF 10 GROUND WATER - GEOLOGICAL LONGITUDINAL SECTION - SHEET 7 OF 10 GROUND WATER - GEOLOGICAL LONGITUDINAL SECTION - SHEET 8 OF 10 GROUND WATER - GEOLOGICAL LONGITUDINAL SECTION - SHEET 9 OF 10 GROUND WATER - GEOLOGICAL LONGITUDINAL SECTION - SHEET 10 OF 10 MARINE ECOLOGY DRAWINGS MARINE ECOLOGICAL ASSESSMENT KAIPARA HARBOUR MARINE ECOLOGICAL ASSESSMENT KAIPARA AND MAHURANGI HARBOURS
GW-013 GW-014 GW-015 GW-016 GW-017 GW-018 GW-019 GW-020 ME-011 ME-012 ME-013	GROUND WATER - GEOLOGICAL LONGITUDINAL SECTION - SHEET 3 OF 10 GROUND WATER - GEOLOGICAL LONGITUDINAL SECTION - SHEET 4 OF 10 GROUND WATER - GEOLOGICAL LONGITUDINAL SECTION - SHEET 5 OF 10 GROUND WATER - GEOLOGICAL LONGITUDINAL SECTION - SHEET 6 OF 10 GROUND WATER - GEOLOGICAL LONGITUDINAL SECTION - SHEET 7 OF 10 GROUND WATER - GEOLOGICAL LONGITUDINAL SECTION - SHEET 8 OF 10 GROUND WATER - GEOLOGICAL LONGITUDINAL SECTION - SHEET 9 OF 10 GROUND WATER - GEOLOGICAL LONGITUDINAL SECTION - SHEET 10 OF 10 MARINE ECOLOGY DRAWINGS MARINE ECOLOGICAL ASSESSMENT KAIPARA HARBOUR MARINE ECOLOGICAL ASSESSMENT KAIPARA AND MAHURANGI HARBOURS MARINE ECOLOGICAL ASSESSMENT MAHURANGI HARBOUR
GW-013 GW-014 GW-015 GW-016 GW-017 GW-019 GW-020 ME-011 ME-012 ME-013 ME-014	GROUND WATER - GEOLOGICAL LONGITUDINAL SECTION - SHEET 3 OF 10 GROUND WATER - GEOLOGICAL LONGITUDINAL SECTION - SHEET 4 OF 10 GROUND WATER - GEOLOGICAL LONGITUDINAL SECTION - SHEET 5 OF 10 GROUND WATER - GEOLOGICAL LONGITUDINAL SECTION - SHEET 6 OF 10 GROUND WATER - GEOLOGICAL LONGITUDINAL SECTION - SHEET 7 OF 10 GROUND WATER - GEOLOGICAL LONGITUDINAL SECTION - SHEET 8 OF 10 GROUND WATER - GEOLOGICAL LONGITUDINAL SECTION - SHEET 9 OF 10 GROUND WATER - GEOLOGICAL LONGITUDINAL SECTION - SHEET 9 OF 10 GROUND WATER - GEOLOGICAL LONGITUDINAL SECTION - SHEET 10 OF 10 MARINE ECOLOGICAL ASSESSMENT KAIPARA HARBOUR MARINE ECOLOGICAL ASSESSMENT KAIPARA AND MAHURANGI HARBOURS MARINE ECOLOGICAL ASSESSMENT MAHURANGI HARBOUR MAHURANGI SEDIMENT DEPOSITION SCENARIO
GW-013 GW-014 GW-015 GW-016 GW-017 GW-018 GW-019 GW-020 ME-011 ME-012 ME-013 ME-014 ME-015	GROUND WATER - GEOLOGICAL LONGITUDINAL SECTION - SHEET 3 OF 10 GROUND WATER - GEOLOGICAL LONGITUDINAL SECTION - SHEET 4 OF 10 GROUND WATER - GEOLOGICAL LONGITUDINAL SECTION - SHEET 5 OF 10 GROUND WATER - GEOLOGICAL LONGITUDINAL SECTION - SHEET 5 OF 10 GROUND WATER - GEOLOGICAL LONGITUDINAL SECTION - SHEET 7 OF 10 GROUND WATER - GEOLOGICAL LONGITUDINAL SECTION - SHEET 8 OF 10 GROUND WATER - GEOLOGICAL LONGITUDINAL SECTION - SHEET 9 OF 10 GROUND WATER - GEOLOGICAL LONGITUDINAL SECTION - SHEET 9 OF 10 GROUND WATER - GEOLOGICAL LONGITUDINAL SECTION - SHEET 10 OF 10 MARINE ECOLOGICAL ASSESSMENT KAIPARA HARBOUR MARINE ECOLOGICAL ASSESSMENT KAIPARA AND MAHURANGI HARBOURS MARINE ECOLOGICAL ASSESSMENT MAHURANGI HARBOUR MAHURANGI SEDIMENT DEPOSITION SCENARIO
GW-013 GW-014 GW-015 GW-016 GW-017 GW-018 GW-019 GW-020 ME-011 ME-012 ME-013 ME-014 ME-015 ME-016	GROUND WATER - GEOLOGICAL LONGITUDINAL SECTION - SHEET 3 OF 10 GROUND WATER - GEOLOGICAL LONGITUDINAL SECTION - SHEET 4 OF 10 GROUND WATER - GEOLOGICAL LONGITUDINAL SECTION - SHEET 5 OF 10 GROUND WATER - GEOLOGICAL LONGITUDINAL SECTION - SHEET 6 OF 10 GROUND WATER - GEOLOGICAL LONGITUDINAL SECTION - SHEET 7 OF 10 GROUND WATER - GEOLOGICAL LONGITUDINAL SECTION - SHEET 8 OF 10 GROUND WATER - GEOLOGICAL LONGITUDINAL SECTION - SHEET 9 OF 10 GROUND WATER - GEOLOGICAL LONGITUDINAL SECTION - SHEET 9 OF 10 GROUND WATER - GEOLOGICAL LONGITUDINAL SECTION - SHEET 10 OF 10 MARINE ECOLOGICAL ASSESSMENT KAIPARA HARBOUR MARINE ECOLOGICAL ASSESSMENT KAIPARA AND MAHURANGI HARBOURS MARINE ECOLOGICAL ASSESSMENT MAHURANGI HARBOUR MAHURANGI SEDIMENT DEPOSITION SCENARIO MAHURANGI SEDIMENT DEPOSITION SCENARIO
GW-013 GW-014 GW-015 GW-016 GW-017 GW-019 GW-020 ME-011 ME-012 ME-013 ME-014 ME-015	GROUND WATER - GEOLOGICAL LONGITUDINAL SECTION - SHEET 3 OF 10 GROUND WATER - GEOLOGICAL LONGITUDINAL SECTION - SHEET 4 OF 10 GROUND WATER - GEOLOGICAL LONGITUDINAL SECTION - SHEET 5 OF 10 GROUND WATER - GEOLOGICAL LONGITUDINAL SECTION - SHEET 5 OF 10 GROUND WATER - GEOLOGICAL LONGITUDINAL SECTION - SHEET 7 OF 10 GROUND WATER - GEOLOGICAL LONGITUDINAL SECTION - SHEET 8 OF 10 GROUND WATER - GEOLOGICAL LONGITUDINAL SECTION - SHEET 9 OF 10 GROUND WATER - GEOLOGICAL LONGITUDINAL SECTION - SHEET 9 OF 10 GROUND WATER - GEOLOGICAL LONGITUDINAL SECTION - SHEET 10 OF 10 MARINE ECOLOGICAL ASSESSMENT KAIPARA HARBOUR MARINE ECOLOGICAL ASSESSMENT KAIPARA AND MAHURANGI HARBOURS MARINE ECOLOGICAL ASSESSMENT MAHURANGI HARBOUR MAHURANGI SEDIMENT DEPOSITION SCENARIO

DRAWING NUMBER	DRAWING TITLE
ME-020	MAHURANGI SEDIMENT DEPOSITION SCENARIO
ME-021	MAHURANGI SEDIMENT DEPOSITION SCENARIO
ME-022	KAIPARA SEDIMENT DEPOSITION SCENARIO
ME-023	KAIPARA SEDIMENT DEPOSITION SCENARIO
ME-024	KAIPARA SEDIMENT DEPOSITION SCENARIO
ME-025	KAIPARA SEDIMENT DEPOSITION SCENARIO
ME-026	KAIPARA SEDIMENT DEPOSITION SCENARIO
ME-027	KAIPARA SEDIMENT DEPOSITION SCENARIO
	OPERATIONAL NOISE DRAWINGS
ON-010	OPERATIONAL NOISE ASSESSMENT NOISE CONTOUR MAP - SHEET 1 OF 16
ON-011	OPERATIONAL NOISE ASSESSMENT NOISE CONTOUR MAP - SHEET 2 OF 16
ON-012	OPERATIONAL NOISE ASSESSMENT NOISE CONTOUR MAP - SHEET 3 OF 16
ON-013	OPERATIONAL NOISE ASSESSMENT NOISE CONTOUR MAP- SHEET 4 OF 16
ON-014	OPERATIONAL NOISE ASSESSMENT NOISE CONTOUR MAP - SHEET 5 OF 16
ON-015	OPERATIONAL NOISE ASSESSMENT NOISE CONTOUR MAP - SHEET 6 OF 16
ON-016	OPERATIONAL NOISE ASSESSMENT NOISE CONTOUR MAP - SHEET 7 OF 16
ON-010	OPERATIONAL NOISE ASSESSMENT NOISE CONTOUR MAP - SHEET 8 OF 16
ON-018	OPERATIONAL NOISE ASSESSMENT NOISE CONTOUR MAP - SHEET 9 OF 16
ON-019	OPERATIONAL NOISE ASSESSMENT NOISE CONTOUR MAP - SHEET 10 OF 16
ON-020	OPERATIONAL NOISE ASSESSMENT NOISE CONTOUR MAP - SHEET 11 OF 16
ON-021	OPERATIONAL NOISE ASSESSMENT NOISE CONTOUR MAP - SHEET 12 OF 16
ON-022	OPERATIONAL NOISE ASSESSMENT NOISE CONTOUR MAP - SHEET 13 OF 16
ON-023	OPERATIONAL NOISE ASSESSMENT NOISE CONTOUR MAP - SHEET 14 OF 16
ON-024	OPERATIONAL NOISE ASSESSMENT NOISE CONTOUR MAP - SHEET 15 OF 16
ON-025	OPERATIONAL NOISE ASSESSMENT NOISE CONTOUR MAP - SHEET 16 OF 16
	ECOLOGICAL SITES - VEGETATION DRAWINGS
ES-010	TERRESTRIAL SURVEY AREA - WARKWORTH NORTH - SHEET 1 OF 5
ES-011	TERRESTRIAL SURVEY AREA - DOME VALLEY FOREST - SHEET 2 OF 5
ES-012	TERRESTRIAL SURVEY AREA - HOTEO NORTH - HOTEO RIVER - SHEET 3 OF 5
ES-013	TERRESTRIAL SURVEY AREA - HOTEO NORTH - WELLSFORD EAST - SHEET 4 OF 5
ES-014	TERRESTRIAL SURVEY AREA - HOTEO NORTH - TE HANA - SHEET 5 OF 5
	ECOLOGICAL SITES - HERPETOFAUNA DRAWINGS
ES-020	HERPETOFAUNA RECORDS - WARKWORTH NORTH - SHEET 1 OF 5
ES-021	HERPETOFAUNA RECORDS - DOME VALLEY FOREST - SHEET 2 OF 5
ES-022	HERPETOFAUNA RECORDS - HOTEO NORTH - HOTEO RIVER - SHEET 3 OF 5
ES-023	HERPETOFAUNA RECORDS - HOTEO NORTH - WELLSFORD EAST - SHEET 4 OF 5
ES-024	HERPETOFAUNA RECORDS - HOTEO NORTH - TE HANA - SHEET 5 OF 5
	ECOLOGICAL SITES - AVIFAUNA DRAWINGS
ES-030	AVIFAUNA SAMPLING LOCATIONS - WARKWORTH NORTH - SHEET 1 OF 5
ES-031	AVIFAUNA SAMPLING LOCATIONS - DOME VALLEY FOREST - SHEET 2 OF 5
ES-032	AVIFAUNA SAMPLING LOCATIONS - HOTEO NORTH - HOTEO RIVER - SHEET 3 OF 5
ES-033	AVIFAUNA SAMPLING LOCATIONS - HOTEO NORTH - WELLSFORD EAST - SHEET 4 OF 5
ES-034	AVIFAUNA SAMPLING LOCATIONS - HOTEO NORTH - TE HANA - SHEET 5 OF 5
	ECOLOGICAL SITES - BAT DRAWINGS
ES-040	BAT SAMPLING LOCATIONS - WARKWORTH NORTH - SHEET 1 OF 5
ES-041	BAT SAMPLING LOCATIONS - DOME VALLEY FOREST - SHEET 2 OF 5
ES-042	BAT SAMPLING LOCATIONS - HOTEO NORTH - HOTEO RIVER - SHEET 3 OF 5
ES-043	BAT SAMPLING LOCATIONS - HOTEO NORTH - WELLSFORD EAST - SHEET 4 OF 5
ES-044	BAT SAMPLING LOCATIONS - HOTEO NORTH - TE HANA - SHEET 5 OF 5
	ECOLOCICAL CITES EDECLIMATED DRAMINOS
E0 050	ECOLOGICAL SITES - FRESHWATER DRAWINGS
ES-050	FRESHWATER SITE MAP - WARKWORTH NORTH - SHEET 1 OF 5
ES-051	FRESHWATER SITE MAP - DOME VALLEY FOREST - SHEET 2 OF 5
ES-052	FRESHWATER SITE MAP - HOTEO NORTH - HOTEO RIVER - SHEET 3 OF 5
ES-053	FRESHWATER SITE MAP - HOTEO NORTH - WELLSFORD EAST - SHEET 4 OF 5
ES-054	FRESHWATER SITE MAP - HOTEO NORTH - TE HANA - SHEET 5 OF 5
	ECOLOGICAL VALUES - INDIVIDUAL SITE DRAWINGS
EV-001	ECOLOGICAL ASSESSMENT TERRESTRIAL VALUES MAP - SHEET 1 OF 6
EV-002	ECOLOGICAL ASSESSMENT TERRESTRIAL VALUES MAP - SHEET 2 OF 6
EV-002	ECOLOGICAL ASSESSMENT TERRESTRIAL VALUES MAP - SHEET 3 OF 6
EV-004	ECOLOGICAL ASSESSMENT TERRESTRIAL VALUES MAP - SHEET 4 OF 6
EV-005	ECOLOGICAL ASSESSMENT TERRESTRIAL VALUES MAP - SHEET 5 OF 6
EV-006	ECOLOGICAL ASSESSMENT TERRESTRIAL VALUES MAP - SHEET 6 OF 6

0	ISSUED FOR RMA APPROVALS	WAS	FCW*	BN*	07/19
No	Revision Note: * indicates signatures on original issue of drawing or last revision of drawing	Drawn	Checked	Approved	Date





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F	OR RMA	APPROVAL	S	

Drawn WAS Drafting FCW* Designed IH Design FCW*

Approved BN* Date JULY 2019

This Drawing must not be Original Size

Project WARKWORTH TO WELLSFORD PROJECT

DRAWING INDEX SHEET 1 OF 2

A1 Contract: PA4156 Drawing No: G-002 Sheet: 1 OF 2 Rev: 0

DRAWING NUMBER	DRAWING TITLE
	PRIORITY ECOLOGICAL SITE DRAWINGS
PES-010	PRIORITY ECOLOGICAL SITES (PES) OVERVIEW MAP - SHEET 1 OF 1
PES-020	OVERVIEW OF PES IN THE UPPER KOURAWHERO STREAM CATCHMENT AREA - SHEET 1 OF 1
PES-030	PRIORITY ECOLOGICAL SITES - WN_T_MAHU_01 - SHEET 1 OF 14
PES-031	PRIORITY ECOLOGICAL SITES - WN_T_MAHU_02 - SHEET 2 OF 14
PES-032	PRIORITY ECOLOGICAL SITES - WN_W_KOURA_01 - SHEET 3 OF 14
PES-033	PRIORITY ECOLOGICAL SITES - WN_T_KOURA_01A - SHEET 4 OF 14
PES-034	PRIORITY ECOLOGICAL SITES - WN_T_KOURA_02 - SHEET 5 OF 14
PES-035	PRIORITY ECOLOGICAL SITES - WN_W_KORUA_02 - SHEET 6 OF 14
PES-036	PRIORITY ECOLOGICAL SITES - WN_W_KOURA_03 - SHEET 7 OF 14
PES-037	PRIORITY ECOLOGICAL SITES - WN_W_KOURA_04 - SHEET 8 OF 14
PES-038	PRIORITY ECOLOGICAL SITES - WN_W_KOURA_05 - SHEET 9 OF 14
PES-039	PRIORITY ECOLOGICAL SITES - DVF_W_KORUA_01 - SHEET 10 OF 14
PES-040	PRIORITY ECOLOGICAL SITES - DVF_T_KORUA_02 - SHEET 11 OF 14
PES-041	PRIORITY ECOLOGICAL SITES - HN_T_HOTEO_02 - SHEET 12 OF 14
PES-042	PRIORITY ECOLOGICAL SITES - HN_T_HOTEO_02A - SHEET 13 OF 14
PES-043	PRIORITY ECOLOGICAL SITES - HN_W_HOTEO_02 - SHEET 14 OF 14
	LANDSCAPE AND ECOLOGICAL MITIGATION DRAWINGS
EM-010	LANDSCAPE AND ECOLOGICAL MITIGATION MAPS - SHEET 1 OF 6
EM-011	LANDSCAPE AND ECOLOGICAL MITIGATION MAPS - SHEET 2 OF 6
EM-012	LANDSCAPE AND ECOLOGICAL MITIGATION MAPS - SHEET 3 OF 6
EM-013	LANDSCAPE AND ECOLOGICAL MITIGATION MAPS - SHEET 4 OF 6
EM-014	LANDSCAPE AND ECOLOGICAL MITIGATION MAPS - SHEET 5 OF 6
EM-015	LANDSCAPE AND ECOLOGICAL MITIGATION MAPS - SHEET 6 OF 6
	LANDSCAPE VISUAL SIMULATIONS
LS-001	VIEWPOINT 8: SH1 LOOKING SOUTH-EAST
LS-002	VIEWPOINT 9: WAYBY STATION ROAD LOOKING EAST
LS-003	VIEWPOINT 9: WAYBY STATION ROAD LOOKING EAST
LS-004	VIEWPOINT 15: WHANGARIPO VALLEY ROAD LOOKING WEST
LS-005	VIEWPOINT 15: WHANGARIPO VALLEY ROAD LOOKING WEST
LS-006	VIEWPOINT 20: VIPOND ROAD (EAST) LOOKING SOUTH (2 MAY 2017)
LS-007	VIEWPOINT 20: VIPOND ROAD (EAST) LOOKING SOUTH (2 MAY 2017)
LS-008	VIEWPOINT 21: CHARIS LANE LOOKING NORTH-EAST
LS-009	VIEWPOINT 21: CHARIS LANE LOOKING NORTH-EAST
	PLANNING VERSION ULDF
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0	ISSUED FOR RMA APPROVALS	WAS	FCW*	BN*	07/19
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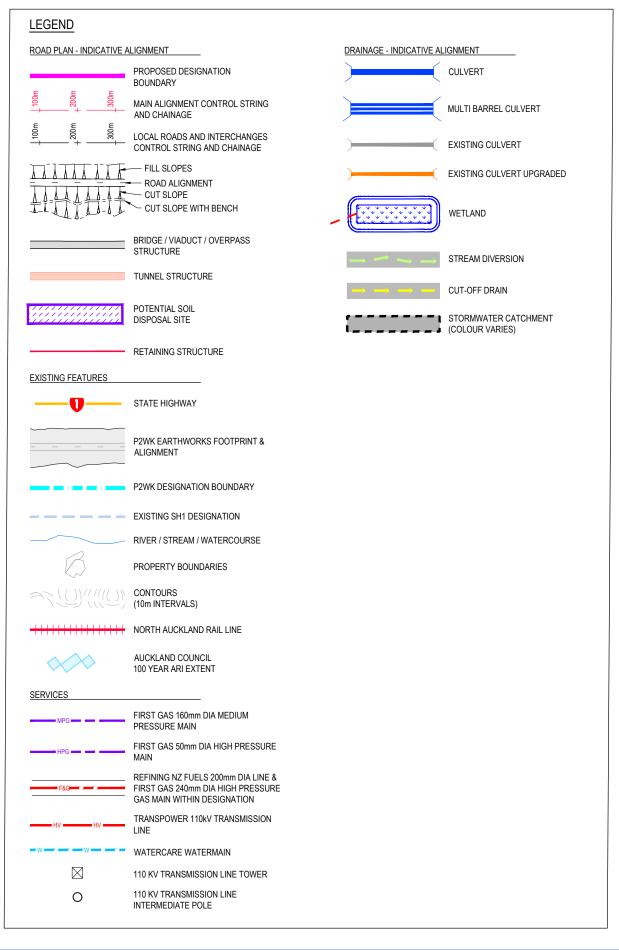
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nolo NTC		This Drawing must not be		Original Size		

Project WARKWORTH TO WELLSFORD PROJECT

DRAWING INDEX SHEET 2 OF 2

This Drawing must not be used for Construction unless signed as Approved

A1 Contract: PA4156 Drawing No: G-003 Sheet: 2 OF 2 Rev: 0



GENERAL NOTES

- 1. THE ALIGNMENT IS INDICATIVE ONLY.
- 2. ALL MEASUREMENTS ARE IN METRES UNLESS OTHERWISE STATED.
- 3. ALL NAMED ROADS ARE ASSUMED TO BE PUBLIC UNLESS STATED OTHERWISE.
- 4. AERIAL IMAGE FROM AUCKLAND COUNCIL AERIAL SURVEY, 2012.
- DIGITAL TERRAIN MODEL IS COMBINED FROM AERIAL SURVEY (AUG 2010) & AUCKLAND COUNCIL LIDAR DATA TO NZTM PROJECTION.
- EXISTING PROPERTY BOUNDARIES SOURCED FROM LINZ, MAY 2019 UPDATE.
- ALL STREAMS WILL BE BRIDGED, CULVERTED AND/OR DIVERTED. REFER SW SERIES FOR INDICATIVE CULVERTS AND DIVERSION LOCATIONS.
- ALL SOIL DISPOSAL SITE LOCATIONS AND SHAPES ARE INDICATIVE ONLY. ALL SOIL DISPOSAL SITE WORKS ARE TO OCCUR OUTSIDE OF ANY STREAM CHANNEL.
- 9. NO CULVERTS LONGER THAN 30m WILL BE LOCATED IN A SIGNIFICANT ECOLOGICAL AREA (SEA) AS IDENTIFIED IN THE AUCKLAND UNITARY PLAN.

OPERATIONAL WATER MANAGEMENT NOTES

- SOME EXISTING CULVERTS BENEATH STATE HIGHWAY 1 ARE SHOWN, WHERE INDICATIVE DESIGN PROPOSES UPGRADES TO THESE CULVERTS. OTHER EXISTING CULVERTS BENEATH STATE HIGHWAY 1
- 100 YEAR ARI HEADWATER EXTENTS ARE NOT SHOWN AT SOIL DISPOSAL SITES, AS THE FINAL SURFACE PROFILE IS SUBJECT TO DETAILED DESIGN.
- 100 YEAR ARI FLOOD EXTENTS SHOWN ARE BASED ON AUCKLAND COUNCIL GIS LAYER, JULY 2013, AND THEREFORE ARE WITHOUT THE PROJECT IN PLACE.
- WATER MANAGEMENT IS NOT SHOWN FOR ACCESS TRACKS, SUCH AS THOSE PROVIDING ACCESS TO THE INDICATIVE ALIGNMENT WITHIN THE FORESTRY AREA. CROSS DRAINAGE IS TO BE MANAGED BY CULVERTING. LONGITUDINAL DRAINAGE IS TO BE MANAGED BY VEGETATED ROADSIDE DRAINS.
- NO CULVERTS LONGER THAN 30m WILL BE LOCATED IN A SIGNIFICANT ECOLOGICAL AREA (SEA) AS IDENTIFIED IN THE AUCKLAND UNITARY PLAN. CULVERTS LOCATIONS ARE INDICATIVE ONLY.
- CULVERT INFORMATION REFER TO CULVERT SUMMARY TABLE IN STORMWATER REPORT.
- WETLAND SHAPE IS INDICATIVE ONLY TO PRESENT PROPOSED LOCATION AND SIZING. SHAPING TO CONTOURS IS SUBJECT TO DETAILED DESIGN.
- STREAM DIVERSIONS AND CUT OFF DRAINS ARE BASED OFF EXISTING CONTOURS. WHERE A SOIL DISPOSAL SITE IS TO BE USED, THE STREAM DIVERSION OR CUT OFF DRAIN SHALL BE AMENDED TO

SERVICES NOTES

- POWER DISTRIBUTION AND COMMUNICATION CABLING (i.e. VECTOR, CHORUS, SPARK, VODAFONE) ROUTES ARE NOT SHOWN. AFFECTED ASSETS WILL BE RELOCATED OR PROTECTED.
- THE SERVICES SHOWN SHOULD BE CONSIDERED INDICATIVE ONLY AND ARE BASED ON RECORDS SUPPLIED BY THE UTILITY COMPANIES. PRIVATE SERVICES AND CONNECTIONS ARE NOT SHOWN.

GLOSSARY

ARI = ANNUAL RECURRENCE INTERVAL

MSE = MECHANICALLY STABILISED EARTH

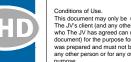
P2WK = PUHOI TO WARKWORTH PROJECT

ALL INFORMATION SHOWN IS SUBJECT TO FINAL DESIGN AND THE DETAILS MAY CHANGE. AREAS AND MEASUREMENTS ARE SUBJECT TO SURVEY

0	ISSUED FOR RMA APPROVALS	WAS	FCW*	BN*	07/19
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Approved BN*		Date JULY 2019		

roject WARKWORTH TO WELLSFORD PROJECT GENERAL NOTES AND LEGEND