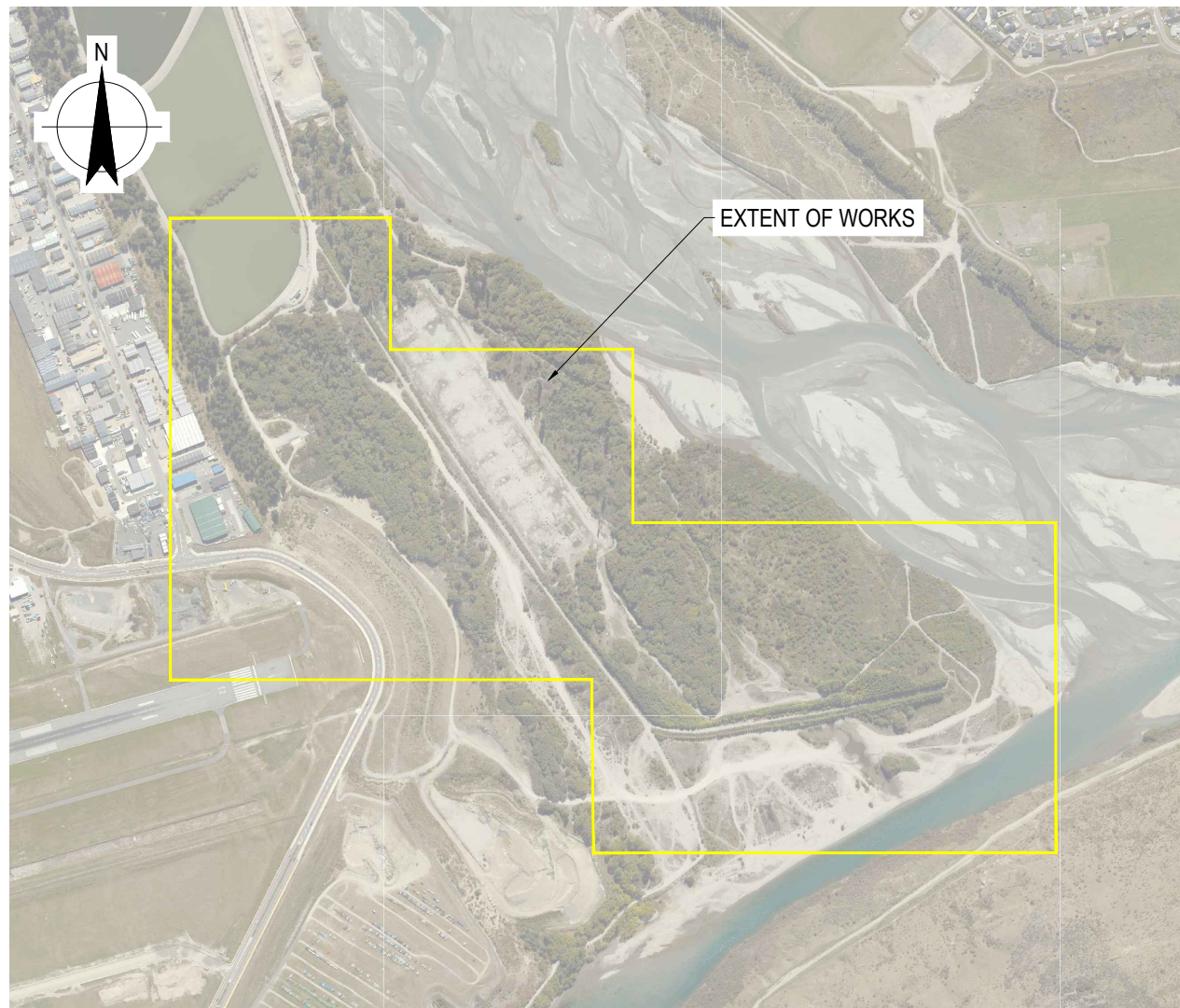


# QUEENSTOWN LAKES DISTRICT COUNCIL

## SHOTOVER WWTP EFFLUENT ALTERNATIVE DISCHARGE

### 12645246



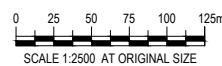
PLAN  
NTS

DRAWING LIST		REVISION			
DRAWING NO.	DRAWING TITLE	14	11	26	
		04	05	05	
		26	26	26	
GENERAL					
12645246-GHD-00-00-DRG-GN-00002	COVER SHEET AND DRAWING LIST			0	
PROCESS					
12645246-GHD-00-00-DRG-PR-00001	PROCESS FLOW DIAGRAM	A	B	0	
12645246-GHD-00-00-DRG-PR-00002	PIPING AND INSTRUMENTATION DIAGRAM - HYDRAULIC PROFILE	A	B	0	
12645246-GHD-00-00-DRG-PR-00003	PIPING AND INSTRUMENTATION DIAGRAM - LEGENDS - SHEET 1	A	B	0	
12645246-GHD-00-00-DRG-PR-00004	PIPING AND INSTRUMENTATION DIAGRAM - LEGENDS - SHEET 2	A	B	0	
12645246-GHD-00-04-DRG-PR-00005	PIPING AND INSTRUMENTATION DIAGRAM - SECONDARY CLARIFIERS	A	B	0	
12645246-GHD-00-07-DRG-PR-00006	PIPING AND INSTRUMENTATION DIAGRAM - TERTIARY FILTER - PUMP STATION	A	B	0	
12645246-GHD-00-07-DRG-PR-00007	PIPING AND INSTRUMENTATION DIAGRAM - TERTIARY FILTERS - SHEET 1	A	B	0	
12645246-GHD-00-07-DRG-PR-00008	PIPING AND INSTRUMENTATION DIAGRAM - TERTIARY FILTERS - SHEET 2	A	B	0	
12645246-GHD-00-07-DRG-PR-00009	PIPING AND INSTRUMENTATION DIAGRAM - TREATED WASTEWATER CALAMITY POND	A	B	0	
12645246-GHD-00-07-DRG-PR-00010	PIPING AND INSTRUMENTATION DIAGRAM - UV PLANT	A	B	0	
12645246-GHD-00-07-DRG-PR-00011	PIPING AND INSTRUMENTATION DIAGRAM - ENHANCED UV TREATMENT	A	B	0	
12645246-GHD-00-07-DRG-PR-00012	PIPING AND INSTRUMENTATION DIAGRAM - DISCHARGE OUTFALL	A	B	0	
CIVIL					
12645246-GHD-00-01-DRG-CI-00001	EFFLUENT DISPOSAL - OVERALL LOCALITY	A	B	0	
12645246-GHD-00-07-DRG-CI-00002	GENERAL ARRANGEMENT PLAN - SHEET 1	A	B	0	
12645246-GHD-00-07-DRG-CI-00003	GENERAL ARRANGEMENT PLAN - SHEET 2	A	B	0	
12645246-GHD-00-07-DRG-CI-00004	CALAMITY POND INTERFACE DIAGRAM	A	B	0	
12645246-GHD-00-07-DRG-CI-00005	EFFLUENT DISCHARGE PIPELINE - PLAN AND PROFILE - SHEET 1 OF 4	A	B	0	
12645246-GHD-00-07-DRG-CI-00006	EFFLUENT DISCHARGE PIPELINE - PLAN AND PROFILE - SHEET 2 OF 4	A	B	0	
12645246-GHD-00-07-DRG-CI-00007	EFFLUENT DISCHARGE PIPELINE - PLAN AND PROFILE - SHEET 3 OF 4	A	B	0	
12645246-GHD-00-07-DRG-CI-00008	EFFLUENT DISCHARGE PIPELINE - PLAN AND PROFILE - SHEET 4 OF 4	A	B	0	
12645246-GHD-00-07-DRG-CI-00009	TYPICAL CROSS SECTIONS - EFFLUENT CONVEYANCE PIPELINE	A	B	0	
12645246-GHD-00-07-DRG-CI-00013	EFFLUENT DISCHARGE PIPELINE - INDICATIVE ROCK OUTFALL STRUCTURE - PLAN AND DETAILS	A	B	0	
12645246-GHD-00-07-DRG-CI-00015	TERTIARY FILTER - ENGINEER FILL AREA - EARTHWORKS PLAN	A	B	0	
MECHANICAL					
12645246-GHD-00-07-DRG-MP-00001	TERTIARY FILTER AND UV BUILDING - GENERAL ARRANGEMENT DRAWING			0	
12645246-GHD-00-07-DRG-MP-00002	TERTIARY FILTER AND UV BUILDING - SECTION AND DETAIL - SHEET 1 OF 2			0	
12645246-GHD-00-07-DRG-MP-00003	TERTIARY FILTER AND UV BUILDING - SECTION AND DETAIL - SHEET 2 OF 2			0	

**FOR CONSENT**  
NOT FOR CONSTRUCTION

Rev	Description	Checked	Approved	Date
0	FOR CONSENT	I. HO	C. WELLS	26.05.26

Author M. COLITA    Drafting Check C. WELLS  
Designer S. BROWNE    Design Check I. HO



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Project No.  
12645246

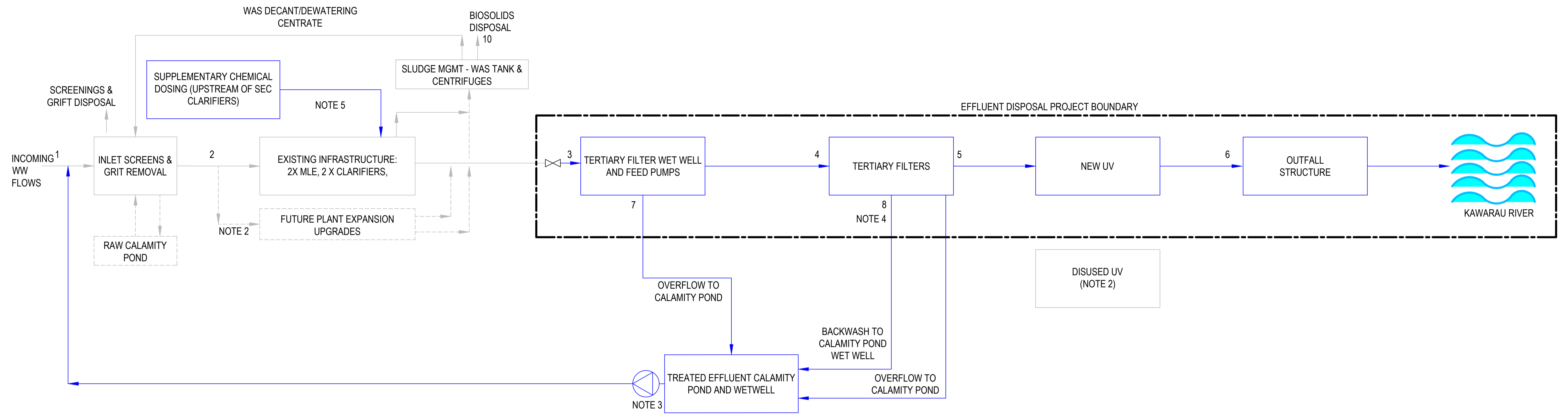
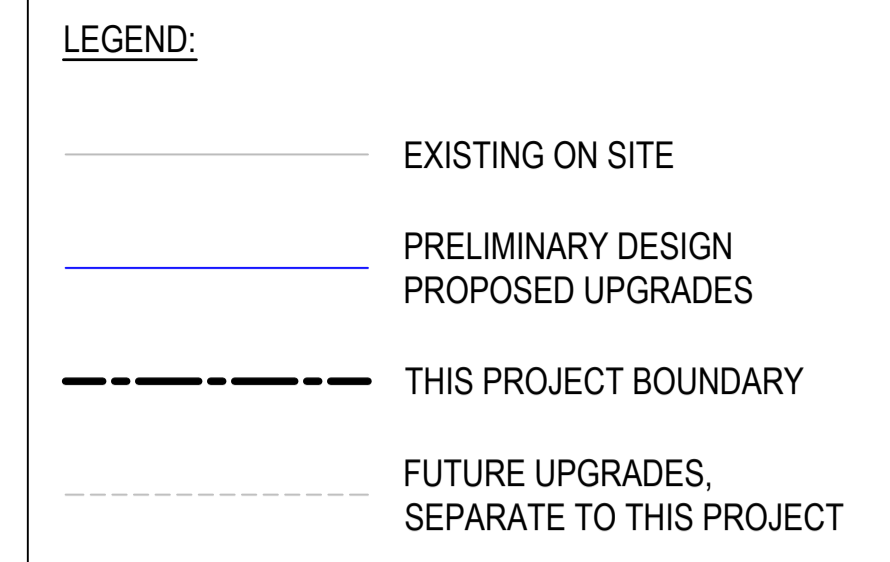
Client QUEENSTOWN LAKES DISTRICT COUNCIL  
Project SHOTOVER WWTP EFFLUENT ALTERNATIVE DISCHARGE  
Status FOR CONSENT

Drawing Title COVER SHEET AND DRAWING LIST FOR CONSENT

Drawing No. 12645246-GHD-00-00-DRG-GN-00002  
Rev 0

Size  
A1

Rev  
0



	STREAM NAME	INCOMING WASTEWATER	FLOWS INTO MLE & CLARIFIERS	TERTIARY FILTER WET WELL - INFLUENT	TERTIARY FILTER - INFLUENT	TERTIARY FILTER - EFFLUENT	UV - EFFLUENT / OUTFALL DISCHARGE	EXCESS FLOW TO CALAMITY POND	TERTIARY FILTER BACKWASH NOTE 4
	STREAM NUMBER	1	2	3	4	5	6	7	8
2030	AVERAGE DAILY FLOW (m3/DAY)	15061	15937	15335	15335	14883	14883	0	452
	PEAK DAILY FLOW (m3/DAY)	18675	19761	19014	19014	18454	18454	0	560
	PEAK WET WEATHER FLOW (m3/DAY)	34640	35872	35269	34788	33749	33749	481	1039
	INSTANTANEOUS FLOW (L/S)	892	525	525	400	400	400	694	32
2060	AVERAGE DAILY FLOW (m3/DAY)	25904	27411	26375	26375	25598	25598	0	777
	PEAK DAILY FLOW (m3/DAY)	31085	32893	31650	31650	30717	30717	0	933
	PEAK WET WEATHER FLOW (m3/DAY)	59579	61698	60662	60000	58213	58213	662	1787
	INSTANTANEOUS FLOW (L/S)	892	694	694	694	694	694	694	32

- NOTES:**
- BASED ON PROCESS FLOW DIAGRAM BECA DRAWING 3364550-010-PA-001. ACCURACY OF PFD HAS NOT BEEN CHECKED.
  - DISUSED LINES TO AND FROM EXISTING UV NOT SHOWN.
  - CONVERSION OF POND 3 INTO A TREATED EFFLUENT CALAMITY POND IS UNDERTAKEN AS A SEPARATE PROJECT BY QLDC, COMPLETION BY DEC 2027.
  - FILTER BACKWASH VOLUME IS BASED ON AN ASSUMPTION OF 3% OF THROUGHPUT. THIS MIGHT VARY IN FIELD CONDITIONS AND SUBJECT TO THE FINAL SELECTION OF THE FILTER MODEL. THE BACKWASH RATE IS BASED ON VENDOR'S BACKWASH PUMP RATE, TO BE CONFIRMED AT DETAILED DESIGN.
  - SUPPLEMENTARY CHEMICAL DOSING IS TO BE ADDED UPSTREAM OF THE SECONDARY CLARIFIERS.

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0	30% DESIGN ISSUE	I.HO	I.HO	26.05.2026
B	30% DESIGN ISSUE (FOR COMMENT)	I.HO		11.05.2026
A	PRELIM DESIGN WORK IN PROGRESS	I.HO		14.04.2026

Author	P.VINCENT	Drafting Check	E.PANTILGAN	Reg No.
Designer	S.BROWNE	Design Check	I.HO	Date



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Client **QUEENSTOWN LAKES DISTRICT COUNCIL**

Project **SHOTOVER WWTP EFFLUENT ALTERNATIVE DISCHARGE**

Status **FOR CONSENT**

Drawing Title **PROCESS FLOW DIAGRAM**

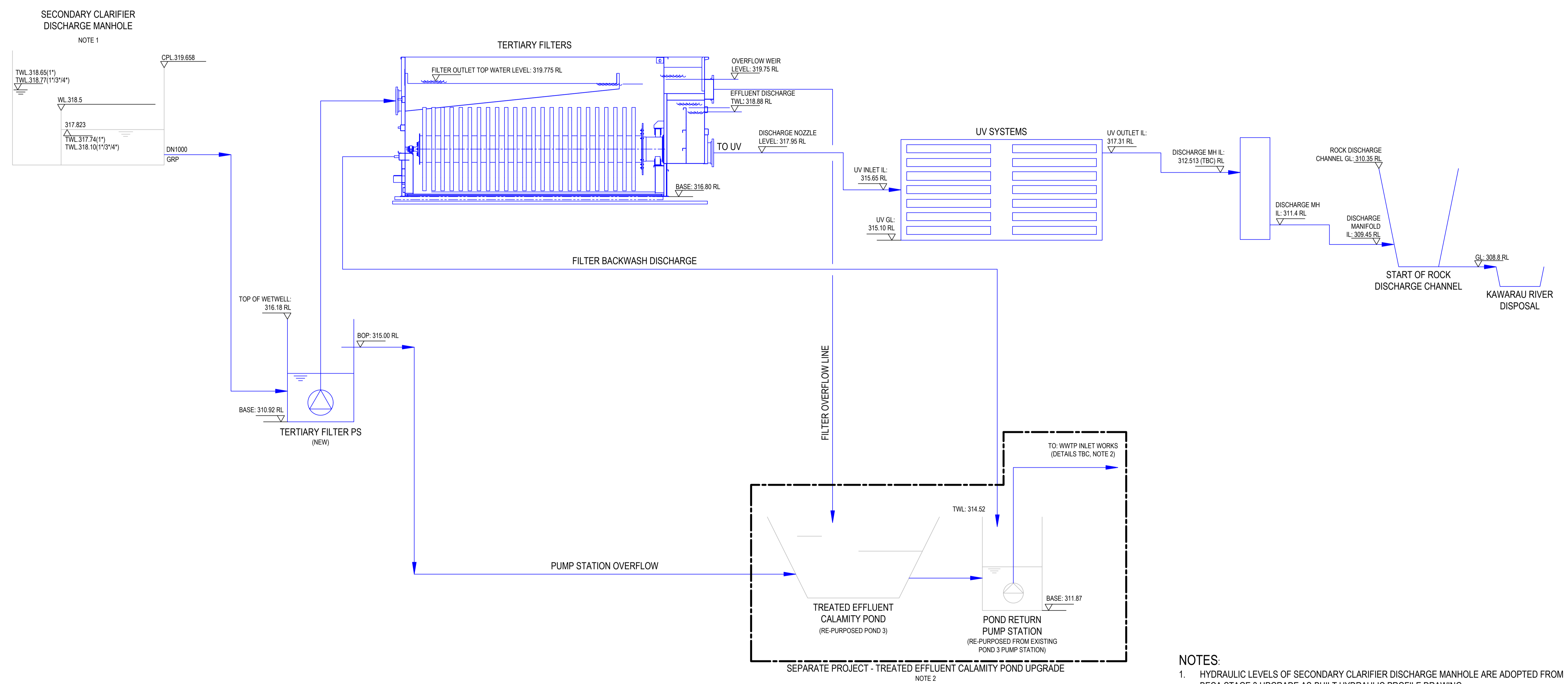
Drawing No. **12645246-GHD-00-00-DRG-PR-00001**

Rev **0**

Size **A1**

**LEGEND:**

	EXISTING ON SITE
	PRELIMINARY DESIGN PROPOSED UPGRADES
	THIS PROJECT BOUNDARY
	FUTURE UPGRADES, SEPARATE TO THIS PROJECT



- NOTES:**
- HYDRAULIC LEVELS OF SECONDARY CLARIFIER DISCHARGE MANHOLE ARE ADOPTED FROM BECA STAGE 3 UPGRADE AS-BUILT HYDRAULIC PROFILE DRAWING.
  - TREATED EFFLUENT CALAMITY POND IS A SEPARATE PROJECT TO THE EFFLUENT DISPOSAL PROJECT. IT RECEIVES OVERFLOWS AND FILTER BACKWASH DISCHARGES.
  - HYDRAULIC LEVELS SHOWN IN THIS DRAWING ARE PRELIMINARY LEVELS, AND SUBJECT TO REVISION AS THE DESIGN PROGRESSES.

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Rev	Description	Checked	Approved	Date
0	30% DESIGN ISSUE	M.TSEN	I.HO	26.05.2026
B	30% DESIGN ISSUE (FOR COMMENT)	I.HO		11.05.2026
A	PRELIM DESIGN WORK IN PROGRESS	I.HO		14.04.2026

Author: P.VINCENT    Drafting Check: E.PANTILGAN  
 Designer: S.BROWNE    Design Check: M.TSEN



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Client: QUEENSTOWN LAKES DISTRICT COUNCIL  
 Project: SHOTOVER WWTP EFFLUENT ALTERNATIVE DISCHARGE  
 Status: FOR CONSENT

Drawing Title: PIPING AND INSTRUMENTATION DIAGRAM HYDRAULIC PROFILE  
 Drawing No.: 12645246-GHD-00-00-DRG-PR-00002  
 Size: A1  
 Rev: 0

LINE CONTINUATION SYMBOL	ACTUATOR SYMBOLS	PIPING SYMBOLS	PUMP SYMBOLS	EQUIPMENT SYMBOLS
<p>P&amp;ID DRAWING NUMBER → 3364550-010-PA-XXX → DIRECTION OF FLOW</p> <p>SOURCE OF DESTINATION → TANK TK-XXX</p>	<p>DIAPHRAM</p> <p>ELECTRO-HYDRAULIC</p> <p>HYDRAULIC</p> <p>SOLENOID</p> <p>ELECTRIC MOTOR</p> <p>PRESSURE BALANCED DIAPHRAGM</p> <p>DIAPHRAGM WITH POSITIONER</p> <p>CYLINDER</p> <p>MANUAL</p> <p>SPRING</p> <p>FLOAT</p> <p>PRESSURE REDUCING REGULATOR SELF CONTAINED</p> <p>BACK PRESSURE REGULATOR SELF CONTAINED</p> <p>PRESSURE-REDUCING REGULATOR, EXTERNAL TAPPING</p>	<p>LINE NUMBER CHANGE</p> <p>SPECIFICATION CHANGE</p> <p>SPECIFICATION BREAK</p> <p>TIE-IN POINT</p> <p>FLOW DIRECTION ARROW</p> <p>CONCENTRIC REDUCER</p> <p>ECCENTRIC REDUCER</p> <p>FLANGE</p> <p>BLIND FLANGE</p> <p>REMOVABLE SPOOL</p> <p>PIPE CAP WELDED</p> <p>PIPE CAP THREADED</p> <p>HOSE CONNECTION</p> <p>PIPE PLUG</p> <p>UNION</p> <p>Y-STRAINER</p> <p>Y-STRAINER WITH DRAIN</p> <p>BASKET TRAP</p> <p>DRAIN</p> <p>OPEN VENT</p> <p>DAMPNER</p> <p>DIAPHRAGM SEAL</p> <p>EXPANSION BELLOWS</p>	<p>CENTRIFUGAL PUMP</p> <p>SUBMERSIBLE PUMP</p> <p>WAS/SCUM PUMP</p> <p>PROGRESSIVE CAVITY PUMP</p> <p>DOSING PUMP</p> <p>POSITIVE DISPLACEMENT PUMP</p>	<p>ALL MAJOR EQUIPMENT WILL BE SHOWN WITH THICKENED LINES.</p> <p>SHAFTLESS CONVEYOR</p> <p>SCREW CONVEYOR</p> <p>BELT CONVEYOR</p> <p>FLOW METER: PDL =PADDLE MAG =MAGNETIC MASS =MASS ROT =ROTAMETER VOR =VORTEX ULT =ULTRASONIC</p> <p>FILTER</p> <p>MIXER</p> <p>VARIABLE SPEED DRIVE</p> <p>SOFT STARTER</p> <p>REVERSING</p> <p>LOW POINT DRAIN</p> <p>SILENCER</p> <p>MACERATOR</p> <p>SCREEN</p> <p>CENTRIFUGE</p> <p>FLOW STREAM INDICATOR</p> <p>LOCAL CONTROL PANEL</p> <p>DRAWING REVISION CLOUD</p>
LINE SYMBOLS				
<p>PRIMARY PROCESS PIPING</p> <p>SECONDARY PROCESS PIPING</p> <p>TRACED PIPE (PRIMARY PROCESS EXAMPLE SHOWN)</p> <p>PROCESS DEMARCATION OR EQUIPMENT PACKAGE BOUNDARY</p> <p>ELECTRICAL LINE SIGNAL (NOTE 1)</p> <p>PNEUMATIC SIGNAL OR AIR SUPPLY</p> <p>SOFTWARE LINK (NOTE 2)</p> <p>MECHANICAL LINK</p> <p>CAPILLARY TUBE</p> <p>HYDRAULIC CONNECTION</p> <p>CHANNEL OUTLINE</p> <p>PROPOSED WORKS</p> <p>EXISTING WORKS</p> <p>THIS PROJECT BOUNDARY</p> <p>FUTURE UPGRADES, SEPARATE TO THIS PROJECT</p>				
VALVE SYMBOLS	GATE SYMBOLS	INSTRUMENT SYMBOLS	GENERAL SYMBOLS	
<p>NORMALLY OPEN</p> <p>NORMALLY CLOSED</p> <p>GATE VALVE</p> <p>SMALL GATE VALVE</p> <p>GLOBE VALVE</p> <p>BUTTERFLY VALVE</p> <p>BALL VALVE</p> <p>KNIFEGATE VALVE</p> <p>KNEEDLE VALVE</p> <p>GATE VALVE - LOCKED OPEN</p> <p>GATE VALVE - LOCKED CLOSED</p> <p>ROTARY VALVE</p> <p>THROUGH CONDUIT GATE VALVE</p> <p>NON RETURN VALVE</p> <p>PRESSURE RELIEF VALVE</p> <p>WAY VALVE</p> <p>PENSTOCK VALVE</p> <p>REDUCED PRESSURE ZONE PROTECTION (BACKFLOW)</p> <p>AIR RELIEF VALVE</p>	<p>PENSTOCK</p> <p>PENSTOCK (WEIR)</p> <p>STOPBOARD/STOP GATE</p> <p>WEIR</p>	<p>RADAR LEVEL TRANSMITTER</p> <p>THERMAL FLOW SWITCH</p> <p>PROBE MULTILEVEL SWITCH/TRANSMITTER</p> <p>BALL FLOAT SWITCH</p> <p>ULTRASONIC LEVEL TRANSMITTER</p>	<p>UV SYSTEM</p> <p>STATIC MIXER</p> <p>TANK VENT</p> <p>CALIBRATION CYLINDER</p> <p>SHAFT-DRIVEN PROPELLER MIXER</p> <p>AUDIBLE ALARM</p> <p>FLUME</p> <p>SPRAY</p> <p>EYEWASH AND SAFETY SHOWER</p> <p>HOSE REEL</p> <p>BRUSH AERATOR</p>	
	INSTRUMENT SYMBOLS	BLOWERS AND COOLERS SYMBOLS		
		<p>POSITIVE DISPLACEMENT BLOWER</p> <p>BLOWER</p> <p>COMPRESSOR</p> <p>AIR DRYER/DEHUMIDIFIER</p>		

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Project **SHOTOVER WWTP EFFLUENT ALTERNATIVE DISCHARGE**

Status **FOR CONSENT**

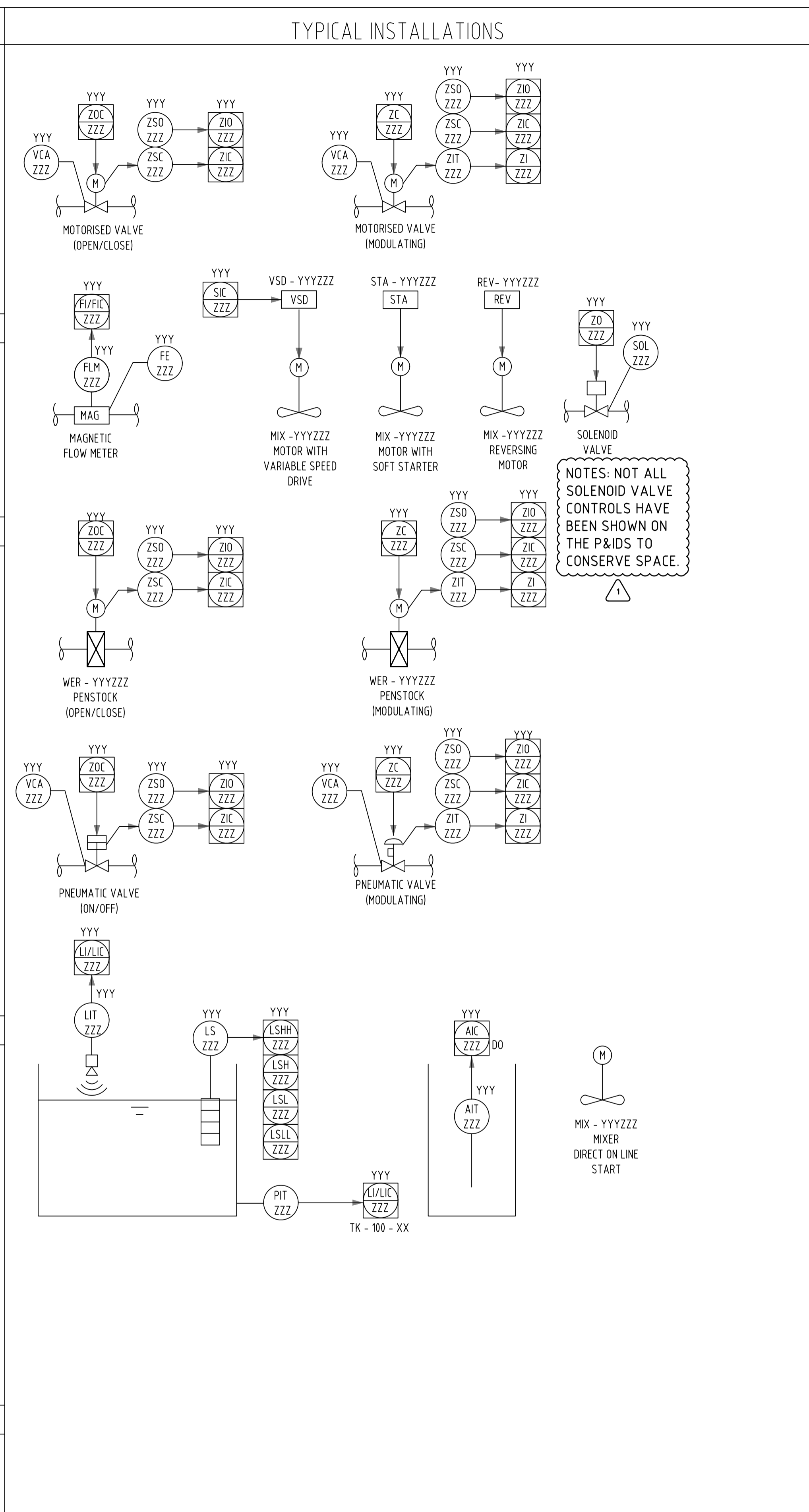
Drawing Title **PIPING AND INSTRUMENTATION DIAGRAM LEGENDS SHEET 1**

Drawing No. **12645246-GHD-00-00-DRG-PR-00003**

Rev **0**

Size **A1**

EQUIPMENT NUMBERING		EQUIPMENT CODES CONTINUED		INSTRUMENT & FUNCTION SYMBOLS		INSTRUMENT CODES																																																																																																																																																																																																																					
<p>XXX-YYY ZZZ</p> <p>← SEQUENTIAL NUMBERING (0-999)</p> <p>← AREA</p> <p>← EQUIPMENT TYPE</p> <p>e.g. MIX - 240230</p> <p>MIXER - GRIT CHAMBER</p>		<table border="0"> <tr> <td>DE DIESEL ENGINE</td> <td>PS PENSTOCK</td> </tr> <tr> <td>DCT DECANTER</td> <td>PTF PLATFORM AND HANDRAIL</td> </tr> <tr> <td>DIF DIFFUSER</td> <td>PMC PUMP CONTROL</td> </tr> <tr> <td>DMA DAMPENER AIR</td> <td>PMP PUMP</td> </tr> <tr> <td>DMI DAMPENER AIR INLET</td> <td>PND POND</td> </tr> <tr> <td>DMP DAMPENER</td> <td>POL POLLUTION INTERCEPTOR</td> </tr> <tr> <td>DOM DO METER</td> <td>PPR PUMP RAILS</td> </tr> <tr> <td>DPS DIAPHRAGM SEAL</td> <td>PLUS PUMP STATION BUILDING</td> </tr> <tr> <td>DRN DRAINAGE/DISCHARGE</td> <td>PWS PRESSURE WASHER</td> </tr> <tr> <td>DTR DISPERSAL TRENCH</td> <td>PV PRESSURE VESSEL</td> </tr> <tr> <td>DWL DRYWELL</td> <td>RBC ROTATING BIOLOGICAL CONTACTOR</td> </tr> <tr> <td>ED EDUCATOR/EJECTOR</td> <td>REC REACTOR</td> </tr> <tr> <td>EDD ELECTRICAL DOSING DRIVE</td> <td>REV RESERVOIR</td> </tr> <tr> <td>ELE ELECTRICAL CONTROLS</td> <td>RYM REVERSING MOTOR</td> </tr> <tr> <td>ELS ELECTRICAL SERVICES</td> <td>RG RADIOACTIVE GAUGE</td> </tr> <tr> <td>EMB EMBANKMENT</td> <td>ROA ACCESS ROAD</td> </tr> <tr> <td>EMG EMERGENCY STORAGE</td> <td>ROT ROTAMETER</td> </tr> <tr> <td>EMS EMERGENCY SHOWER</td> <td>RPZ REDUCED PRESSURE ZONE</td> </tr> <tr> <td>EXH EXHAUST STACK</td> <td>RTZ ROCK TRAP</td> </tr> <tr> <td>FAN FAN</td> <td>RTW RETAINING WALLS/BUND</td> </tr> <tr> <td>FBB FILTRATION BED/BIOFILTER</td> <td>RYM REVERSING MOTOR</td> </tr> <tr> <td>FDR FEEDER</td> <td>SAL SATELLITE DISH</td> </tr> <tr> <td>FI FILTER</td> <td>SAT SURGE ANTICIPATING VALVE</td> </tr> <tr> <td>FIT PIPES AND FITTINGS</td> <td></td> </tr> <tr> <td>FLC FLOWMETER CHAMBER</td> <td>SBR SOUND BARRIER</td> </tr> <tr> <td>FLJ FLEXIBLE JOINT</td> <td>SBT SBR</td> </tr> <tr> <td>FLM FLAME ARRESTOR</td> <td>SCB SCRUBBER</td> </tr> <tr> <td>FLS FLUSHING CONNECTION</td> <td>SCH SCRUM HARVESTOR</td> </tr> <tr> <td>FLT CARTRIDGE FILTER</td> <td>SCN MANUAL SCREEN</td> </tr> <tr> <td>FNC FENCES</td> <td>SCY SCREW CONVEYOR</td> </tr> <tr> <td>FNK FUEL TANK</td> <td>SDR SCREEN</td> </tr> <tr> <td>FON FOUNDATION</td> <td>SEP SEPARATOR</td> </tr> <tr> <td>FPB FLOOD PROTECTION BARRIER</td> <td>SFT SOFTENER - WATER</td> </tr> <tr> <td>FRE FIRE SYSTEM</td> <td>SIL SILENCER</td> </tr> <tr> <td>FTB FLOW TUBE/ROTAMETER</td> <td>SG SLIDE GATE</td> </tr> <tr> <td>GAN GANTRY</td> <td>SLU SLUICE</td> </tr> <tr> <td>GDD GRAVITY DRAINAGE DECK</td> <td>SLW SLEW DRIVE</td> </tr> <tr> <td>GEN GENERATOR CONNECTION</td> <td>SM STATIC MIXER</td> </tr> <tr> <td>GEN GENERATOR SET</td> <td>SP SCRAPER BRIDGE</td> </tr> <tr> <td>GRC GRIT CLASSIFIER</td> <td>SPT SPIROTAINER</td> </tr> <tr> <td>GRE GREASE TANK</td> <td>SSH SAFETY SHOWER</td> </tr> <tr> <td>GRS GRILLES</td> <td>SSR STEP SCREEN</td> </tr> <tr> <td>GRT GRIT REMOVAL</td> <td>SST SOFT STARTER</td> </tr> <tr> <td>GSY GENERATOR SYNCHRONISER</td> <td>STR STRAINER</td> </tr> <tr> <td>GT GRIT TRAP</td> <td>STW SURGE CHAMBER</td> </tr> <tr> <td>HA HYDRAULIC ACCUMULATOR</td> <td>SCL SCALES</td> </tr> <tr> <td>HAM HAMMER RESISTER</td> <td>SCM SCREEN CHAMBER</td> </tr> <tr> <td>HAR HARMONIC FILTER</td> <td>SCR SCREEN</td> </tr> <tr> <td>HDC HEADWORKS CHAMBER</td> <td>SEP SEPTIC TANKS</td> </tr> <tr> <td>HEX HEAT EXCHANGER</td> <td>SHD SHED</td> </tr> <tr> <td>HMI HUMAN MACHINE INTERFACE</td> <td>SLT SLUDGE STORAGE TANK</td> </tr> <tr> <td>HAST HOIST</td> <td>SLV BALL, GATE, SLUICE ETC.</td> </tr> <tr> <td>HPR HOPPER</td> <td>SOL SOLENOID VALVE</td> </tr> <tr> <td>HOS HOSE REEL/HOSE</td> <td>SPN SOLAR PANEL</td> </tr> <tr> <td>HTC HEATING COIL</td> <td>SPR SPRINKLERS</td> </tr> <tr> <td>HTR HEATER</td> <td>SPT SOAPKIT</td> </tr> <tr> <td>HV HAND VALVE</td> <td>STA SOFT STARTER</td> </tr> <tr> <td>HYD HYDRAULIC SYSTEM</td> <td>STC STACK</td> </tr> <tr> <td>HYD HYDRANTS</td> <td>STK SURGE TANK</td> </tr> <tr> <td>INB INSULATION BOX</td> <td>STR STORAGE CHAMBER</td> </tr> <tr> <td>INC INSPECTION CHAMBER</td> <td>SUM SUMP</td> </tr> <tr> <td>INT INLET CHAMBER</td> <td>SUR SURGE CONTROLLER</td> </tr> <tr> <td>IPS INSTRUMENT POWER SUPPLY</td> <td>SWB SWITCHBOARD</td> </tr> <tr> <td>IRR IRRIGATION SYSTEM</td> <td>SWR SOFTWARE</td> </tr> <tr> <td>ISO ISOLATING VALVE</td> <td>TAP SAMPLE TAP OR SIMILAR</td> </tr> <tr> <td>ISU INSULATION</td> <td>TBV TOBYS</td> </tr> <tr> <td>ITH IT HARDWARE</td> <td>TEE TEE</td> </tr> <tr> <td>JUC JUNCTION CHAMBER</td> <td>TEL TELEMETRY</td> </tr> <tr> <td>LAN LANDSCAPING</td> <td>TMS TEMPORARY STORAGE</td> </tr> <tr> <td>LFB LIFTING BEAM</td> <td>TNK TANK</td> </tr> <tr> <td>LFS LIME HOPPER &amp; 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KX TIME SET POINT	TRC TOTAL ORGANIC CARBON	LA LEVEL ALARM	TRA PRESSURE TRANSDUCER	LAH LEVEL ALARM HIGH	TRL TRAILER	LCU LEVEL CONTROL	TRN TRANSFORMER																																																																																																																																																																																																																				
LSN LEVEL SENSOR	TRR TELEMETRY RADIO	LEI LEVEL INDICATOR	TEM TEMPERATURE SWITCH	LIC LEVEL INDICATING CONTROL	TSH TEMPERATURE SWITCH HIGH	LIT LEVEL INDICATING CONTROL	TSL TEMPERATURE SWITCH LOW																																																																																																																																																																																																																				
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NO2 NITRITE	YA TORQUE ALARM	NO3 NITRATE	YSH TORQUE ALARM HIGH	O OSCILLATION	YSS TORQUE SAFETY SWITCH	ORP OXIDATION REDUCTION POTENTIAL	TAN TOTAL AMMONIACAL NITROGEN																																																																																																																																																																																																																				
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PIPE NUMBERING				PIPE MATERIAL CODES																																																																																																																																																																																																																							
<p>WWW-XXXX-YYYY-ZZZZ-AA</p> <p>← PIPE INSULATION REQUIREMENTS</p> <p>← PIPE SERVICE CODES</p> <p>← PIPE MATERIAL CODES</p> <p>← NOMINAL PIPE SIZE (mm)</p> <p>← UNIQUE PIPE NUMBER</p> <p>e.g. 114-150-UPVC-DBW- No. 114, 150mm UNPLASTICISED PVC, DRAINAGE ALL DIMENSIONS NOMINAL BORE EXCEPT MILD STEEL PIPE AND PE</p>				<table border="0"> <tr> <td>ABS ACROLYNONITRILE BUTADIENE STYRENE</td> <td>ACX ASBESTOS CEMENT</td> </tr> <tr> <td>CCE CONCRETE CHANNEL EPOXY LINED</td> <td>CCX CONCRETE CHANNEL</td> </tr> <tr> <td>CIC CAST IRON ELEMENT CEMENT LINED</td> <td>CIE CAST IRON ELEMENT EPOXY LINED</td> </tr> <tr> <td>CIX CAST IRON</td> <td>CPVC CHLORINATED PVC SCHEDULE 80</td> </tr> <tr> <td>CU COPPER</td> <td>DIEL DUCTILE IRON CEMENT LINED</td> </tr> <tr> <td>DIFC EPOXY COATED &amp; EPOXY LINED DUCTILE IRON</td> <td>DOC DUCTILE IRON CALCIUM ALUMINATE CEMENT LINED</td> </tr> <tr> <td>FLX FLEXIBLE HOSE / PIPE</td> <td>FRC FIBRE REINFORCED CONCRETE</td> </tr> <tr> <td>FRP FIBREGLASS REINFORCED PLASTIC</td> <td>GMS GALVANISED MILD STEEL</td> </tr> <tr> <td>HDPE HIGH DENSITY POLYETHYLENE</td> <td>MSCL MILD STEEL CEMENT LINED</td> </tr> <tr> <td>MSK MILD STEEL FUSION BONDED POLYETHYLENE COATED</td> <td>MXP MILD STEEL FUSION BONDED POLYETHYLENE COATED AND LINED</td> </tr> <tr> <td>POLYETHYLENE</td> <td>PVC POLYVINYL CHLORIDE</td> </tr> <tr> <td>PVG PVC SCHEDULE 80</td> <td>RPC REINFORCED CONCRETE</td> </tr> <tr> <td>SS STAINLESS STEEL 316 L</td> <td>SSC STAINLESS STEEL CHANNEL</td> </tr> <tr> <td>SSW STAINLESS STEEL 316 L SPIRAL - WELD</td> <td>SSX STAINLESS STEEL 316 L SCHEDULE 10</td> </tr> <tr> <td>UPVC RIGID UNPLASTICISED POLYVINYL CHLORIDE</td> <td>VCX VITRIFIED CLAY</td> </tr> </table>		ABS ACROLYNONITRILE BUTADIENE STYRENE	ACX ASBESTOS CEMENT	CCE CONCRETE CHANNEL EPOXY LINED	CCX CONCRETE CHANNEL	CIC CAST IRON ELEMENT CEMENT LINED	CIE CAST IRON ELEMENT EPOXY LINED	CIX CAST IRON	CPVC CHLORINATED PVC SCHEDULE 80	CU COPPER	DIEL DUCTILE IRON CEMENT LINED	DIFC EPOXY COATED & EPOXY LINED DUCTILE IRON	DOC DUCTILE IRON CALCIUM ALUMINATE CEMENT LINED	FLX FLEXIBLE HOSE / PIPE	FRC FIBRE REINFORCED CONCRETE	FRP FIBREGLASS REINFORCED PLASTIC	GMS GALVANISED MILD STEEL	HDPE HIGH DENSITY POLYETHYLENE	MSCL MILD STEEL CEMENT LINED	MSK MILD STEEL FUSION BONDED POLYETHYLENE COATED	MXP MILD STEEL FUSION BONDED POLYETHYLENE COATED AND LINED	POLYETHYLENE	PVC POLYVINYL CHLORIDE	PVG PVC SCHEDULE 80	RPC REINFORCED CONCRETE	SS STAINLESS STEEL 316 L	SSC STAINLESS STEEL CHANNEL	SSW STAINLESS STEEL 316 L SPIRAL - WELD	SSX STAINLESS STEEL 316 L SCHEDULE 10	UPVC RIGID UNPLASTICISED POLYVINYL CHLORIDE	VCX VITRIFIED CLAY																																																																																																																																																																																								
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B	30% DESIGN ISSUE (FOR COMMENT)	I.HO	I.HO	11.05.2026
A	PRELIM DESIGN WORK IN PROGRESS	I.HO	I.HO	14.04.2026
Rev	Description	Checked	Approved	Date
Author	P.VINCENT	Drafting Check	E.PANTILGAN	
Designer	S.BROWNE	Design Check	I.HO	



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Project No.  
12645246



Client **QUEENSTOWN LAKES DISTRICT COUNCIL**

Project **SHOTOVER WWTP EFFLUENT ALTERNATIVE DISCHARGE**

Status **FOR CONSENT**

Drawing Title **PIPING AND INSTRUMENTATION DIAGRAM LEGENDS SHEET 2**

Drawing No. 12645246-GHD-00-00-DRG-PR-00004

Rev **0**

04-BDG-201  
CLARIFIER BRIDGE, SKIMMER & SCRAPER  
0.18kW

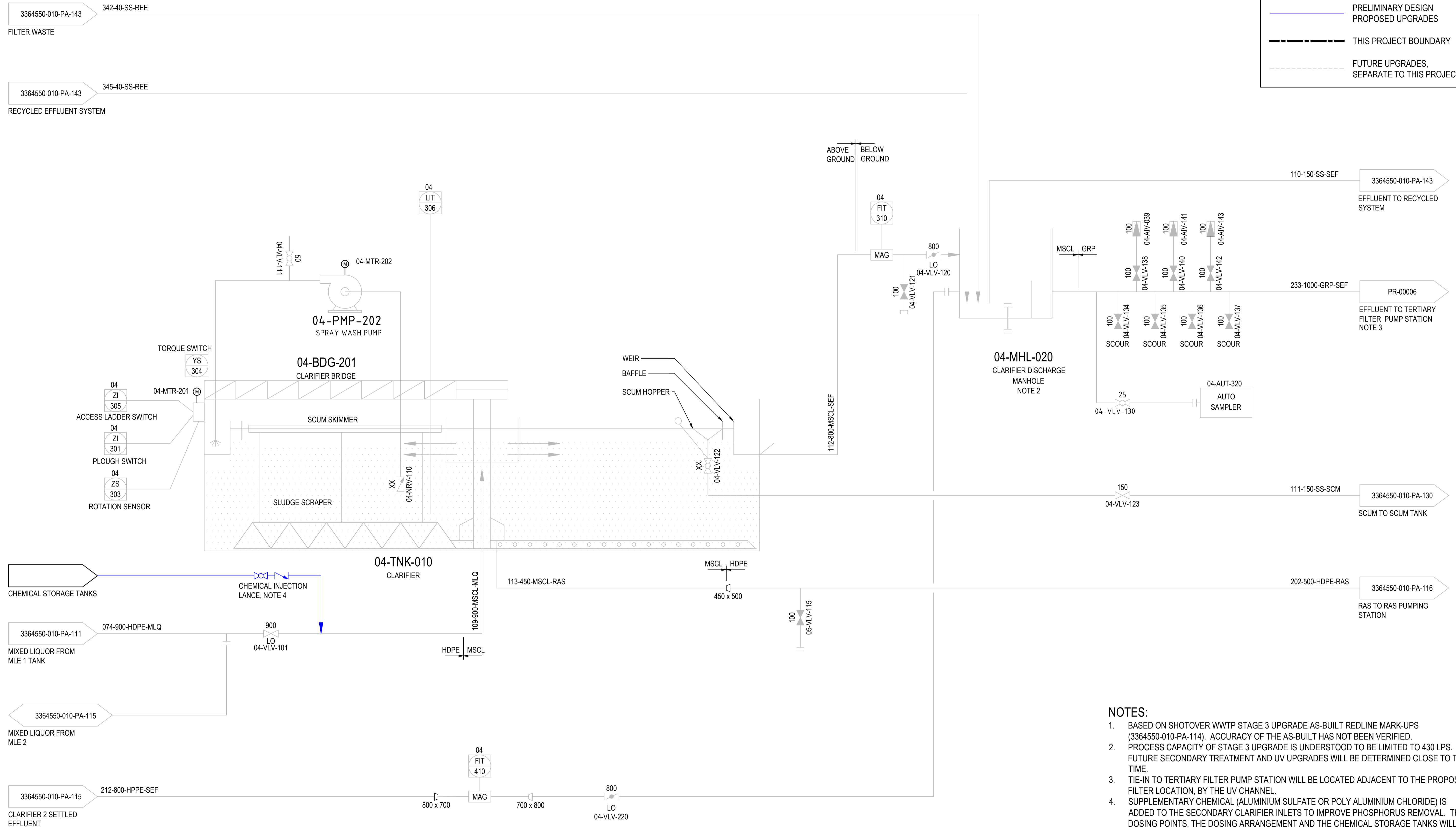
04-PMP-202  
SPRAY WASH PUMP  
2.2kW

04-TNK-010  
CLARIFIER

04-MHL-020  
CLARIFIER DISCHARGE  
MANHOLE

**LEGEND:**

	EXISTING ON SITE
	PRELIMINARY DESIGN
	PROPOSED UPGRADES
	THIS PROJECT BOUNDARY
	FUTURE UPGRADES, SEPARATE TO THIS PROJECT



**NOTES:**

1. BASED ON SHOTOVER WWTP STAGE 3 UPGRADE AS-BUILT REDLINE MARK-UPS (3364550-010-PA-114). ACCURACY OF THE AS-BUILT HAS NOT BEEN VERIFIED.
2. PROCESS CAPACITY OF STAGE 3 UPGRADE IS UNDERSTOOD TO BE LIMITED TO 430 LPS. FUTURE SECONDARY TREATMENT AND UV UPGRADES WILL BE DETERMINED CLOSE TO THE TIME.
3. TIE-IN TO TERTIARY FILTER PUMP STATION WILL BE LOCATED ADJACENT TO THE PROPOSED FILTER LOCATION, BY THE UV CHANNEL.
4. SUPPLEMENTARY CHEMICAL (ALUMINIUM SULFATE OR POLY ALUMINIUM CHLORIDE) IS ADDED TO THE SECONDARY CLARIFIER INLETS TO IMPROVE PHOSPHORUS REMOVAL. THE DOSING POINTS, THE DOSING ARRANGEMENT AND THE CHEMICAL STORAGE TANKS WILL BE DESIGNED IN THE SUBSEQUENT DESIGN STAGE.

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NOT FOR CONSTRUCTION**

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Author: P.VINCENT    Drafting Check: E.PANTILGAN  
 Designer: S.BROWNE    Design Check: I.HO



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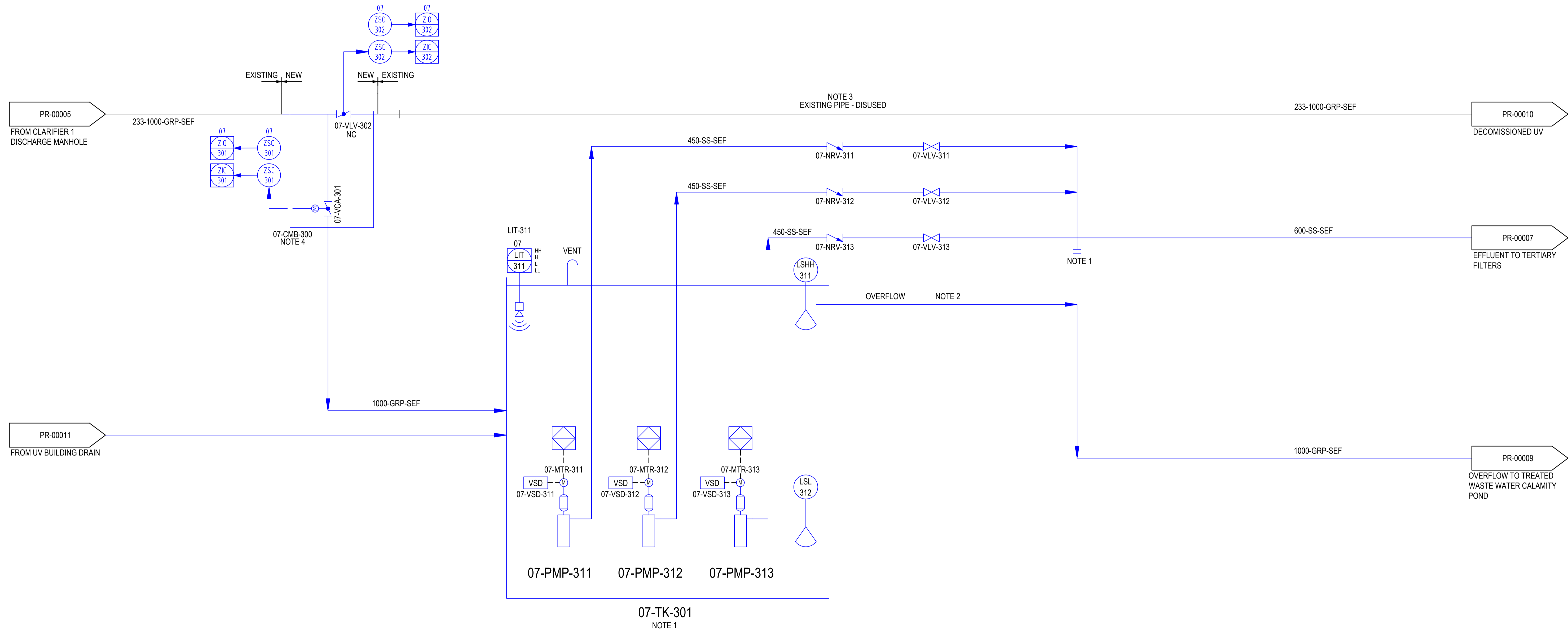
Client: QUEENSTOWN LAKES DISTRICT COUNCIL  
 Project: SHOTOVER WWTP EFFLUENT ALTERNATIVE DISCHARGE  
 Status: FOR CONSENT

Drawing Title: PIPING AND INSTRUMENTATION DIAGRAM SECONDARY CLARIFIERS  
 Drawing No: 12645246-GHD-00-04-DRG-PR-00005  
 Rev: 0

**LEGEND:**

	EXISTING ON SITE
	PRELIMINARY DESIGN PROPOSED UPGRADES
	ELECTRICAL SIGNAL

07-PMP-311 TERTIARY FILTER FEED PUMP 1  
 07-PMP-312 TERTIARY FILTER FEED PUMP 2  
 07-PMP-313 TERTIARY FILTER FEED PUMP 3  
 07-TK-301 TERTIARY FILTER PUMP STATION



- NOTES:**
1. SPACE ALLOWANCE IN WETWELL TO ADD AN ADDITIONAL PUMP IN FUTURE.
  2. PRIOR TO THE FILTERS ARE OPERATIONAL, THE OVERFLOW LINE WILL BE OPERATED AS THE DIVERSION LINE OF OFF-SPEC EFFLUENT TO THE TREATED EFFLUENT CALAMITY POND.
  3. EXISTING UV CHANNEL WILL BE DECOMMISSIONED ONCE THE ENHANCED UV SYSTEM (SHEET PR-00011) IS OPERATIONAL. THE ORIGINAL PIPE WILL BE DISUSED.
  4. DIVERSION VALVE (07-VCA-301) AND THE PUMP STATION WET WELL (07-TK-301) WILL BE USED AS AN EMERGENCY DIVERSION TO THE TREATED WATER CALAMITY POND, BEFORE THE TERTIARY FILTERS ARE OPERATIONAL (BY DECEMBER 2028).

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Client QUEENSTOWN LAKES DISTRICT COUNCIL  
 Project SHOTOVER WWTP EFFLUENT ALTERNATIVE DISCHARGE  
 Status FOR CONSENT

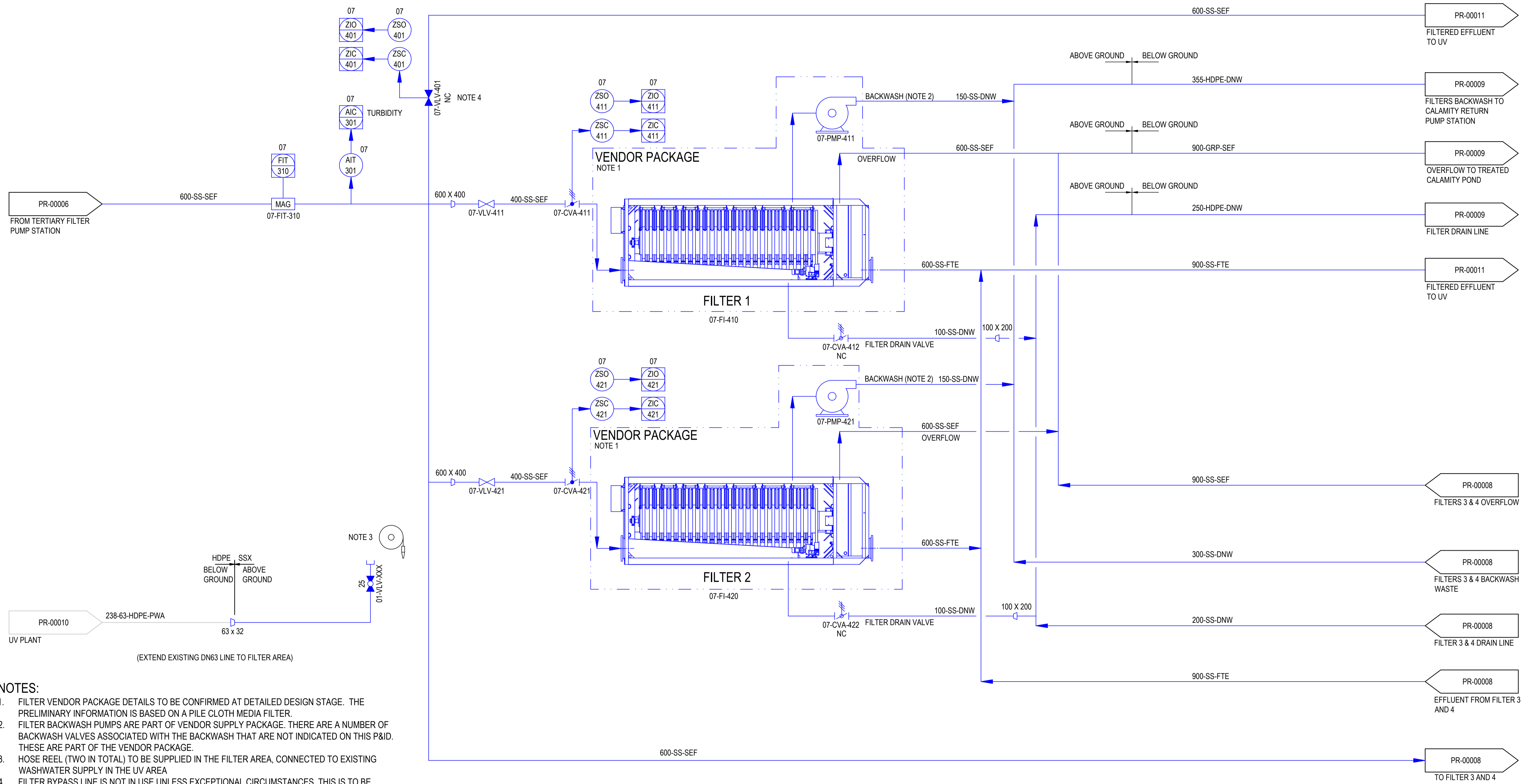
Drawing Title PIPING AND INSTRUMENTATION DIAGRAM TERTIARY FILTER PUMP STATION  
 Drawing No. 12645246-GHD-00-07-DRG-PR-00006  
 Rev 0

Size A1

**LEGEND:**

- EXISTING ON SITE
- PRELIMINARY DESIGN
- VENDOR PACKAGE

07-FI-410 TERTIARY FILTER 1  
 07-FI-420 TERTIARY FILTER 2  
 07-PMP-411 TERTIARY FILTER 1 BACKWASH PUMP  
 07-PMP-421 TERTIARY FILTER 2 BACKWASH PUMP



PR-00006 FROM TERTIARY FILTER PUMP STATION

PR-00011 FILTERED EFFLUENT TO UV

PR-00009 FILTERS BACKWASH TO CALAMITY RETURN PUMP STATION

PR-00009 OVERFLOW TO TREATED CALAMITY POND

PR-00009 FILTER DRAIN LINE

PR-00011 FILTERED EFFLUENT TO UV

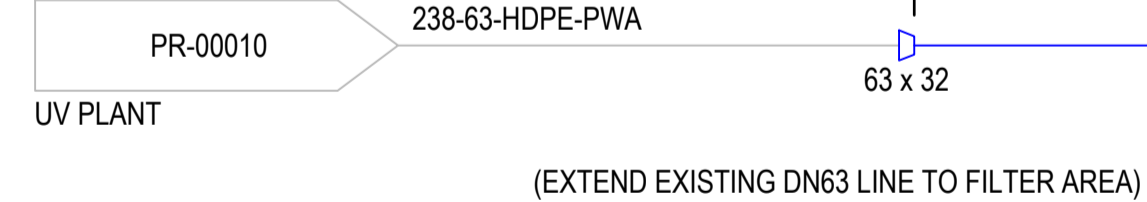
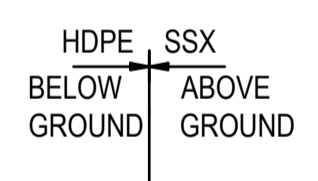
PR-00008 FILTERS 3 & 4 OVERFLOW

PR-00008 FILTERS 3 & 4 BACKWASH WASTE

PR-00008 FILTER 3 & 4 DRAIN LINE

PR-00008 EFFLUENT FROM FILTER 3 AND 4

PR-00008 TO FILTER 3 AND 4



- NOTES:**
1. FILTER VENDOR PACKAGE DETAILS TO BE CONFIRMED AT DETAILED DESIGN STAGE. THE PRELIMINARY INFORMATION IS BASED ON A PILE CLOTH MEDIA FILTER.
  2. FILTER BACKWASH PUMPS ARE PART OF VENDOR SUPPLY PACKAGE. THERE ARE A NUMBER OF BACKWASH VALVES ASSOCIATED WITH THE BACKWASH THAT ARE NOT INDICATED ON THIS P&ID. THESE ARE PART OF THE VENDOR PACKAGE.
  3. HOSE REEL (TWO IN TOTAL) TO BE SUPPLIED IN THE FILTER AREA, CONNECTED TO EXISTING WASHWATER SUPPLY IN THE UV AREA
  4. FILTER BYPASS LINE IS NOT IN USE UNLESS EXCEPTIONAL CIRCUMSTANCES. THIS IS TO BE REVIEWED DURING DETAILED DESIGN

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Client **QUEENSTOWN LAKES DISTRICT COUNCIL**

Project **SHOTOVER WWTP EFFLUENT ALTERNATIVE DISCHARGE**

Status **FOR CONSENT**

Drawing Title **PIPING AND INSTRUMENTATION DIAGRAM TERTIARY FILTERS SHEET 1**

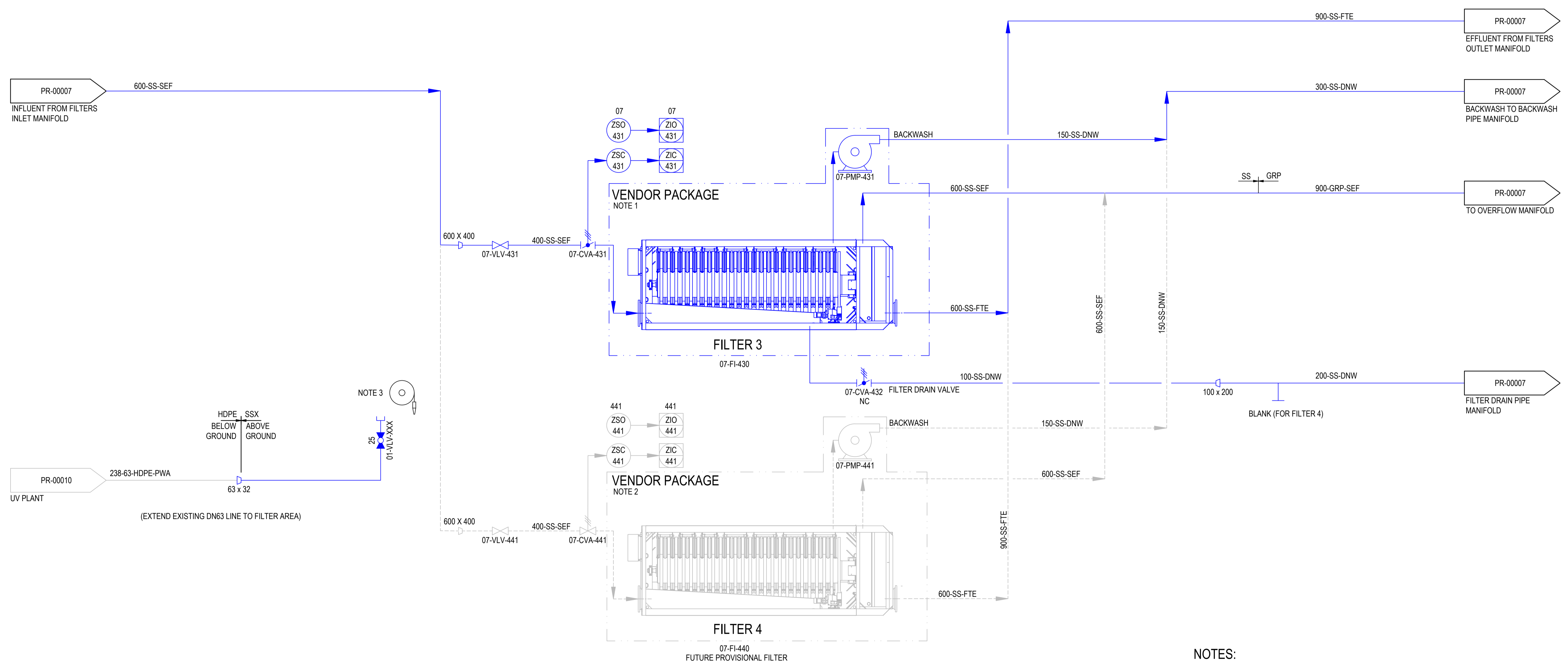
12645246-GHD-00-07-DRG-PR-00007

Size **A1**  
 Rev **0**

**LEGEND:**

	EXISTING ON SITE
	PRELIMINARY DESIGN PROPOSED UPGRADES
	FUTURE UPGRADES, SEPARATE TO THIS PROJECT
	VENDOR PACKAGE

07-FI-430 TERTIARY FILTER 3  
 07-FI-440 TERTIARY FILTER 4  
 07-PMP-431 TERTIARY FILTER 3 BACKWASH PUMP  
 07-PMP-441 TERTIARY FILTER 4 BACKWASH PUMP



- NOTES:**
1. THE INSTALLATION TIMEFRAME FOR FILTER NO. 3 IS TO BE CONFIRMED AS PART OF STAGING REVIEW.
  2. THE INSTALLATION TIMEFRAME FOR FILTER NO.4 WILL BE DETERMINED AT A LATER DATE.
  3. HOSE REEL (TWO IN TOTAL) TO BE SUPPLIED IN THE FILTER AREA, CONNECTED TO EXISTING WASHWATER SUPPLY IN THE UV AREA

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Client **QUEENSTOWN LAKES DISTRICT COUNCIL**  
 Project **SHOTOVER WWTP EFFLUENT ALTERNATIVE DISCHARGE**  
 Status **FOR CONSENT**

Drawing Title **PIPING AND INSTRUMENTATION DIAGRAM TERTIARY FILTERS SHEET 2**  
 Drawing No. **12645246-GHD-00-07-DRG-PR-00008**  
 Rev **0**

Size **A1**

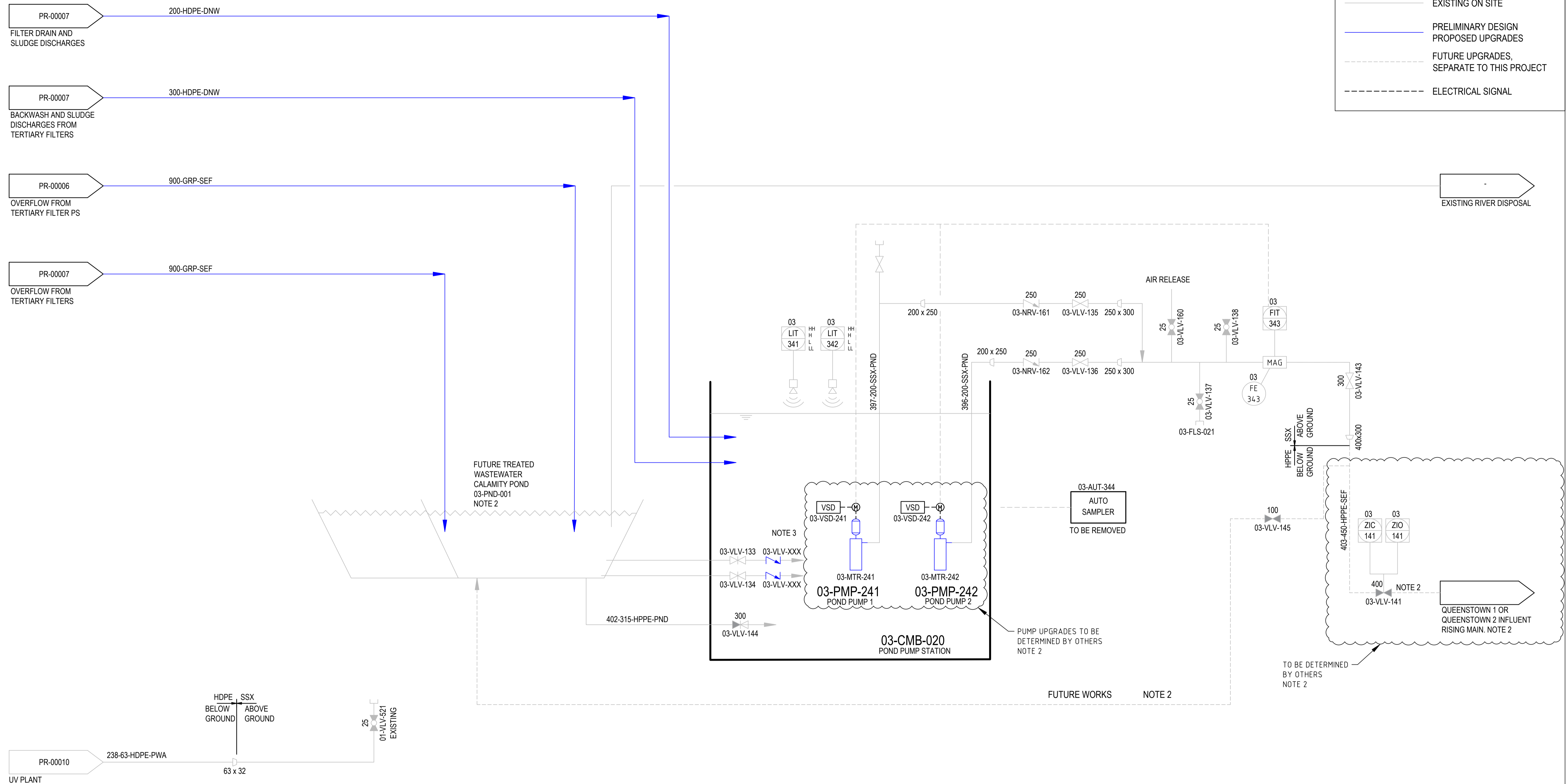
03-PMP-241  
POND PUMP 1  
22kW

03-PMP-242  
POND PUMP 2  
22kW

03-CMB-020  
POND PUMP STATION

**LEGEND:**

	EXISTING ON SITE
	PRELIMINARY DESIGN PROPOSED UPGRADES
	FUTURE UPGRADES SEPARATE TO THIS PROJECT
	ELECTRICAL SIGNAL



- NOTES:**
- THIS DRAWING IS BASED ON STAGE 3 WWTP AS-BUILT DRAWING 3364550-010-PA-121. ACCURACY OF THE AS-BUILT HAS NOT BEEN CHECKED.
  - THE TREATED WASTEWATER CALAMITY POND IS A SEPARATE PROJECT UNDERTAKEN BY OTHERS. THE PURPOSE OF THIS DRAWING IS TO SHOW INTERFACES WITH THE TERTIARY FILTERS AND OTHER COMPONENTS IN THE EFFLUENT DISPOSAL UPGRADE PROJECT.
  - FLAP VALVES OR EQUIVALENT ARE SUGGESTED TO BE INSTALLED IN THE PUMP STATION TO KEEP BACKWASH AND SLUDGE DISCHARGES FROM THE TERTIARY FILTERS WITHIN THE WET WELL.

**FOR CONSENT**  
**NOT FOR CONSTRUCTION**

0	30% DESIGN ISSUE	I.HO	I.HO	26.05.2026
B	30% DESIGN ISSUE (FOR COMMENT)	I.HO		11.05.2026
A	PRELIM DESIGN WORK IN PROGRESS	I.HO		14.04.2026
Rev	Description	Checked	Approved	Date
Author	P.VINCENT	Drafting Check	E.PANTILGAN	
Designer	S.BROWNE	Design Check	I.HO	



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Client **QUEENSTOWN LAKES DISTRICT COUNCIL**

Project **SHOTOVER WWTP EFFLUENT ALTERNATIVE DISCHARGE**

Status **FOR CONSENT**

Drawing Title **PIPING AND INSTRUMENTATION DIAGRAM TREATED WASTEWATER CALAMITY POND**

Size **A1**

Project No. **12645246**

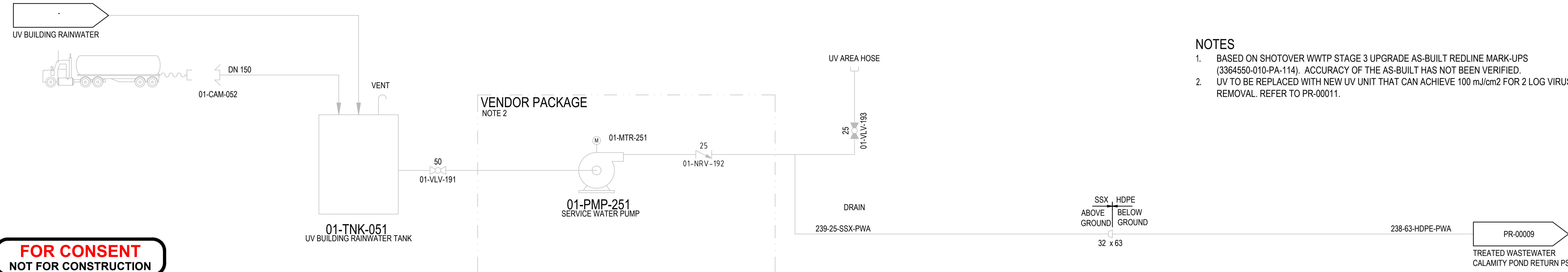
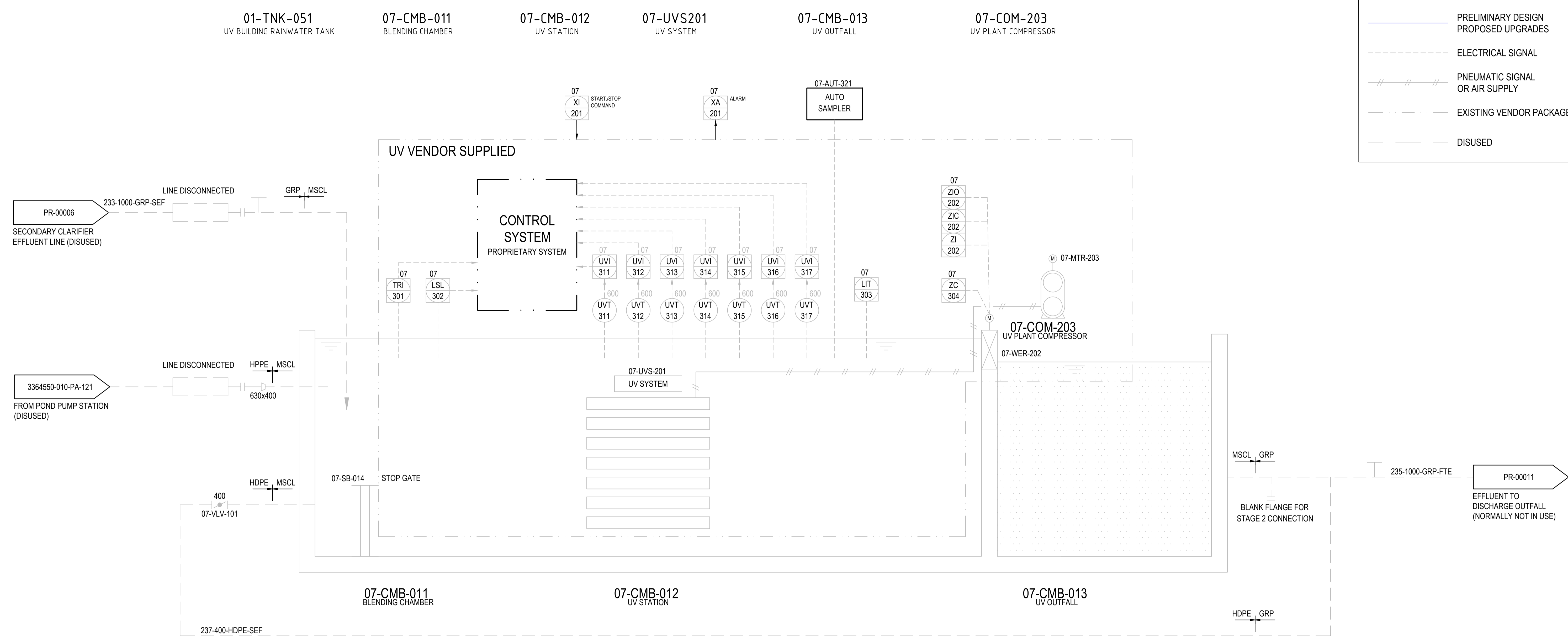
Drawing No. **12645246-GHD-00-07-DRG-PR-00009**

Rev **0**

**THIS UV SYSTEM IS REPLACED WITH THE NEW UV SYSTEM, REFER TO PR-00011 FOR DETAILS**

**LEGEND:**

	EXISTING ON SITE
	PRELIMINARY DESIGN PROPOSED UPGRADES
	ELECTRICAL SIGNAL
	PNEUMATIC SIGNAL OR AIR SUPPLY
	EXISTING VENDOR PACKAGE
	DISUSED



- NOTES**
1. BASED ON SHOTOVER WWTP STAGE 3 UPGRADE AS-BUILT REDLINE MARK-UPS (3364550-010-PA-114). ACCURACY OF THE AS-BUILT HAS NOT BEEN VERIFIED.
  2. UV TO BE REPLACED WITH NEW UV UNIT THAT CAN ACHIEVE 100 mJ/cm<sup>2</sup> FOR 2 LOG VIRUS REMOVAL. REFER TO PR-00011.

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A	PRELIM DESIGN WORK IN PROGRESS	I.HO		14.04.2026

Author: P.VINCENT    Drafting Check: E.PANTILGAN  
 Designer: S.BROWNE    Design Check: I.HO



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12645246

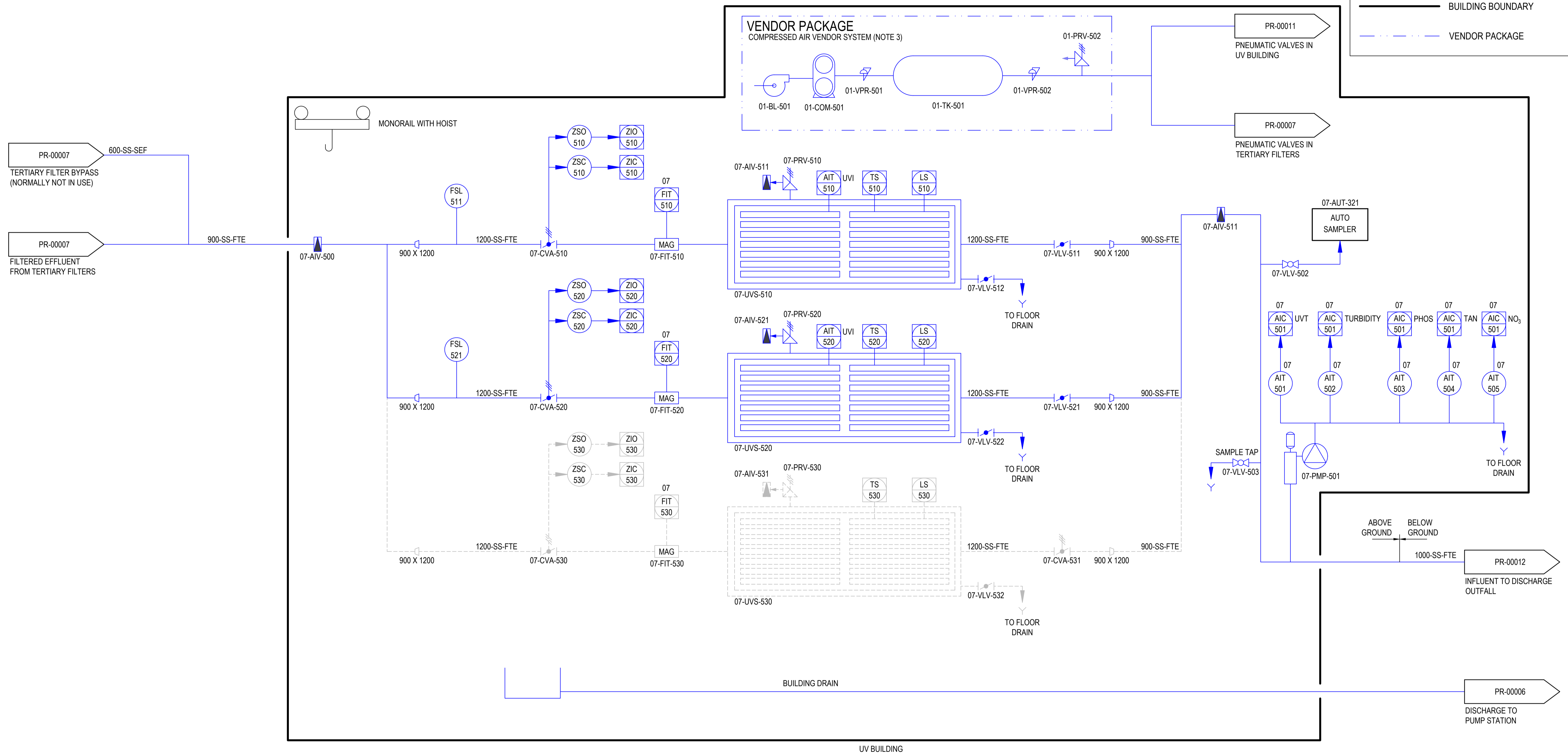
Client: QUEENSTOWN LAKES DISTRICT COUNCIL  
 Project: SHOTOVER WWTP EFFLUENT ALTERNATIVE DISCHARGE  
 Status: FOR CONSENT

Drawing Title: PIPING AND INSTRUMENTATION DIAGRAM UV PLANT  
 Drawing No.: 12645246-GHD-00-07-DRG-PR-00010  
 Rev: 0

07-UVS-510 UV REACTOR 1  
 07-UVS-520 UV REACTOR 2  
 07-UVS-530 UV REACTOR 3

**LEGEND:**

	EXISTING ON SITE
	PRELIMINARY DESIGN PROPOSED UPGRADES
	FUTURE UPGRADES, SEPARATE TO THIS PROJECT
	BUILDING BOUNDARY
	VENDOR PACKAGE



**NOTES**

1. UV SYSTEM FINAL DETAILS TO BE CONFIRMED BY VENDOR. NOT ALL DETAIL IS SHOWN.
2. THE UV SYSTEM SHALL INCLUDE PROCESS INSTRUMENTATION (NOT CURRENTLY SPECIFIED IN VENDOR PACKAGE). THIS IS FOR MONITORING OF TREATED EFFLUENT QUALITY.
3. DETAILS OF COMPRESSED AIR SYSTEM TO BE CONFIRMED AT DETAILED DESIGN.
4. A MONORAIL WITH HOIST OR A LIFTING GANTRY IS INSTALLED FOR INFREQUENT UV REMOVAL. THE DETAILS WILL BE DETERMINED AS PART OF DETAILED DESIGN.

**FOR CONSENT  
 NOT FOR CONSTRUCTION**

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A	30% DESIGN ISSUE (FOR COMMENT)	I.HO		11.05.2026
Rev	Description	Checked	Approved	Date
Author	P.VINCENT	Drafting Check	E.PANTILGAN	
Designer	S.BROWNE	Design Check	I.HO	



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Project No.  
 12645246

Client **QUEENSTOWN LAKES DISTRICT COUNCIL**

Project **SHOTOVER WWTP EFFLUENT ALTERNATIVE DISCHARGE**

Status **FOR CONSENT**

Drawing Title **PIPING AND INSTRUMENTATION DIAGRAM ENHANCED UV TREATMENT**

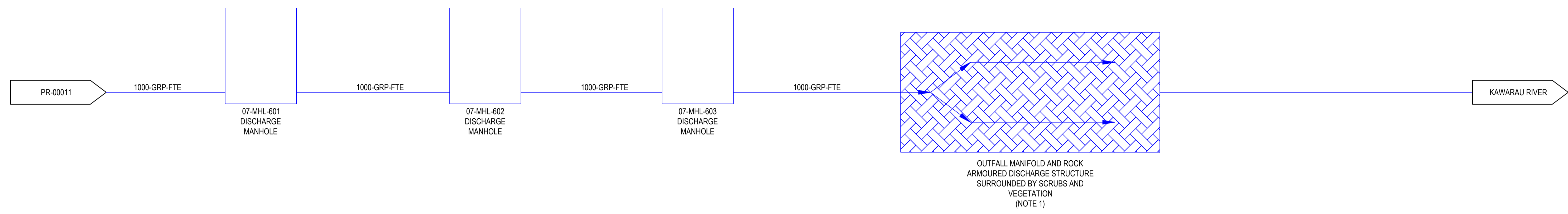
12645246-GHD-00-07-DRG-PR-00011

Size **A1**

Rev **0**

**LEGEND:**

	EXISTING ON SITE
	PRELIMINARY DESIGN PROPOSED UPGRADES
	VENDOR PACKAGE



**FOR CONSENT**  
**NOT FOR CONSTRUCTION**

- NOTES**
1. DETAILS FOR MANIFOLD AND ROCK ARMoured OUTFALL STRUCTURE TO BE FURTHER REFINED AT DETAILED DESIGN.
  2. INSPECTION PORTS ARE INSTALLED ALONG THE PIPELINE FOR MAINTENANCE ACTIVITIES.

Rev	Description	Checked	Approved	Date
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A	PRELIM DESIGN WORK IN PROGRESS	I.HO		14.04.2026

Author	J.ANG	Drafting Check	E.PANTILGAN
Designer	S.BROWNE	Design Check	I.HO



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Project No.  
12645246

Client	QUEENSTOWN LAKES DISTRICT COUNCIL
Project	SHOTOVER WWTP EFFLUENT ALTERNATIVE DISCHARGE
Status	FOR CONSENT

Drawing Title	PIPING AND INSTRUMENTATION DIAGRAM DISCHARGE OUTFALL	Size	A1
Drawing No.	12645246-GHD-00-07-DRG-PR-00012	Rev	0



LEGEND - EXISTING	
	MAJOR CONTOUR LINE
	MINOR CONTOUR LINE
	LEGAL BOUNDARY LINE
	HIGH VOLTAGE LINE
	SEWER
	SEWER ABANDONED
	MANHOLE
	DRAIN
	WATER

LEGEND - PROPOSED	
	EFFLUENT DISCHARGE LINE
	MANHOLE
	ENGINEERED FILL OVER PIPE
	ENGINEERED FILL PAD

PLAN  
SCALE 1:2500

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NOT FOR CONSTRUCTION

Rev	Description	Checked	Approved	Date
0	30% DESIGN ISSUE	KS	IH	26.05.26
B	PRELIM DESIGN WORK IN PROGRESS	KS	IH	11.05.26
A	PRELIM DESIGN WORK IN PROGRESS	KS	IH	14.04.26

Author	F. HOCKS	Drafting Check	C. WELLS
Designer	F. HOCKS	Design Check	I. HO



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Project **SHOTOVER WWTP EFFLUENT ALTERNATIVE DISCHARGE**

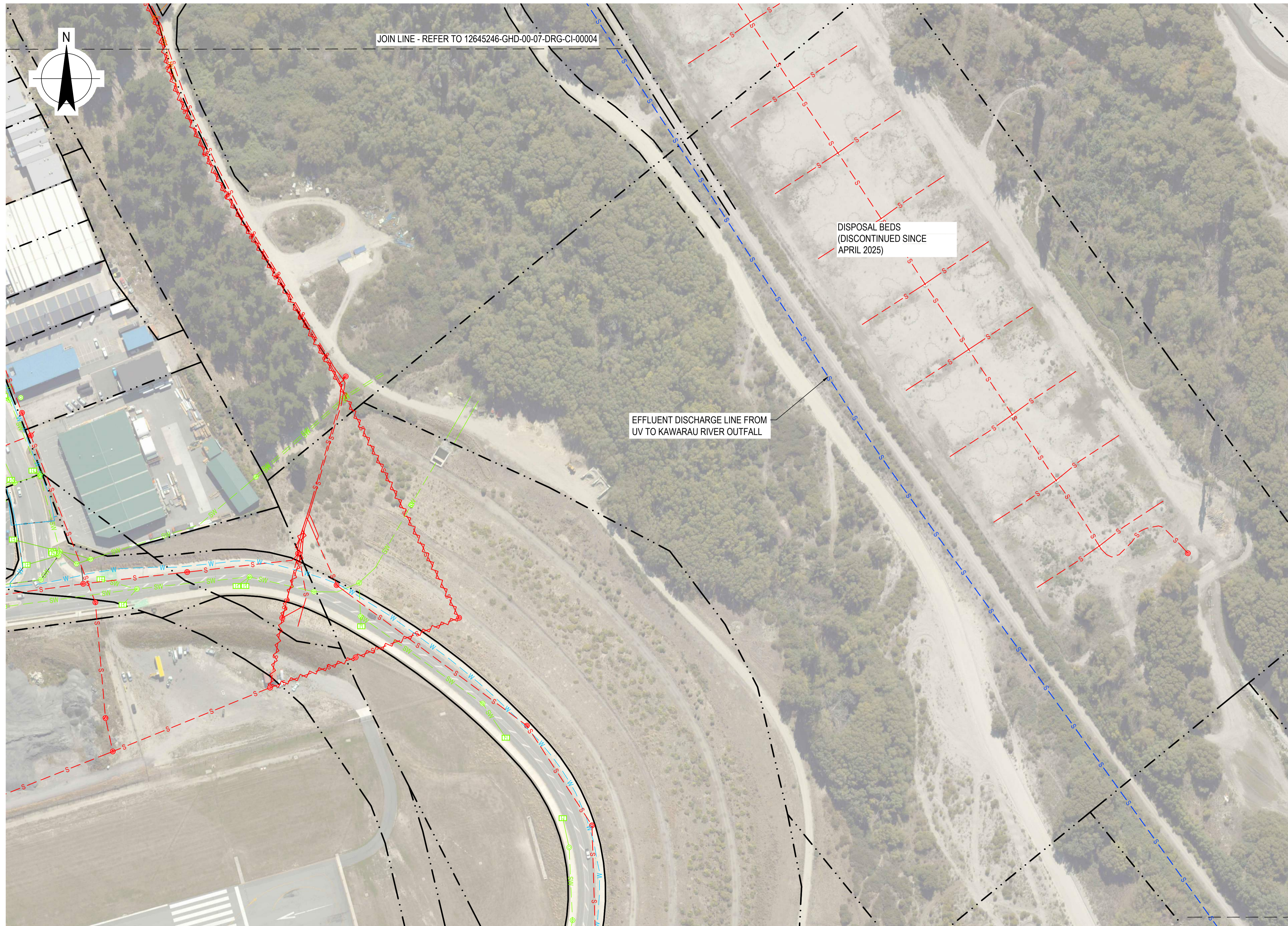
Status **FOR CONSENT**

Drawing Title **EFFLUENT DISPOSAL OVERALL LOCALITY**

Drawing No. **12645246-GHD-00-01-DRG-CI-00001**

Size **A1**

Rev **0**



LEGEND - EXISTING	
	MAJOR CONTOUR LINE
	MINOR CONTOUR LINE
	LEGAL BOUNDARY LINE
	HIGH VOLTAGE LINE
	SEWER
	SEWER ABANDONED
	MANHOLE
	DRAIN
	WATER
LEGEND - PROPOSED	
	EFFLUENT DISCHARGE LINE
	MANHOLE
	ENGINEERED FILL OVER PIPE
	ENGINEERED FILL PAD

PLAN  
SCALE 1:1000

JOIN LINE - REFER TO 12645246-GHD-00-07-DRG-CI-00003

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B	PRELIM DESIGN WORK IN PROGRESS	KS	IH	11.05.26
A	PRELIM DESIGN WORK IN PROGRESS	KS	IH	14.04.26

Author F. HOCKS      Drafting Check C. WELLS  
Designer F. HOCKS      Design Check I. HO



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Project No.  
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Client QUEENSTOWN LAKES DISTRICT COUNCIL  
Project SHOTOVER WWTP EFFLUENT ALTERNATIVE DISCHARGE  
Status FOR CONSENT

Drawing Title  
GENERAL ARRANGEMENT PLAN SHEET 1

Drawing No.  
12645246-GHD-00-07-DRG-CI-00002

Size  
A1

Rev  
0



JOIN LINE - REFER TO 12645246-GHD-00-07-DRG-CI-00002

ROCK OUTFALL  
REFER DRAWING  
CI-00013 FOR DETAILS

LEGEND - EXISTING	
	MAJOR CONTOUR LINE
	MINOR CONTOUR LINE
	LEGAL BOUNDARY LINE
	HIGH VOLTAGE LINE
	SEWER
	SEWER ABANDONED
	MANHOLE
	DRAIN
	WATER

LEGEND - PROPOSED	
	EFFLUENT DISCHARGE LINE
	MANHOLE
	ENGINEERED FILL OVER PIPE
	ENGINEERED FILL PAD

PLAN  
SCALE 1:1000

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Author	F. HOCKS	Drafting Check	C. WELLS
Designer	F. HOCKS	Design Check	I. HO



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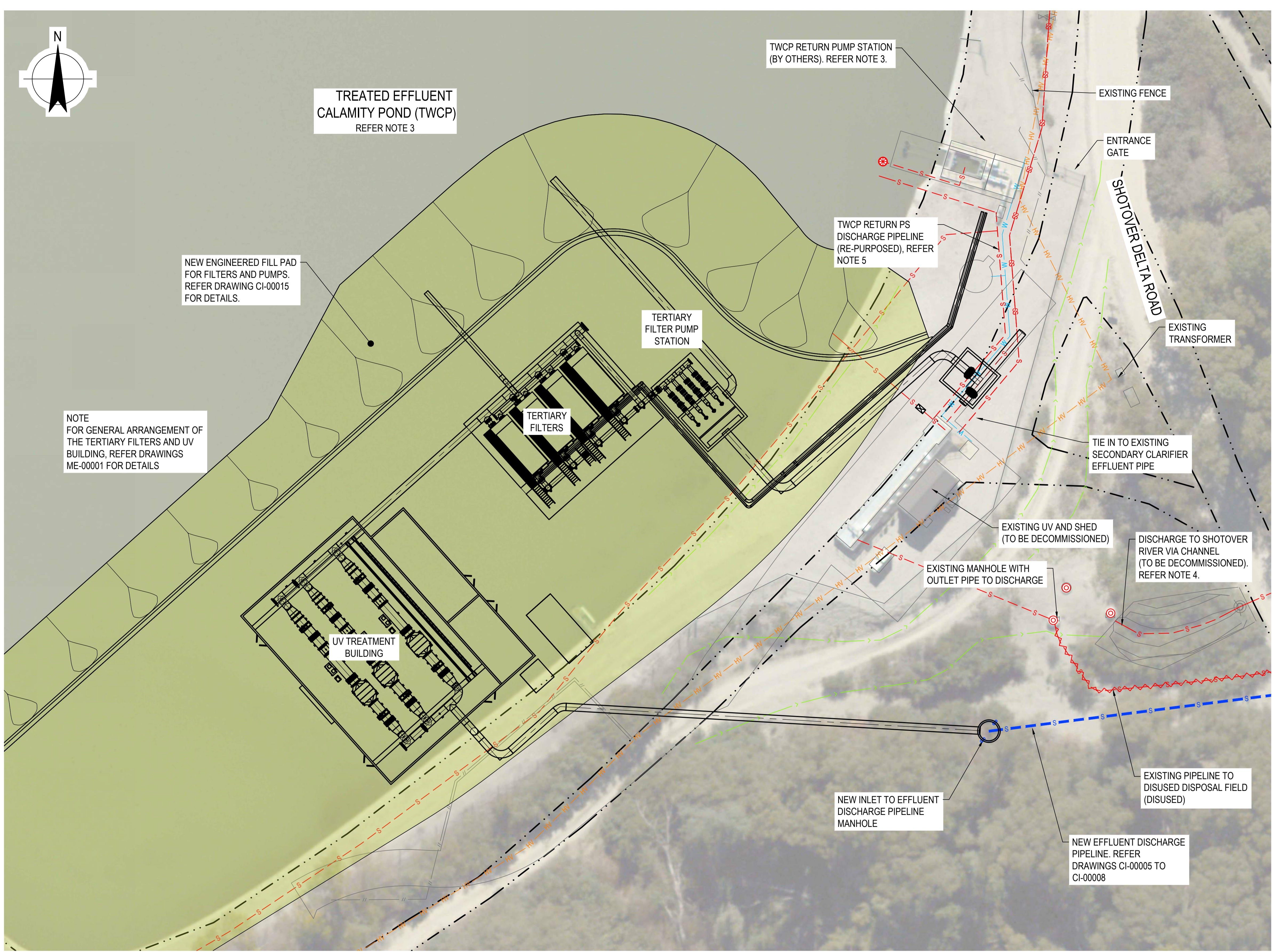
Project **SHOTOVER WWTP EFFLUENT ALTERNATIVE DISCHARGE**

Status **FOR CONSENT**

Drawing Title **GENERAL ARRANGEMENT PLAN SHEET 2**

12645246-GHD-00-07-DRG-CI-00003

Size **A1**  
Rev **0**



LEGEND - EXISTING	
	MAJOR CONTOUR LINE
	MINOR CONTOUR LINE
	LEGAL BOUNDARY LINE
	HIGH VOLTAGE LINE
	SEWER
	SEWER ABANDONED
	MANHOLE
	DRAIN
	WATER

LEGEND - PROPOSED	
	EFFLUENT DISCHARGE LINE
	MANHOLE
	ENGINEERED FILL OVER PIPE
	ENGINEERED FILL PAD

- NOTES:**
- PIPELINE AND POWER CABLE ALIGNMENTS ARE TAKEN FROM EXISTING AS-BUILT DRAWINGS BY OTHERS OR GIS. THEY SHOULD BE TREATED AS INDICATIVE AND REQUIRE CONFIRMATION PRIOR TO DETAILED DESIGN AND CONSTRUCTION.
  - THE ORTHOPHOTOGRAPHY SURVEY DATA IS DERIVED FROM LINZ, DATED 2021
  - THE TREATED EFFLUENT CALAMITY POND (TWCP) IS COMPLETED AS A SEPARATE PROJECT. IT WILL HAVE THE FOLLOWING INTERFACES WITH THIS PROJECT: (1) OVERFLOW FROM PUMP STATION, (2) OVERFLOW FROM TERTIARY FILTERS, (3) BACKWASH PIPE FROM TERTIARY FILTERS (FOR RETURNING TO WWTP), (4) FILTER DRAINING TO TWCP PUMP STATION, (5) POWER SUPPLY AND CONTROL AUTOMATION FOR TWCP RETURN PUMPS
  - THE EXISTING EFFLUENT DISCHARGE PIPELINE TO DISPOSAL FIELD HAS BEEN DISUSED SINCE APRIL 2025. THE EXISTING DISCHARGE PIPELINE TO THE SHOTOVER RIVER WILL BE DECOMMISSIONED WHEN THE DISCHARGE PIPELINE AND ROCK OUTFALL AT KAWARAU RIVER IS OPERATIONAL.
  - THE TWCP RETURN PIPELINE TO THE WWTP INLET WORKS IS NOT SHOWN IN THIS DRAWING. THE EXACT PIPE ALIGNMENT WILL BE DETERMINED AS THE TWCP DETAILED DESIGN PROGRESSES.
  - ADDITIONAL SPACE ALLOWANCE HAS BEEN MADE ON THE ENGINEERED FILL PLATFORM TO ACCOUNT FOR POTENTIAL CHANGES DURING DETAILED DESIGN. THE FOOTPRINT OF THE FILL PLATFORM WILL BE FINALISED AS PART OF THE SUBSEQUENT DESIGN STAGE.

TREATED EFFLUENT CALAMITY POND (TWCP)  
REFER NOTE 3

NEW ENGINEERED FILL PAD FOR FILTERS AND PUMPS. REFER DRAWING CI-00015 FOR DETAILS.

NOTE FOR GENERAL ARRANGEMENT OF THE TERTIARY FILTERS AND UV BUILDING, REFER DRAWINGS ME-00001 FOR DETAILS

TWCP RETURN PUMP STATION (BY OTHERS). REFER NOTE 3.

TWCP RETURN PS DISCHARGE PIPELINE (RE-PURPOSED), REFER NOTE 5

EXISTING FENCE

ENTRANCE GATE

SHOTOVER DELTA ROAD

EXISTING TRANSFORMER

TERTIARY FILTER PUMP STATION

TERTIARY FILTERS

TIE IN TO EXISTING SECONDARY CLARIFIER EFFLUENT PIPE

EXISTING UV AND SHED (TO BE DECOMMISSIONED)

EXISTING MANHOLE WITH OUTLET PIPE TO DISCHARGE

DISCHARGE TO SHOTOVER RIVER VIA CHANNEL (TO BE DECOMMISSIONED). REFER NOTE 4.

UV TREATMENT BUILDING

EXISTING PIPELINE TO DISUSED DISPOSAL FIELD (DISUSED)

NEW INLET TO EFFLUENT DISCHARGE PIPELINE MANHOLE

NEW EFFLUENT DISCHARGE PIPELINE. REFER DRAWINGS CI-00005 TO CI-00008

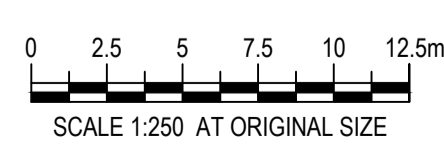
PLAN  
SCALE 1:250

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Rev	Description	Checked	Approved	Date
0	30% DESIGN ISSUE	KS	IH	26.05.26
B	PRELIM DESIGN WORK IN PROGRESS	KS	IH	11.05.26
A	PRELIM DESIGN WORK IN PROGRESS	KS	IH	14.04.26

Author	F. HOCKS	Drafting Check	C. WELLS
Designer	F. HOCKS	Design Check	I. HO



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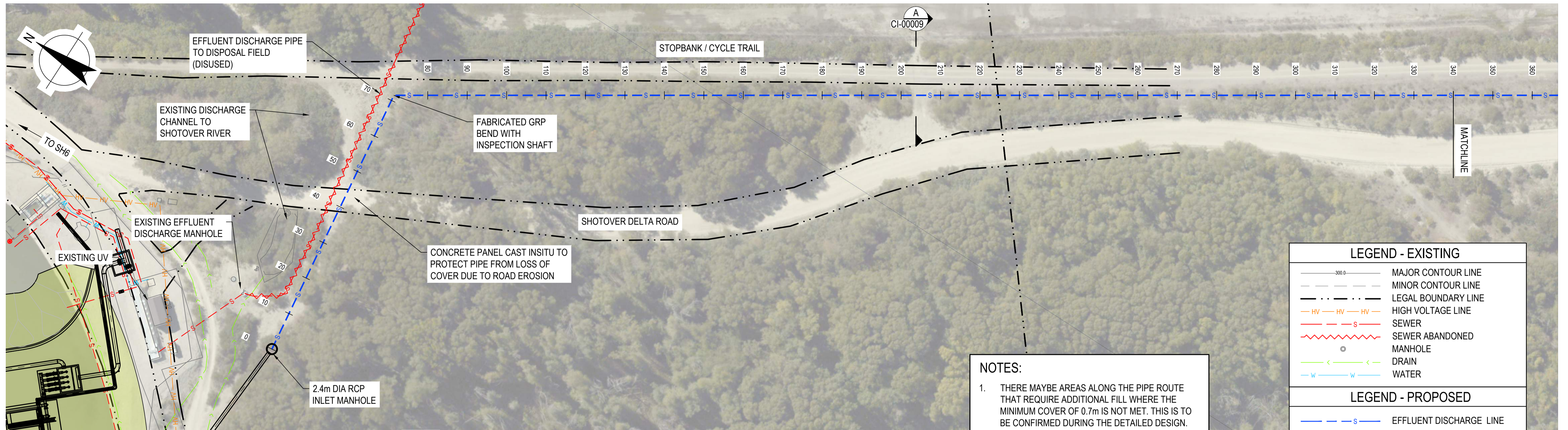
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Project No.  
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Client	QUEENSTOWN LAKES DISTRICT COUNCIL
Project	SHOTOVER WWTP EFFLUENT ALTERNATIVE DISCHARGE
Status	FOR CONSENT

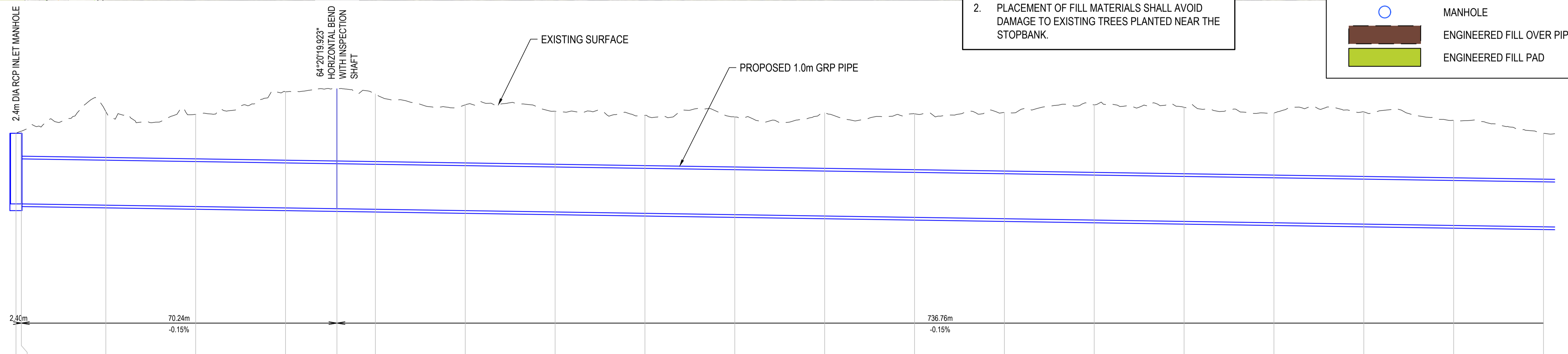
Drawing Title	CALAMITY POND INTERFACE PLAN	Size	A1
Drawing No.	12645246-GHD-00-07-DRG-CI-00004	Rev	0



LEGEND - EXISTING	
	MAJOR CONTOUR LINE
	MINOR CONTOUR LINE
	LEGAL BOUNDARY LINE
	HIGH VOLTAGE LINE
	SEWER
	SEWER ABANDONED
	MANHOLE
	DRAIN
	WATER
LEGEND - PROPOSED	
	EFFLUENT DISCHARGE LINE
	MANHOLE
	ENGINEERED FILL OVER PIPE
	ENGINEERED FILL PAD

**NOTES:**

1. THERE MAYBE AREAS ALONG THE PIPE ROUTE THAT REQUIRE ADDITIONAL FILL WHERE THE MINIMUM COVER OF 0.7m IS NOT MET. THIS IS TO BE CONFIRMED DURING THE DETAILED DESIGN.
2. PLACEMENT OF FILL MATERIALS SHALL AVOID DAMAGE TO EXISTING TREES PLANTED NEAR THE STOPBANK.



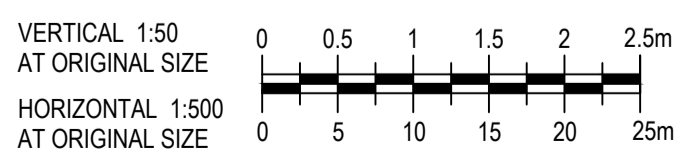
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DEPTH TO INVERT	1.570	1.618	2.083	2.050	2.582	2.662	2.566	2.352	2.240	2.178	2.173	2.298	2.304	2.364	2.564	2.557	2.459	2.496	2.338	2.079
PIPE INVERT LEVEL	311.400	311.400	311.371	311.341	311.310	311.293	311.280	311.250	311.220	311.190	311.160	311.130	311.100	311.070	311.040	311.010	310.980	310.950	310.920	310.890
EXISTING SURFACE	312.970	313.018	313.454	313.391	313.892	313.955	313.846	313.602	313.460	313.368	313.333	313.228	313.404	313.434	313.604	313.547	313.419	313.446	313.268	312.969

**LONGITUDINAL SECTION**  
 HORIZONTAL SCALE 1:500  
 VERTICAL SCALE 1:50

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Author: F. HOCKS    Drafting Check: C. WELLS  
 Designer: F. HOCKS/A. GHAVIDEL    Design Check: K. SLIEPEN



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Client: **QUEENSTOWN LAKES DISTRICT COUNCIL**  
 Project: **SHOTOVER WWTP EFFLUENT ALTERNATIVE DISCHARGE**  
 Status: **FOR CONSENT**

Drawing Title: **EFFLUENT DISCHARGE PIPELINE PLAN AND PROFILE SHEET 1 OF 4**

12645246-GHD-00-07-DRG-CI-00005

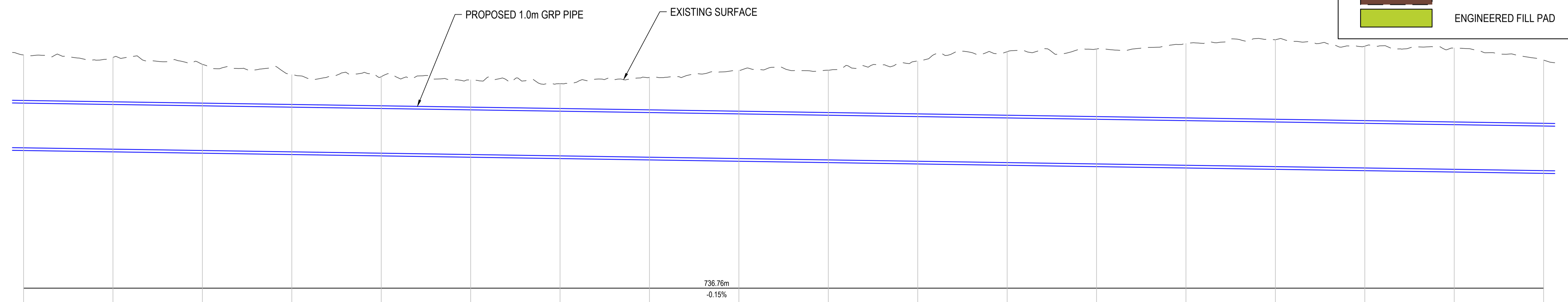
Size: **A1**  
 Rev: **0**



**NOTES:**

1. THERE MAYBE AREAS ALONG THE PIPE ROUTE THAT REQUIRE ADDITIONAL FILL WHERE THE MINIMUM COVER OF 0.7m IS NOT MET. THIS IS TO BE CONFIRMED DURING THE DETAILED DESIGN.
2. PLACEMENT OF FILL MATERIALS SHALL AVOID DAMAGE TO EXISTING TREES PLANTED NEAR THE STOPBANK.

LEGEND - EXISTING	
	MAJOR CONTOUR LINE
	MINOR CONTOUR LINE
	LEGAL BOUNDARY LINE
	HIGH VOLTAGE LINE
	SEWER
	SEWER ABANDONED
	MANHOLE
	DRAIN
	WATER
LEGEND - PROPOSED	
	EFFLUENT DISCHARGE LINE
	MANHOLE
	ENGINEERED FILL OVER PIPE
	ENGINEERED FILL PAD



Rev	Description	Checked	Approved	Date
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B	PRELIM DESIGN WORK IN PROGRESS	KS	IH	11.05.26
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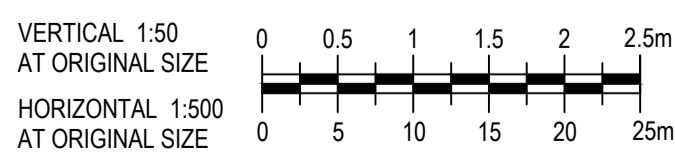
CHAINAGE	EXISTING SURFACE	PIPE INVERT LEVEL	DEPTH TO INVERT
340.000	312.969	310.880	2.079
360.000	312.914	310.880	2.054
380.000	312.759	310.830	1.929
400.000	312.527	310.800	1.727
420.000	312.483	310.770	1.713
440.000	312.410	310.740	1.671
460.000	312.327	310.710	1.617
480.000	312.468	310.680	1.788
500.000	312.825	310.650	1.976
520.000	312.827	310.619	2.008
540.000	312.829	310.589	2.240
560.000	313.041	310.559	2.482
580.000	313.102	310.529	2.573
600.000	313.226	310.499	2.727
620.000	313.309	310.469	2.840
640.000	313.165	310.439	2.726
660.000	313.124	310.409	2.715
680.000	312.853	310.379	2.474

**LONGITUDINAL SECTION**  
 HORIZONTAL SCALE 1:500  
 VERTICAL SCALE 1:50

**FOR CONSENT**  
 NOT FOR CONSTRUCTION

Rev	Description	Checked	Approved	Date
0	30% DESIGN ISSUE	KS	IH	26.05.26
B	PRELIM DESIGN WORK IN PROGRESS	KS	IH	11.05.26
A	PRELIM DESIGN WORK IN PROGRESS	KS	IH	14.04.26

Author F. HOCKS    Drafting Check C. WELLS  
 Designer F. HOCKS/A. GHAVIDEL    Design Check K. SLIEPEN



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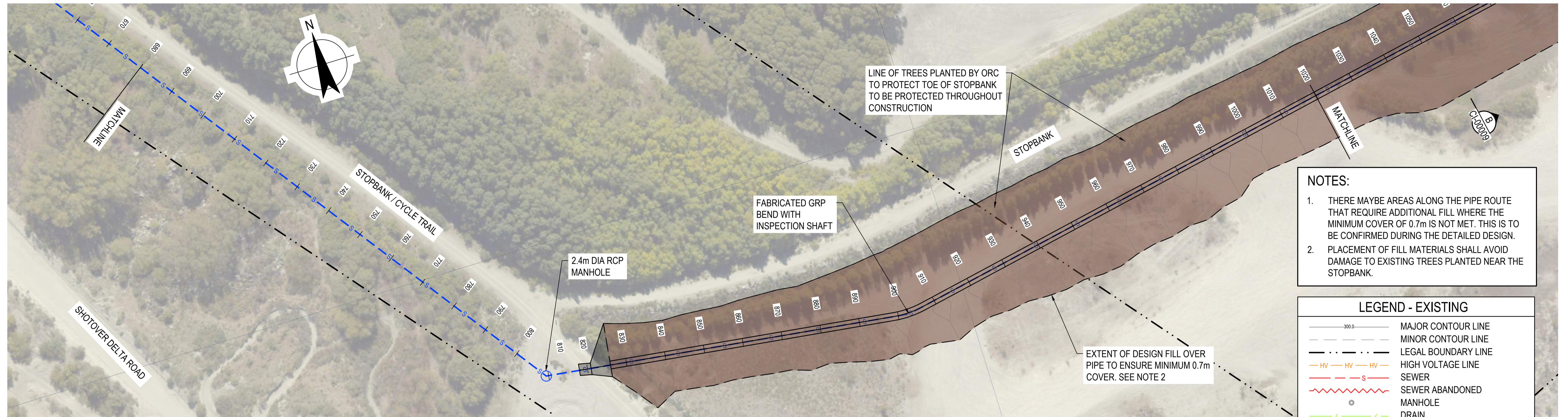


Client **QUEENSTOWN LAKES DISTRICT COUNCIL**  
 Project **SHOTOVER WWTP EFFLUENT ALTERNATIVE DISCHARGE**  
 Status **FOR CONSENT**

Drawing Title **EFFLUENT DISCHARGE PIPELINE PLAN AND PROFILE SHEET 2 OF 4**

12645246-GHD-00-07-DRG-CI-00006

Size **A1**  
 Rev **0**



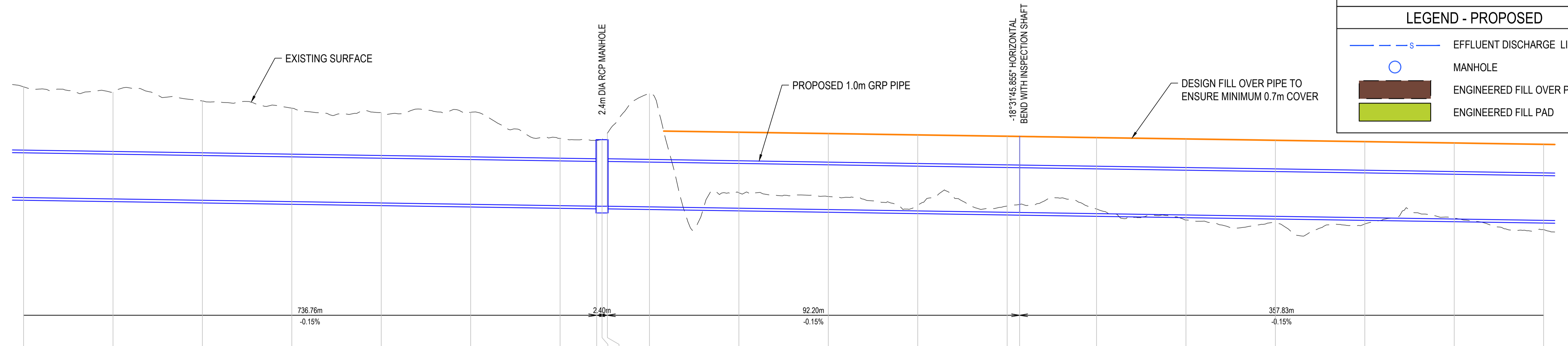
- NOTES:**
1. THERE MAYBE AREAS ALONG THE PIPE ROUTE THAT REQUIRE ADDITIONAL FILL WHERE THE MINIMUM COVER OF 0.7m IS NOT MET. THIS IS TO BE CONFIRMED DURING THE DETAILED DESIGN.
  2. PLACEMENT OF FILL MATERIALS SHALL AVOID DAMAGE TO EXISTING TREES PLANTED NEAR THE STOPBANK.

**LEGEND - EXISTING**

- 300.0 — MAJOR CONTOUR LINE
- 100.0 — MINOR CONTOUR LINE
- - - - - LEGAL BOUNDARY LINE
- HV — HV — HV — HIGH VOLTAGE LINE
- S — S — S — SEWER
- S — S — S — SEWER ABANDONED
- MANHOLE
- W — W — W — DRAIN
- W — W — W — WATER

**LEGEND - PROPOSED**

- S — EFFLUENT DISCHARGE LINE
- MANHOLE
- ENGINEERED FILL OVER PIPE
- ENGINEERED FILL PAD



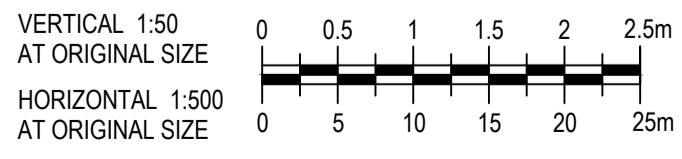
PIPE LENGTH (m)	736.76m	2.40m	92.20m	357.83m
PIPE GRADE (%)	-0.15%		-0.15%	-0.15%

DATUM RL. 307.0	
DESIGN SURFACE	311.779, 311.749, 311.745, 311.719, 311.689, 311.659, 311.629, 311.598, 311.568
DEPTH TO INVERT	2.474, 2.384, 2.219, 2.088, 2.022, 2.056, 1.904, 1.469, 1.487, 1.631, 2.528, 0.345, 0.292, 0.138, 0.140, 0.179, 0.104, -0.113, -0.146, -0.141, 0.024, -0.207
PIPE INVERT LEVEL	310.379, 310.349, 310.319, 310.289, 310.258, 310.228, 310.198, 310.186, 310.186, 310.186, 310.172, 310.141, 310.111, 310.111, 310.080, 310.046, 310.046, 310.020, 309.990, 309.990, 309.930, 309.900, 309.870, 311.568
EXISTING SURFACE	312.853, 312.733, 312.538, 312.377, 312.281, 312.284, 311.703, 311.655, 311.673, 311.617, 312.700, 310.486, 310.403, 310.218, 310.190, 310.225, 310.124, 309.877, 309.814, 309.789, 309.924, 309.663
CHAINAGE	680.000, 700.000, 720.000, 740.000, 760.000, 780.000, 800.000, 808.191, 809.391, 810.591, 820.000, 840.000, 860.000, 880.000, 900.000, 902.788, 920.000, 940.000, 960.000, 980.000, 1000.000, 1020.000

**LONGITUDINAL SECTION**  
 HORIZONTAL SCALE 1:500  
 VERTICAL SCALE 1:50

**FOR CONSENT**  
 NOT FOR CONSTRUCTION

0	30% DESIGN ISSUE	KS	IH	26.05.26
B	PRELIM DESIGN WORK IN PROGRESS	KS	IH	11.05.26
A	PRELIM DESIGN WORK IN PROGRESS	KS	IH	14.04.26
Rev	Description	Checked	Approved	Date
Author	F. HOCKS	Drafting Check	C. WELLS	
Designer	F. HOCKS/A. GHAVIDEL	Design Check	K. SLIEPEN	



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Client **QUEENSTOWN LAKES DISTRICT COUNCIL**

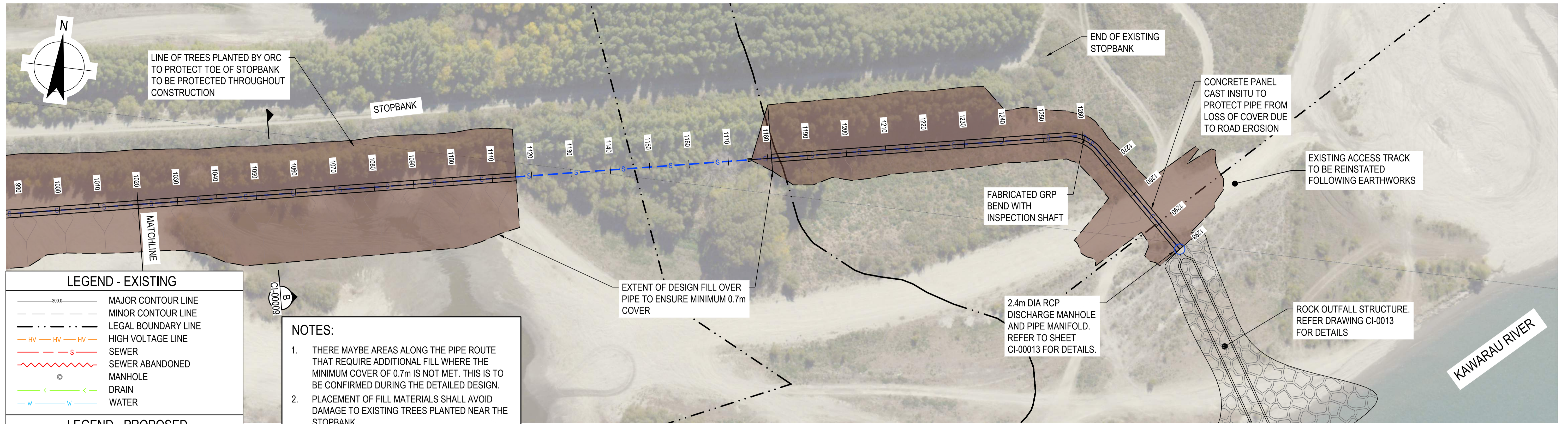
Project **SHOTOVER WWTP EFFLUENT ALTERNATIVE DISCHARGE**

Status **FOR CONSENT**

Drawing Title **EFFLUENT DISCHARGE PIPELINE PLAN AND PROFILE SHEET 3 OF 4**

Drawing No. **12645246-GHD-00-07-DRG-CI-00007**

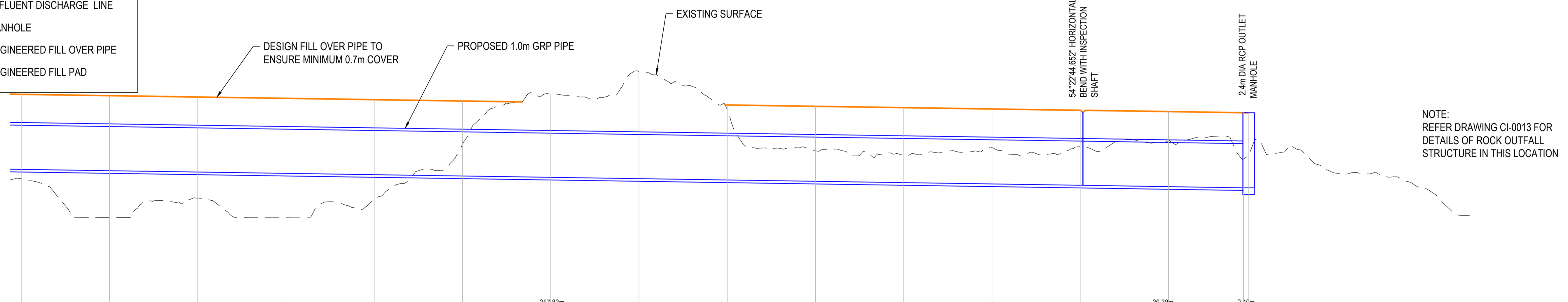
Rev **0**



LEGEND - EXISTING	
	MAJOR CONTOUR LINE
	MINOR CONTOUR LINE
	LEGAL BOUNDARY LINE
	HIGH VOLTAGE LINE
	SEWER
	SEWER ABANDONED
	MANHOLE
	DRAIN
	WATER
LEGEND - PROPOSED	
	EFFLUENT DISCHARGE LINE
	MANHOLE
	ENGINEERED FILL OVER PIPE
	ENGINEERED FILL PAD

**NOTES:**

1. THERE MAYBE AREAS ALONG THE PIPE ROUTE THAT REQUIRE ADDITIONAL FILL WHERE THE MINIMUM COVER OF 0.7m IS NOT MET. THIS IS TO BE CONFIRMED DURING THE DETAILED DESIGN.
2. PLACEMENT OF FILL MATERIALS SHALL AVOID DAMAGE TO EXISTING TREES PLANTED NEAR THE STOPBANK.



PIPE LENGTH (m)	PIPE GRADE (%)
357.83m	-0.15%
36.38m	-0.15%
2.40m	

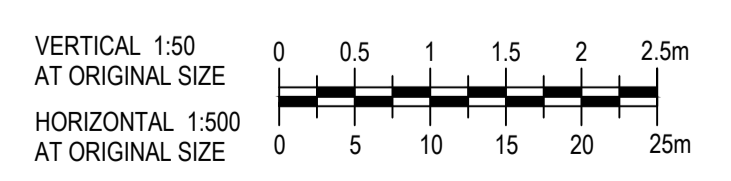
DATUM RL. 306.0	
DESIGN SURFACE	311.586, 311.538, 311.508, 311.478, 311.448, 311.268, 311.298, 311.267, 311.237, 311.208, 311.166, 311.178, 311.151, 311.151
DEPTH TO INVERT	0.207, 1.061, 0.594, 0.583, 0.559, 1.886, 2.413, 1.598, 0.690, 0.629, 0.825, 0.873, 0.877, 1.035, 0.650, 0.743
PIPE INVERT LEVEL	309.570, 309.840, 309.810, 309.780, 309.750, 309.690, 309.660, 309.630, 309.600, 309.570, 309.540, 309.510, 309.509, 309.479, 309.453, 309.453
EXISTING SURFACE	309.663, 308.779, 309.216, 308.787, 309.191, 309.720, 312.073, 311.228, 310.290, 310.199, 310.365, 310.383, 310.387, 310.515, 310.102, 310.196
CHAINAGE	1020.000, 1040.000, 1060.000, 1080.000, 1100.000, 1120.000, 1140.000, 1160.000, 1180.000, 1200.000, 1220.000, 1240.000, 1260.000, 1280.000, 1297.003, 1298.203

**LONGITUDINAL SECTION**  
HORIZONTAL SCALE 1:500  
VERTICAL SCALE 1:50

**FOR CONSENT**  
NOT FOR CONSTRUCTION

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A	PRELIM DESIGN WORK IN PROGRESS	KS	IH	14.04.26

Author: F. HOCKS    Drafting Check: C. WELLS  
Designer: F. HOCKS/A. GHAWIDEL    Design Check: K. SLIEPEN



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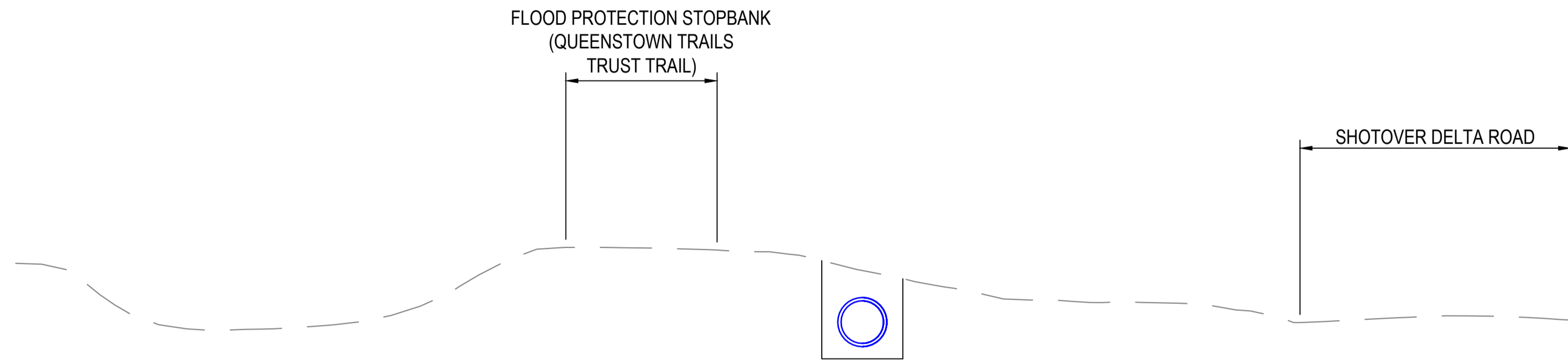
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Client: QUEENSTOWN LAKES DISTRICT COUNCIL  
Project: SHOTOVER WWTP EFFLUENT ALTERNATIVE DISCHARGE  
Status: FOR CONSENT

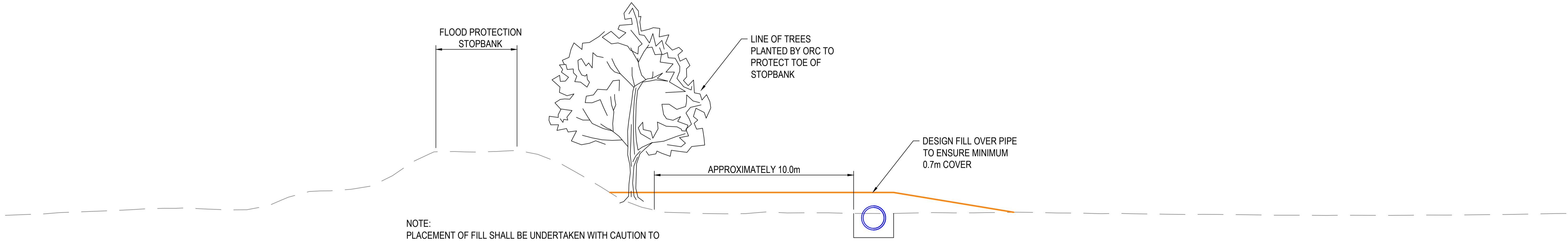
Drawing Title: EFFLUENT DISCHARGE PIPELINE PLAN AND PROFILE  
SHEET 4 OF 4

Drawing No: 12645246-GHD-00-07-DRG-CI-00008  
Rev: 0



NOTE:  
PIPE TRENCHES SHALL BE UNDERTAKEN WITH CAUTION TO MINIMISE EFFECT ON THE STOPBANK. TRENCH DETAILS WILL BE COMPLETED ONCE DETAILED GEOTECHNICAL INVESTIGATION AND DESIGN IS COMPLETED.

**A SECTION**  
CI-00005 SCALE 1 : 100



NOTE:  
PLACEMENT OF FILL SHALL BE UNDERTAKEN WITH CAUTION TO AVOID DAMAGE TO THE EXISTING TREES

**B SECTION**  
CI-00008 SCALE 1 : 100

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A	PRELIM DESIGN WORK IN PROGRESS	KS	IH	14.04.26

Author F. HOCKS      Drafting Check C. WELLS  
Designer F. HOCKS/A. GHAVIDEL      Design Check I. HO



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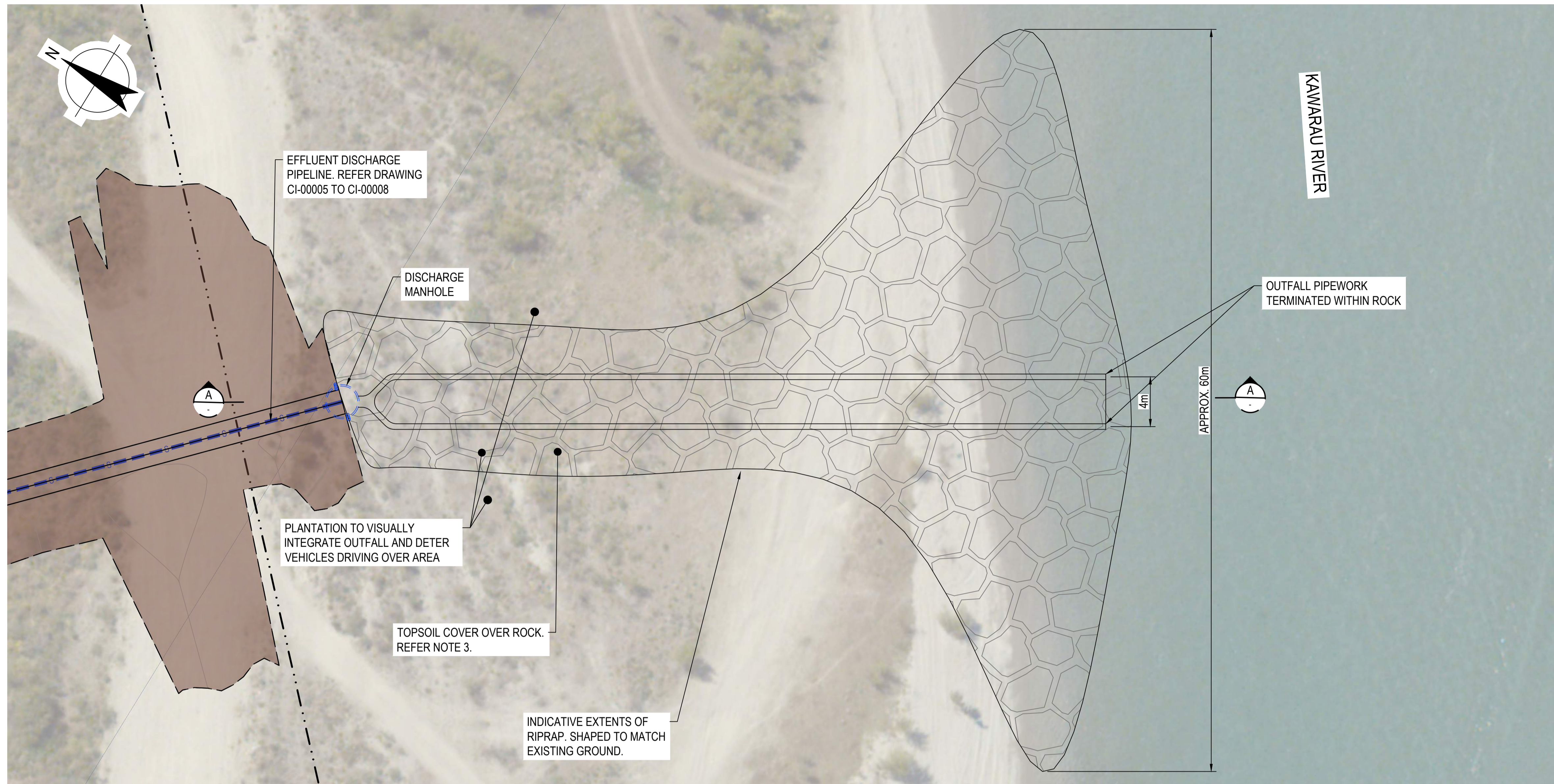


Project No.  
12645246

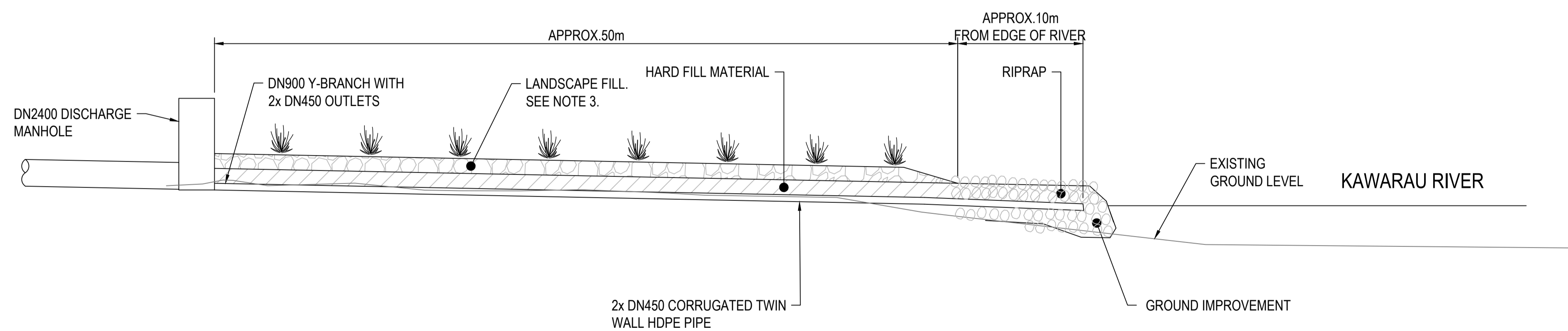
Client QUEENSTOWN LAKES DISTRICT COUNCIL  
Project SHOTOVER WWTP EFFLUENT ALTERNATIVE DISCHARGE  
Status FOR CONSENT

Drawing Title TYPICAL CROSS SECTIONS EFFLUENT CONVEYANCE PIPELINE  
Drawing No. 12645246-GHD-00-07-DRG-CI-00009  
Rev 0

Size A1



PLAN  
SCALE 1:200



A-A SECTION  
1:200

NOTES:

1. THE RIVER BED LEVEL HAS BEEN ESTIMATED FROM BATHYMETRY SURVEY UNDERTAKEN IN MARCH 2026.
2. THE INDICATIVE PLAN AND SECTIONS OF THE OUTFALL WILL BE SUBJECT TO FURTHER REFINEMENT THROUGH THE DETAILED DESIGN STAGES. THE PURPOSE OF THIS DRAWING IS TO DEMONSTRATE THE CONCEPT AND ITS RELATIVE SIZE.
3. REFER TO BOFFA MISKELL LANDSCAPE MITIGATION PLAN FOR CONCEPTUAL DETAILS OF VEGETATION TO BE PLANTED AROUND THE OUTFALL STRUCTURE.

**FOR CONSENT**  
**NOT FOR CONSTRUCTION**

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A	PRELIM DESIGN WORK IN PROGRESS	KS	IH	14.04.26

Author F. HOCKS      Drafting Check C. WELLS  
Designer F. HOCKS/A. GHAVIDEL      Design Check I. HO



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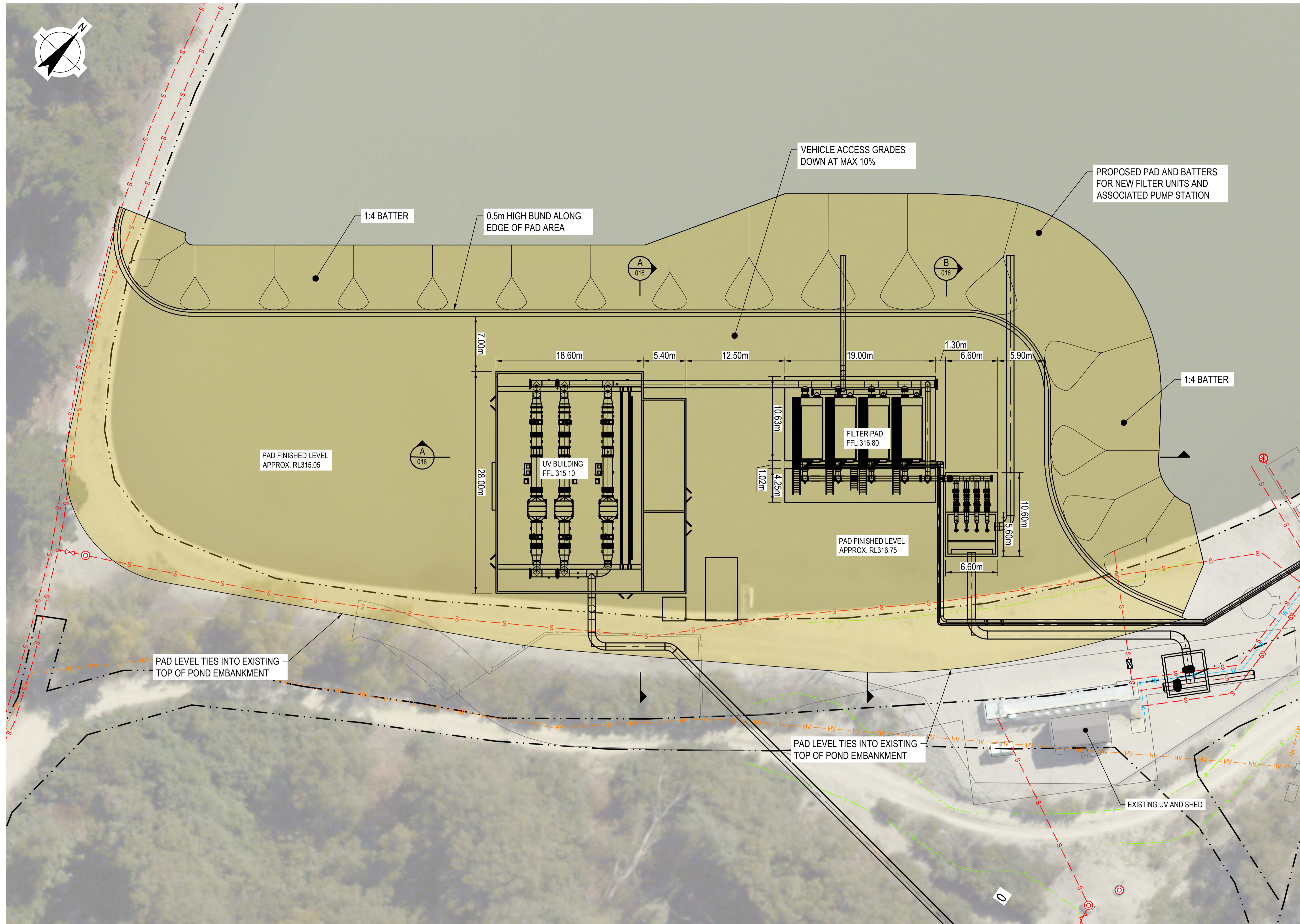
Project No.  
12645246

Client QUEENSTOWN LAKES DISTRICT COUNCIL  
Project SHOTOVER WWTP EFFLUENT ALTERNATIVE DISCHARGE  
Status FOR CONSENT

Drawing Title  
EFFLUENT DISCHARGE PIPELINE  
ROCK OUTFALL STRUCTURE  
PLAN AND DETAILS

12645246-GHD-00-07-DRG-CI-00013

Size  
A1  
Rev  
0



LEGEND - EXISTING	
	MAJOR CONTOUR LINE
	MINOR CONTOUR LINE
	LEGAL BOUNDARY LINE
	HIGH VOLTAGE LINE
	SEWER
	SEWER ABANDONED
	MANHOLE
	DRAIN
	WATER
LEGEND - PROPOSED	
	EFFLUENT DISCHARGE LINE
	MANHOLE
	ENGINEERED FILL OVER PIPE
	ENGINEERED FILL PAD

**NOTES:**

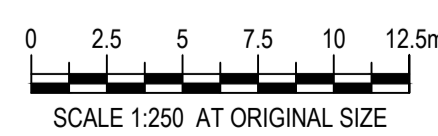
- PIPELINE AND POWER CABLE ALIGNMENTS ARE TAKEN FROM EXISTING AS-BUILT DRAWINGS BY OTHERS OR GIS. THEY SHOULD BE TREATED AS INDICATIVE AND REQUIRE CONFIRMATION PRIOR TO DETAILED DESIGN AND CONSTRUCTION.
- AT PRESENT, THE INTERFACES WITH CALAMITY POND ARE ASSUMED TO BE CONFIGURED AS SHOWN. THERE IS A RISK THAT THESE INTERFACES MAY CHANGE DEPENDING ON THE CALAMITY POND PROJECT SCOPE AND DESIGN DECISIONS. ANY SUCH CHANGES MAY IMPACT FILTER LOCATION, PIPE LENGTHS, PIPE SIZES, AND PUMP SELECTION.
- REFER TO GEOTECHNICAL REPORT FOR RECOMMENDED FIELD INVESTIGATIONS PRIOR TO FINALISING THE RECLAIMED AREA DESIGN
- INDICATIVE LOCATION OF FUTURE SECOND UV CHANNEL IS INCLUDED. THE FINAL LOCATION MAY CHANGE AS A RESULT OF FURTHER DESIGN INPUT.
- THE ORTHOPHOTOGRAPHY SURVEY DATA IS DERIVED FROM LINZ, DATED 2021

PLAN  
SCALE 1:250

**FOR CONSENT**  
NOT FOR CONSTRUCTION

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Author F. HOCKS    Drafting Check C. WELLS  
Designer F. HOCKS/A. GHAVIDEL    Design Check I. HO



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Project No.  
12645246

Client QUEENSTOWN LAKES DISTRICT COUNCIL  
Project SHOTOVER WWTP EFFLUENT ALTERNATIVE DISCHARGE  
Status FOR CONSENT

Drawing Title  
TERTIARY FILTER  
ENGINEERED FILL AREA  
EARTHWORKS PLAN

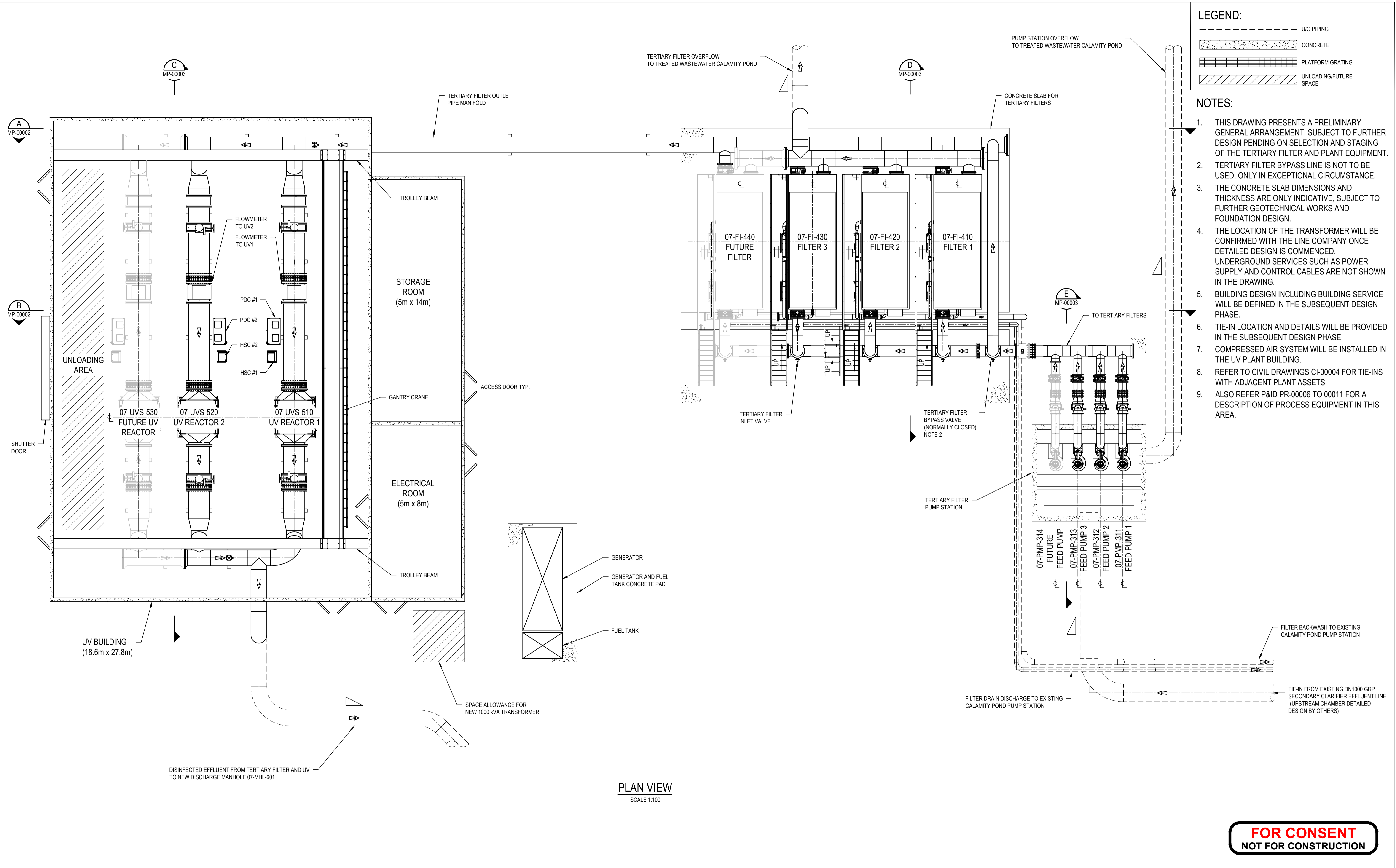
Drawing No.  
12645246-GHD-00-07-DRG-CI-00015

Size  
A1  
Rev  
C

**LEGEND:**

- U/G PIPING
- CONCRETE
- PLATFORM GRATING
- UNLOADING/FUTURE SPACE

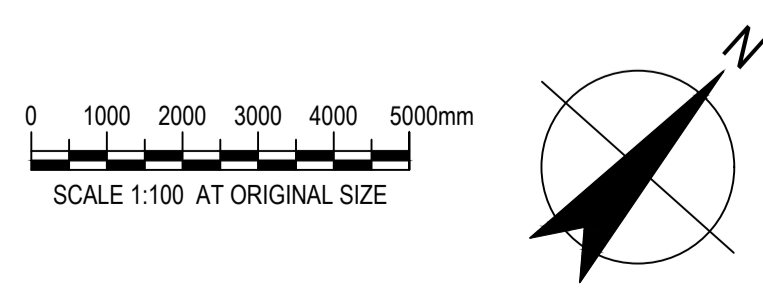
- NOTES:**
1. THIS DRAWING PRESENTS A PRELIMINARY GENERAL ARRANGEMENT, SUBJECT TO FURTHER DESIGN PENDING ON SELECTION AND STAGING OF THE TERTIARY FILTER AND PLANT EQUIPMENT.
  2. TERTIARY FILTER BYPASS LINE IS NOT TO BE USED, ONLY IN EXCEPTIONAL CIRCUMSTANCE.
  3. THE CONCRETE SLAB DIMENSIONS AND THICKNESS ARE ONLY INDICATIVE, SUBJECT TO FURTHER GEOTECHNICAL WORKS AND FOUNDATION DESIGN.
  4. THE LOCATION OF THE TRANSFORMER WILL BE CONFIRMED WITH THE LINE COMPANY ONCE DETAILED DESIGN IS COMMENCED. UNDERGROUND SERVICES SUCH AS POWER SUPPLY AND CONTROL CABLES ARE NOT SHOWN IN THE DRAWING.
  5. BUILDING DESIGN INCLUDING BUILDING SERVICE WILL BE DEFINED IN THE SUBSEQUENT DESIGN PHASE.
  6. TIE-IN LOCATION AND DETAILS WILL BE PROVIDED IN THE SUBSEQUENT DESIGN PHASE.
  7. COMPRESSED AIR SYSTEM WILL BE INSTALLED IN THE UV PLANT BUILDING.
  8. REFER TO CIVIL DRAWINGS CI-00004 FOR TIE-INS WITH ADJACENT PLANT ASSETS.
  9. ALSO REFER P&ID PR-00006 TO 00011 FOR A DESCRIPTION OF PROCESS EQUIPMENT IN THIS AREA.



**PLAN VIEW**  
SCALE 1:100

**FOR CONSENT**  
NOT FOR CONSTRUCTION

Rev	Description	Checked	Approved	Date
0	30% DESIGN ISSUE	M.T.	I.H.	26.05.26
Author	R. MENDOZA	Drafting Check	L. DELA CRUZ	Reg No.
Designer	R. MENDOZA	Design Check	I. HO, M. TSEN	Date



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Project No.  
12645246

Client **QUEENSTOWN LAKES DISTRICT COUNCIL**

Project **SHOTOVER WWTP EFFLUENT ALTERNATIVE DISCHARGE**

Status **FOR CONSENT**

Drawing Title **TERTIARY FILTER AND UV BUILDING GENERAL ARRANGEMENT DRAWING**

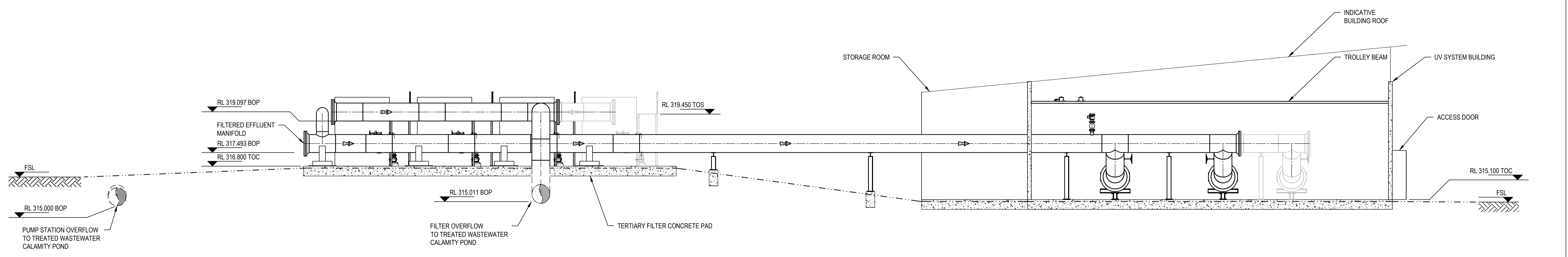
Size **A1**

Drawing No. **12645246-GHD-00-07-DRG-MP-00001**

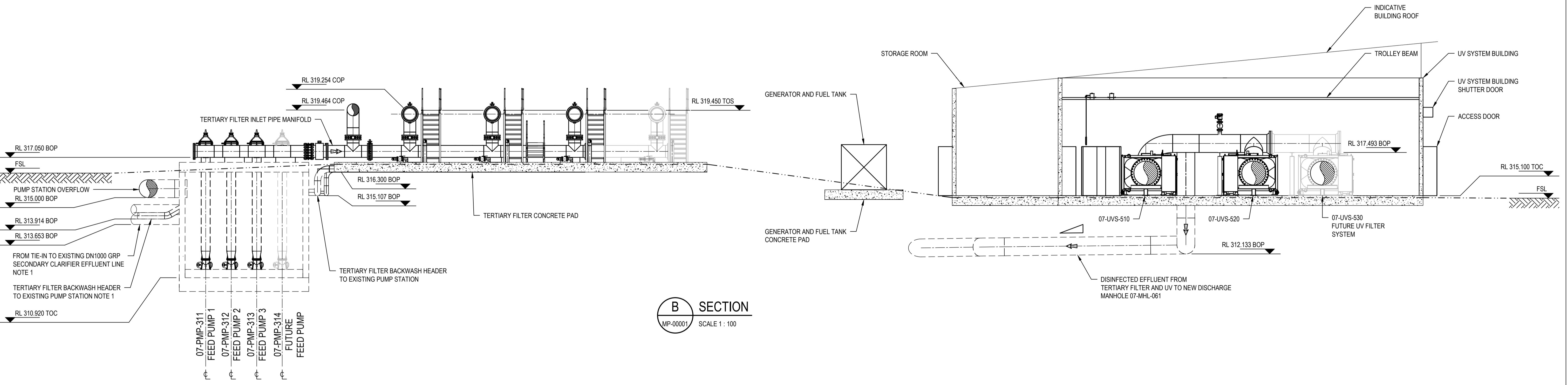
Rev **0**

**LEGEND:**

- U/G PIPING
- CONCRETE
- FSL



**A SECTION**  
MP-00001 SCALE 1 : 100



**B SECTION**  
MP-00001 SCALE 1 : 100

- NOTES:**
- THE PUMP STATION TIE-IN POINTS WITH THE CIVIL CONSTRUCTION OF THE TREATED WASTEWATER CALAMITY POND WILL BE REFINED AS THE DESIGN PROGRESSES.
  - THE LEVELS AND THE GENERAL ARRANGEMENT DESCRIBED IN THIS DRAWING ARE TO BE TREATED AS PRELIMINARY ONLY. SUBJECT TO DETAILED DESIGN FOLLOWING THE SELECTION OF TERTIARY FILTERS AND UV REACTORS IN THE DETAILED DESIGN PHASE.
  - DETAILS OF PIPE FITTINGS, FLANGES, COUPLERS ARE TO BE INCLUDED IN THE DETAILED DESIGN DRAWINGS. SOME OF THEM ARE INCLUDED IN THE PLAN VIEW AND SECTIONS AS PRELIMINARY.
  - REFER TO NOTE 3 IN SHEET MP-00001 REGARDING CONCRETE SLAB DIMENSIONS AND THICKNESS.
  - REFER TO NOTE 5 IN SHEET MP-00001 REGARDING BUILDING DESIGN AND BUILDING SERVICES IN THE DETAILED DESIGN PHASE.

**FOR CONSENT**  
**NOT FOR CONSTRUCTION**

0	30% DESIGN ISSUE	M.T.	I.H.	26.05.26
Rev	Description	Checked	Approved	Date
Author	R. MENDOZA	Drafting Check	L. DELA CRUZ	
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Project No.  
12645246

Client **QUEENSTOWN LAKES DISTRICT COUNCIL**

Project **SHOTOVER WWTP EFFLUENT ALTERNATIVE DISCHARGE**

Status **FOR CONSENT**

Drawing Title **TERTIARY FILTER AND UV BUILDING SECTION AND DETAIL SHEET 1 OF 2**

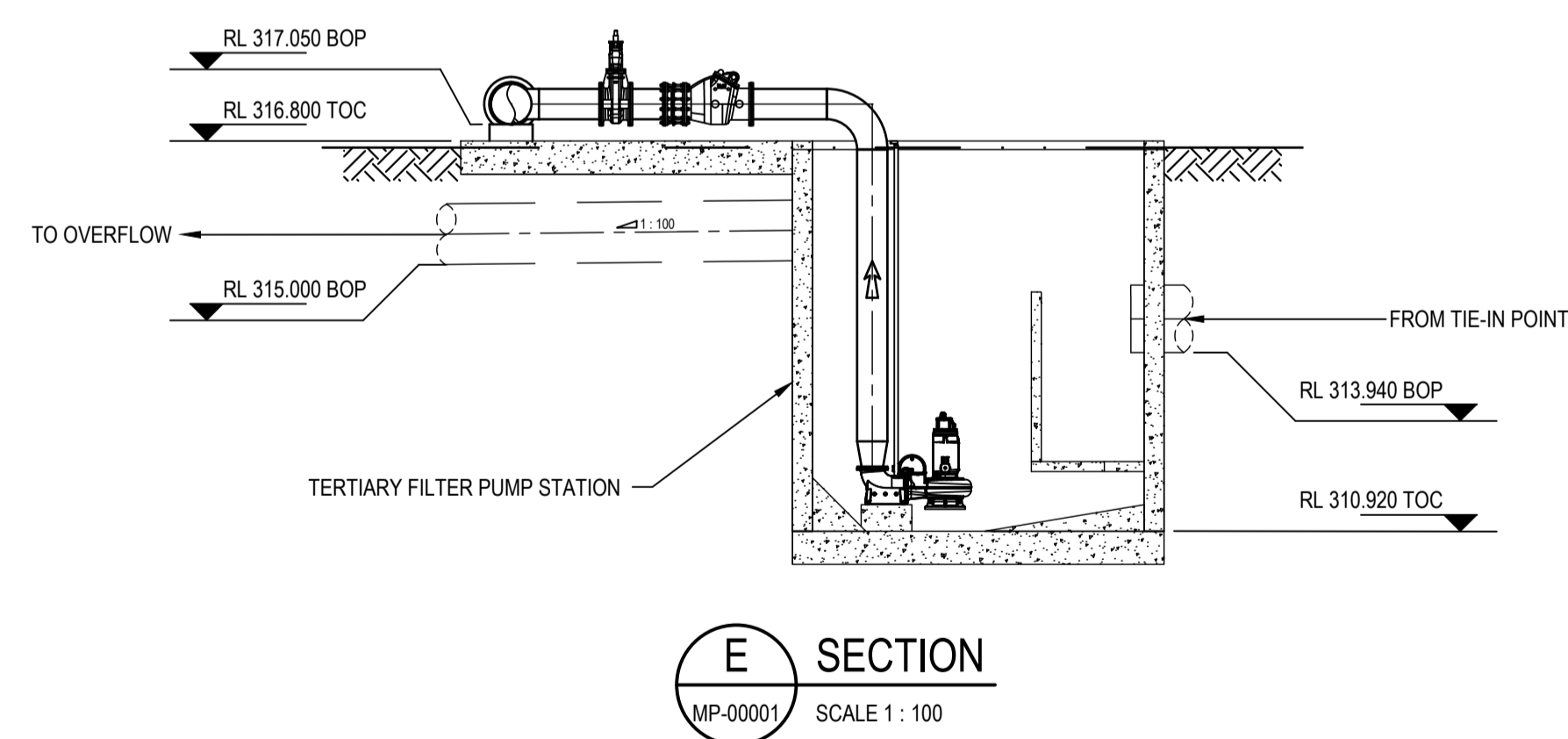
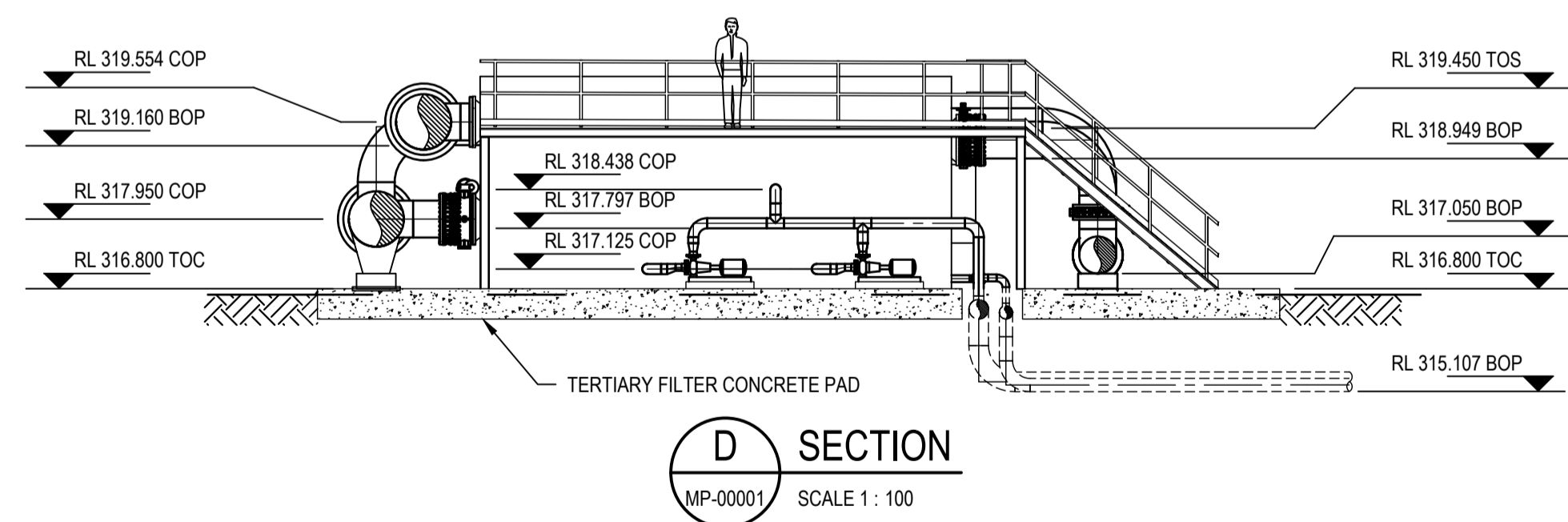
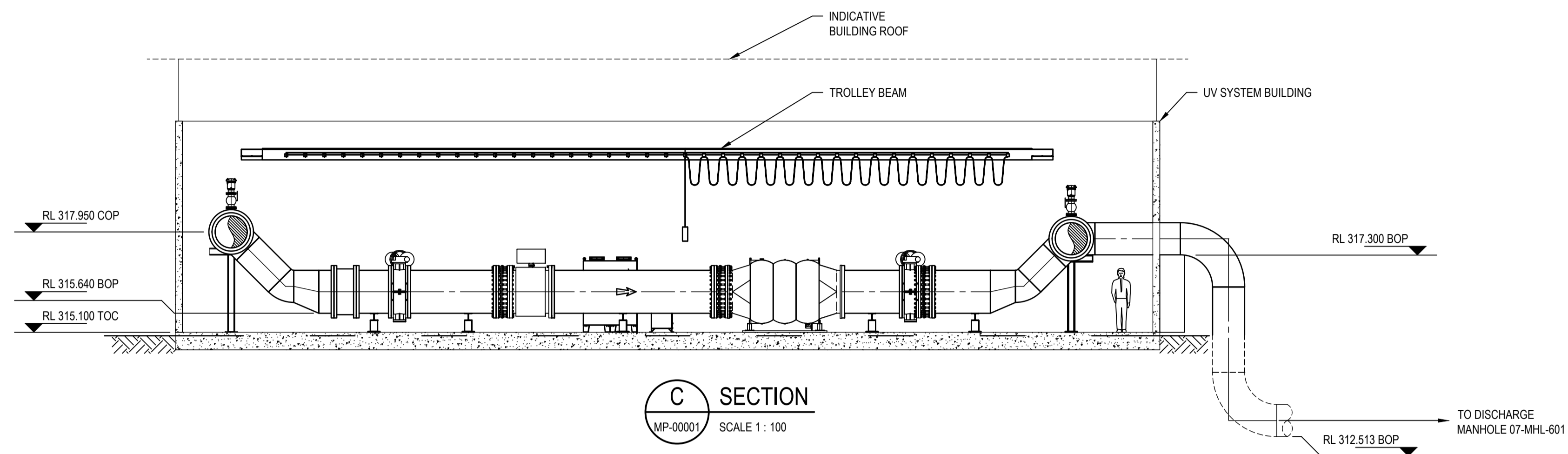
Size **A1**

Drawing No. **12645246-GHD-00-07-DRG-MP-00002**

Rev **0**

**LEGEND:**

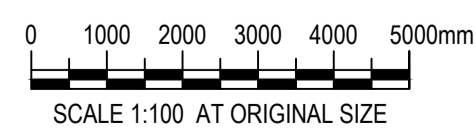
	U/G PIPING
	CONCRETE
	EARTH



**NOTES:**  
1. REFER TO SHEET MP-00001 AND MP-00002.

**FOR CONSENT**  
**NOT FOR CONSTRUCTION**

Rev	Description	Checked	Approved	Date
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Author	R. MENDOZA	Drafting Check	L. DELA CRUZ	
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Project No.  
12645246

Client **QUEENSTOWN LAKES DISTRICT COUNCIL**  
Project **SHOTOVER WWTP EFFLUENT ALTERNATIVE DISCHARGE**  
Status **FOR CONSENT**

Drawing Title **TERTIARY FILTER AND UV BUILDING SECTION AND DETAIL SHEET 2 OF 2**

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Size **A1**  
Rev **0**