

## Appendix K – Three Waters Facility Asset Identification Specification (normative)

### 1. APPLICATION

This specification applies to all water facility assets that will be vested in or are currently managed by Queenstown Lakes District Council.

### 2. PURPOSE

The purpose of this specification is to establish a framework of principles to be applied to the representation of three water facility assets in the Hansen Asset Management System (AMS) and operational documents.

A facility is defined as a plant or process that is distinctly separated from the distributed network assets. Facilities include, but are not limited to:

- Wastewater treatment plants
- Wastewater pump stations
- Water Supply treatment plants
- Water supply pump stations

There are currently no stormwater pump stations or treatment facilities within the QLDC network, it is intended that these will be included as and when required. Consideration of including other stormwater assets is underway and may be included in future versions.

It is intended that this specification will ensure that the assets can be accurately valued and effectively managed.

It should be noted that network (distributed) assets are entered into Hansen via GIS as per the QLDC As-Built Standard and are not subject to this specification.

### 3. RELATED DOCUMENTS

This specification should be read in conjunction with the following documents:

- QLDC As-built Standard
- QLDC Land Development and Subdivision Code of Practice (NZS 4404/2010 with QLDC amendments)

### 4. ASSET REPRESENTATION IN THE ASSET MANAGEMENT SYSTEM

To facilitate the purpose of this document, the following will be required/generated for each asset within a facility:

**UnitID** – Unique ID generated by the Asset Management System (AMS) when the individual asset is created in the AMS environment.

**Position ID** – a descriptive ID of the function of the asset within the facility.

**Asset Register Data** – a list of the required asset specification data prior to its import into the AMS. See section 5.

**Piping and Instrumentation Diagram (P&ID)** - A diagram which shows the interconnection of process equipment and the instrumentation used to control the process<sup>1</sup>

**UnitID**

For facility asset types the UnitID is automatically generated by Hansen using a combination of the Asset Equipment Codes (see Appendix B) and the unique numeric identifier (compkey) generated in Hansen. E.g.

VLV	150203
Asset Equipment Type	Unique ID (Compkey)

**Position ID**

A facility is likely to contain one or more individual process areas depending on the design and sophistication of that plant.

The process ID is it to be generated by the designer or owner (where the asset is to be vested) by concatenating the following four elements separated by hyphens:

- Facility ID
- Process ID
- Asset Equipment Code
- Equipment Number

**- Facility ID**

Facility ID is generated by QLDC within Hansen and is a four character alpha code. This is created from two parts, the first being a two character code describing the facility type, followed by a two character code to identify the specific facility. A longer descriptive name can follow the 4 character code. The current allocated names are listed in Appendix A. E.g.

ST	SP	Shotover Ponds
Facility Type (Sewer Treatment)	Facility ID (Shotover Ponds)	Facility Descriptive Name

**- Process ID**

The appropriate two digit process area code is to be selected from one of the types listed in appendix B. New codes are required to be approved by QLDC prior to their use. E.g. 01 (Intake and Screening)

**- Asset Equipment Code**

The appropriate three character alpha asset equipment code is to be selected from one of the types listed in appendix C. New codes are required to be approved by QLDC prior to their use. E.g. SCR (Screen)

**- Equipment Number**

A three character sequential numeric ID to uniquely identify multiple occurrences of the same asset type within the facility/process. E.g. 001

This will result in a Position IDs as per the following examples:

Shotover ponds sewer treatment plant inlet screen one:

STSP	-	01	-	SCR	-	001
Facility ID		Process ID		Equipment Code		Equipment Number

Shotover ponds sewer treatment plant inlet screen two:

STSP	-	01	-	SCR	-	002
Facility ID		Process ID		Equipment Code		Equipment Number

Shotover ponds sewer treatment plant UV reactor one:

STSP	-	07	-	UVS	-	001
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<sup>1</sup> As defined by the Institute of Instrumentation and Control

Facility ID		Process ID		Equipment Code		Equipment Number
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**Asset Register Data**

As per the QLDC Land Development & Subdivision Code of Practice an asset register is required to be provided to the adopted format / level of detail. The asset register shall include (but not be limited to) all process units, civil structures and buildings, earth structures, pipes and appurtenances, process tankage, mechanical and electrical equipment.

Individual assets shall be componentised by the expected design life and the physical location of the assets.

Asset costs are to be the actual cost applicable to each item plus any overhead allocation or installation costs that are included in the Contractor’s Contract costs.

**5. RESPONSIBILITIES**

**Designer**

The designer or owner (where the asset is to be vested) is responsible for the creation of the Position ID, along with the reference of the Position ID within all appropriate documents including, but not limited to, design drawings, P&IDs, functional documents and asset schedules.

**Construction Contractor**

The construction contractor or owner (where the asset is to be vested) is responsible for the tagging of assets with the Position ID. All items that are assigned a Position ID shall be physically tagged on site using a system that does not suffer degradation due to environmental conditions such as sunlight or gaseous emissions. The tags for each asset shall be connected by use of a plastic cable tie, the tag itself shall be made from stainless steel and the tag number punched into it.

**QLDC**

To enable the generation of position IDs, QLDC will provide a facility ID following a request to the Asset Planning Team (infrastructureassetplanningteam@qldc.govt.nz).

**6. IMPROVEMENT PLAN**

- Improve definition and delineation of facility and network assets.
- Incorporate a Piping and Instrumentation Diagram (P&ID) standard.
- Improve the definitions around the level of componentisation.
- Consider inclusion of include Stormwater detention basins and/or soak pits.

**7. REVIEW**

This specification will be reviewed annually.

**TABLE A – FACILITY NAMES** The following are currently allocated facility names as at March 2016.

<u>Water - Pump Stations</u>	<u>Water - Treatment</u>	<u>Water - Reservoirs</u>	<u>Wastewater - Pump Stations</u>	<u>Wastewater - Treatment Plants</u>	
WPAR-ANDERSON RD BST	WTBP-BEACON POINT	WRAP-ARTHURS POINT	SPA1-ALISON AVE #2	SPL4-LAKE HAYES #4	STHP-HAWEA PONDS
WPAT-ARROWTOWN	WTKH-KELVIN HEIGHTS	WRAR-ARROWTOWN	SPA2-KINGSTON STREET	SPL5-LAKE HAYES #5	STPP-PROJECT PURE
WPB3-ARROWTOWN BOOST	WTLE-LAKE HAYES EST	WRBP-BEACON POINT	SPA3-ALISON AVE #1	SPL6-LAKE HAYES #6	STSP-SHOTOVER PONDS
WPBF-BORE ARTHURS PT	WTLG-LUGGATE	WRF1-FERNHILL #1	SPAP-OXNBRDGE TUN RD	SPNS-NORFOLK STREET	
WPBG-BORE GLENORCHY	WTLH-LAKE HAYES	WRF2-FERNHILL #2	SPAT-ATLEY ROAD	SPOR-OUTLET ROAD	
WPBL-BALMORAL BOOST	WTRB-ROYS BAY	WRF3-FERNHILL #3	SPBM-ARTN-LK HAYS RD	SPP1-ALBERTTOWN #1	
WPBP-BEACON POINT	WTTM-TWO MILE	WRGB-GLENDHU BAY	SPBV-BAYVIEW RD	SPP2-ALBERTTOWN #2	
WPBV-BROADVIEW RISE	WTWI-WESTERN INTAKE	WRGF-GOLDFIELDS	SPCD-CEDAR DRIVE	SPP3-RIVERBANK RD	
WPCD-COREBRIDGE BORE		WRGR-GLENORCHY	SPCR-CEMETERY RD	SPPL-PARK ST LIFT	
WPF1-FERNHILL #1		WRHR-HAWEA	SPD1-DUNGARVON #1	SPPS-PARK STREET	
WPF2-FERNHILL #2		WRKH-KELVIN HEIGHTS	SPD2-DUNGARVON #2	SPRP-REMARKS PARK #1	
WPF3-FERNHILL #3		WRLC-LOMOND CRESCENT	SPDR-DOMAIN ROAD	SPSB-SUNSHINE BAY	
WPGD-GLENDHU BAY		WRLE-LAKE HAYES EST	SPEA-ESSEX AVENUE	SPT1-CHURCH RD	
WPGD-GLENDA DRIVE		WRLH-LAKE HAYES	SPEP-EELY POINT	SPT2-HARRIS PLACE	
WPHA-HAWEA		WRLR-LUGGATE	SPEW-EDGEWATER	SPT4-ALICEBURNDR #1	
WPHH-HIDDEN HILLS		WRMI-MOUNT IRON	SPF2-FRANKTON BEACH	SPT5-ALICEBURNDR #2	
WPHI-HIGHVIEW TCE		WRQ1-QTOWN HILL #1	SPFB-FRANKTON BEACH	SPTB-TUCKERS BEACH	
WPHT-HEATON PARK		WRQ2-QTOWN HILL #2	SPFF-FASTFLO BLOCK	SPW1-THREEPWOOD #1	
WPKH-KELVIN HEIGHTS		WRQR-QUAIL RISE	SPFS-FREDERICK ST	SPW2-THREEPWOOD #2	
WPL1-LAKE HAYES EST		WRRV-REMARKABLESVIEW	SPGO-GORGE ROAD	SPW7-THREEPWOOD #7	
WPLA-HAYES EST BST		WRWR-WESTERN	SPGR-GORDON ROAD	SPWA-WAN-LUGG HWY #1	
WPLC-LOMOND CRES			SPH1-HAWEA ESPLANADE	SPWL-WILLOW PLACE	
WPLG-LUGGATE			SPH2-SCOTTS BEACH	SPWP-WAIMANA PLACE	
WPLH-LAKE HAYES			SPHD-HIKUWAI DRIVE	SPMP-MARINE PARADE	
WPLW-QTOWN HILL #1			SPK1-LAKESIDE RD #1	SPMR-MCDONNELL RD	
WPMD-MARINA DRIVE			SPK2-LAKESIDE RD #2	SPNI-NICHOL STREET	
WPML-MIDDLETON			SPKP-KAWARAU PLACE		
WPPW-PANNERS WAY			SPL1-LAKE HAYES #1		
WPSC-Shotover Bore			SPL2-LAKE HAYES #2		
WPTM-TWO MILE			SPL3-LAKE HAYES #3		
WPWA-WANAKA AIRPORT					
WPWB-THREEPWOOD BST					
WPWW-WESTERN WANAKA					

**TABLE B – PROCESS ID’S**

The following are acceptable, as at March 2016, any addition to this list is required to be agreed with the QLDC Asset Planning Team prior to their use.

**WW Treatment**

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- 01 General and Ancillary
- 02 Inlet and Screening
- 03 Biological Treatment
- 04 Clarifier
- 05 RAS / Sludge Return Line
- 06 Sludge Handling / Drying
- 07 Disinfection

**WW Pump Stations**

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- 21 General and Ancillary
- 22 Inlet and Operational Storage
- 23 Emergency Storage
- 24 Electrical and Pumps
- 25 Outlet

**WS Intake/Treatment**

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- 41 General and Ancillary
- 42 Bore / Inlet (Including Pumps)
- 43 Disinfection
- 44 Contact Tanks

**WS Pump Stations (Network)**

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- 51 General and Ancillary
- 52 Bore / Inlet
- 53 Electrical and Pumps
- 54 Outlet

**WS Storage**

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- 61 Inlet
- 62 Storage
- 63 Outlet

**TABLE C – ASSET EQUIPMENT CODES**

The following are acceptable, as at March 2016, any addition to this list is required to be agreed with the QLDC Asset Planning Team prior to their use.

<b>Equipment Type</b>	<b>Description</b>	<b>Equipment Type</b>	<b>Description</b>	<b>Equipment Type</b>	<b>Description</b>	<b>Equipment Type</b>	<b>Description</b>
ABL	Air Blower	FAN	Fan	LPU	Lightening Arrester	SCL	Scales
ACD	Air Conditioner	FIC	Flow Indicator Controller	LSH	High Level Switch	SCR	Mechanical Screen
AET	Aerator	FIN	Flow Indicating Transmitter	LSL	Low Level Switch	SIL	Acoustic Silencer
AIC	Analyser Indicator Controller	FIR	Flow Indicating Readout	LSN	Level Sensor	SLT	Sludge Storage Tank
AIV	Air Bleed Valve	FIT	Pipes and Fittings	LTM	Level Transmitter	SLV	Ball, Gate, Sluice Valve
ALD	Acoustic Door	FLC	Flowmeter Chamber	LTR	Level Transducer	SOL	Solenoid Valve
ANT	Antenna/ Arial	FLJ	Flexible Joint	MAC	Macerator	SPI	Speed Indicator
AOM	Analogue Output Module	FLM	Flowmeter	MET	Meter	SPN	Solar Panel
ASB	Assembly Kit	FLS	Flushing Connection	MHL	Manhole/ Lampholes/ Cleaning E	SPR	Sprinklers
ASM	Alarm System	FLT	Cartridge Filter	MIX	Mixer	STA	Soft Starter
AUT	Autosampler	FNK	Fuel Tank	MKV	Motorised Knife Gate Valve	STI	Strainer
BAT	backup Battery	FRE	Fire System	MOC	Moisture Controller	SUR	Surge Controller
BIN	Bin/Skip	FSW	Flow Switch	MOI	Moisture Monitoring Probe	SWB	Switchboard
BKP	Backflow Preventor	GCN	Generator Connection	MPR	Motor Protection Relay	SWR	Software
CAB	Cabinetry	GEN	Generator	MTC	Motor Control	TAP	Sample tap or similar
CAM	Camlock Coupling	GNC	Generator Controller	MTR	Motor	TAR	Tarriff Metering
CAZ	Chlorine Analyser	GRC	Grit Classifier	NRV	Non Return Valve	TEE	TEE
CBK	Chain Block	GRS	Grilles	PBT	Pressure Break Tank	TEL	Telemetry
CBL	Cabling	GRT	Grit Removal	PCM	Pump Chamber	TEM	Temperature Switch
CDB	Chlorine Doser	GSY	Generator Synchroniser	PHA	pH Analyser	TIC	Temperature Indicator Controll
CLD	Chlorine Leak Detector	HAM	Hammer Resister	PIC	Pressure Indicating Controller	TMA	Temperature Alarm
CLS	Chlorine Sensor	HAR	Harmonic Filter	PIP	Pipework	TME	Temperature Element
CML	Chamber Lid	HMI	Human Machine Interface	PLC	Programme Logic Controller	TRA	Pressure Transducer
CMP	Computer	HOS	Hose Reel/Hose	PLY	Polymer Tank	TRL	Trailer
CNP	Control Panel	HST	Hoist	PMC	Pump Control	TRN	Transformer
CNT	Centrifuge	HTR	Heater	PMP	Pump	TRR	Telemetry Radio
CNV	Conveyor	HUM	Humidifier	PPR	Pump Rails	TUM	Turbidity Meter
COM	Compressor	HYD	Fire Hydrant	PRG	Pressure Gauge	TUR	Telemetry Unit
CTL	Chlorine Trolley Load	IRR	Irrigation System	PRS	Pressure Switch	UPS	UPS
CWP	Chlorine Weigh Pads	ISO	Isolating valve Gate & Sluice	PRV	Pressure Reducing/Regulating V	UVS	UV System

Equipment		Equipment		Equipment		Equipment	
Type	Description	Type	Description	Type	Description	Type	Description
DCT	Decanter	ITH	IT Hardware	PSN	Pressure Sensor	VDD	Variable Dosing Drive
DIF	Diffuser	LAH	High Level Alarm	PWS	Pressure Washer	VIB	Vibration Switch
DNT	Decant Tank	LAL	Low Level Alarm	RAI	Rain Gauge	VNT	Ventilation
DOM	DO Meter	LCU	Level Control	REV	Reservoir	VSD	Variable Speed Drive
DVT	Dose/Volume Timer	LEI	Level Indicator	ROT	Rotameter	WBR	Water Blaster
EDD	Electrical Dosing Drive	LFB	Lifting Beam	SAL	Satellite Dish	WER	Weir/ Slide Gate
ELE	Electrical Controls	LFS	Lime Hooper & Feeder	SAM	Sampler	WWL	Wet Well Lid
ELS	Electrical Services	LMT	Limit Switch	SAT	Surge Anticipating Valve		
EMS	Emergency Shower	LOV	Discharge Louvre	SBT	SBR Tanks		