

9 September 2022

Parliamentary Precinct  
C/- TBIG  
Level 5, Boulcott Tower  
42 - 45 Willis Street  
Wellington 6011

Attn: Malcolm Tait

Dear Malcolm

**RE: Hazardous Substances Assessment - Parliamentary Services, Museum Street, Pipitea, Wellington**

**(Our Reference: 19261.000.001\_08)**

## 1 Introduction

ENGEO Ltd was requested by Parliamentary Precinct C/- TBIG to provide a response to the matters relating to hazardous facilities in an undated Request for Further Information (RFI) letter (File ref: 1199795) from Wellington City Council (WCC), relating to 1 Molesworth Street, Pipitea, Wellington. This work has been carried out in accordance with our proposal dated 07/07/2022 and an acceptance e-mail dated 13/07/2022.

The RFI included the following request relating to hazardous facilities:

*6. Please provide the following to enable completion of the hazardous facilities review:*

- a. The hazardous facilities screening procedure (HFSP) and derived activity assessment;*
- b. Controlled zone drawings at the location; and*
- c. Emergency Management Procedures that tie into this section of work (if available).*

The site has an area of approximately 4.56 ha and is zoned 'Central Area' in the WCC District Plan (Operative May 2021) (WCCDP). Map 18 of the WCCDP indicates the site is located within a hazard area (ground shaking). A proposed site plan, drawing FAS - 104 prepared by Studio Pacific Architecture is attached (Attachment 1).

This letter provides a response to the matters raised in the RFI.

This letter is based on the information available at the time of writing, however design refinements may occur during future detailed design of the project to ensure the evolving needs of Parliament are met.

## 2 Hazardous Substances On-Site

Hazardous substances are currently present on-site in the following locations:

- An existing in-ground fuel tank storing diesel (which will be removed as part of the redevelopment works).
- Two existing Caterpillar 3408 diesel-powered generators located in the basement of the Parliament House building. For the purposes of this assessment and based on the engine make and model of these generators, it is assumed they each contain 46 litres of CAT DEO 15W-40 Engine Oil.
- Three existing transformers located in the basement of the Parliament House building. Two of these transformers are 1.5 MMVA and the third is a 750 kVA. For the purposes of this assessment, it is assumed these transformers contain 1,215 litres and 730 litres of Savita transformer oil respectively, based on Vectors standard details and the standard oil utilised in their transformers.

As a result of the proposed site development works additional hazardous substances will be present on-site in the following locations / equipment:

- Two new diesel-powered generators located on the ground floor of the Museum Street building. The generators will each contain 62 litres of CI-4 15W-40 lubricating oil. A general specification for the P605-3 generator (FG Wilson) is attached (Attachment 2). Each generator will have an associated 500 litre diesel standalone double-skinned SuperVault day tank which will be located in the basement of the Museum Street Building. A specification for the SuperVault tanks (SuperVault MH FuelChief) is also attached (Attachment 3).
- Four SVR 7000 (7,216 litre) standalone double-skinned FuelChief SuperVault diesel tanks located in the basement of the Museum Street building. The specification for the SuperVault tanks is attached as Attachment 3.
- One SV3 11000 (11,400 litre) standalone double-skinned FuelChief SuperVault diesel tank located near to the existing generators in the Parliament House carpark, to the east of the Museum Street building. The specification for the SuperVault tanks is attached as Attachment 3.
- The roof of Ballantrae Place building which will include four heat pump chiller units, (AquaForce 30XA/XQ air cooled liquid chiller, reversible air-to-water heat pump) each containing 160 kg of R134A refrigerant gas and 25 L of lubricating oil. For the purposes of this assessment, a common lubricating oil used in heat pump chiller units has been assumed, Trane Oil 0057E. A specification for the chiller units is attached (Attachment 4).
- An external plant room area of Museum Street building which will include four chiller units. No information was available for these chiller units, which will be smaller than those listed above. For the purposes of this assessment it is conservatively assumed these units will each contain the same volume of refrigerant gas and lubricating oil as the ones on the Ballantrae Place building.

A drawing showing relevant information pertaining to the basement level of the Museum Street building is available for relevant Council Officers to view under controlled circumstances.

The hazardous substances that are present, used and stored in 'greater than household volumes' at the site, are summarised in the inventory of hazardous substances (Attachment 5).

### 3 Hazardous Substances Screening Procedure

#### 3.1 Background

The rules surrounding the 'use, storage or handling of hazardous substances' in the Central area are detailed in Section 13.6.2.3 of the WCCDP. Rule 13.6.2.3.1 specifies that for activities that are not specifically exempted in Section 3.5.2.2, the cumulative effects ratio, calculated using the Hazardous Facilities Screening Procedure (HFSP) should be used to determine whether or not those activities are permitted activities.

The HFSP is outlined in Section 3.5 of the WCDP. Section 3.5 recognises that '*In some cases, proposals involving the establishment of new hazardous facilities may add to the number of hazardous facilities already existing on a site.*' Section 3.5 states that if such facilities are separated by more than 30 metres, they will be treated as 'hazardous sub-facilities' and that the HFSP will only apply to the new facility. On this basis, we have prepared the HFSP to include all hazardous substances used or stored within 30 m of the proposed development area.

#### 3.2 Activity Status

An assessment of the proposed facility in accordance with the HFSP is included in Table A1 (Attachment 6). The effects ratios calculated in Table A1 the HFSP are as follows:

- The fire explosion effects ratio: 0.34,
- Human health effects ratio: NA
- Environmental effects: 1.14

The table in Rule 13.6.2.3.1 states that in a 'Hazard Area' the 'use, storage or handling of hazardous substances' will be a permitted activity if the effects ratio is greater than 0.002 but less than or equal to 0.05. As the calculated effects ratios for both fire explosion and environmental effects exceed this range a discretionary (restricted) consent will be required under Section 13.6.2.3 for the 'use, storage or handling of hazardous substances' at the site.

#### 3.3 Activity Standards

Standards for facilities involving the 'use, storage or handling of hazardous substances' are listed in Rules 13.6.2.3.2 to 13.6.2.3.12 of the WCCDP. An assessment of the proposed Museum Street building, in accordance with these standards, is provided in Table A2 (Attachment 7).

Rule 3.2.2.9 requires that a Site Management Plan must be prepared for sites involving the storage, use, handling or disposal of hazardous substances which do not comply with the conditions for permitted activities. A draft Site Management Plan (SMP) has been prepared for the site (included as a separate file).

Table A2 together with the draft SMP demonstrates that the facility is consistent with the requirements of the WCCDP.

## 4 Controlled Zone Drawings

'Controlled zones' is a term used to describe an area adjoining a hazardous substance location which needs to be managed to prevent or reduce the adverse effects of certain substances. Under the Health and Safety at Work (Hazardous Substances) Regulations 2017 (HSW(HS)R) this term no longer applies to class 3.1 substances e.g. diesel.

Where controlled zones no longer apply, specified separation distances are required in some instances. Separation distances required at the site are detailed in the draft SMP. Drawings detailing these separation distances will be provided in the finalised SMP.

## 5 Emergency Management Procedures

Preparation of Emergency Management Procedures are a requirement for the site, as detailed in the SMP. These will be provided to WCC prior to the site becoming operational. We understand that the project planner has requested the preparation of these Emergency Management Procedures be covered by a condition of consent.

## 6 Limitations

- i. We have prepared this report in accordance with the brief as provided. This report has been prepared for the use of our client, Parliamentary Precinct C/- TBIG, their professional advisers and the relevant Territorial Authorities in relation to the specified project brief described in this report. No liability is accepted for the use of any part of the report for any other purpose or by any other person or entity.
- ii. The assessments and recommendations in this report are based on the information provided by the client at the time of our engagement. If the processes on-site, or the substances stored or used at the site, are changed it may be necessary to update this assessment as such changes may affect the consent status of the site.
- iii. This Limitation should be read in conjunction with the Engineering NZ / ACENZ Standard Terms of Engagement.
- iv. This report is not to be reproduced either wholly or in part without our prior written permission.

We trust that this information meets your current requirements. Please do not hesitate to contact the undersigned on (07) 777 0209 if you require any further information.

Report prepared by



**Bridget Derham**

HSNO Scientist

Report reviewed by



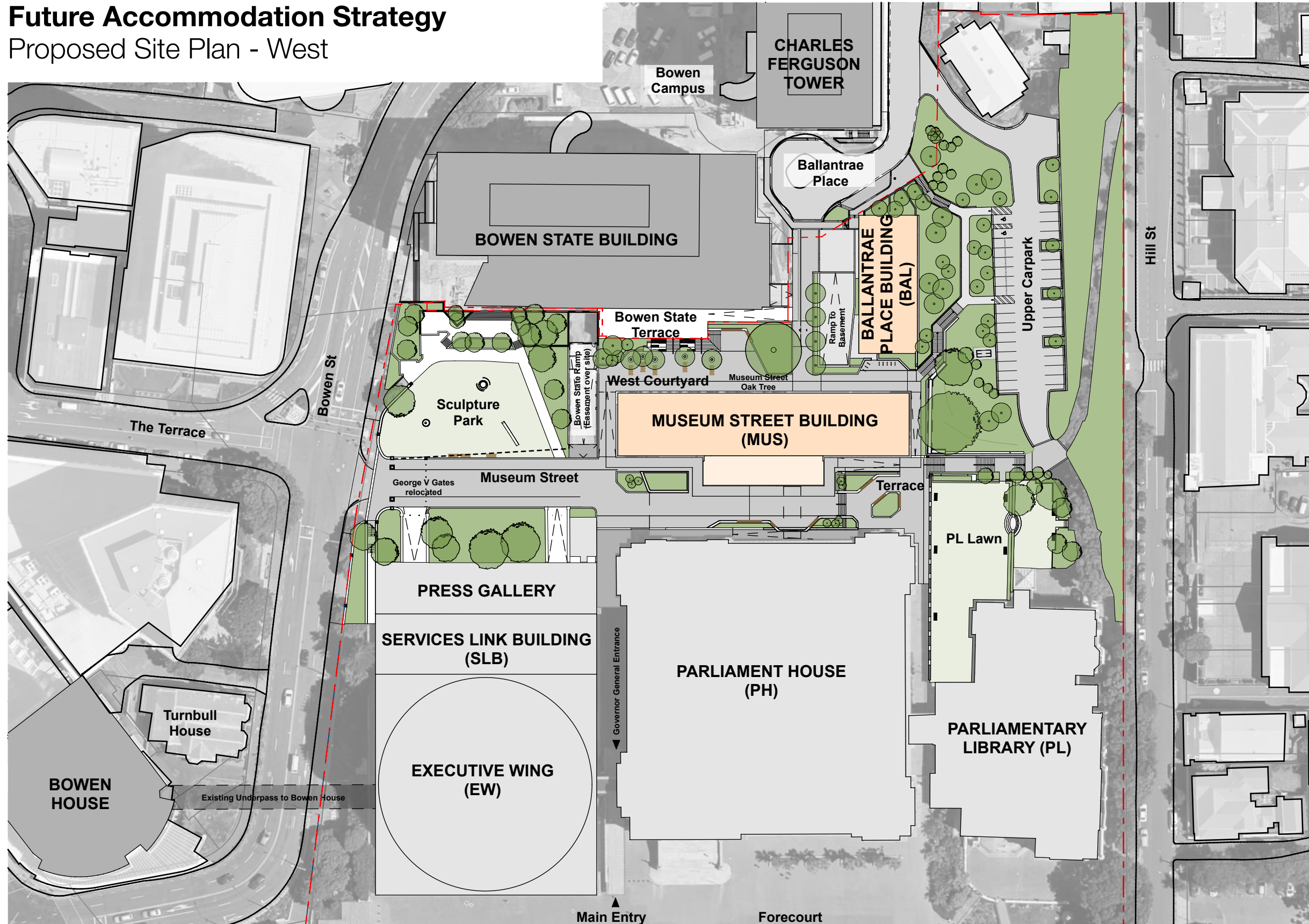
**Lotta Liddell, CEng CEnv MICE**

Senior Environmental Engineer

Attachment Number	Description
Attachment 1	Proposed Site Plan - West, DrawingFAS - 104. Prepared by Studio Pacific Architecture.
Attachment 2	550 kVA 'P605-3' Generator specification. FG Wilson.
Attachment 3	FuelChief. SuperVault MH specifications.
Attachment 4	AquaForce. Specifications for the 30XA/XQ air cooled liquid chiller, reversible air-to-water heat pump.
Attachment 5	Hazardous Substances Inventory
Attachment 6	Table A1: Assessment of the activities on-site in accordance with Hazardous Facilities Screening Procedure in accordance with Section 3.5 and 13.6.2.3.1 – WCDP.
Attachment 7	Table A2: Hazardous Substances: Assessment Against Relevant Conditions
Draft Site Management Plan (SMP) – Separate file	


# Future Accommodation Strategy

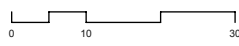
## Proposed Site Plan - West



**SITE PLAN KEY**

- - - Site boundary

True North: 

Original Scale / Print check: 



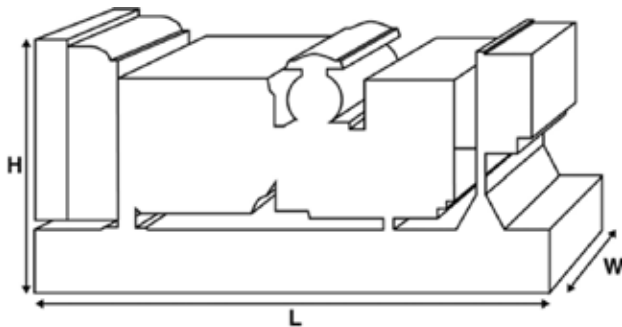
# P605-3

## Output Ratings

Voltage, Frequency		Prime	Standby
400/230 V, 50 Hz	kVA	550	605
	kW	440	484
	kVA		
	kW		



Ratings at 0.8 power factor.  
Please refer to the output ratings technical data section for specific generator set outputs per voltage.



## Dimensions and Weights

Length	mm	3900 (153.5)
Width	mm	1461 (57.5)
Height	mm	2156 (84.9)
Weight (Dry)	kg	4080 (8995)
Weight (Wet)	kg	4148 (9145)

Ratings in accordance with ISO 8528, ISO 3046, IEC 60034, BS5000 and NEMA MG-1.22.  
Generator set pictured may include optional accessories.

### Prime Rating

These ratings are applicable for supplying continuous electrical power (at variable load) in lieu of commercially purchased power. There is no limitation to the annual hours of operation and this model can supply 10% overload power for 1 hour in 12 hours.

### Standby Rating

These ratings are applicable for supplying continuous electrical power (at variable load) in the event of a utility power failure. No overload is permitted on these ratings. The alternator on this model is peak continuous rated (as defined in ISO 8528-3).

### Standard Reference Conditions

Note: Standard reference conditions 25°C (77°F) Air Inlet Temp, 100m (328 ft) A.S.L. 30% relative humidity.  
Fuel consumption data at full load with diesel fuel with specific gravity of 0.85 and conforming to BS2869: 1998, Class A2.

FG Wilson offer a range of optional features to allow you to tailor our generator sets to meet your power needs.  
Options available include:

- Upgrade to CE Certification
- A wide range of Sound Attenuated Enclosures
- A variety of generator set control and synchronising panels
- Additional alarms and shutdowns
- A selection of exhaust silencer noise levels

For further information on all of the standard and optional features accompanying this product please contact your local Dealer or visit:

[www.fgwilson.com](http://www.fgwilson.com)



# P605-3



## Ratings and Performance Data

Engine Make	Perkins		
Engine Model:	2806A-E18TAG1		
Alternator Make	FG Wilson		
Alternator Model:	FGL60040		
Control Panel:	FG100		
Base Frame:	Heavy Duty Fabricated Steel		
Circuit Breaker Type:	3 Pole MCCB		
Frequency:	50 HZ		60 HZ
Engine Speed: RPM	rpm	1500	
Fuel Tank Capacity:	litres (US gal)	1132 (299.04)	
Fuel Consumption Prime	litres (US gal)/hr	106.8 (28.2)	
Fuel Consumption Standby	litres (US gal)/hr	117.9 (31.1)	

## Engine Technical Data

No. of Cylinders	6		
Alignment	IN LINE		
Cycle	4 STROKE		
Bore	mm (in)	145 (5.7)	
Stroke	mm (in)	183 (7.2)	
Induction	TURBOCHARGED AIR TO AIR CHARGE COOLED		
Cooling Method	WATER		
Governing Type	ELECTRONIC		
Governing Class	ISO 8528 G2		
Compression Ratio	14.5:1		
Displacement	L (cu. in)	18.1 (1104.5)	
Moment of Inertia:	kg m <sup>2</sup> (lb/in <sup>2</sup> )	7.44 (25424)	
Voltage	24		
Ground	Negative		
Battery Charger Amps	70		
Engine Weight Dry	kg (lb)	2050 (4519)	
Engine Weight Wet	kg (lb)	2158 (4758)	

## Engine Performance Data

		50 Hz	60 Hz
Engine Speed	rpm	1500	
Gross Engine Power Prime	kW (hp)	495 (664)	
Gross Engine Power Standby	kW (hp)	544 (730)	
BMEP Prime	kPa (psi)	2184 (316.8)	
BMEP Standby	kPa (psi)	2400 (348.1)	

# P605-3



## Fuel System

Fuel Filter Type:		Eco Replaceable Element			
Recommended Fuel:		Class A2 Diesel			
Fuel Consumption at		110 % Load	100 % Load	75 % Load	50 % Load
50 Hz Prime:	l/hr (US gal/hr)	117.9 (31.1)	106.8 (28.2)	80.8 (21.3)	57.3 (15.1)
50 Hz Standby	l/hr (US gal/hr)	-	117.9 (31.1)	88.3 (23.3)	61.8 (16.3)
60 Hz Prime	l/hr (US gal/hr)				
60 Hz Standby	l/hr (US gal/hr)	-			

(Based on diesel fuel with a specific gravity of 0.86 and conforming to BS2869 classA2,EN590)

## Air System

Air System		50 Hz	60 Hz
Air Filter Type:		Non Canister	
Combustion Air Flow Prime	m <sup>3</sup> /min (cfm)	37 (1307)	
Combustion Air Flow Standby	m <sup>3</sup> /min (cfm)	40 (1413)	
Max. Combustion Air Intake Restriction	kPa	6.4 (25.7)	

## Cooling System

Cooling System		50 Hz	60 Hz
Cooling System Capacity	l (US gal)	68.5 (18.1)	
Water Pump Type:		Centrifugal	
Heat Rejected to Water & Lube Oil: Prime	kW (Btu/min)	185 (10521)	
Heat Rejected to Water & Lube Oil: Standby	kW (Btu/min)	190.9 (10856)	
Heat Radiation to Room*: Prime	kW (Btu/min)	68.4 (3890)	
Heat Radiation to Room*: Standby	kW (Btu/min)	69.4 (3947)	
Radiator Fan Load:	kW (hp)	9 (12.1)	
Radiator Cooling Airflow:	m <sup>3</sup> /min (cfm)	373.2 (13179)	
External Restriction to Cooling Airflow:	Pa (in H <sub>2</sub> O)	125 (0.5)	

\*: Heat radiated from engine and alternator  
 Designed to operate in ambient conditions up to 50°C (122°F).  
 Contact your local FG Wilson Dealer for power ratings at specific site conditions.

## Lubrication System

Oil Filter Type:		Eco, Full Flow
Total Oil Capacity:	l (US gal)	62 (16.4)
Oil Pan Capacity:	l (US gal)	53 (14)
Oil Type:		API CH4 / CI4
Oil Cooling Method:		WATER

## Exhaust System

Exhaust System		50 Hz	60 Hz
Maximum Allowable Back Pressure:	kPa (in Hg)	6.9 (2)	
Exhaust Gas Flow: Prime	m <sup>3</sup> /min (cfm)	88 (3108)	
Exhaust Gas Flow: Standby	m <sup>3</sup> /min (cfm)	95.3 (3365)	
Exhaust Gas Temperature: Prime	°C (°F)	521 (969)	
Exhaust Gas Temperature: Standby	°C (°F)	523 (974)	

# P605-3



## Alternator Physical Data

No. of Bearings:	1
Insulation Class:	H
Winding Pitch:	2/3
Winding Code	6S
Wires:	6
Ingress Protection Rating:	IP23
Excitation System:	SHUNT
AVR Model:	R150

\* dependant on voltage code selected

## Alternator Operating Data

Overspeed: rpm	2250
Voltage Regulation: (Steady state) %	+/- 1.0
Wave Form NEMA = TIF:	50
Wave Form IEC = THF: %	2
Total Harmonic content LL/LN: %	1.5
Radio Interference:	EN61000-6
Radiant Heat: 50 Hz kW (Btu/min)	30.2 (1717)
Radiant Heat: 60 Hz kW (Btu/min)	

## Alternator Performance Data 50 Hz:

		415/240 V	400/230 V	380/220 V	
Voltage Code					
			230 V		
Motor Starting Capability*	kVA	1121	1055	969	
Short Circuit Capacity**	%	270	270	270	270
Reactances	Xd	3.75	4.036	4.269	
	X'd	0.189	0.203	0.215	
	X''d	0.142	0.142	0.15	

## Alternator Performance Data 60 Hz

Voltage Code

Motor Starting Capability*	kVA					
Short Circuit Capacity**	%	270	270	270	270	270
Reactances	Xd					
	X'd					
	X''d					

Reactances shown are applicable to prime ratings.

\*Based on 30% voltage dip at 0.6 power factor.

\*\* With optional independant excitation system (PMG / AUX winding)

# P605-3



## Output Ratings 50 Hz

Voltage Code	kVA	Prime		Standby	
		kW	kVA	kW	kVA
415/240V	550	440	605	484	
400/230V	550	440	605	484	
380/220V	525	420	577.5	462	
230/115V					
220/127V					
220/110V					
200/115V					
240V					
230V					
220V					

## Output Ratings 60 Hz

Voltage Code	kVA	Prime		Standby	
		kW	kVA	kW	kVA
480/277V					
440/254V					
416/240V					
400/230V					
380/220V					
240/139V					
240/120V					
230/115V					
220/127V					
220/110V					
208/120V					
240/120					
220/110					



**P605-3**

## Dealer Contact Details

### Documentation

Operation and maintenance manual including circuit wiring diagrams.

### Generator Set Standards

The equipment meets the following standards: BS5000, ISO 8528, ISO 3046, IEC 60034, NEMA MG-1.22.

### Warranty

6.8 – 750 kVA electric power generation products in prime applications the warranty period is 12 months from date of start-up, unlimited hours (8760). For standby applications the warranty period is 24 months from date of start-up, limited to 500 hours per year.

730 – 2500 kVA electric power generation products in prime applications the warranty period is 12 months from date of start-up, unlimited hours (8760 hours) or 24 months from date of start-up, limited to 6000 hours. For standby applications the warranty period is 36 months from date of start-up, limited to 500 hours per year.

FG Wilson manufactures product in the following locations:

**Northern Ireland • Brazil • China • India**

With headquarters in Northern Ireland, FG Wilson operates through a Global Dealer Network.

To contact your local Sales Office please visit the FG Wilson website at [www.fgwilson.com](http://www.fgwilson.com).

FG Wilson is a trading name of Caterpillar (NI) Limited.




In line with our policy of continuous product development, we reserve the right to change specification without notice.



## SuperVault™ - the 4 hour fire rated tank

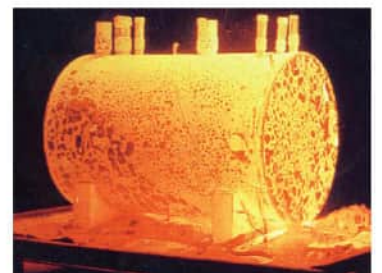
The SuperVault™ MH is the first storage system to pass the internationally recognised SwRI 95 - 03 multi hazard test, the toughest test for above ground fuel tanks. The SuperVault™ MH has been tested for multiple exposures to fire and other hazards and has passed an extended element exposure test.

This means that if the SuperVault™ MH experiences a hazard, it may be repaired, re-certified and kept in service rather than having to be replaced. This unique design provides unsurpassed fire protection making it the only storage tank to be installed in high density buildings without the need for additional bunding. The rigorously tested SuperVault™ MH is built to last.

-  The SuperVault™ cylindrical 1000 litres to 110,000 litres
-  The SuperVault™ rectangular 1000 litres to 7000 litres
-  The SuperVault™ multiple compartment of the above

### Super insulation

The specially formulated insulation provides maximum thermal protection to the internal steel tank. This special insulation formula also helps guard against corrosion of the steel primary and secondary tanks. No other storage system provides a higher level of insulation and fuel security. In hot climates, the insulation also minimises fuel losses due to evaporation.



SuperVault™ undergoing the four hour fire test at 2000 °F (1093 °C)



### Secondary Containment

No bunding is required for the installation of the SuperVault™. Environmental regulations have made the secondary containment as important as the primary containment. Engineered and constructed for maximum protection, the SuperVault MH outer steel tank provides secondary containment as well as protecting the insulation from the elements of nature and fire. Both the primary and secondary containment tank conforms to AS 1692 and UL-2085 requirements.

SuperVault's™ are in use world wide in locations and buildings where security, protection and environmental concerns are paramount. In government buildings, airports, hospitals, military sites, from the Arctic cold to the desert heat, the SuperVault™ is unsurpassed in it's reliability and durability.

# Technical Details

## Rectangular

Includes: 50 mm fill dropper, 50 mm free to air vent socket, 50mm interstitial monitor pipe, 50mm dip dropper with dipstick and cap, 3 X 50mm stub socket fittings, emergency venting, earth lugs.

Model No	Nominal Capacity Litres	Length	Diameter	Height	Weight
SVR-4999	514	1337	1068	1409	1372
SVR-1000	1031	1634	1418	1409	1955
SVR-1200	1237	1752	1518	1409	2177
SVR-2000	2062	1779	1870	1605	2882
SVR-3000	3093	2289	2018	1622	3986
SVR-4000	4124	2319	2168	1822	4638
SVR-4999	4999	2400	2218	1980	5029
SVR-6000	6186	3004	2218	1921	5981
SVR-7000	7216	3444	2218	1921	6673

## Cylindrical

Includes: 50 mm fill dropper, 50 mm free to air vent socket, 50mm interstitial monitor pipe, 50mm dip dropper with dipstick and cap, 3 X 50mm stub socket fittings, twin pedestals, emergency venting, earth lugs.

Model No	Nominal Capacity Litres	Length	Diameter	Height	Weight
SV1-3000	3330	3240	1534	1780	3327
SV1-5000	5600	5230	1534	1780	5062
SV2-11000	11000	6090	1916	2160	7782
SV2-15000	15000	8100	1916	2160	9920
SV3-11000	11400	4080	2300	2540	8091
SV3-20000	20900	7250	2300	2540	12833
SV3-30000	33000	11250	2300	2540	18915
SV4-34000	35000	7250	2873	3120	17199
SV4-45000	45100	9250	2873	3120	21043
SV4-55000	55100	11250	2873	3120	24852
SV4-65000	65200	13250	2873	3120	28661
SV5-60000	59650	7241	3653	3940	24970
SV5-76900	76922	9241	3653	3940	30431
SV5-94000	94194	11241	3653	3940	35899
SV5-100000	101457	12084	3653	3940	38176
SV5-110000	111466	13241	3653	3940	41330

## Benefits

- Capacities from 1,000 to 110,000 litres
- Lightweight insulation which has 75% less weight than traditional concrete
- Third-party certification
- 30 year warranty
- Easy to install & relocate
- Protected with a 300 dft, 3 coat paint system, keeps the SuperVault™ looking good for years
- Internal coatings available for aviation use or potable water
- Multiple compartment configuration
- Meets current standards and regulations
- Storage of diesel, petrol, ethanol, fuel oil, methanol, bio fuels and aviation fuels
- Emergency venting for primary and secondary containment
- Interstitial monitoring capability
- Integral pedestal supports provide seismic anchoring

## SuperVault Approvals & Compliance

### International

- Southwest Research Institute (SwRI) 95 - 03 & 95 - 01
- Complies to UL 2085
- Complies to UL 142

### New Zealand

- Complies to EPA (New Zealand) HSNO: 2004

### Australia

- AS 1692: 2006
- AS 1940: 2004



AUSTRALIA: 1300 899 038 | [www.fuelchief.com.au](http://www.fuelchief.com.au) | E: [sales@fuelchief.com.au](mailto:sales@fuelchief.com.au)  
NEW ZEALAND: (03) 384 2380 | [www.fuelchief.co.nz](http://www.fuelchief.co.nz) | E: [sales@fuelchief.co.nz](mailto:sales@fuelchief.co.nz)





United Technologies

turn to the experts



**AQUAFORCE**<sup>®</sup>

**30XA/XQ**

**Air-Cooled Liquid Chiller**

**Reversible Air-to-Water Heat Pump**

Nominal cooling capacity: 274–1518kW ( 30XA )

Nominal cooling capacity: 315–1471kW ( 30XQ )

Nominal heating capacity: 311–1412kW ( 30XQ )



# Technical Specifications

## Unit with Cu/Al condenser coil

30XQ		745	750	810	910	1002	1035	1102
Cooling Capacity	kW	740	735	810	910	980	1035	1100
Heating Capacity	kW	710	707.4	760	850.1	920	970	1030
Comp power input (Cooling)	kW	207.3	211.0	225.3	254.4	276.2	291.8	308.9
Comp power input (Heating)	kW	195.2	190.3	206.5	230.5	244.3	264.0	282.0
Cooling COP	kw/kw	3.25	3.13	3.25	3.23	3.23	3.21	3.24
Heating COP	kw/kw	3.29	3.30	3.30	3.30	3.39	3.29	3.29
Min load %	%	30	13	12	14	15	13	14
Refrigerant charge		HFC-134a						
Circuit A	kg	255	160	115	160	160	195	195
Circuit B	kg	-	115	160	140	160	140	160
Circuit C	kg	-	-	-	-	-	-	-
Circuit D	kg	-	-	-	-	-	-	-
Compressor		Semi-hermetic screw compressor						
Motor cooling		refrigerant cooling motor						
Circuit A		1	1	1	1	1	1	1
Circuit B		-	-	1	1	1	1	1
Circuit C		-	-	-	-	-	-	-
Circuit D		-	-	-	-	-	-	-
Control		-	-	-	-	-	-	-
Air heat exchanger		-	-	-	-	-	-	-
Fan type		-	-	-	-	-	-	-
Quantity		12	14	14	16	16	18	18
Air flow	l/s	54168	63196	63196	72224	72224	81252	81252
RPM	r/s	950	950	950	950	950	950	950
Water heat exchanger		-	-	-	-	-	-	-
Water content	l	127	127	147	175	175	175	175
Nominal flow rate(cooling)	l/s	35.2	35.3	38.6	43.3	46.7	49.3	52.4
Nominal flow rate(heating)	l/s	33.8	33.7	36.2	40.5	43.8	46.2	49.0
Nominal pressure drop (cooling)	kPa	38.7	44.1	47.3	68.4	77.6	85.5	95.0
Nominal pressure drop (heating)	kPa	36.0	35.0	42.0	60.3	69.1	75.8	84.6
Max. water-side pressure w/o hydronic module	kPa	1000	1000	1000	1000	1000	1000	1000
Integrated hydronic module (option)		-	-	-	-	-	-	-
Water Connection		-	-	-	-	-	-	-
Nominal Diameter	DN	150	150	150	150	150	150	150
Electrical data		-	-	-	-	-	-	-
Power		380V-3Ph-50Hz						
Control power supply		24V via internal transformer						
Start-up		Star-delta start						
Nominal unit current draw, Circuit A+B	A	389	418	425	481	518	548	580
Circuit C+D		-	-	-	-	-	-	-
Maximum unit current draw, Circuit A+B	A	538	584	632	730	780	814	863
Circuit C+D		-	-	-	-	-	-	-
Maximum start-up current, Circuit A+B	A	629	829	829	977	977	1060	1060
Circuit C+D		-	-	-	-	-	-	-
Fan power	kW	20.4	23.9	23.9	27.3	27.2	30.6	30.6
Length	mm	7186	8380	8380	9574	9574	10768	10768
Width	mm	2253	2253	2253	2253	2253	2253	2253
Height	mm	2297	2297	2297	2297	2297	2297	2297
Shippment weight	kg	7717	8919	9051	9915	10161	10680	10919
Operation weight	kg	7844	9054	9198	10090	10336	10855	11094

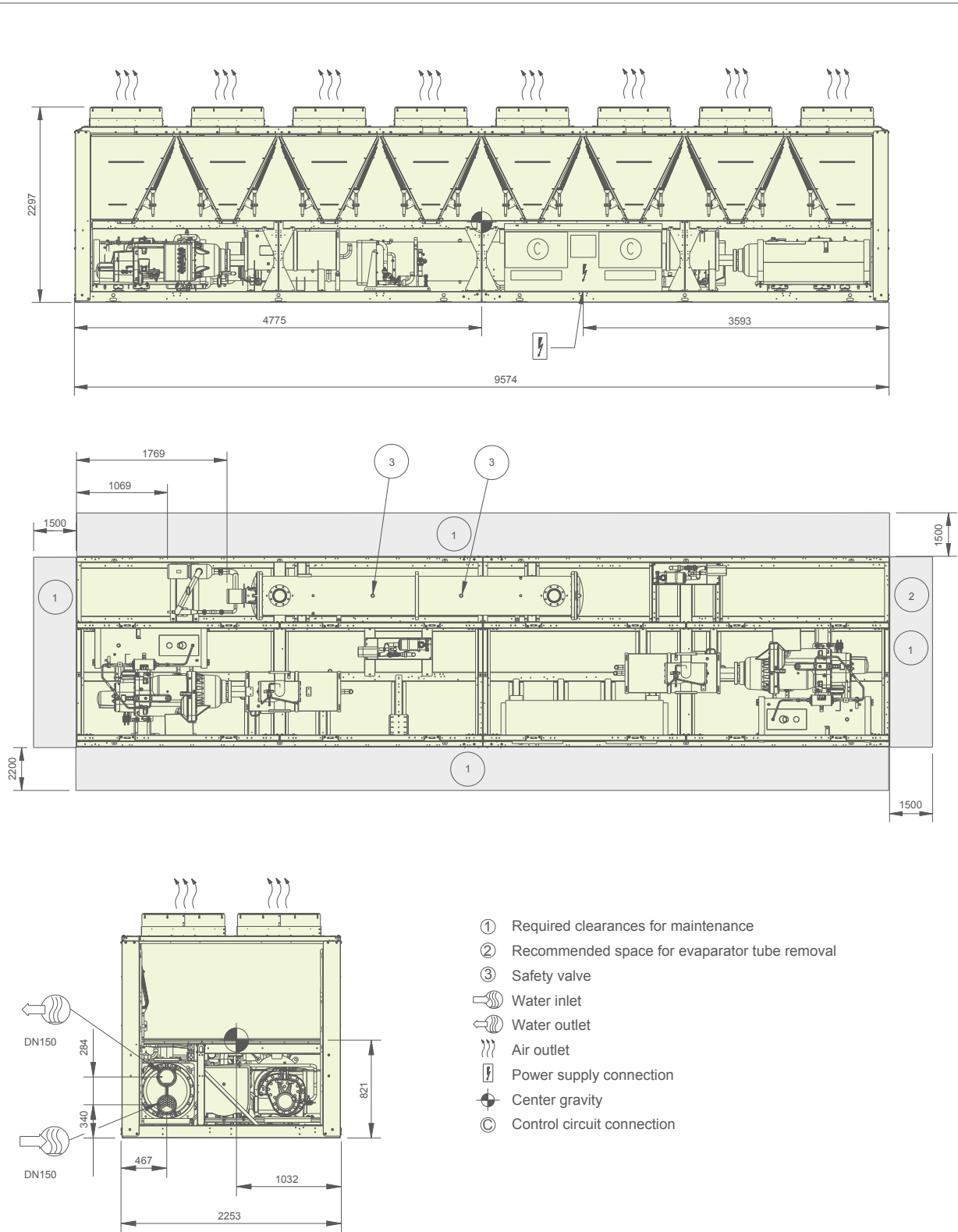
\* Nominal cooling mode - evaporator entering/leaving water temperature 12/7°C, outside air temperature 35°C

\*\* Nominal heating mode - water heat exchanger entering/leaving water temperature 40/45°C, outside air temperature 7°C

\*\*\* Water heat exchanger fouling factor 0.018m²K/kW

# Dimensions/Clearances

## 30XQ910/1002 - Cu/Al Condenser coils



Notes: Single power connection point, and arrive from the bottom. Reserve 120mm height space below the unit for power supply connection (unit aerial installation or cable slot arrangement in unit base)

# Weight Distribution, 30XQ0330~1502



Models	Dimensions, mm										Weight Distribution, kg														Operating Weight, kg
	A	B	C	D	E	F	G	H	I	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12	P13	P14		
30XQ330	2231	2157	3582	2690						1398	1273	708	644											4023	
30XQ430	2231	2157	4776	1942	1942					1318	788	1136	680	953	570									5445	
30XQ502	2231	2157	4776	1942	1942					1326	793	1143	683	959	573									5477	
30XQ1150 Module B	2231	2157	4776	1942	1942					1326	793	1143	683	959	573									5477	
30XQ1200 Module B	2231	2157	4776	1942	1942					1326	793	1143	683	959	573									5477	
30XQ1230 Module B	2231	2157	4776	1942	1942					1326	793	1143	683	959	573									5477	
30XQ625	2231	2157	7164	1942	1942	892	1496			675	602	730	651	786	701	812	725	855	763					7300	
30XQ1300 Module B	2231	2157	7164	1942	1942	892	1496			675	602	730	651	786	701	812	725	855	763					7300	
30XQ660	2231	2157	7164	1942	1942	892	1496			739	727	755	743	771	759	778	766	790	777					7605	
30XQ670	2231	2157	7164	1942	1942	892	1496			710	661	755	702	799	744	820	763	855	795					7604	
30XQ1100 Module A	2231	2157	7164	1942	1942	892	1496			710	661	755	702	799	744	820	763	855	795					7604	
30XQ1150 Module A	2231	2157	7164	1942	1942	892	1496			710	661	755	702	799	744	820	763	855	795					7604	
30XQ1300 Module A	2231	2157	7164	1942	1942	892	1496			710	661	755	702	799	744	820	763	855	795					7604	
30XQ1340 Module A/B	2231	2157	7164	1942	1942	892	1496			710	661	755	702	799	744	820	763	855	795					7604	
30XQ1370 Module B	2231	2157	7164	1942	1942	892	1496			710	661	755	702	799	744	820	763	855	795					7604	
30XQ1400 Module B	2231	2157	7164	1942	1942	892	1496			710	661	755	702	799	744	820	763	855	795					7604	
30XQ702	2231	2157	7164	1942	1942	892	1496			715	676	766	724	818	773	842	796	882	833					7825	
30XQ1200 Module A	2231	2157	7164	1942	1942	892	1496			715	676	766	724	818	773	842	796	882	833					7825	
30XQ1370 Module A	2231	2157	7164	1942	1942	892	1496			715	676	766	724	818	773	842	796	882	833					7825	
30XQ1450 Module B	2231	2157	7164	1942	1942	892	1496			715	676	766	724	818	773	842	796	882	833					7825	
30XQ745	2231	2157	7164	1942	1942	892	1496			697	659	760	718	823	778	852	805	900	852					7844	
30XQ1230 Module A	2231	2157	7164	1942	1942	892	1496			697	659	760	718	823	778	852	805	900	852					7844	
30XQ1400 Module A	2231	2157	7164	1942	1942	892	1496			697	659	760	718	823	778	852	805	900	852					7844	
30XQ1450 Module A	2231	2157	7164	1942	1942	892	1496			697	659	760	718	823	778	852	805	900	852					7844	
30XQ1502 Module A/B	2231	2157	7164	1942	1942	892	1496			697	659	760	718	823	778	852	805	900	852					7844	
30XQ750	2231	2157	8358	1942	1942	892	2690			1003	1009	949	955	895	901	870	876	796	800					9054	
30XQ810	2231	2157	8358	2690	892	1942	1942			1117	810	1089	770	1062	771	1050	763	1012	734					9198	
30XQ910	2231	2157	9552	1942	1942	892	1942	1942		933	781	925	775	917	768	913	765	905	758	899	751			10090	
30XQ1002	2231	2157	9552	1942	1942	892	1942	1942		938	787	938	787	937	786	937	786	936	785	935	784			10336	
30XQ1035	2231	2157	10746	1496	892	2690	892	1942	1942	875	759	860	746	852	739	826	717	818	710	800	694	781	678	10855	
30XQ1102	2231	2157	10746	1496	892	2690	892	1942	1942	875	761	866	754	861	749	845	736	840	731	828	721	817	710	11094	

Note: (1) foot screw even hole number (far side) represent for evaporator side  
 (2) foot screw, M20X300

### Hazardous Substances Inventory

Substance	Substance UN Number	Location	Maximum Quantity held on site <sup>1</sup>	Substance State	Approval Number	HSNO Classification <sup>1</sup>	Hazard Classification <sup>1</sup>	SDS Expiry Date
CAT DEO 15W-40 Engine Oil	NA	Within emergency generator 1 (Parliament House)	46 L	Liquid	Non Hazardous	Non Hazardous	Non Hazardous	Out of Date
CAT DEO 15W-40 Engine Oil	NA	Within emergency generator 2 (Parliament House)	46 L	Liquid	Non Hazardous	Non Hazardous	Non Hazardous	Out of Date
CI-4 15W40 Lubricating oil	NA	Within emergency generator 3 (Museum St - Ground Floor)	62 L	Liquid	Non Hazardous	Non Hazardous	Non Hazardous	Out of Date
Diesel fuel	3082	Supervault tank - Day tank for emergency generator 3 (Museum St basement)	500 L	Liquid	HSR001441	3.1D, 6.1E, 6.3B, 6.7B, 9.1B	Flammable Liquids Category 4, Aspiration hazard Category 1, Carcinogenicity Category 2, Hazardous to the Aquatic Environment (chronic) Category 2	Mar-26
CI-4 15W40 Lubricating oil	NA	Within emergency generator 4 (Museum St Ground floor)	62 L	Liquid	Non Hazardous	Non Hazardous	Non Hazardous	Out of Date
Diesel fuel	3082	Supervault tank - Day tank for emergency generator 4 (Museum St basement)	500 L	Liquid	HSR001441	3.1D, 6.1E, 6.3B, 6.7B, 9.1B	Flammable Liquids Category 4, Aspiration hazard Category 1, Carcinogenicity Category 2, Hazardous to the Aquatic Environment (chronic) Category 2	Mar-26
Diesel fuel	3082	Supervault tank - Parliament House car park	11,400 L	Liquid	HSR001441	3.1D, 6.1E, 6.3B, 6.7B, 9.1B	Flammable Liquids Category 4, Aspiration hazard Category 1, Carcinogenicity Category 2, Hazardous to the Aquatic Environment (chronic) Category 2	Mar-26
Diesel fuel	3082	Supervault tank 1 (Museum St basement)	7,216 L	Liquid	HSR001441	3.1D, 6.1E, 6.3B, 6.7B, 9.1B	Flammable Liquids Category 4, Aspiration hazard Category 1, Carcinogenicity Category 2, Hazardous to the Aquatic Environment (chronic) Category 2	Mar-26
Diesel fuel	3082	Supervault tank 2 (Museum St basement)	7,216 L	Liquid	HSR001441	3.1D, 6.1E, 6.3B, 6.7B, 9.1B	Flammable Liquids Category 4, Aspiration hazard Category 1, Carcinogenicity Category 2, Hazardous to the Aquatic Environment (chronic) Category 2	Mar-26
Diesel fuel	3082	Supervault tank 3 (Museum St basement)	7,216 L	Liquid	HSR001441	3.1D, 6.1E, 6.3B, 6.7B, 9.1B	Flammable Liquids Category 4, Aspiration hazard Category 1, Carcinogenicity Category 2, Hazardous to the Aquatic Environment (chronic) Category 2	Mar-26
Diesel fuel	3082	Supervault tank 4 (Museum St basement)	7,216 L	Liquid	HSR001441	3.1D, 6.1E, 6.3B, 6.7B, 9.1B	Flammable Liquids Category 4, Aspiration hazard Category 1, Carcinogenicity Category 2, Hazardous to the Aquatic Environment (chronic) Category 2	Mar-26
Refrigerant gas R134A	3159	Within heatpump chiller system (Roof Ballantrae Place Building)	640 kg	Gas Non-Permanent	HSR001031	Non Hazardous	Non Hazardous	Dec-23
Trane Oil 057E	NA	Within heatpump chiller system (Roof Ballantrae Place Building)	100 L	Liquid	HSR002606	9.1C	Hazardous to the Aquatic Environment (chronic) Category 3	Out of Date
Refrigerant gas R134A	3159	Within heatpump chiller system (External plant room area - Museum St building)	320 kg	Gas Non-Permanent	HSR001031	Non Hazardous	Non Hazardous	Dec-23
Trane Oil 057E	NA	Within heatpump chiller system (External plant room area - Museum St building)	50 L	Liquid	HSR002606	9.1C	Hazardous to the Aquatic Environment (chronic) Category 3	Out of Date
Refrigerant gas R134A	3159	Within chiller system (External plant room area - Museum St building)	320 kg	Gas Non-Permanent	HSR001031	Non Hazardous	Non Hazardous	Dec-23
Trane Oil 057E	NA	Within chiller system (External plant room area - Museum St building)	50 L	Liquid	HSR002606	9.1C	Hazardous to the Aquatic Environment (chronic) Category 3	Out of Date
Transformer oil (Savita)	NA	Within transformer 1 (Parliament House basement)	730 L	Liquid	Non Hazardous	Non Hazardous	Non Hazardous	Out of Date
Transformer oil (Savita)	NA	Within transformer 2 (Parliament House basement)	1,215 L	Liquid	Non Hazardous	Non Hazardous	NA	Out of Date
Transformer oil (Savita)	NA	Within transformer 3 (Parliament House basement)	1,215 L	Liquid	Non Hazardous	Non Hazardous	NA	Out of Date

Notes: 1 New Zealand adopted the Globally Harmonised System (GHS 7) for classifying hazardous substances on 30 April 2021. For ease of reference the pre-April 2021 HSNO classifications have also been included in the inventory.

**Table A1 Hazardous Facilities Screening Procedure Assessment**

Ref. No.	Substances on this site	HSNO Approval Number	Hazard Classifications	Effect Type	Hazard Rating	Base Quantity B	Units	Substance Form	Distance to boundary less than 30 metres? YES / NO	Adjacent to water? YES / NO	Type of Activity A: Above-ground B: Under-ground U: In use	Adjustment Factor			Product of Adjustment Factors	Adjusted Quantity A	Proposed Quantity P T or m <sup>3</sup>	Fire/Explosion Quantity Ratio FQ	Human Health Quantity Ratio HQ	Environment Quantity Ratio EQ
						T or m <sup>3</sup>	T or m <sup>3</sup>					F1	F2	F3						
1	CAT DEO 15W-40 Engine Oil	NA	NA																	
2	CAT DEO 15W-40 Engine Oil	NA	NA																	
3	CI-4 15W40 Lubricating oil	NA	NA																	
4	Diesel fuel	HSR001441	3.1D, 6.1E, 6.3B, 6.7B, 9.1B	Fire/Explosion	LOW	100	T	Liquid	Y		A	1.0	1.0	1.0	1	100	0.415	0.004		
				Human Health	-	-	-													
				Environment	MEDIUM	30	T		N			1.0	1.0	1.0	1	30				
5	CI-4 15W40 Lubricating oil	NA	NA																	
6	Diesel fuel	HSR001441	3.1D, 6.1E, 6.3B, 6.7B, 9.1B	Fire/Explosion	LOW	100	T	Liquid	Y		A	1.0	1.0	1.0	1	100	0.415	0.004		
				Human Health	-	-	-													
				Environment	MEDIUM	30	T		N			1.0	1.0	1.0	1	30				
7	Diesel fuel	HSR001441	3.1D, 6.1E, 6.3B, 6.7B, 9.1B	Fire/Explosion	LOW	100	T	Liquid	Y		A	1.0	1.0	1.0	1	100	9.462	0.095		
				Human Health	-	-	-													
				Environment	MEDIUM	30	T		N			1.0	1.0	1.0	1	30				
8	Diesel fuel	HSR001441	3.1D, 6.1E, 6.3B, 6.7B, 9.1B	Fire/Explosion	LOW	100	T	Liquid	Y		A	1.0	1.0	1.0	1	100	5.989	0.060		
				Human Health	-	-	-													
				Environment	MEDIUM	30	T		N			1.0	1.0	1.0	1	30				
9	Diesel fuel	HSR001441	3.1D, 6.1E, 6.3B, 6.7B, 9.1B	Fire/Explosion	LOW	100	T	Liquid	Y		A	1.0	1.0	1.0	1	100	5.989	0.060		
				Human Health	-	-	-													
				Environment	MEDIUM	30	T		N			1.0	1.0	1.0	1	30				
10	Diesel fuel	HSR001441	3.1D, 6.1E, 6.3B, 6.7B, 9.1B	Fire/Explosion	LOW	100	T	Liquid	Y		A	1.0	1.0	1.0	1	100	5.989	0.060		
				Human Health	-	-	-													
				Environment	MEDIUM	30	T		N			1.0	1.0	1.0	1	30				
11	Diesel fuel	HSR001441	3.1D, 6.1E, 6.3B, 6.7B, 9.1B	Fire/Explosion	LOW	100	T	Liquid	Y		A	1.0	1.0	1.0	1	100	5.989	0.060		
				Human Health	-	-	-													
				Environment	MEDIUM	30	T		N			1.0	1.0	1.0	1	30				
12	Refrigerant gas R134A	HSR001031	NA																	
13	Trane Oil 057E	HSR002606	9.1C	Fire/Explosion	-	-	-	Liquid	Y		A						0.098			
				Human Health	-	-	-													
				Environment	LOW	100	T		N			1.0	1.0	1.0	1	100				
14	Refrigerant gas R134A	HSR001031	NA																	
15	Trane Oil 057E	HSR002606	9.1C	Fire/Explosion	-	-	-	Liquid	Y		A						0.049			
				Human Health	-	-	-													
				Environment	LOW	100	T		N			1.0	1.0	1.0	1	100				
16	Refrigerant gas R134A	HSR001031	NA																	
17	Trane Oil 057E	HSR002606	9.1C	Fire/Explosion	-	-	-	Liquid	Y		A						0.049			
				Human Health	-	-	-													
				Environment	LOW	100	T		N			1.0	1.0	1.0	1	100				
18	Transformer oil (Savita)	NA	NA																	
19	Transformer oil (Savita)	NA	NA																	
20	Transformer oil (Savita)	NA	NA																	
<b>Total Quantity Ratios</b>																	<b>0.342</b>	<b>0.000</b>	<b>1.144</b>	

Table A2: Use, Storage or Handling of Hazardous Substances: Assessment Against Relevant Activity Standards

Reference	Standard	Comments
13.6.2.3.2	Except for the storage, use or handling of Liquid Petroleum gas (LPG), any area where hazardous substances are used, stored or handled in any manner on-site shall have secondary containment (via bunding or otherwise) using materials that are resistant to the hazardous substances handled on-site. Secondary containment systems also need to comply with any relevant provisions under the Hazardous Substances and New Organisms Act 1996.	<p><b>Complies</b></p> <p>Substances which are classified as hazardous under the Globally Harmonised System (GHS 7) for classifying hazardous substances (adopted by New Zealand on 30 April 2021) will be present in the following locations at the site:</p> <ul style="list-style-type: none"> <li>• Small volumes (25 L) of lubricating oil contained within each of the eight sealed systems for the chillers, located on the roof of the proposed Ballantrae Place Building, and the external plant room area at the proposed Museum Street Building.</li> <li>• Diesel in day tanks associated with the emergency generators in the basement of the proposed Museum Street Building.</li> <li>• Diesel tanks used for storage for the emergency generators in the basement of the proposed Museum Street Building.</li> <li>• Diesel tank situated in the Parliament House carpark near to the existing generators.</li> </ul> <p>All diesel tanks are purpose-designed and constructed double skinned SuperVault tanks. No additional bunding is required for these tanks. They are engineered and constructed for maximum protection, with the outer steel tank providing secondary containment as well as protecting the inner tank from the elements of nature and fire. All except the 11,400 L tank are located within buildings which will provide additional containment.</p> <p>The lubricating oil is within a sealed system for the heat pump chillers. These are also within buildings which will provide additional containment.</p> <p>The draft Site Management Plan (SMP) specifies the storage requirements for the hazardous substances present on the site.</p>
13.6.2.3.3	Except for the storage, use or handling of Liquid Petroleum gas (LPG), any secondary containment system shall be maintained to ensure that it will perform the functions for which it was designed and contain any spill or accidental release.	<p><b>Complies</b></p> <p>The SuperVault tanks are purpose designed and built for the storage of diesel fuel. They have passed the internationally recognised SwRI 95-03 multi hazard test for above ground fuel tanks, which includes being tested for multiple exposures to fire and other hazards. Areas where hazardous substances are present are subject to a routine inspection on a weekly basis, as described in the draft SMP.</p>

Reference	Standard	Comments
13.6.2.3.4	Except for the storage, use or handling of Liquid Petroleum gas (LPG), any area(s) where hazardous substances are loaded, unloaded, packaged, mixed, manufactured or otherwise handled shall have a spill containment system that is compliant with relevant provisions under the Hazardous Substances and New Organisms Act 1996.	<p><b>Complies</b></p> <p>Except for the 11,400 L tank, the fuel storage tanks are located in an area of the building which is away from the main areas used by the public and workers who are not involved in building maintenance. The tanks have also been multi hazard tested against heavy vehicle impact. Any spills / leakages from these due to accidental damage are unlikely. All the new diesel tanks are required to fuel the emergency systems on-site (generators etc.) and hence will only require filling after a significant power outage, or on an annual basis as some fuel will be used during routine equipment testing.</p> <p>The lubricating oil is also contained within a sealed system in the chillers, located externally at roof level. No handling of hazardous substances will occur in this area apart from maintenance which will be carried out by suitably qualified staff or maintenance subcontractors.</p> <p>The site will be operated in accordance with a site-specific Site Management Plan (SMP) which includes a spill response procedure. The site will also have Emergency Management Procedures.</p>
13.6.2.3.5	Except for the storage, use or handling of Liquid Petroleum gas (LPG), secondary containment systems shall be designed to contain any spill or accidental release of hazardous substance, and any storm water and/ or fire water that has become contaminated, and prevent and contaminant from entering the sewerage or stormwater drainage system unless expressly permitted under a resource consent or trade waste permit.	<p><b>Complies</b></p> <p>The SuperVault tanks are double skinned and as such, contaminated stormwater and / or fire water cannot enter the secondary containment provided. The majority of the tanks are located within buildings which will provide additional containment. The majority of the tanks are being installed in the basement which is unlikely to have floor drains (connected to the on-site wastewater system) or stormwater drains, and therefore the risk of contaminants being discharged to these systems is low.</p>
13.6.2.3.6	All stormwater grates, collection structures and inspection chamber covers on the site shall be clearly marked as such.	<p><b>Complies</b></p> <p>ENGEO has been advised that the site operator will comply with all applicable regulations.</p>
13.6.2.3.7	Any area where vehicles, equipment or containers that are or may have been contaminated with hazardous substances are washed down shall be designed, constructed and managed to prevent the effluent from the washdown area from discharge into or onto land, entry or discharge into the sewerage or stormwater drainage system unless expressly permitted by a rule in a regional plan, trade waste permit or resource consent.	<p><b>NA</b></p> <p>No washdown facilities are proposed as a part of the proposed new building.</p>
13.6.2.3.8	Underground tanks for the storage of petroleum products shall be designed, constructed, installed, maintained, operated, managed and at	<p><b>NA</b></p>

Reference	Standard	Comments
	the end of their life removed to prevent leakage and spills. Compliance with any relevant provisions under the Hazardous Substances and New Organisms Act 1996 and the Code of Practice for the “Design, Installation and Operation of Underground Petroleum Storage Systems” (1992) is a minimum requirement.	No underground tanks are proposed. An existing underground tank will be removed as a part of the development works.
<b>Signage</b>		
13.6.2.3.9	All facilities must display signage to indicate the nature of the hazardous substances present (compliance with the provisions of the Hazardous Substances and New Organisms Act 1996 and the requirements of the Building Code (F8) or the Code of Practice “Signage for Premises Storing Hazardous Substances and Dangerous Goods” of the New Zealand Chemical Industry Council (Nov 2004) is a minimum requirement).	<b>Complies</b> The SMP specifies the signage requirements for the hazardous substances for the site.
<b>Waste Management</b>		
13.6.2.3.10	Any process waste or waste containing hazardous substances shall be stored in a manner which complies with 13.6.2.3.2 to 13.6.2.3.9 above.	<b>NA</b> No process waste or waste containing hazardous substances will be produced as a result of the presence of hazardous substances at the site.
13.6.2.3.11	Any hazardous facility generating wastes containing hazardous substances shall dispose of these wastes to facilities which, or waste disposal contractors who, meet all the requirements of regional and district rules for discharges to the environment and also the provisions of the Hazardous Substances and New Organisms Act 1996.	<b>NA</b> No waste containing hazardous substances will be produced as a result of the presence of hazardous substances at the site
<b>Other</b>		
13.6.2.3.12	Council must be informed of the activity’s location, the nature of the activity and when the activity commences and ceases.	<b>Complies</b> The assessment carried out by ENGEO informs Wellington City Council (WCC) of the locations where hazardous substances will be present on-site and the purpose of their presence. We assume that it will be a condition of consent that WCC be informed prior to commencement of the <i>use, storage or handling of hazardous substances</i> on-site and also that WCC be informed if the activity ceases for any reason.