



ROTTNEST ISLAND STAFF ACCOMMODATION DA SUBMISSION HYDRAULICS SITE SERVICES REPORT

1. GENERAL

This report has been prepared to provide a general overview of the hydraulics site services for the proposed Rottnest Island Staff Accommodation project. The hydraulic services systems will be designed to provide a quality installation that incorporates the best materials available to suit the intended purpose/use, coastal location and to comply with all statutory requirements.

2. SCOPE

The hydraulic section includes of the following:

- Property sewerage
- Sanitary plumbing and drainage
- Cold and heated water services
- Sanitary fixtures and taps

3. MAINTENANCE MINIMISATION

Materials, fixtures, fittings and equipment will be selected to provide longevity of service and to minimize maintenance costs. Specific areas of the hydraulics design that will contribute to minimizing maintenance costs include:

- Sufficient fall to all drains to minimize blockage occurrences
- PVC property sewer drainage with solvent welded joints to prevent ingress of tree roots
- Incorporating drain access points at surface level for ease of access

4. ENERGY & WATER USE MINIMISATION

The hydraulic services will be designed to minimize energy and water usage. Specific areas of the hydraulics design that will contribute include:

- Incorporating 5 WELS rated tapware and fixtures
- Instantaneous electric water heating for Staff Accommodation Amenities

5. PROPERTY SEWERAGE

The property sewer drainage system will be designed and installed in accordance with the Australian Standard 3500.2. A PVC property sewer drainage system will traverse throughout the site at grade with a discharge connection to an RIA sewer pump station located northeast of the site. Manholes will be installed on major property sewer drain changes of direction and access points installed at end of drain branches to facilitate ease of maintenance. A 2000 litre grease trap will be installed on the southern side of the Central Facility building to treat the waste water discharge from the Kitchen in accordance with Water Corporation industrial waste requirements.

6. SANITARY DRAINAGE

The property sewerage and sanitary drainage systems have been designed in accordance with the Australian Standard 3500.2. All fixtures and fittings will be selected to provide for ease of cleaning, reduced maintenance costs, longevity of service and best value for money. All waste and vent pipe work, where exposed, will be chrome plated.

7. COLD & HEATED WATER SERVICES

The cold and heated water service systems have been designed in accordance with AS3500.1. A new 50mm diameter (230 L/min) water service boundary connection will be obtained off Parker Point Road to supply the proposed development water requirements. An optional water treatment, storage and pressurization system may be installed to prevent premature pipe, fittings and equipment degradation. A water supply ring main will traverse throughout the site with valved branches to groups of fixtures.



Electric instantaneous water heaters will be installed to supply hot water to Accommodation Units to minimize energy consumption. A commercial electric storage water heater will be installed in the Central Facility building to supply hot water to the fixtures throughout via a hot circulating piping system. Thermostatic mixing valves will be installed to limit the hot water temperature to 50°C to taps and outlets utilized for personal hygiene. New tap ware and outlets will be fitted with flow control valves to minimize water consumption. Hose taps will be installed around the site.

8. FIRE SERVICE

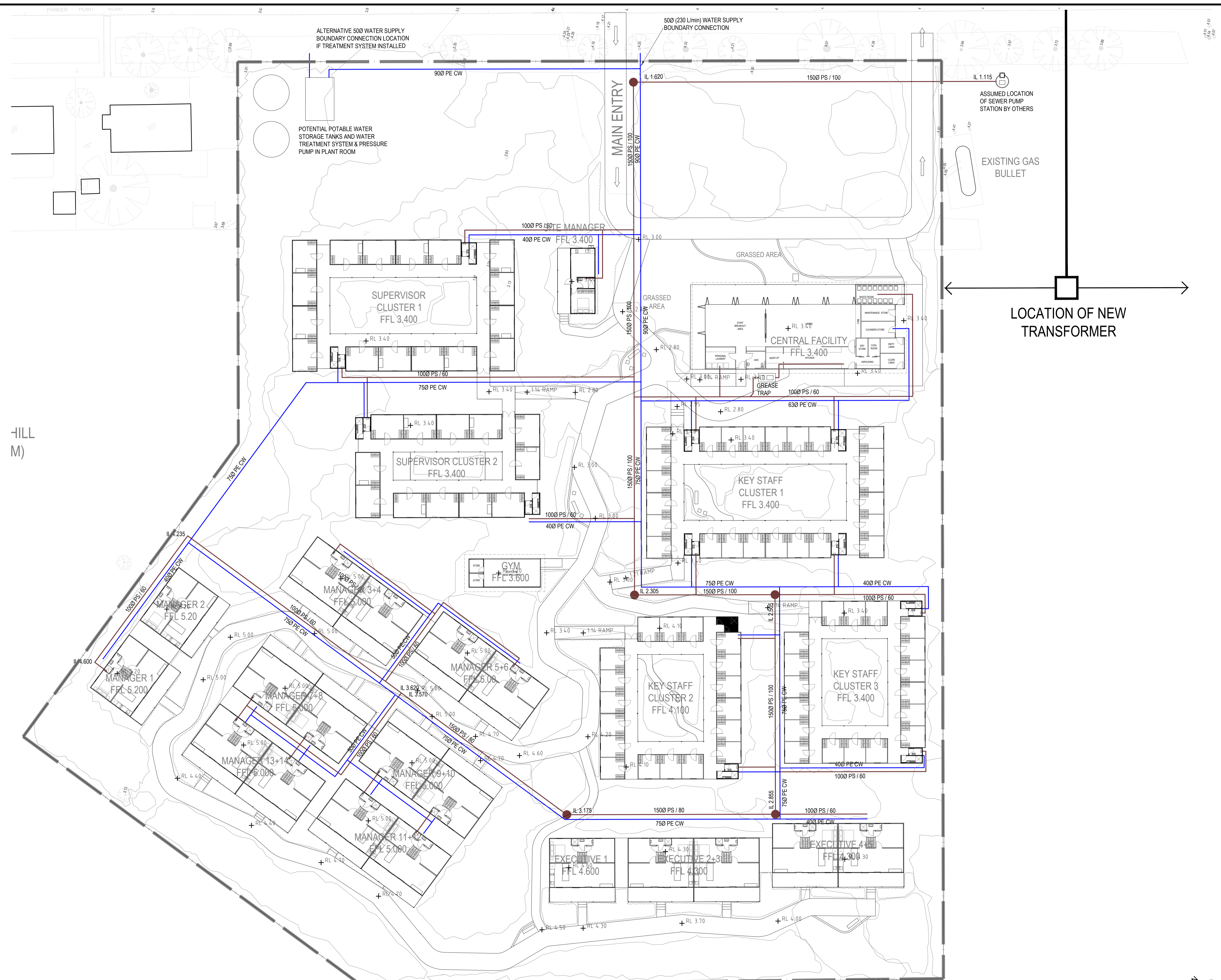
Fire hydrants and fire hose reels are not required for this development as the building fire compartments do not exceed 500m².

9. GAS SERVICE

Liquid Petroleum Gas may be utilized for Kitchen cooking appliances and water heating via localized bottles per building / cluster subject to future availability of LPG bottle replacements on the island.

10. STORMWATER DRAINAGE

Refer to the Civil Engineers report.



HILL M)

SITE PLAN : HYDRAULIC SERVICES LAYOUT
SCALE 1:250 @ A1

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ROTTNE ISLAND STAFF ACCOMMODATION
FOR THE PRENDVILLE GROUP

Site Plan
Hydraulic Services Layout

DRAWN	QO	DESIGNED	QO	REDUCTION
CHECKED		PRINCIPAL		0 25
APPROVED	QO	Q.Oma		
SCALE	1:250 @ A1	DATE	JUNE 2022	DRAWING No. REV.
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