

PROJECT :
LOT 848 TRUSCOTT CRES, EXMOUTH
PROPOSED 25 UNIT STRATA TITLED TOURIST DEVELOPMENT

HYDRAULIC SERVICES
DESIGN DEVELOPMENT
REPORT

PREPARED BY:

W.LUPTON + PARTNERS PTY LTD
PO BOX 5046 FALCON WA 6210

Tel: 0403 122 665

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INTRODUCTION

This is a Design Development Report for Hydraulic Services for the proposed 41 Lot strata development.

This Report sets out the parameters of W.Lupton + Partners technical design and client service for the Hydraulics Services design of the above project.

Objectives

- To provide Hydraulic Services that minimise capital, running and maintenance costs without affecting standard of engineering, equipment and finishes.
- To provide Hydraulic Services of commercial quality to maximise the engineered design life.

Design Criteria

- Hydraulic services to comply with the Building Code of Australia.
- Hydraulic services to comply with all current statutory requirements and guidelines including Local Shire Council, Water Corporation, Fire and Emergency Services Authority of Western Australia, and The West Australian Department of Health.
- Hydraulic Services to comply with current Australian Standards where applicable and particularly the following:
 - AS 3500 National Plumbing and Drainage Code incorporating:
 - Part 1.2 : 1998 Water Supply
 - Part 2.2 : 1996 Sanitary Plumbing and Drainage.
 - Part 3.2: 1998 Stormwater Drainage
 - Part 4.2 : 1997 Hot Water Supply Systems.
- AS 2419 Fire Hydrant Installations.

Water Supply

The Water Corporation have confirmed there is currently no water available to the site. A water main extension is required to the site to supply potable water to the development, the water main extension is to be designed and documented by the project civil engineer.

When completed the water main extension will only provide a 20mm water meter to the site. The 20mm water meter will not provide the required flow rate to service the development. Therefore potable water storage tanks and pumps will be provided onsite.

The potable on site water storage water system will comprise of 2 x 75kl tanks (5.2m dia x 4.0m high) and a 4m x 5m shed to house the dual pumps and filtration system. The storage tanks will include an automatic chlorination dosing system and a water filtration system on the outlets of the pumps.

A 100mm water main will extend throughout the site to supply potable water to each lot.

Fire Hydrants

It is anticipated that fire hydrants will be required to provide coverage to the proposed lots. The required flow and pressure for residential developments is 10L/sec @ 200kpa.

A flow and pressure test would need to be carried out on the proposed water main extension to confirm if the new street main could provide the required flow and pressure. However regardless of the test results initial feedback from The Water Corporation has indicated that a 100mm fire service would not be available to the site.

Based on the above information it is proposed that onsite fire service tanks and pumps be installed.

The fire system will comprise of 2 x 72kl tanks (5.2m dia x 4.0m high) and a 6m x 8m shed to house the dual electric and diesel fire pumps. The storage tanks and pump shed is to be located a minimum of 10m away from any fire source or be constructed out of fire rated materials.

Located within the main entry of the development there will be a fire booster cabinet, again this is required to be separate from any fire source as per the above requirements.

A 180mm fire main will extend throughout the site to supply above ground hydrants to provide fire hose coverage to each lot.

Sewer and Waste Water Disposal

The Water Corporation have confirmed there is currently no sewer junction available to the site and there is no available capacity within the sewer drainage system servicing the Exmouth Township.

It is proposed an Aerobic Treatment Unit (ATU) with flat bed leach drains be installed on site for sewer and waste water disposal. The system is to be an approved ATU by The West Australian Department of Health and be sized and designed in accordance with the West Australian Health Regulations 1974.

Note, the ATU and disposal area will be sized for stage 1 only, as indications from the developer is that it is anticipated that the Water Corporation will have a sewer junction available to the site for when stage 2 is developed.

Storm Water Disposal

Storm water disposal for the development is to be designed and documented by the project civil engineer.

Schematic Design Drawings

Refer to the attached drawing H.01 for schematic water, fire and sewer layouts.