

Hansen Yuncken



# Target Off-site Reserve Erskine Park

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Hydraulic Services  
Design Brief

18 December 2008  
Issue: A



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## Hydraulic Services Design Brief

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## Appendix A

Services Connection Sketch

# 1 Introduction

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The Hydraulic services for the proposed Target Offsite Reserve at Templar Road, Erskine Park are based on the following:

- The preliminary architectural drawings issued by Space Design.
- Inspection of the proposed site and survey information.
- Preliminary study of existing authority services.
- Targets Off-site Design Brief
- Two developments consisting of: Target Off-site Reserve (H3) and Future Facility (H1) shall be constructed on the property, with shared services.

# 2 General

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Hydraulic Services installation for this development will be designed and constructed in general compliance with the word and the intent of this document, relevant standards, BCA and other Authority requirements including any negotiated requirements.

All materials, equipment selections and workmanship associated with the systems' installation will be of a standard, or better, local industry type.

## 3 External Infrastructure

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### 3.1 Sewer Mains

- 1 x 225mm diameter sewer connection point has been provided for the property, from the existing 375mm glass reinforced polyester (GRP), running along the northern site boundary. It is envisaged that this connection point will be used for the Future Facility (H1), subject to Sydney Water Corporation approval
- The proposed Target Off-site Reserve (H3) will not gravitate to the existing 225mm diameter connection point located on the northern side of the site.
- A 150mm diameter sewer connection point will be provided to the Target Off-site Reserve by extending a new sewermain through the adjacent western property. This connection point will also act as an additional sewer connection point for the Future Facility.
- An easement will need to be created through the adjacent western property for the new sewermain.
- The design, construction and supervision of the new sewermain will be undertaken by a suitably qualified Sydney Water designer.
- A Section 73 application will be lodged with Sydney Water to confirm the suitability of the sewer connection point.
- SWC Developer charges for sewer mains may apply, subject to Sydney Water assessment.

### 3.2 Water Mains

- An existing 200mm uPVC watermain is located in Templar Road.
- Domestic potable cold water for the property will be provided from 1 connection to the existing 200m uPVC watermain. The shared connection will service both sites on the property
- Fire services water for the site will be provided from 1 tee and valve connection to the existing 200m uPVC watermain. The shared connection will service both sites on the property.
- A Section 73 application will be lodged with Sydney Water to confirm the suitability of the sewer connection point.
- SWC Developer charges for water supply may apply, subject to Sydney Water assessment.

### 3.3 Gas Mains

- There are no gas mains available for connection, therefore no gas will be provided to the property. An existing Authorities gas main is located

to the north of the site, in Templar Road. The gas main is likely to be extended to provide gas to adjoining developments, in the future. Gas services can be provided to the Site H1 and H3, if required, in the future.

## 4 Sewer

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### 4.1 Sewer Drainage

- Sewer drainage for the Target Off-site reserve will reticulate around the Target site and drain to the new connection point
- Connection shall be made via a new boundary trap
- uPVC pipework will be used for all sanitary drainage pipework.
- The sewer system will be designed in accordance with AS 3500 and NSW Code of Practice-Plumbing and Drainage requirements.
- The complete sewer drainage system will conform to the requirements of the Sydney Water Corporation.

### 4.2 Sanitary Plumbing and Drainage

- Sanitary plumbing and sewer drainage shall reticulate via gravity and collect all sanitary fixtures and plantroom floor wastes as required and discharge to the Target site sewer drainage system.
- uPVC pipework will be used for all sanitary drainage pipework.
- The complete sewer drainage system will conform to the requirements of the Sydney Water Corporation.

## 5 Stormwater

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- Refer to Civil drawings for external drainage system.
- Roof areas discharging to gutters and downpipes shall be sized for a 1 in 100 year 5 minute intensity storms where box gutters are installed and 1 in 20 year 5 minute intensity where eaves gutters are installed.
- All roof overflows shall have capacity for a 1 in 100 year 5 minute intensity.
- The complete system of stormwater plumbing and drainage will conform to the requirements of AS 3500, Penrith City Council and Sydney Water Corporation.

## 6 Potable Water

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### 6.1 Potable Cold and Hot Water Service

- A shared cold water supply for both sites within the property shall extend from the existing 200 dia. authorities watermain in Templar Road via a single authority water meter complete with backflow prevention device and a water pressure booster pump set, located within the estate services zone pump room.
- The shared water service shall branch to provide individual supplies to the Target Off- site Reserve and Future Facility via sub- meters. Sub-meter for the Future Facility to be provided at a later date.
- The Target Off- site water supply shall reticulate throughout the site to supply all potable cold water consuming outlets, within the Target site.
- Pulse meters will be provided to the following areas for consumption monitoring ;
  - Cold water supply for Reuse Rainwater top up.
  - Office Building.
  - Hot water supply.
- Pressure reduction valves shall control water pressure to all groups of fixtures within the building.
- The Target Off-site Reserve reticulated supply shall serve all required fire hose reels, potable hose taps, plant and other potable water consuming fixtures, located within the Target site.
- The potable water system will be designed in accordance with AS 3500 and NSW Code of Practice-Plumbing and Drainage requirements.
- The cold water service will conform to the requirements of the Sydney Water Corporation.

### 6.2 Hot Water Service

- A centralised solar hot water plant with electric boosters will be located in the cleaners' room with the solar panels installed on the roof. Hot water will reticulate via a balanced flow and return reticulation to all hot water consuming fixtures within the building.
- Thermostatic mixing valves will be provided to control hot water temperature to all personal hygiene fixtures within disabled amenities at 42 deg C.
- Thermostatic mixing valves will be provided to control hot water temperature to all personal hygiene fixtures within male and female amenities areas at 50 deg C.

- The complete system will conform to the requirements of the Sydney Water Corporation.
- The hot water plant shall have adequate capacity to meet the highest demand spread over a 60 minute peak period.
- The hot water system will be designed in accordance with AS 3500 and NSW Code of Practice-Plumbing and Drainage requirements
- The complete system will conform to the requirements of the Sydney Water Corporation.

## 7 Rainwater Re-use

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### 7.1 Rainwater Reuse Service

- A Rainwater Reuse service shall extend from the site's rainwater collection tank (refer to Civil Documents) via rainwater pressure booster pumps, filters and other treatment equipment and supply the following:
  - Fixture flushing and external wash down taps
  - Landscape Irrigation services
  - Future regional harvesting system
- Pressure reduction valves shall control water pressure to all groups of fixtures within the building.
- The rainwater reuse service will conform to the requirements of the Sydney Water Corporation and NSW Health.

## 8 Fire Services

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### 8.1 Fire Hose Reel Service

- The Target Off- site Reserve fire hose reel service will extend from the Target Off- site Reserve potable cold water service to required fire hose reels within the Target Off- site Reserve, maintaining adequate coverage.
- The complete system will conform to the requirements of the BCA & Local Council.

### 8.2 Fire Hydrant Service

- A shared fire hydrant water supply shall extend from the existing 200 dia. authorities watermain in Templar Road via a fire hydrant suction/ booster assembly complete with backflow prevention device and booster pumps, located within the estate services pump room.
- A reticulated hydrant system ring main within will be installed within the Target Off- site Reserve throughout the building in accordance with the requirements of the Building Code of Australia, AS 2419.1-2005.
- Two connection points from the hydrant system ring main will be provided, for the Future Facility
- External attack fire hydrants connected to the fire hydrant ring main shall be installed throughout the Target Off- site Reserve as required for coverage compliance in accordance with AS2419.1-2005.
- The complete system will conform to the requirements of the BCA and AS 2419.1 2005

### 8.3 Fire Sprinkler Service

- The fire sprinkler supply will extend from the existing 200 dia. authorities watermain in Templar Road via a fire sprinkler suction/ booster assembly complete with backflow prevention device and will terminate with a Table "E" flange within the fire services pump room, for connection and further extension by the fire sprinkler contractor.

## 9 Sanitary Fixtures and Tapware

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### 9.1 Sanitary Fixtures

- Sanitary fixtures will be selected by the Architect in conjunction with the Client and will be reviewed for compliance with current water saving recommendations and requirements
- All Sanitary Fixtures will be high quality high-density vitreous chinaware and white in colour.
- WC suites shall be of the close coupled type with concealed isolating valves within cistern.
- Urinals shall be of the wall hung and waterless type.
- Floor grates, basin plug and washers shall be chrome brass plate.

### 9.2 Tapware

- All exposed taps, faucets and other fittings shall be chromium plated.
- Taps to fixtures shall be single lever type with ceramic disc valves and solid brass spouts with aerated outlets.
- All tapware shall incorporate flow control and shall be WELS approved.

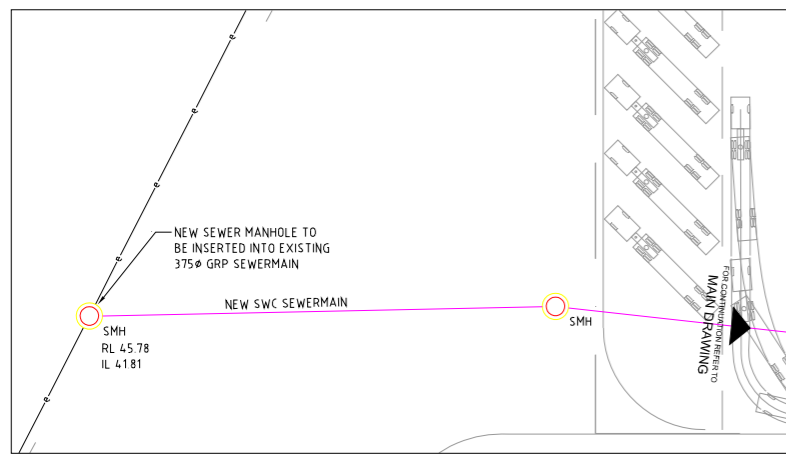
### 9.3 Testing, Commissioning and Certifications

- Testing, commissioning and 12 month warranty and maintenance during warranty will be provided as part of the scope of works.
- Maintenance provisions will be forwarded for client review during documentation phase.
- Essential Services certifications will be provided when due

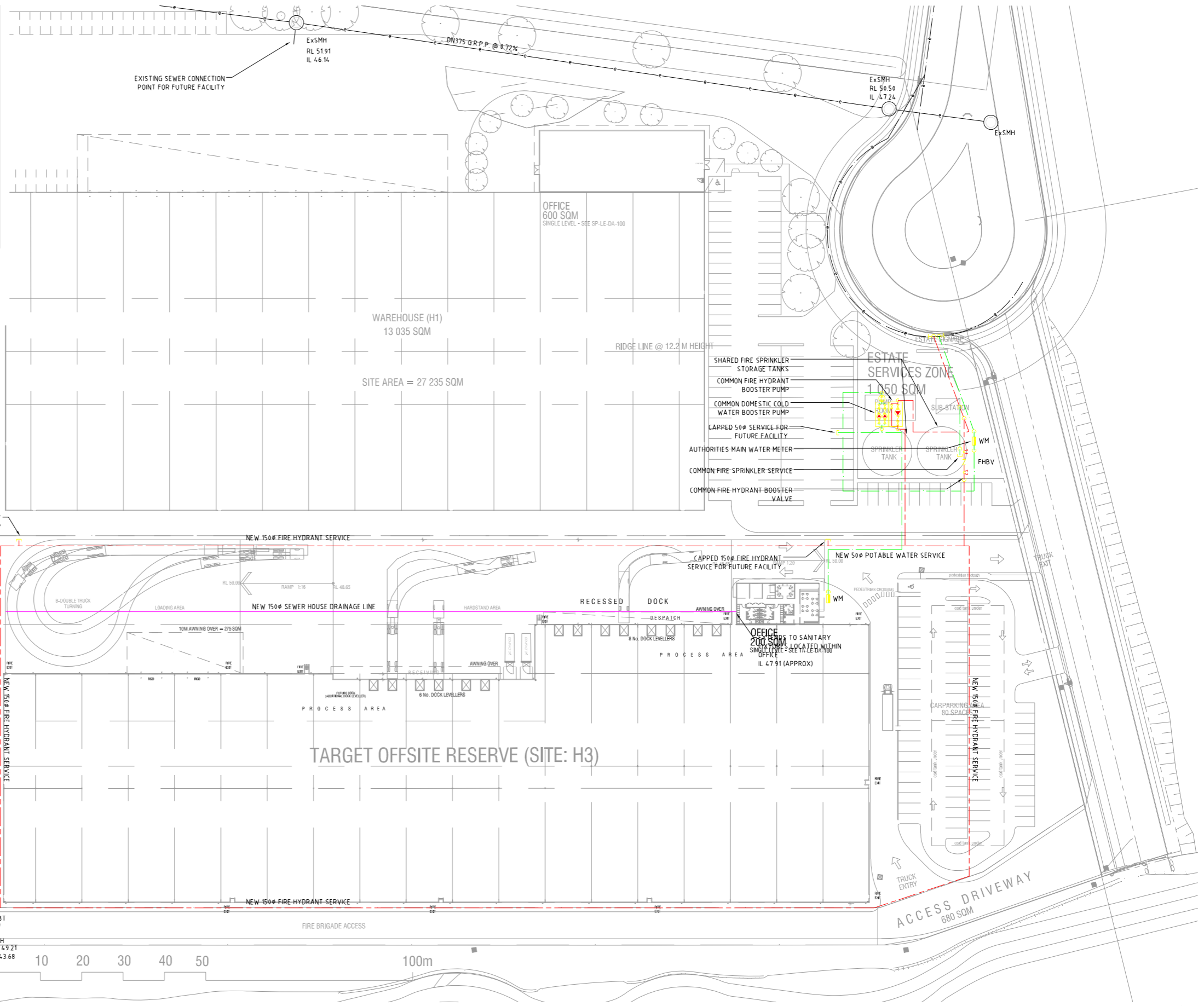
# Appendix A

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## Services Connection Sketch



INSET A

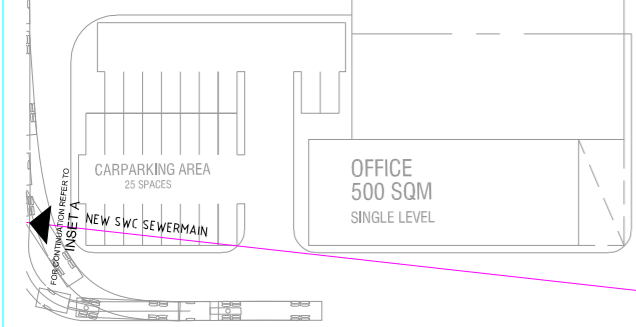


RESIDUAL (H2) SITE AREA 1

WAREHOUSE  
5 040 SQM

SITE AREA = 25 575 SQM

TARGET OFFSITE RESERVE (SITE: H3)



Issue	Description	Drwn	Ckd	Appd	Date
P2	PRELIMINARY ISSUE 2	DGM	AC	DGM	18 12 08
P1	PRELIMINARY ISSUE 1	DGM	AC	DGM	08 11 08

Status  
**PRELIMINARY ONLY**  
NOT TO BE USED FOR CONSTRUCTION

Client  
**hansen yuncken**  
BUILDING VALUE

Scale (A1) 1500 Date AHD  
Drawn DGM Designed DGM

Project  
**TARGET AUSTRALIA  
SITE H, TEMPLAR ROAD  
ERSKINE PARK**

Title  
**HYDRAULIC SERVICES  
SERVICES CONNECTION  
POINTS**

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Project Code AA002233 Drawing No. SKH-01 Issue P2