



## The Sandstone Buildings, Sydney

### Building Services Information for DA Stage 1 Lands

#### Prepared for:

Ian Lomas  
Make Architects

Date:  
24 February 2017

#### Prepared by:

Joseph Walsh  
Project No. 29212-SYD-EHMNR  
P:\29212\BRIEF\BRE\_EHMNGR\_008(ACOUSTIC).DOCX

Level 6, Building B, 207 Pacific Highway, St Leonards NSW 2065  
T: (02) 8484 7000 F: (02) 8484 7100 E: sydney@wge.com.au W: www.wge.com.au

# Revision

REVISION	DATE	COMMENT	APPROVED BY
01	24/02/2017	Issue for inclusion in COS D.A issue	Joseph Walsh

REVISION

# Introduction

## 1. Introduction

This report has been prepared for the proposes of detailing the basic services arrangements to provide evidence to the City Of Sydney (COS) that the services design is being implemented with a strategy that attempts to minimise impacts on the existing structure, existing heritage material and attempts to minimise any plant on roof areas. WGE is undertaking the following services within the building.

- Mechanical services
- Electrical services
- Communication services
- Security Services
- Fire protection services
- Hydraulic services (plumbing)
- Pool Services
- Sustainability

# Strategies to Minimise Services Impact on The Lands.

## 2. Strategies to Minimise Services Impact on The Lands.

The following list details the central design philosophies employed to minimise visual impacts of services on the building

- Utilise the existing substation within Farer Place that is currently not being utilised. Negotiations with Ausgrid are continuing
- All major A/C plant including cooling towers, Chiller, Boilers and major AHU plant are within basement levels or within new extended areas. (not on the roof top)
- Pumps tanks and Domestic water storage and Domestic water heaters are all within basement areas.
- Fire Engineered solution are being implemented to minimise the requirement for louvres within heritage building fabric.
- Services for sanitary drainage are being installed within the floor zone to eliminate the need to touch heritage ceilings within Lands
- A services tunnel will link the two building so that all major plant, tanks, switchboards, chiller and boilers can be located within education. This will limit the impact of the development on Lands.
- Discharge from Cooling towers is to be horizontal from the façade of Education Building. The discharge is in the new façade and is completely integrated.
- Kitchen, Toilets and Garbage etc discharge either horizontal at lands or vertically within areas adjacent lift over runs so that they do not break the envelope. (see attached sketches)

# Authorities Connections

## 3. Authorities Connections

### 3.1 Fire Protection

#### 3.1.1 Wet Fire Protection Services

Allocation for a sprinkler tank and associated pump set has been provided within the Education building.

### 3.2 Communications

#### 3.2.1 Voice & Data

Applications will be lodged with licensed Carrier provider for communication services to the site.

#### 3.2.2 Free to Air and Pay TV

Pay TV shall be sourced from a roof mounted satellite dish. Free to Air TV shall be sourced from a roof mounted master antenna.

### 3.3 Power Supply

#### 3.3.1 Supply Authority Application

An Application for Load was lodged with Ausgrid for providing permanent power to the site. Ausgrid have accepted supplying the two buildings from existing substations located off the site.

### 3.4 Hydraulic Site Services

- Property sewer services incorporating:
  - A **225** gravity connection to the Authorities main sewer infrastructure is required for each building. Further investigation is required to confirm the condition of the existing sewer main. It is likely that Sydney Water would require new connections to Bridge street sewer system.
- Domestic Cold Water Supplies incorporating:
  - The proposal is to make connection to the 250mm DICL water main in Bent Street. The developments water supply would be fed and managed from this location and to ensure there is sufficient water to maintain peak supply. Reticulated pipework through the Loftus link services corridor would feed the Lands Building.
  - A triplex pump set shall cater for the domestic cold water load throughout the 2 buildings.
- Gas Services Incorporating:
  - It is proposed to connect to the Jemena main in Bent Street and supply a single gas meter located in the Ed. Bdg. This supply would extend and reticulate as required to the Land Bdg, via the Loftus link.
  - Supply of domestic gas hot water, commercial kitchen, mechanical plant, pool heating, spa heating
- Fire Services incorporating: (Note: subject to conditional approval as noted in Point 2 above)
  - A single fire services station incorporating approx 110Kl storage tank, fire pump set, booster assembly
  - The fire services would reticulate throughout the development via the Loftus link.

# Authorities Connections

## 3.5 Civil Infrastructure

- Stormwater Drainage Incorporating:
  - Collection of storm water run-off at base of downpipes and discharging to the sites storm water drainage system to rainwater tanks and associated civil infrastructure.
  - Collection of storm water run-off from paved and parking areas via rainwater outlets, gully's, gully pits, grated sumps etc., connecting to the sites main drainage system.
  - Through consultation with Sydney City Council and Sydney water a determination would be made as to whether on site stormwater detention is required.

# Centralised Systems to Limit Impact On The Lands

## 4. Centralised Systems to Limit Impact On The Lands

### 4.1 Services Sketch

The attached sketch demonstrates the philosophy of main plant being located within the Education Building and both buildings being served from that central plant.

The following is located within Education Basements

- Main Switchboards
- Main Comms Room
- Fire Pump Room
- Domestic hotwater plant
- Chillers
- Boilers
- Fire Tanks

Cooling towers are located within the new fabric of education.



## Centralised Systems to Limit Impact On The Lands

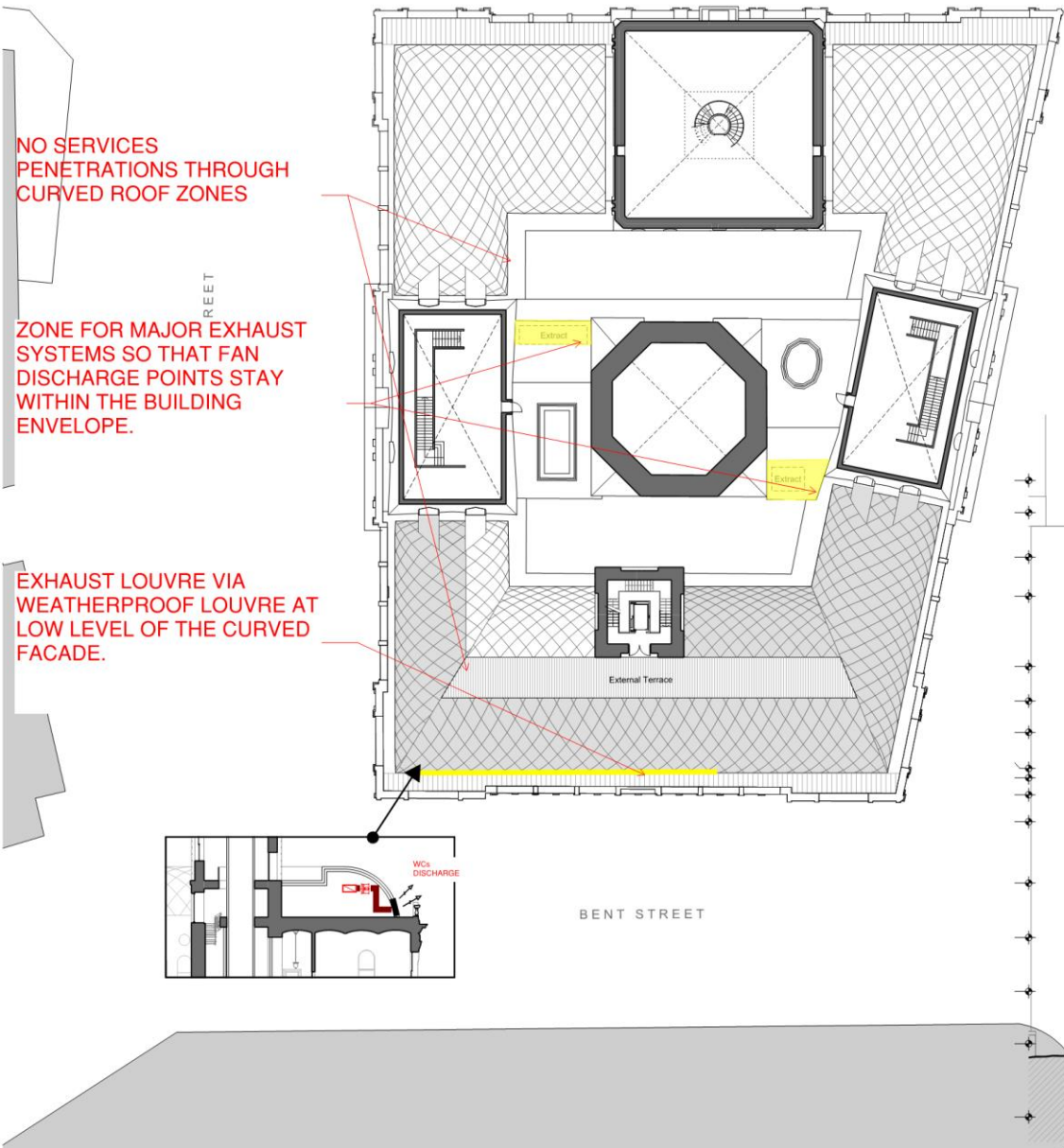
## 4.2 Services Sketch

Project Name	SANDSTONE
Project No	29212
Sketch Title	LANDS ROOF
Sketch No	
Date: 04/02/2017	By:

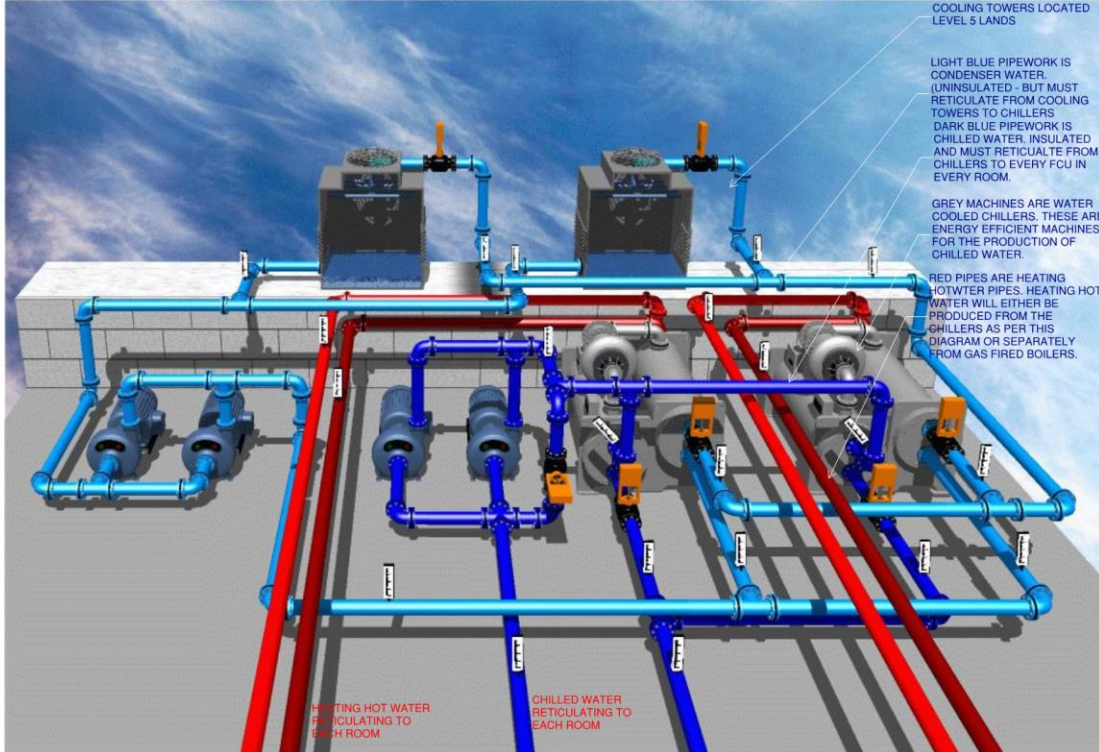


Level 6, Building B  
207 Pacific Highway  
St Leonards NSW 2065  
Phone 02 8484 7000  
Fax 02 8484 7100

LANDS ROOF PLAN SHOWING SERVICES STAYING WITHIN ENVELOPE

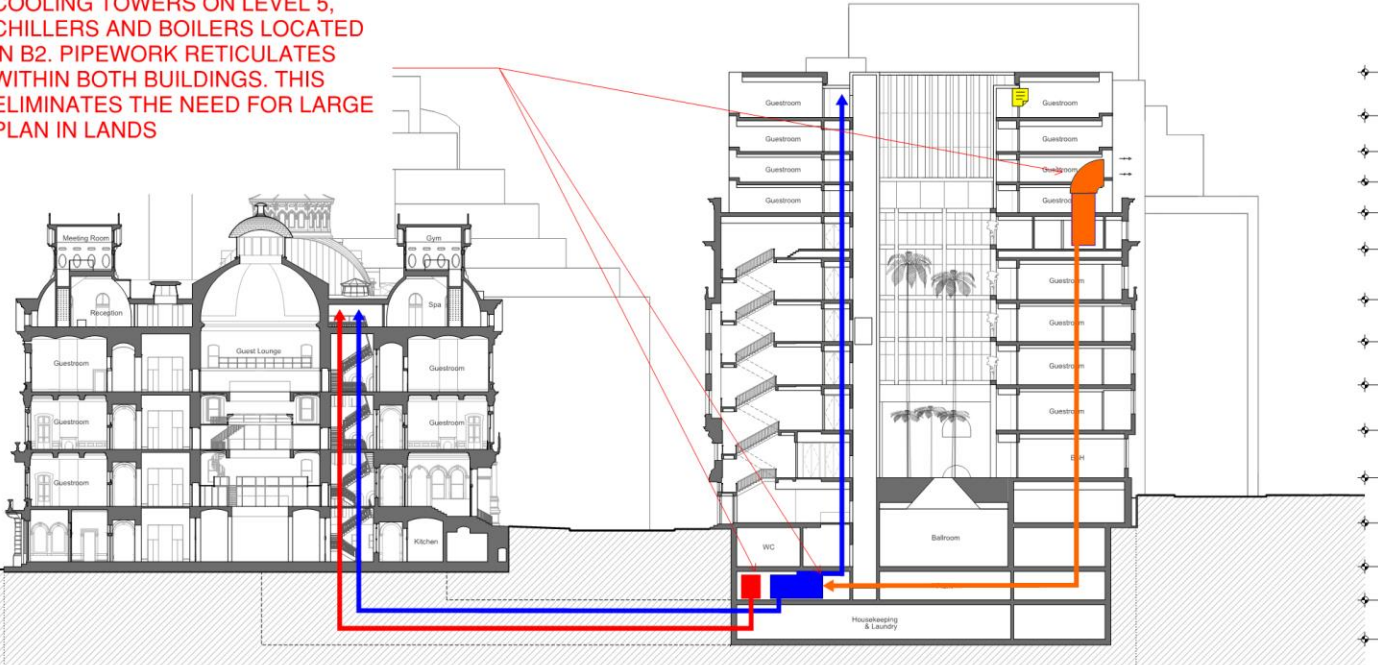


## A/C BASIC SYSTEM SCHEMATIC - WATER COOLED CHILLER SOLUTION



SECTION SHOWING ALL MAJOR A/C PLANT FOR THE TWO BUILDINGS SITS WITHIN EDUCATION

ALL MAJOR PLANTS SITS WITHIN THE EDUCATION BUILDING. COOLING TOWERS ON LEVEL 5, CHILLERS AND BOILERS LOCATED IN B2. PIPEWORK RETICULATES WITHIN BOTH BUILDINGS. THIS ELIMINATES THE NEED FOR LARGE PLAN IN LANDS



## CENTRALISED SYSTEMS TO LIMIT THE IMPACT ON LANDS