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**Director Generals Utility Report
Sewer, Water, Gas, Fire and
Electrical Services
88 Walker Street & 77-81 Berry
Street North Sydney.**

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1. Executive Summary

Connell Wagner has been appointed by Eastmark Holdings Pty Ltd to prepare a report for the Director General addressing the existing capacity and requirements of the development for the provision of utilities including staging of infrastructure works.

The development site is currently comprised of the land and buildings located within Berry Street, Little Spring Street, Spring Street, Denison Street and 88 Walker Street

Connell Wagner has been asked to review and assess the Proposed Changes to determine what, if any, impact such changes will have on the existing utilities

Connell Wagner has obtained information that is generally available to the public through normal methods of obtaining such information (such as “dial-before-you-dig” and building management records). The information reviewed to prepare this report is not exhaustive and considers only the information which was available to Connell Wagner as at the date of this report.

Connell Wagner has reviewed the electrical, water, sewer and gas services for the development. In summary, the conclusion reached by Connell Wager as set out in this report confirms that the proposed changes will not detrimentally affect existing utilities

In order to review the impact of the Proposed Development, the following criteria have been used to assess each respective system:

- **Retail**
The existing retail will be expanded to consist of approximately three levels of podium retail and lobby areas.
- **Commercial**
A new 33 level commercial office building (which will contain approximately 49,000 square metres of office space), separate to the existing Beau Monde Apartments tower. This will replace the existing retail space known as Shopping World
- **Car Parking**
The existing Beau Monde car parking (located under Beau Monde Tower) will remain and a new four level basement car parking will be constructed within the 77-81 Berry Street site.
- **Hotel**
A proposed 30 level hotel building located at 88 Walker Street which will contain approximately 200 hotel rooms. This will provide street access (via an air bridge to be located over Little Spring Street) to Walker Street for the occupants of the new Commercial tower.
- The types of permitted occupancy will include retail, commercial and hotel.

COMMERCIAL SITE

EXISTING BEAU MONDE HOTEL

HOTEL SITE

Denison St

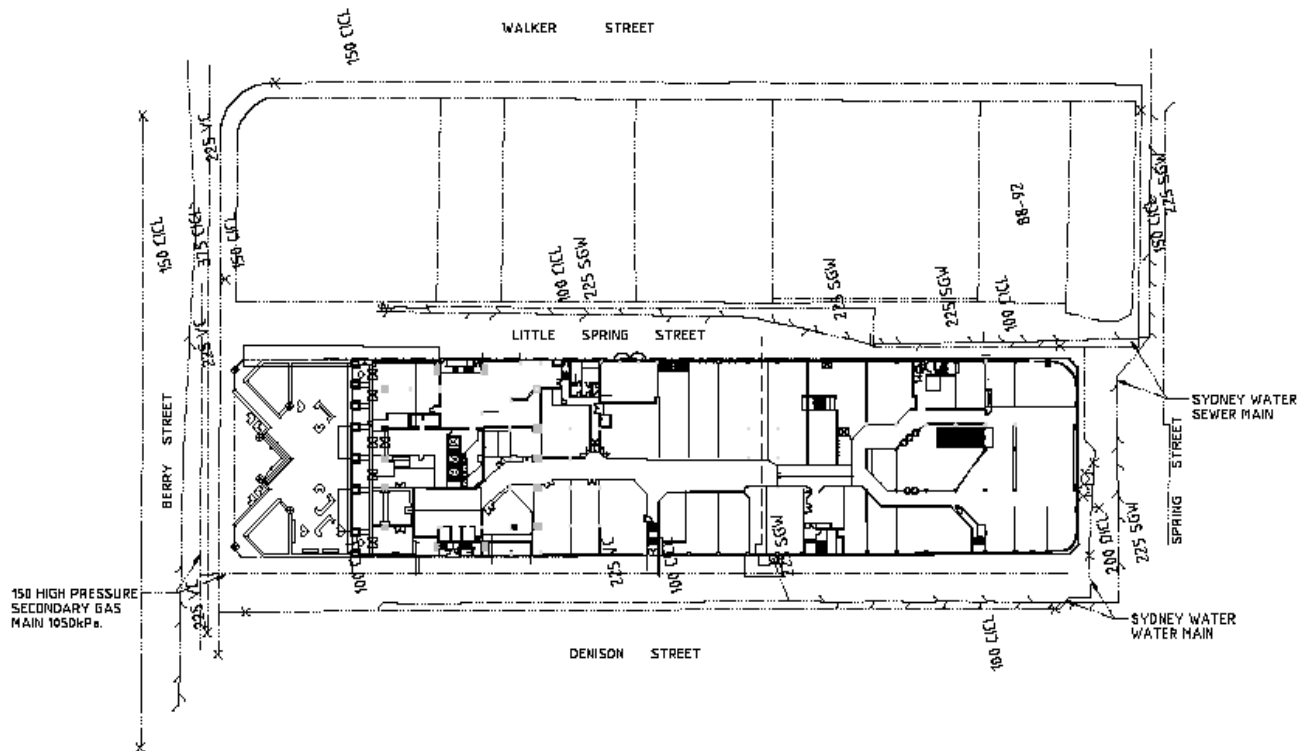
Little Spring St

Walker St

Berry St

3. Hydraulic Services

3.1 Figure 2 Existing Water, Gas and Sewer services



Existing Authority Mains-site layout

4. Sewer Services

4.1.1 Description of existing sewer services

This Section 4 will describe/overview:

- The existing Sydney Water assets in the adjoining streets; and
- The existing sanitary plumbing and drainage connections from Beau Monde, including the two connections from Beau Monde.
- 88 Walker Street sewer connection

4.1.2 Existing Sydney Water sewer main assets

Sydney Water owns the sewer mains located around Beau Monde. These include:

- **Berry Street** (northern boundary)
A 225 sewer running from west to east with one manhole and two provisional connection points. No connections within Beau Monde appear to discharge into this sewer.
- **Denison Street** (western boundary)
A 225 sewer running from north to south with four manholes and three provisional connection points. No connections within Beau Monde appear to discharge into this sewer
- **Little Spring Street** (eastern boundary)
A 225 sewer running from north to south with three manholes and ten provisional connection points. Beau Monde apartments appear to be connected into and discharge into this sewer.
- **Spring Street** (southern boundary)
A 225 sewer running from west to east with two manholes and three provisional connection points. Beau Monde Retail appears to be connected into and discharges into this sewer.
- **Walker Street** (eastern boundary of the hotel site)
There is no sewer network located adjacent to the hotel site in Walker Street

4.1.3 Proposed sewer main upgrade

To satisfy Sydney Water's requirements the following Sydney Water assets will need constructed

- (a) The construction of a 225mm sewer sideline in Little Spring Street to serve the existing Beau Monde Tower
- (b) The construction of a 225mm sewer sideline in Spring Street to serve the proposed office tower
- (c) The construction of a 225mm sewer sideline in Little Spring Street to serve the proposed Hotel

4.1.4 Existing private sewer connections

Three sewer connections extend from Sydney Water sewers in to the proposed site.

1 connection located in Little Spring Street serving Beau Monde Tower,

- 1 connection located in Spring Street serving the Beau Monde retail (shopping world), and
- 1 connection located in Little Spring Street serving 88 Walker Street

4.1.5 Connection no 1- Beau Monde Tower

(a) **Existing**

A 225 sewer extends from the eastern boundary of Beau Monde located 100 metres south of Berry Street. The sewer service extends into Beau Monde terminating with a boundary trap within the loading dock.

(b) **Proposed Changes**

The outlet of the boundary trap traverses horizontally through to the existing loading dock located in Beau Monde Retail, prior to exiting the Beau Monde and connecting to the Sydney Water sewer in Little Spring Street. This sewer outfall will require relocation, prior to the commencement of works for the Proposed Development.

4.1.6 Connection no 2- Beau Monde Retail (Shopping World)

(a) **Existing**

A 150 sewer extends from the southern boundary of Beau Monde and connects to Sydney Waters 225 sewer in Spring Street.

The sewer and grease waste drainage from Beau Monde Retail falls from north to south, and discharges via a boundary trap to the authority sewer main located in Spring Street,

(b) **Proposed Changes**

This sewer and grease waste drainage pipes will need to be cut and sealed prior to the commencement of any works for the Proposed Development, and reinstated once the Proposed Development works have been completed.

4.1.7 Connection no 3- 88 Walker Street

(a) **Existing**

A 150 sewer extends from the western boundary of 88 Walker Street and connects to Sydney Waters 225 sewer in Little Spring Street.

(b) **Proposed Changes**

This sewer drainage pipes will need to be cut and sealed prior to the commencement of any works for the Proposed Development, and reinstated once the Proposed Development works have been completed.

4.1.8 Proposed sewer drainage – commercial office building

The proposed commercial tower sewer connection will be connected to the Sydney Water sewer in Spring Street.

The proposed commercial office building will be designed to achieve a 5 Green Star rating and a 5 star ABGR.

It is proposed to capture and reuse all sewer flows from the existing Beau Monde Apartments and from the new commercial office building, (together with the

proposed flows from the new hotel building) via the installation of a Membrane Biological Reactor (MBR) plant, recycled water can be used throughout the new commercial office building and new hotel building.

4.1.9 Proposed early works – Beau Monde Commercial

In order to commence construction on the proposed new commercial office building but ensure the continuity of the existing sewer connection, for the Beau Monde Apartments and Beau Monde Commercial, works may be required to install:

- (a) Temporary sewer pump station and rising main; and/or
- (b) A new gravity alternative connection to Little Spring Street.

4.1.10 Proposed sewer drainage – Hotel building

It is anticipated that the proposed 30 level hotel building will connect to Sydney Water's sewer and a second connection to the proposed MBR plant located within the new commercial tower.

There will be two off links between the new commercial office building and the hotel building, being:.

- (a) An over head pedestrian air bridge across Little Spring Street; and
- (b) A below ground services tunnel below Little Spring Street.

(Both the bridge and the tunnel will run in an east-west direction.)

It is envisaged that a gravity sewer connection below the air bridge will accommodate a 225mm sewer pipe, which will connect to the MBR plant.

Any associated waste below the proposed gravity connection located below the air bridge, has two options for discharge:

- (i) A new separate gravity connection to Sydney Water's sewer in either Little Spring Street; or
- (ii) A new sewer pumping station and rising main. This will connect to the hotel's gravity connection via the air bridge.

5. Water Services

5.1.1 Description of existing water services

The site is encompassed by a network of Sydney Water cold water mains.

This section 5 will describe the arrangement of these pipes, and supply connections associated with the existing Beau Monde.

5.1.2 Existing Sydney Water's water main assets

The Sydney Water owned cold water mains locations are as follows:

- **Berry Street** (northern boundary)
A 375mm trunk main and a 150mm cold water main reticulate from west to east. There are no connections to this water main from Beau Monde.
- **Denison Street** (western boundary)
A 100mm cold water main reticulates from north to south. There are no connections to this water main from Beau Monde
- **Little Spring Street** (eastern boundary)
A 100mm cold water main reticulates from south to north. There are no connections to this water main from Beau Monde
- **Spring Street** (southern boundary)
There is one off Sydney Water mains changing from a 200mm water main to a 150mm water main which reticulate from west to east. Beau Monde Retail connects to the 200mm cold water main.
- **Walker Street** (eastern boundary of hotel site)
2 off 150mm cold water mains reticulate from south to north. There is a connection to this water main from the existing building located on the hotel site

5.1.3 Proposed water main upgrade

To satisfy Sydney Water's requirements the following Sydney Water assets will need constructed

(a) The construction of a 200mm water main in either Denison Street or Little Spring Street (subject to final design) connecting into the existing 200mm water main located in Spring Street and interconnecting into the 150mm water main located in Berry Street

5.1.4 Existing private water connections

Six water connections extend from the Sydney Water's water main to the development site. These service connections provide water for:

Beau Monde

- 1 off fire sprinkler service
- 1 off fire hydrant service
- 1 off cold water services

88 Walker Street

- 1 off fire hydrant service
- 1 off fire sprinkler service

- 1 off cold water service

5.1.5 Incoming Cold Water Service

(b) **Existing water service- Beau Monde**

A single property service extends from the water main located in Spring Street and enters the development site at the southern end

(b) **Existing water service- 88 Walker Street**

A single property service extends from the water main located in Walker Street and enters the development site at the eastern end

(c) **Proposed Changes to water services**

The existing Spring Street water main connection serving the development will be disconnected and a new connection for the existing Beau Monde Tower will be located in Little Spring Street. The existing 88 Walker Street water main connection will be disconnected from the water main

5.1.6 Incoming Fire Hydrant Service

(a) **Existing fire Hydrant service- Beau Monde**

A fire hydrant service extends from the water main located in Spring Street and enters the development site at the southern end

(b) **Existing fire Hydrant service- 88 Walker Street**

A fire hydrant service extends from the water main located in Walker Street and enters the development site at the eastern end

(c) **Proposed Changes**

The existing Spring Street fire hydrant main connection serving the development will be disconnected and a new connection for the existing Beau Monde Tower will be located in Little Spring Street. The existing 88 Walker Street fire hydrant main connection will be disconnected from the water main

5.1.7 Incoming Fire Sprinkler Service

(a) **Existing fire sprinkler- Beau Monde**

A fire sprinkler water service extends from the water main located in Spring Street and enters the development at the southern end

(b) **Existing fire sprinkler- 88 Walker Street**

A fire sprinkler water service extends from the water main located in Walker Street and enters the development at the eastern end

(c) **Proposed Changes**

The existing Spring Street fire sprinkler main connection serving the development will be disconnected and a new connection for the existing Beau Monde Tower will be located in Little Spring Street. The existing 88 Walker Street fire sprinkler main connection will be disconnected from the water main

5.1.8 Proposed water services for Beau Monde Commercial

It is proposed that the existing 100mm water main along Little Spring Street be upgraded to 200mm water main. This water main will provide the water main connection for the new commercial office building, new Hotel building and the existing Beau Monde Tower. This will serve the domestic water service and combined hydrant and fire sprinkler service for the proposed new buildings and the existing Beau Monde Tower

A new water meter room, water filtration room and cold water booster pump house will be provided within the back of house areas located in the basement of the new commercial office building and Hotel Building

5.1.9 Proposed water services for Hotel building

The new hotel building to be located on the Hotel Site will have a water main connection from the upgraded 200mm main in Little Spring Street. This will serve the domestic water service and combined hydrant and fire sprinkler service

A new water meter room, water filtration room and cold water booster pump house will be provided within the back of house areas of the Hotel

5.1.10 Proposed early works – Water Services

To ensure the continuation of cold water supply to Beau Monde Tower prior to, during and after the construction of the new commercial office building, the following works will need to be carried out at Beau Monde. Relocation of the cold water service, fire hydrant service, fire sprinkler service and brigade booster assembly, together with fire sprinkler service connections, rooms for pumps, valve rooms, and connect into the new amplified 200mm main

6. Gas Service

6.1.1 Description of existing services - Beau Monde

Beau Monde is encompassed by a network of Jemena owned gas mains.

This section 6 will describe the arrangement of these pipes, and supply connections associated with the existing Beau Monde development and 88 Walker Street..

6.1.2 Existing Jemena gas main assets

The Jemena owned gas mains located around the site are as follows:

- **Berry Street** (northern end)
A 75mm low pressure (7kpa) gas main and a 150mm (1050kpa) high pressure secondary gas main are located at this boundary. Beau Monde has no gas connection in to this gas main
- **Denison Street** (western end)
A 160mm low pressure (7kpa) gas main and a 150mm (1050kpa) high pressure secondary gas main are located at this boundary. The gas connection for Beau Monde is connected to the secondary main.
- **Little Spring Street** (Eastern end)
There is no gas main located in Little Spring Street
- **Spring Street** (southern end)
A 75mm low pressure (7kpa) gas main is located at this boundary. Beau Monde has no gas connection in to this gas main
- **Walker Street** (Eastern end of hotel site)
A 75mm low pressure (7kpa) gas main is located at this boundary

6.1.3 Incoming gas supply and meter arrangements generally

Two gas connections enter the development site, 1 off located on Denison Street and the other located on Walker Street

- (a) **Existing Gas service- Beau Monde**
A single property service extends from the gas main located in Denison Street and enters the development site from the West.
- (b) **Existing Gas service- 88 Walker Street**
A single property service extends from the gas main located in Walker Street and enters the development site from the East.
- (c) **Proposed changes**
The gas supply entering the development will need to be disconnected prior to the demolition of the existing shopping world centre.

6.1.4 Proposed gas supply for commercial office building

A new gas application will be submitted to Jemena for a gas connection to service the commercial Tower. It is proposed the new billing meter will be located in a gas meter room within the back of house areas located within the basement of the new commercial office building.

6.1.5 Proposed gas supply for hotel building

A new gas application will be submitted to Jemena for a gas connection to service the Hotel building. It is proposed the new billing meter will be located in a gas meter room within the back of house area of the hotel

7. Electrical

7.1.1 Existing Energy Australia assets

There exists an Energy Australia elevated 2x1500kVA chamber substation located on Little Spring Street. This existing substation is within the construction zone for the development and is proposed to be relocated to Denison Street.

There is also an existing 1000kVA kiosk substation located on Little Spring St which presently serves the adjacent building (88 Walker St) as well as another existing building (100 Mount St). It is proposed that this kiosk be decommissioned prior to the demolition of the existing 88 Walker St site.

The existing substations and proposed works have been discussed with Energy Australia with no objection. The final detail is subject to further design and load profile analysis by Energy Australia network planners at a later stage.

7.1.2 Electrical Services for Commercial Tower, Hotel and Retail

New Commercial building

The Commercial building shall be provided with a 3x1500kVA upper level chamber substation located on the Southern perimeter of the low rise plant room (level 4) of the Commercial building. A Main Switchroom shall be located directly adjacent to the substation.

Hotel

The Hotel shall be supplied via a second 3x1500kVA upper level chamber substation located on the Southern perimeter of level 4 of the commercial building directly adjacent to the Commercial building substation.

A set of consumers mains will be reticulated to a main distribution panel from where main feeders to the Hotel Main Switchroom will emanate via the footbridge linking the Hotel with the Commercial building.

Retail

The new retail precinct shall be supplied from the relocated 2x1500kVA substation proposed for Denison St. This substation will serve the loads presently taken from the existing elevated 2x1500kVA chamber substation on Little Spring Street. The retail precinct will be provided with a dedicated main switchroom located adjacent to the relocated substation.

The above configuration has been discussed with Energy Australia with no objection. The final detail is subject to further design and load profile analysis by Energy Australia network planners at a later stage.

8. Communications

8.1.1 Communications for Commercial Tower, Hotel and Retail

New Commercial building

The Commercial building shall be provided with diverse telecommunication paths from little Spring St to separate Main Distribution Frame (MDF) rooms within the basement beneath the Commercial Building.

Hotel

The Hotel shall be provided with a dedicated Main Distribution Frame (MDF) room located within the basement of the Hotel.

Retail

The telecommunications service for the retail area will emanate from the two Main Distribution Frame (MDF) rooms within the basement beneath the retail area.