

1st July 2015

JST Pty Ltd
Level 2
72 Macquarie Street
Parramatta NSW 2150

Your Ref:
Our Ref: 15-276-C001-02
Direct phone: 02 9439 1777

Attention Tom Copping

Dear Tom,

Bonds Site – Dunmore Street Pendle Hill Servicing Strategy Letter

Further to recent discussions on the proposed servicing of The Bonds development at Dunmore Street in Pendle Hill please find below a summary of the external servicing strategy for the development.

Our investigations of the site were carried out with regard to the Concept Masterplan prepared by PTW Architects and Section 117 Direction 3.1 Residential Zones.

The site which is currently a Bonds Factory with industrial buildings, offices, access roads and carpark within is approximately 7.996Ha in size. Currently the majority of the site is covered in impervious surfaces such as roofs and roads. There is some “soft” grassed landscaping strips along the western, eastern and southern boundary’s and within the south west corner of the site.

This letter does not include servicing internal to the site as the project is at the rezoning stage and the layout of this site will need to be confirmed subject to further detailed design and studies carried out during the preparation of development applications for the site.

EXISTING SERVICES

Water

From Dial Before You Dig (DBYD) information a 150mm diameter uPVC water main owned by Sydney Water exists running east/west along the northern portion of Dunmore Street to the north of the site. This uPVC pipe changes into a DICL (Ductile iron cement lined) pipe outside 221-223 Dunmore Street.

There is also a 100mm diameter CIL (Cast Iron Cement Lined) water main running north/south along the eastern portion of Jones Street to the east of the site.

Given the size of the proposed development and additional requirements for water supply these existing mains will likely not be large enough to connect into. There is an existing 375mm diameter main at the intersection of Stapleton and Jones St approximately 200m to the north east of the site which may need to be connected into. The cost for this would be in the order of \$300,000. This will need to be confirmed with Sydney Water.

Sewer

From Dial Before You Dig (DBYD) information a 225mm diameter SGW (Salt Glazed Water) sewer main owned by Sydney Water exists along to southern portion of Dunmore Street to the north west of the site. This sewer is approximately 1.4m deep and drains off to the north. This is likely the current sewer connection point for the northern portion of the site.

There is also a 225mm diameter VC (Vitrified Clay) sewer within Jones Street to the east of the site which drains to the east. This sewer is also approximately 1.4m deep and likely currently drains the eastern portion of the existing site.

There is also an existing 150mm diameter VC (vitrified clay) pipe approx. 1.8m deep in Jones Street adjacent the south east corner of the site which could also be used for the development.

Given the size of the proposed development and additional requirements for sewer drainage these sewer drains may need to be upsized. This will need to be confirmed with Sydney Water as will likely costs.

Power

From Dial Before You Dig records there are existing electrical ducts owned by Endeavour Energy within the northern portion of Dunmore Street to the north of the site. Records indicate there are proposed ducts to be installed along the southern side of Dunmore street in the north east corner of the site.

There is also record of electrical ducts within Jones Street to the east of the site which likely service the site currently. Dual ducts run from Jones Street into the centre of the site. There is an existing padmount substation within the centre of the site servicing the existing Bonds site.

Initial discussions with a Level 3 accredited service provider indicate there will be a requirement for a minimum 7 sub-station kiosk to service the apartments and a requirement to install a feeder from the nearest zoned sub-station. The nearest zoned sub-station to the site is the Holroyd Sub Station which is approximately 1.5km to south west of the site at the intersection of Centenary Road and Old Prospect Road. See attached Zoned Sub Substation Sketch 01. Indicative costs to install this feeder is \$800/m.

The cost of installing the sub-stations and feeder connection to the zoned sub-station will likely be approximately \$3,500,000

Approval will need to be sought by Endeavour Energy as owners of all the electrical ducts for all connections into their network.

Gas

From Dial Before You Dig records there is an existing 150mm diameter gas main owned by Jemena 1.2m north of the northern boundary of the site within the Dunmore Road reserve. This is classified as a secondary gas main and currently services the northern portion of the Bonds site.

There is also a 75mm diameter nylon main running in the north/south direction within the eastern verge of Jones Street to the east of the site. This main does not appear to service the current site.

Approval will need to be sought by Jemena as owners of these gas mains for all connections into their network. Given the size of the proposed development and additional gas requirements there may be upgrade works required as part of the development. This will need to be confirmed by Jemena as will any likely costs.

Communications

From Dial Before You Dig records there is record of existing Optus telecommunications cables within Dunmore Street to the north of the site.

There is also record of Telstra cable connections into the site from Dunmore Street to the north and Jones Street in north east of the site. New Telstra connections can likely be made from either Dunmore Street and Jones Street however will need to be confirmed with Telstra.

Given the significant ducts and cables within the current site including Telstra and Optus we do not expect any external upgrades will be required. We also expect NBNCo will service the site.

RMS

Initial information from Dial Before You Dig indicates there is no RMS roads or infrastructure adjacent the site. The closest RMS traffic intersection is the corner of Dunmore Street and Goodall Street to the north west of the site.

Further discussions with RMS will be required to determine if any upgrade works are required to this intersection however at this stage it is not anticipated.

Stormwater

From discussions with Holroyd City Council there is existing stormwater drainage networks within both Dunmore and Jones Street. There is an existing 450mm diameter pipe network on Dunmore Street to the north west of the site which drains to the north. There are two existing networks within Jones Street to the east of the site. One is an existing 600mm diameter pipe at the northern end of Jones Street which drains to the east and a second being a 300mm diameter at the south east corner of the site. This network also drains off to the east.

Connection into these networks will need to be confirmed with Council.

Council have confirmed all stormwater drainage design will need to conform to Holroyd City Council stormwater guidelines. Within these guidelines is the installation of On-Site-Detention (OSD) systems. Council have confirmed the use of OSD's will be required within the proposed development which will need to comply with the Upper Parramatta River catchment guidelines. These being:

Max Permissible Site Discharge (PSD) = 80 Lit/sec/Ha

Min Site Storage Requirement (SSR) = 470m³/Ha.

Given the total site area of 7.996Ha this equates to a PSD of **639Lit/sec** and SSR of **3,760m³**.

Detailed stormwater designs will be developed and submitted to Council during the development application stage.

Flooding

Holroyd Council have provided flood maps indicating localised flooding in Dunmore and Jones Street during 100 year storm events. See attached flood maps. Whilst the extent of this flooding is mostly confined to the road reserve there is some minor encroachment into the site to the north from Dunmore Street. Even with this localised flooding the risk of the site flooding from external runoff is deemed insignificant. The area of site to the north locally affected would likely be landscaped areas post development, further reducing this risk.

It is our opinion no flood study is required and the localised flooding as indicated on Council's maps can be mitigated during design stages of the development. In fact, it is considered likely that the proposal will achieve a better outcome for the site and surrounding locality in terms of flooding impacts. This is due to the reduced site impervious coverage with the demolition of existing buildings and hardstanding areas, provision of a public park (approximately 1Ha in size), landscaped areas, boulevards and private/communal open space with deep soil zones.

It should be noted that the provision and condition of existing services to the site reflect the site's function as a major industrial facility, which is now redundant and predominately vacant. Based on our preliminary investigations it is fully anticipated that the existing services will be sufficient to accommodate the renewal of the site for the purpose of residential development albeit with upgrades to existing services to bring them up to current standards. Further consultation with public infrastructure authorities will be carried out during development applications for the site to determine the extent of these upgrades as is standard industry practice.

Please feel free to discuss if you have any queries.

Yours sincerely



Andrew Tweedie BEng Civil MIEAust CPEng
Senior Civil Engineer
02 9439 1777