

SYDNEY INTERNATIONAL CONVENTION, EXHIBITION AND ENTERTAINMENT PRECINCT THE HAYMARKET PRECINCT – NORTH WEST PLOT

SERVICES INFRASTRUCTURE REPORT

FOR SSDA 4

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DARLING HARBOUR LIVE SICEEP – THE HAYMARKET – NORTH WEST PLOT

SERVICES INFRASTRUCTURE REPORT FOR SS DA 4

Sewer, Water, Gas, Telecommunications & Electrical Infrastructure

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1 EXECUTIVE SUMMARY

Hyder Consulting has been engaged by Lend Lease to provide civil infrastructure advice to support a Stage 2 Development Application, to be submitted in relation to the North West Plot in The Haymarket precinct to be developed on part of the Darling Harbour area known as the Sydney International Convention, Exhibition & Entertainment Precinct (SICEEP).

Lend Lease are a part of the successful consortium, chosen by the NSW government, to undertake the redevelopment of the site. This consortium is known as Darling Harbour Live (DHL).

Following a desk top study of the existing services in the vicinity of the site undertaken during a Dial Before You Dig (DBYD) exercise, Hyder Consulting and Lend Lease have consulted utility providers for sewer, water, gas, electricity, communications and stormwater. It is apparent from the findings of this consultation exercise that these utility providers can cater for the needs of the proposed development either through the utilisation of existing utility networks or through the local augmentation of existing networks. Consultation with the utility authorities is ongoing as the scope of the development is further refined.

This report has been prepared to address the Director-General Requirements (DGR's) that have been issued for this project and details the investigation of existing utilities in the vicinity of the development in the context of the proposed development scheme, the likely points of future connection to the utilities and the associated potential upgrades or augmentation works that may be required.

2 INTRODUCTION

This report supports a State Significant Development (SSD) Development Application (DA) submitted to the Minister for Planning and Infrastructure pursuant to Part 4 of the Environmental Planning and Assessment Act 1979 (EP&A Act).

The Application (referred to as SSDA 4) follows the submission of a staged SSD DA (SSDA 2) submitted in March 2013 to the Department of Planning and Infrastructure that set out a Concept Proposal for a new mixed use residential neighbourhood at Darling Harbour known as 'The Haymarket'. The Haymarket forms part of the Sydney International Convention, Exhibition and Entertainment Precinct (SICEEP) Project, which will deliver Australia's global city with new world class convention, exhibition and entertainment facilities and support the NSW Government's goal to "make NSW number one again".

More specifically this subsequent DA seeks approval for a public car park (above ground) and commercial office building within the North West development plot of The Haymarket and associated public domain works. The DA has been prepared and structured to be consistent with the Concept Proposal DA.

3 OVERVIEW OF PROPOSED DEVELOPMENT

The proposal relates to a detailed ('Stage 2') DA for a commercial office and public car park development in the North West Plot of The Haymarket together with associated public domain works. The Haymarket Site is to be developed for a mix of residential and non-residential uses, including but not limited to residential buildings, commercial, retail, community and open space. The North West Plot is one of six development plots identified in the Concept Proposal DA.

Under the Concept Proposal, the North West Plot will accommodate active ground floor uses, a multi-storey above ground public car park and a commercial office building above. More specifically, this SSD DA seeks approval for the following components of the development:

- Staged demolition of existing site improvements, including the existing Sydney Entertainment Centre (SEC), Entertainment car park, and part of the pedestrian footbridge connected to the Entertainment car park;
- Associated tree removal and replanting;
- Construction and use of a mixed use commercial building comprising:
 - ground level retail/television studio uses/IQ Hub;
 - public car park (above ground);
 - ancillary parking (above ground); and
 - commercial office space.
- Provision of vehicle access to the development from realigned Exhibition Place;
- · Public domain improvements, including:
 - provision (part) of a new north-south pedestrian connection (known as the Boulevard) eventually linking Quay Street to Darling Harbour;
 - provision (part) of a new east-west pedestrian laneway (known as Dickson's Lane) linking
 Darling Drive to the Boulevard; and
- Extension and augmentation of physical infrastructure / utilities as required.

4 BACKGROUND

On 21 March 2013 a critical step in realising the NSW Government's vision for the SICEEP Project was made, with the lodgement of the first two SSD DAs with the Department of Planning and Infrastructure. The key components of these proposals are outlined below.

Public Private Partnership SSD DA (SSD 12_5752)

The Public-Private Partnership (PPP) SSD DA (SSD 1) includes the core facilities of the SICEEP Project, comprising the new, integrated and world-class convention, exhibition and entertainment facilities along with ancillary commercial premises and public domain upgrades.

The Haymarket Concept Proposal (SSD 13 5878)

The Haymarket Concept Proposal SSD DA (SSDA 2) establishes the vision and planning and development framework which will be the basis for the consent authority to assess detailed development proposals within the Haymarket Site.

More specifically the Stage 1 Concept Proposal seeks approval for the following key components and development parameters:

Staged demolition of existing site improvements, including the existing Sydney
Entertainment Centre (SEC), Entertainment Centre Car Park, and part of the pedestrian
footbridge connected to the Entertainment car park and associated tree removal;

- A network of streets, lanes, open space areas and through-site links generally as shown on the Public Domain Concept Proposal, to facilitate reintegration of the site into the wider urban context and connection with the broader SICEEP Site;
- Street layouts;
- Development plot sizes, development plot separation, building envelopes (maximum height in RLs), building separation, building depths, building alignments and a benchmark for natural ventilation and solar provision for the precinct;
- Land uses across the site, including residential and non-residential uses;
- A maximum total gross floor area (GFA) across The Haymarket Site of 197,236m2 for the mixed use development (excluding ancillary above ground car parking), comprising of:
 - A maximum of 49,545m2 non-residential GFA; and
 - A maximum of 147,691m2 residential GFA;
 - Above ground parking including public car parking;
- Residential car parking rates to be utilised in the subsequent detailed (Stage 2)
 Development Applications, being:
 - Zero (0) spaces per studio apartment;
 - Maximum one (1) space per two (2) one bedroom apartments;
 - Maximum one (1) space per one bedroom + study apartment, plus one (1) additional space per five (5) apartments;
 - Maximum one (1) space per two bedroom apartment, plus one (1) additional space per five (5) apartments; and
 - Maximum two (2) spaces per 3+ bedroom apartment.
- Design Guidelines to guide future development and the public domain; and
- A remediation strategy.

This report has been prepared to support a detailed Stage 2 SSD DA for a mixed use commercial and public car park development and associated public domain works within The Haymarket (SSDA 4), consistent with the Concept Proposal SSD DA.

5 SITE DESCRIPTION

The SICEEP Site is located within Darling Harbour. Darling Harbour is a 60 hectare waterfront precinct on the south-western edge of the Sydney Central Business District that provides a mix of functions including recreational, tourist, entertainment and business.

With an area of approximately 20 hectares, the SICEEP Site is generally bound by the Light Rail Line to the west, Harbourside shopping centre and Cockle Bay to the north, Darling Quarter, the Chinese Garden and Harbour Street to the east, and Hay Street to the south (refer to **Figure 1**).

The Haymarket Site is:

- Located in the south of the SICEEP Site, within the northern portion of the suburb of Haymarket;
- Bounded by the Powerhouse Museum to the west, the Pier Street overpass and Little Pier Street to the north, Harbour Street to the east, and Hay Street to the south; and

Irregular in shape and occupies an area of approximately 43,807m². Cockle **Bathurst Street**



SICEEP Site

Figure 1: SICEEP site Location

The Concept Proposal DA provides for six (6) separate development plots across the Haymarket Site (refer to Figure 2):

- 1. North Plot;
- North East Plot: 2.
- 3. South East Plot;
- 4. South West Plot;
- 5. North West Plot; and
- Western Plot (Darling Drive). 6.

The Application Site area relates to the North West Plot and surrounds as detailed within the architectural and landscape plans submitted in support of the DA.



Figure 2 - Concept Proposal Development Plots

6 PLANNING APPROVALS STRATEGY

The SICEEP Project will result in the lodgement of numerous SSD DAs for the various components of the redevelopment project. SSD DAs have already been lodged for the PPP component of the SICEEP Project (comprising the convention centre, exhibition centre, entertainment facility and ancillary commercial premises and associated public domain upgrades), and the Stage 1 Concept Proposal for The Haymarket. Separate 'Stage 2' SSD DAs for the development of the South West Plot and the Western Plot (Darling Drive) and associated public domain works will be lodged concurrently with this application. Future applications will be lodged for the Hotel complex, and the remaining development plots of The Haymarket Site.

7 PURPOSE OF THIS REPORT

This report has been prepared to accompany the DA for the North West Plot component of The Haymarket. It addresses the relevant requirements of the DGR's for the project, issued on the 21st of January 2013 and updated on 27th March 2013. Requirement 11: Utilities states:

- "In consultation with relevant agencies, the existing capacity and any augmentation requirements of the development for the provision of utilities including staging of infrastructure shall be addressed; and
- Details of how infrastructure assets of various utility stakeholders will be protected during the demolition and construction phase of the project."

This report details the investigation of existing utilities in the vicinity of the development, the likely points of future connection to the utilities, associated potential upgrades or augmentation that may be required.

The basis for the investigation of the existing utilities in the vicinity of the site was a 'Dial Before You Dig' enquiry that was undertaken on 5th July 2011. Figure 2 depicts the area subject to the DBYD enquiry. This report does not consider any utility infrastructure outside the enquiry boundary and its' potential relationship to, or impact on the supply of utility services to the site.

For greater clarity, this report relates only to the portion of the site south of Pier Street on the eastern side of the existing Darling Drive identified as location '5' in Figure 2.



Figure 3: DBYD Enquiry Area (DBYD, 2011)

The following entities were identified as having an interest in the DBYD enquiry area:

Roads and Maritime Services (RMS), (formerly RTA)	Verizon Business
RailCorp	Visionstream
PIPE Networks	AAPT / PowerTel
Ausgrid	Telstra
Jemena	Optus and/or Uecomm
Sydney Water	AARNet Pty Ltd
	Primus Telecom

This report only details the investigations undertaken in relation to the services infrastructure belonging to Ausgrid, Telstra, NBNCo/Telstra, Jemena, Sydney Water and RailCorp as required to supply the North West Plot.

8 UTILITIES INFRASTRUCTURE

Reference shall be made to the Services Infrastructure Report in Appendix B [Report No. DN00339, dated 12/03/2013, Rev 04] submitted in support of The Haymarket Concept Proposal SSD DA (SSDA 2).

That report provides a description of the existing utilities servicing the precinct, the consultation undertaken with relevant utility authorities, the overall servicing concept for The Haymarket precinct and confirmation that the existing infrastructure in the vicinity of the site has capacity to supply the proposed development.

Since submission of the Stage 1 DA to the State, consultation with the various utility authorities has progressed with detailed servicing strategies for many of the utilities now being prepared. These servicing strategies and the appropriate authority approvals are not expected to be finalised until after the submission of the Stage 2 DA that this report is written in support of.

Reference should be made to Appendix A for the combined services plan which depicts existing utility infrastructure and that which is proposed to service the new development.

8.1 PROTECTION OF UTILITIES INFRASTRUCTURE

The following process will be followed to ensure existing utilities infrastructure is protected:

- A desk-top investigation of existing services will be undertaken using Dial Before You Dig information and site observations;
- Site survey will be undertaken to accurately locate existing infrastructure assets where practical;
- Site exploration works will be undertaken where considered necessary to more accurately locate existing infrastructure assets and test for unknown services;
- Consultation will be undertaken with utility providers to confirm location of services and to obtain all necessary consents to work in their vicinity;
- Utility technical and hazard requirements will be incorporated into the design and construction documentation;
- Safe work methods statements and inspection and test plans will be prepared by accredited contractors;
- Pre-start work checklists will be implemented and recorded;
- Workshops will be conducted with utility providers where diversion of, connection to or construction close to critical assets is required; and; and
- Field safety inspectors will be present during critical works as determined by each utility provider.

As design progresses or as new information becomes available, the above process will be adjusted or supplemented as required to ensure existing infrastructure assets are adequately protected.

8.2 SEWER

Existing Infrastructure

A DN300 CL sewer is located within the footprint of the proposed North West Plot in what is currently Lackey Street. This sewer drains to the north where it picks up a DN300 VC sewer main from Little Pier Street before joining with another DN300 CL sewer main in Pier Street where it then drains west towards Darling Drive. The DN300 CL main in Lackey Street shall have to be relocated to within The Boulevard where existing connections from Little Pier Street

and any other locations shall have to be identified and reinstated. The new sewer main in The Boulevard shall connect further upstream in Pier Street to the same DN300 CL.

There are two existing sewers identified as disused mains by Sydney Water that currently reside within the North West Plot. These shall be investigated to confirm their status and made redundant as appropriate.

Provision of Utilities

It is proposed that the North West Plot shall be serviced via a connection to the existing DN300 CL main in Pier Street just upstream of where it enlarges into a DN600 CL sewer main. This connection shall require the construction of a new manhole over the existing main. This strategy has been identified in Sydney Water feasibility letter dated 8th March 2013, case number 131523.

8.3 WATER

Existing Infrastructure

A DN200 CICL water main is located within the footprint of the proposed North West Plot and is located in what is currently Lackey Street. This main is fed by a DN375 DICL trunk main on the northern side of Pier Street and connects to a DN150 CICL reticulation main in Hay Street. This main will need to be relocated to within The Boulevard where existing connections from Little Pier Street and any other locations shall also have to be identified and reinstated.

Provision of Utilities

It is proposed that private water services will be taken off the relocated DN200 CICL water main to supply potable water and fire requirements to the North West Plot. This concept has been identified in Sydney Water feasibility letter dated 8th March 2013, Case number 131523, and is presently being developed in consultation with Sydney Water.

8.4 GAS

Existing Infrastructure

There are no gas mains immediately in the vicinity of the proposed North West Plot. The nearest main is a DN100mm 1050kPa secondary main in Little Pier Street. This main currently supplies natural gas via a regulator set to the existing Entertainment Centre, the Pump House and the Sydney Harbour Foreshore Authority compound beneath the Pier Street overpass.

Provision of Utilities

It is proposed to extend a gas main from the regulator set in Little Pier Street to the site via the Boulevard and the proposed Theatre Lane.

8.5 TELECOMMUNICATIONS

Existing Infrastructure

There is local in-ground communications infrastructure in the vicinity of the site that is operated by Telstra and Optus however the North West Plot proposal is not expected to directly impact upon them.

Provision of Utilities

Prior to the submission of the Stage 1 DA, consultation with NBNCo confirmed their intention to supply essential communications infrastructure to the entire SICEEP development precinct including the North West Plot.

There is no NBNCo infrastructure in the vicinity of the site however during consultation with NBNCo they confirmed that they would deliver all lead-in infrastructure to the precinct. The delivery strategy is currently being developed with NBNCo.

8.6 ELECTRICAL

Existing Infrastructure

There are a number of HV distribution cables located within the eastern end of the North West Plot in what is currently Lackey Street. Investigations undertaken by Lend Lease indicate that these cables can be terminated without the need re-establish existing connections to other private users.

Provision of Utilities

Ausgrid has provided an indicative feasibility study for The Haymarket precinct which confirms that the subject site will be supplied from two new HV feeders from the Camperdown Zone Substation. Formal application for these new HV feeders was submitted during April 2013 and on receipt of the Design Information Packs from Ausgrid, a Level 3 ASP will be engaged by Lend Lease to undertake the detailed design and documentation of the required infrastructure for approval by Ausgrid.

Current expectation is that the new underground HV supply will enter the Haymarket precinct from the north along the eastern side of Darling Drive and then distributed to the substation location within the subject site.

8.7 STORMWATER, FLOODING AND WSUD

For discussion of all utilities associated with stormwater and flooding please refer to report No.DN00347 accompanying the development application which this report is submitted in support of.

9 CONCLUSION

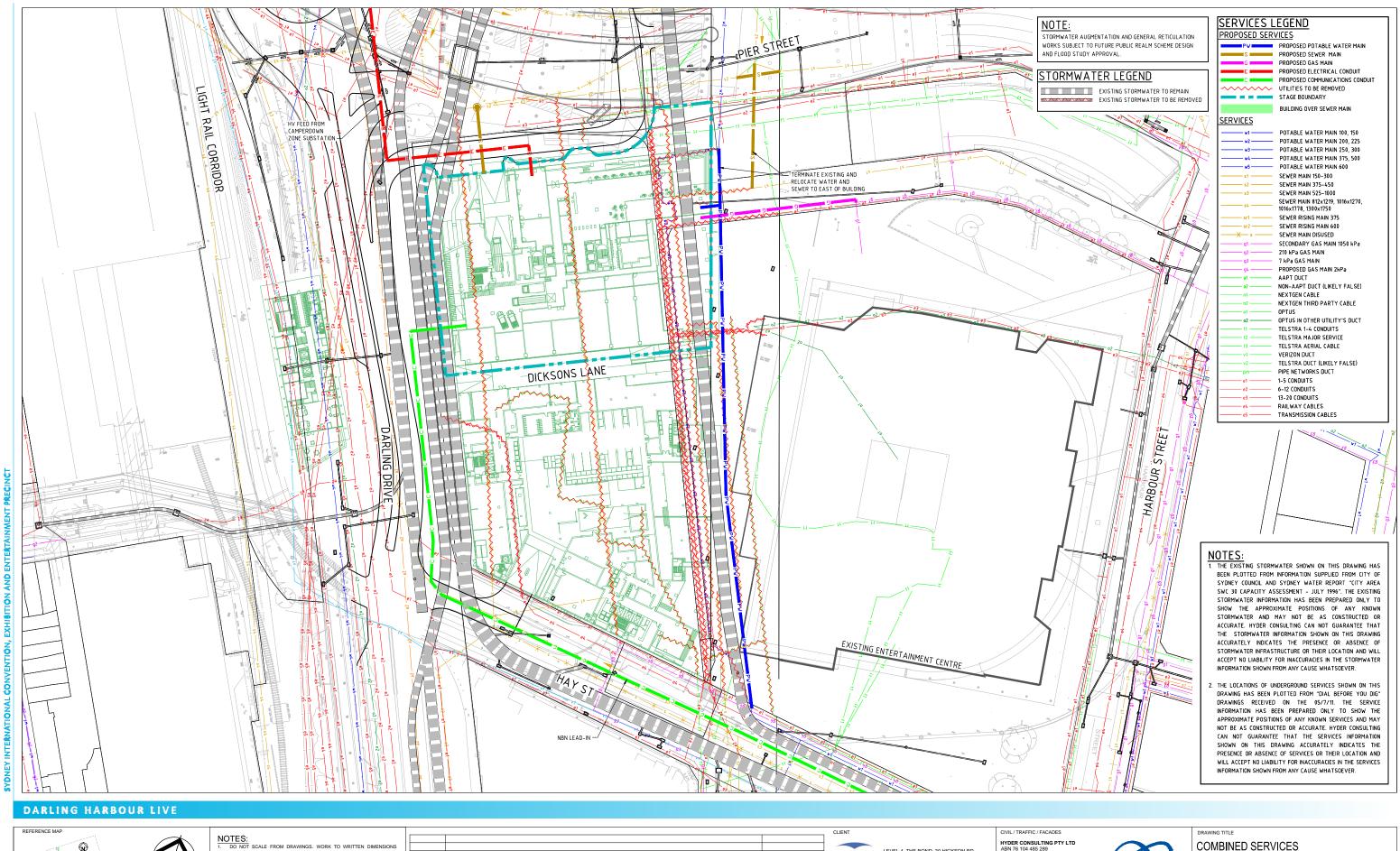
Lend Lease (including Hyder Consulting and AECOM) will continue to consult with and obtain the necessary approvals from the relevant authorities and utility providers regarding the proposed Haymarket development in the context of:

- Existing utilities and arrangements
- Forecast demand for utilities required by the proposed Haymarket development; and
- New infrastructure, augmentation and diversion works required to facilitate the proposed Haymarket development.

The consultation to date has confirmed that The Haymarket can be adequately serviced by utility providers, subject to further detailed investigation, scheme development and design development in consultation with the providers.

APPENDIX A

COMBINED SERVICES PLAN





APPENDIX B

SERVICES INFRASTRUCTURE REPORT SUBMITTED IN SUPPORT OF THE HAYMARKET STAGE 1 DA (SSDA 2)