PROPOSED DATA STORAGE CENTRE
100-110 EUSTON ROAD, ALEXANDRIA

PRELIMINARY ASSESSMENT REPORT

Prepared for
Lindsay Bennelong Developments

By
BBC Consulting Planners

Job No. 09184
PAR - Final.doc
February 2010

55 MOUNTAIN STREET BROADWAY NSW ~ PO BOX 438 BROADWAY NSW 2007 ~ TELEPHONE [02] 9211 4099 FAX [02] 9211 2740
EMAIL: bbc@bbcplanners.com.au ~ WEB SITE: www.bbcplanners.com.au

ABN 061 868 942

Table of Contents

FIGURES

APPENDICES

1. INTRODUCTION

1.1 Overview

This Preliminary Assessment Report accompanies a project application lodged pursuant to Section 75E in Part 3A of the *Environmental Planning and Assessment Act 1979* ("the Act") relating to land located at No's 100–110 Euston Road, Alexandria ("the site") for a data storage centre with a Capital Investment Value of around $146 million, comprising two separate buildings containing data storage facilities, a substation, generator room, UPS and COMMS rooms, switch room, security room, ancillary offices and associated services and infrastructure ("the project").

The Minister for Planning is requested to confirm that the proposed data storage centre is a Part 3A project for the purposes of *State Environmental Planning Policy (Major Development) 2005* ("the Major Development SEPP"). Schedule 1 of the Major Development SEPP in Group 4, Clause 12 includes:-

> *"Development for the purpose of container storage facilities or storage or distribution centres with a capital investment value of more than $30M"*

If it is determined that the project is of a kind that is described in Schedule 1 of the Major Development SEPP, and is therefore a project to which Part 3A of the Act applies, this Preliminary Assessment Report is intended to assist the Director-General in the preparation of Director-General's Environmental Assessment Requirements ("DGEARs").

1.2 Purpose of this Report

The purpose of this Preliminary Assessment Report is to assist the Minister in forming an opinion that the proposal is a project for the purposes of the Major Development SEPP and to provide an informed basis for the DGEARs.

The Preliminary Assessment Report includes:

- a site description and analysis;
- an overview of the project;
- a preliminary assessment of the project; and
- the legislative framework applying to the project.

The Preliminary Assessment Report is accompanied by:

- preliminary architectural plans of the proposed data storage centre;
- a completed application form; and
- the required initial fee, as advised by the Department of Planning, being [$1,000.00].

1.3 Summary of Project

The Project Application seeks the Minister's approval for demolition of existing warehouse buildings and hardstand areas, preparatory earthworks, selective removal of existing trees, and the carrying out of development for the purposes of a data storage centre including the erection of buildings, provision of car parking, roadways and service, site landscaping, security measures and landscaping on land located at No's 100–110 Euston Road, Alexandria. Preliminary architectural plans are provided in **Appendix 1**.

1.4 Capital Investment Value and Application of Part 3A

Through the operation of the Major Development SEPP, the Minister will be the consent authority for the project as:-

- the development is for a 'storage or distribution centre' pursuant to the definition contained in Group 4, Clause 12 of the Major Development SEPP; and

- the Capital Investment Value of the project, as defined in the Major Development SEPP, is approximately $146 million.

An opinion has been sought from the Minister that the project is one to which Part 3A of the Act applies, thereby authorising the submission of a Project Application under Section 75E of the *Environmental Planning and Assessment Act 1979*.

1.5 Application Checklist

A draft Department of Planning Guideline, entitled "Steps in the Assessment and Approval of Major Projects under Part 3A", dated 14 September 2005, lists the matters to be addressed in a Project Application. The following table sets out the matters and notes where or how each requirement is addressed:

Table 1: Matters required to be addressed

Requirement	Where addressed
(a) A written and graphical description of the project and any ancillary components, including relevant preliminary plans	Section 4, and Appendix 1
(b) The location(s) and a map identifying the site(s)/ alignment / corridor	Section 2 and all Figures
(c) The capital investment value and other relevant information in relation to parameters set out in the Major Development SEPP or any relevant order relevant for determining whether Part 3A applies to the project	Section 1.4

Requirement	Where addressed
(d) The planning provisions applying to the site and whether the project is permitted under the prevailing Environmental Planning Instruments (EPIs), DCPs, policies etc, and if the project is inconsistent with such instruments/plans/policies	Section 6
(e) The views of agencies, local council and/or the community if known	Section 4
(f) List any other approvals required in particular if a licence from the Department of Environment and Conservation under the Protection of the Environment Operations Act is required	Section 6.1.2
(g) If relevant, justification as to why the project should be considered to be a Major Development under Part 3A, taking into consideration the relevant criteria	N/A
(h) A preliminary assessment to identify the likely environmental issues	Section 7
(i) A completed application form	A completed application form is provided under separate cover.
(j) The prescribed application fee	The application fee will be submitted prior to exhibition of the Environmental Assessment.
(k) The number of copies of application documents requested by the Department, including documents in electronic format	3 copies of the Preliminary Assessment Report are provided. An electronic copy of the Preliminary Assessment Report is provided on CD.
(l) Any other matters required by the Director-General, following consultation with the Department	If and when identified, these will be addressed.

2. SITE DESCRIPTION

2.1 Location

The site is located between Euston Road and Burrows Road on the western fringe of the South Sydney Industrial Precinct, in the suburb of Alexandria. The location of the site is identified in **Figure 1**, **Figure 2A**, **Figure 3A** and **Figure 3B**.

2.2 Real Property Description and Ownership

The site comprises Lot 1 in DP709175, is known as No's 100–110 Euston Road, Alexandria and is wholly owned by Euston Road Pty Ltd.

2.3 Area and Frontages

The site is roughly rectangular in shape (but for a truncated north-west corner), has an area of approximately 1.18 hectares, and has dual frontages to Burrows Road to the south-east and Euston Road to the north-west of 96.65 metres and 75.36 metres, respectively.

2.4 Improvements

There are three warehouse-type buildings on the site. Two address Euston Road, with the third sited in the north east corner of the site near to Burrows Road. The area of the site adjacent to and between the existing buildings predominantly consists of hardstand used for parking and vehicular circulation (see **Figure 3A**).

2.5 Levels

Adjacent to Euston Road the levels of the site range from RL 5.37 metres AHD adjacent to the stormwater drainage channel to RL 6.16 metres AHD at the site's northern corner. These levels are generally maintained across the site so that the easternmost extent of the concrete hardstand is at RL 5.49 metres AHD at its southern corner and RL 5.75 metres AHD at the rear of the easternmost warehouse building. The eastern edge of the hardstand is delineated by a retaining wall beyond which the site falls towards the Burrows Road frontage. There is approximately a 1.0 metre to 2 metre difference in ground surface at the base and top of the retaining wall.

Along the Burrows Road frontage, the site levels vary from RL 2.25 metres AHD near to the site's south-eastern corner to RL 3.79 metres AHD near to the north-eastern corner.

2.6 Drainage and Flooding

2.6.1 Drainage

An open stormwater drain extends along the south-western boundary of the site. The stormwater drain feeds into Alexandra Canal. The drain is within an easement (see **Figure 2B**).

The open stormwater drain enters the site via the north-eastern corner of Sydney Park and thence beneath Euston Road. It traverses the south-western corner of the site, then enters

the adjacent site to the south (No's 112-120 Euston Road) before passing beneath Burrows Road and thence into the Alexandra Canal, around 75 metres to the south of the site's south-eastern corner (see **Figure 3A**).

2.6.2 Flooding

Flooding issues associated with the site have been addressed by Northrop Engineers (see **Appendix 2**). The site is affected by floodwaters resulting from backwater from Alexandra Canal and excess overland flow crossing Euston Road. A portion of the south-eastern corner of the site is subject to inundation.

2.7 Vegetation

The site is fringed by rows of trees along Burrows Road and the open stormwater drain with a few smaller trees in planter beds on the Euston Road frontage. Along the Burrows Road frontage is a row of 17 large and mature *Ficus macrocarpa 'Hillii'* (Hills Weeping Figs). These trees are of substantial height (i.e. around 19-20 metres) and spread (i.e. up to 35 metres), and overhang Burrows Road. There is a gap in the centre of the row of figs where a tree has been wind-thrown and removed. Another tree failed in the north-eastern corner of the site, possibly because its root system was confined by the presence of an industrial installation with water possibly seeping into the soil profile.

The figs are placed at 3.5-metre centres, with no consideration of their mature dimensions, have atypical crown shapes, being asymmetrical with a strong east/west orientation due to competition for available light and an overall lack of room for lateral spread and development both above and below ground. The soil they are planted in contains fill, and can be described as 'loose'. They are not rare or endangered.

2.8 Accessibility

2.8.1 Euston Road

Euston Road is a wide, two-way collector road extending north from Campbell Road to become McEvoy Street, thence to Botany Road and beyond. It provided two trafficable lanes with kerbside parking on each side.

2.8.2 Burrows Road

Burrows Road is also a wide, two-way collector road which extends north from Canal Road to Huntley Street. It also provides two trafficable lanes with parking on each side.

2.8.3 Site Access

There are three driveways into the site off Euston Road and two from Burrows Road. The main site access, positioned between the two warehouses fronting Euston Road, leads to the site's vehicular manoeuvring and truck parking area.

2.9 Contamination

Stage 1 and Stage 2 Environmental Site Assessments ("ESA") have been carried out by Consulting Earth Scientists Pty Ltd in May 2008 and February 2009, respectively. The Executive Summary of the Stage 2 ESA states:-

> *"The 2008 ESA comprised sampling and analysis of soil from seven boreholes and groundwater from three new monitoring wells.*
>
> *The stratigraphy observed at the site was fill up to 2m thick overlying sand, silty sands, peat and clayey silty sands.*
>
> *Laboratory results indicated that the concentrations of the contaminants of potential concern in the soil samples, specifically heavy metals, TPH, PAH, OCPs and PCBs, were less than the site assessment criteria for commercial/ industrial land use in all samples analysed.*
>
> *The results of sampling and analysis of groundwater samples collected from the monitoring wells indicated that concentrations of TPH, BTEX and VOCs were well below the relevant groundwater assessment criteria in all samples, however, zinc concentrations exceeded the relevant assessment criteria in groundwater collected from BH2 and BH3. It was considered that the elevated metals concentrations were representative of natural background conditions as wells BH3 and BH2 were located at the up-gradient and down-gradient ends of the site respectively.*
>
> *The CES (2008) ESA concluded that the site was suitable for continued commercial/industrial land use and groundwater does not require remediation or management of contamination."*

(The Stage 2 ESA was undertaken in support of a previous proposal to locate a child care centre in the site's south-eastern corner. The Stage 2 ESA concluded that no remediation or management of contamination was required for that proposal.)

3. SURROUNDING AREA

3.1 To the North-East

To the north-east of the site between Euston Road and Burrows Road are various light industrial/ warehouse-type buildings. Adjacent to the site on the Euston Road frontage is No. 94 Euston Road, comprising a two-storey office building and a connected single-level high clearance warehouse occupied by Monitor Australia Pty Ltd, a forklift truck business. Adjacent to the site on the Burrows Road frontage is a mechanical repair and tip-truck business ("Sloys"), accommodated in a large, single-storey shed.

Further to the north-east is Huntley Street, which links Sydney Park Road to the west with Bourke Road to the south-east. The expansive Alexandria Industrial Area extends north-east beyond Huntley Street towards Redfern and Waterloo, generally between Euston Road/McEvoy Street to the west and Botany Road to the east.

3.2 To the East/South-East

Immediately opposite (and to the east of) the site on the eastern side of Burrows Road is an "Australia Post" sorting facility. It backs onto the Alexandra Canal.

Burrows Road runs parallel with the canal and is lined on both sides with predominantly warehouse and light-industrial activities. Those sites along the eastern/south-eastern side of Burrows Road back onto the canal.

The Alexandra Canal is a distinctive feature of the southern part of the industrial area of South Sydney. The canal is a constructed waterway draining to the Cooks River to the south west and collects stormwater run-off via pipes and open drainage channels from a large catchment which largely comprises the southern industrial area of South Sydney.

3.3 To the South-West

The site is adjoined to the south-west by a large office/warehouse complex occupied by Recall, which is a data protection and document storage company. Various industrial, warehouse and commercial uses extend further south along Euston and Burrows Road towards Campbell Road.

3.4 To the West/North-West

Sydney Park is located opposite the western site boundary, beyond Euston Road, and covers a total area of approximately 40 hectares. Sydney Park provides a range of recreational activities including an interconnecting network of pedestrian and cycle paths between the surrounding roadways of Euston Road, Sydney Park Road, Princes Highway, Barwon Park Road and Campbell Road, and also includes the Alan Davidson Oval, several small lakes and wetlands, former heritage-listed brick kilns, a multipurpose centre and other ancillary buildings.

The stormwater drainage channel which traverses the north-western corner of the subject site flows beneath Euston Road from the north-eastern corner of Sydney Park. The alignment of the drain within Sydney Park is identified on **Figure 1**.

4. VIEWS OF AGENCIES

General discussions were held with Aaron Sutherland and Andrew Rees of Sydney City Council on 13 January 2010, during which the proposal was explained and described. Matters discussed included: the project's compliance with Council's FSR, height, landscape, setbacks, parking and other controls; the provision of a landscaped link between Euston Road and Burrows Road across the site and, in particular, the width of the link adjacent to the stormwater drainage channel; the width of the landscaped link; Section 94 contributions and possible requirements for land dedication; screening of the rooftop chillers; past failure of Hills Weeping Fig trees adjacent to Burrows Road, the inappropriately close spacing of these trees, their size, hazard rating and life expectancy and as a consequence of all of the foregoing, the necessity for trees to be removed; and flooding and flood protection. As a result of these general discussions, the site plan was revised to remove an egress driveway to Euston Road, thereby providing a 10-metre landscaped setback between the stormwater drainage channel and proposed Data Storage Centre 2.

5. DESCRIPTION OF PROJECT

5.1 Overview

The aim of the project is to provide a secure, high-quality, high-capacity data storage centre in a strategic position within the 'Global Economic Corridor' of the Sydney Metropolitan Area extending from Port Botany/Sydney Airport to the Sydney CBD and beyond to Macquarie Park.

The project involves:

- demolition of the three existing warehouse-type buildings and their associated existing hardstands, services diversions, excavation, selective vegetation removal (including removal of most of the Hills Weeping Figs along the Burrows Road frontage), and bulk earthworks to bench the site for two new buildings;
- construction of two new buildings containing data rooms, offices, switch rooms, substations, communications rooms, generator rooms and mechanical plant areas;
- provision of a combined ingress/egress driveway to/from Euston Road and separate ingress and egress driveways to/from Burrows Road;
- construction of new internal circulation roads and hardstand area for car parking and delivery vehicles;
- construction of a security fence;
- landscaping; and
- provision of a public walkway between Euston Road and Burrows Road adjacent to the stormwater drainage channel and otherwise along the site's southern boundary.

The project has a Capital Investment Value of around $146 million.

5.2 Rationale

Data storage centres require ease of access in a strategic location, ready access to reliable and adequate power, and proximity to fibre and other telecommunications infrastructure and security. The site is ideally located for a data storage centre, being in close proximity to (but not within) the Sydney CBD and Sydney Airport with easy access to (but not on) the arterial road network. (Proximity to the CBD is important so that speed of data transmission is not diminished over the fibre networks.) It is also not under the flight path or in an earthquake zone or in a bushfire prone area. It has access to a large power supply and is close to fibre networks.

Users of the proposed data storage centre will be leading Australian corporations in various fields of commerce. The high value of the data stored means that security fences need to be erected, access will be limited and tightly controlled and security guards will be on duty 24/7.

5.3 Enabling Works

In order to implement the project, the site needs to be cleared of its existing buildings and hardstands and the site then benched in two parts, east and west. The western part which will be accessed via Euston Road will be benched at around RL 6.0 metres AHD, which is generally within +/- 0.3 metres of its existing ground level. The eastern part which is accessed via Burrows Road will be benched at around RL 4.5 metres, which is around 1.0 metres lower than the existing ground level of the hardstand that occupies much of this part of the site, but higher than the easternmost part of the site which presently falls from the existing hardstand towards Burrows Road.

Accordingly, the levels of the eastern part of the site are generally to be lowered but immediately adjacent to Burrows Road are to be raised to provide vehicular access, and the required building platform.

An erosion and sedimentation control plan will be prepared to manage erosion and sedimentation risks.

5.4 New Buildings

Each of the two new buildings will accommodate a self-contained data storage centre with associated offices, security, sub-station, generator room, UPS/COMMS facilities, and external car parking and vehicular circulation.

The two buildings will be around 13 metres apart, separated by vehicular circulation and a low retaining wall. Each building excluding its front office annex will have a footprint of around 42 x 44 metres and a predominant height of around 13.7 metres excluding roof-top 'chillers'. There will be two levels of data storage in each building.

Each building will have a front office annex with a GFA of around 550m^2 over two levels.

The total GFA of the site will be approximately 7,000m^2, equating to an FSR of 0.6:1.

Chillers will be located on the roof of each building to serve as cooling devices for the data rooms. The chillers will be surrounded by steel cladding. The chillers extend above the predominant roof height, however will be confined to a central strip along each roof.

5.5 Access

Separate ingress and egress points will be provided for the two buildings. Data Centre 1 will be accessed from Burrows Road; Data Centre 2 will be accessed from Euston Road.

5.6 Car Parking

Off-street car parking will be provided for each building. A total of 48 surface car spaces is proposed: 27 spaces in association with Data Centre 1, and 22 spaces in association with Data Centre 2.

5.7 Flood Protection

A flood protection wall is proposed around the southern and eastern sides of the hardstands on the site to prevent inundation of the car parking and vehicular circulation areas. Above the flood level will be a palisade-type fence to provide security but permit visual access of/to the site and its surrounds.

5.8 Landscaping

Around 30% of the site, predominantly around the perimeter, will be landscaped (i.e. around 3,500m^2). Adjacent to the southern site boundary a green corridor over 14 metres wide will be landscaped and will incorporate a public walkway linking Euston Road and Burrows Road (and the environs of the Alexandra Canal with Sydney Park).

The existing 17 Hills Weeping Figs along the Burrows Road frontage have been planted at 3.5 metre intervals, and have reached an unsustainable size for a roadside location on private land in an industrial area. The individual form of the trees is severely compressed, with weak branching present due to the close spacing and support provided by adjacent trees, resulting in consistent failure. Consequently, 13 of these trees are identified for removal.

Subject to arborist's' advice, three Hills Weeping Figs in the south-eastern corner of the site within the area required for flood storage are to be retained in situ, as is the specimen at the site's north-eastern corner.

5.9 Waste Management

The project will not generate significant amounts of waste, either during construction or operation.

A Waste Management Plan will be prepared for the site.

5.10 Noise Management

Noise from the chillers and generator will be attenuated to reduce noise emissions to compliant levels.

5.11 Stormwater Management

A Concept Stormwater Management Plan will accompany the Environmental Assessment. It will provide for rainwater harvesting. Harvested rainwater will be used for landscape irrigation, cooling towers, and toilets.

5.12 Greenhouse Gas Emissions and ESD Measures

The proposed data centres will product greenhouse gas emissions mainly due to electricity consumption, particularly for cooling. A Power Usage Effectiveness target of 1.75 is proposed (i.e. best practice for Australian climate conditions).

5.13 Diesel Storage

Diesel fuel will be stored on-site in two tanks (one for each building) to power the generators. Details have yet to be determined for their size and location. However, they are each likely to have a capacity for 20,000 litres and each is likely to be located underground, beneath a driveway.

5.14 Jobs

The project will create around 100 jobs during construction and around 40-50 during operation.

5.15 Construction Period

It will take around 18 months to construct the project.

6. STATUTORY FRAMEWORK

6.1 Relevant Acts

6.1.1 Environmental Planning and Assessment Act 1979

On 1 August 2005, Part 3A was introduced into the *Environmental Planning and Assessment Act 1979* ("the Act"). Part 3A and its accompanying Regulations contain the assessment and determination framework for "Major Development".

The Minister has been requested to express his opinion that the data storage centre, with a Capital Investment Value of $146 million, to which this PAR relates, is a project to which Part 3A of the Act applies.

6.1.2 Approvals Under Other Acts

No other approvals are sought under any other Acts.

6.2 State Environmental Planning Policies

6.2.1 State Environmental Planning Policy (Major Development) 2005

State Environmental Planning Policy (Major Development) 2005 was gazetted in May 2005 and aims to identify development of economic, social or environmental significance to the State or regions of the State, so as to provide a consistent and comprehensive assessment and decision-making process for that development. The Minister for Planning is the consent authority for development of the type, value or in a location, generally as identified in the SEPP, and Part 3A of the Act applies to the development.

Subsection 6(1) of the SEPP specifies that:

> *"Development that, in the opinion of the Minister, is development of a kind:*
>
> *(a) that is described in Schedule 1 or 2 …*
>
> *is declared to be a project to which Part 3A of the Act applies."*

Schedule 1 of the SEPP is entitled 'Part 3A projects – classes of development' and specifies criteria on a class specific basis which determines whether the project is a 'major project' pursuant to Part 3A. Group 4 refers to 'Other manufacturing industries, distribution and storage facilities'. Clause 12 in Group 4 of Schedule 1 states as follows:

> *"**12 Distribution and storage facilities***
>
> *Development for the purpose of container storage facilities, or storage or distribution centres, with a capital investment value of more than $30 million."*

The proposed data storage centre will have a capital investment value of approximately $146 million.

6.2.2 State Environmental Planning Policy No. 55 (Remediation of Land)

State Environmental Planning Policy No. 55 (Remediation of Land) ("SEPP 55") aims to promote the remediation of contaminated land for the purpose of reducing the risk of harm to human health or any other aspect of the environment by specifying certain considerations to be had in determining development applications in general, by requiring that remediation work meets certain standards.

The subject site has historically operated for light industrial and warehouse purposes. Stage 1 and Stage 2 Environmental Site Assessments prepared by Consulting Earth Scientists have revealed no contamination impediments to the redevelopment of the site for the purposes of a data storage centre.

6.3 Local Planning Instruments and Policies

6.3.1 South Sydney Local Environmental Plan 1998

6.3.1.1 Zoning and Permissibility

Pursuant to the provisions of *South Sydney Local Environmental Plan 1998* ("the SSLEP"), the site is zoned No. 4 Industrial ("the Industrial zone"). **Figure 4** contains an extract from the SSLEP zoning map.

6.3.1.2 Zone objectives

The objectives of the Industrial zone are as follows:-

> *"(a) to facilitate and encourage suitable types of industrial development ranging from general industry to high technology industry, including warehousing, manufacturing and distribution centres, or other land uses which, due to their type, nature, scale, transport requirements or impacts, cannot reasonably be located in another zone, and*
>
> *(b) to allow for a range of ancillary, non-industrial land uses that provide direct services to industrial activities and their workforce, including associated research, administration, commercial and retail facilities, and*
>
> *(c) to ensure that development is carried out in a manner which does not detract from the amenity enjoyed by residents in neighbouring localities, the viability of commercial centres in the vicinity, or from the efficient operation of the local or regional road system, and*
>
> *(d) to provide for appropriate forms of industrial development which will contribute to the economic and employment growth of the area, and*
>
> *(e) to improve the environmental quality of the City of South Sydney by ensuring that industries conform to strict environmental and hazard reduction guidelines, and*
>
> *(f) to ensure that the scale, design and materials of construction, and the nature of development, contribute positively to the visual quality of major access routes."*

The proposal is consistent with the aims and objectives of the zone.

6.3.1.3 Permissible uses

No development is prohibited in the Industrial zone. Accordingly, a data storage centre is a permissible use.

6.3.1.4 Built environment design principles and masterplans

Clause 28 of the SSLEP refers to built environment design principles and masterplans. The provisions of Clause 28 state:

> *"(1) The Council, in determining an application for consent to the carrying out of any development on land to which this plan applies, must take into consideration whether the development:*
>
> *(a) has been designed to reinforce and protect the local topography and setting, and*
>
> *(b) reinforces and enhances the streetscape and character of the locality, and*
>
> *(c) is compatible with the scale and design of neighbouring development, and*
>
> *(d) has been designed with adequate provision for the intended occupants, and those in the vicinity of the site of the proposed development, in terms of:*
>
> *(i) privacy, and*
>
> *(ii) access to sunlight, and*
>
> *(e) has been designed so as to be energy efficient in terms of natural:*
>
> *(i) lighting, and*
>
> *(ii) ventilation, and*
>
> *(iii) heating and cooling, and*
>
> *(f) establishes and enhances the public domain, and*
>
> *(g) has been designed so as to preserve predominant view lines and vistas enjoyed from parks, reserves, roadways, footpaths and other areas of the public domain, and*
>
> *(h) encourages complementary land uses and activities.*
>
> *(2) The Council, before granting consent to the carrying out of development on land within Zone No 5 or comprising a site area of*

5,000 square metres or more, must take into consideration any masterplan for the land that is available to the Council."

The project will result in an improved site and streetscape appearance through high quality modern industrial design. The surrounding area includes a variety of industrial and warehouse development, generally with limited positive impact to the street.

The project recognises the strategic work completed by the City of Sydney to improve the Alexandra Canal and Sydney Park precincts. In particular, the proposal responds to the preferred character strategies of these locations through provision of a 'green corridor' along the southern boundary of the site. (The character strategies for the Sydney Park and Alexandra Canal are provided at **Figures 7A and 7B**.)

The design of the building incorporates ESD principles and encourages energy efficient operation in terms of heating and cooling, lighting and electricity use.

6.3.1.5 Flood liable land

Clause 38 of the SSLEP relates to flood liable land and states as follows:-

"The Council must not grant consent to the erection of a building or the carrying out of works on land to which this plan applies if, in the opinion of the Council:

(a) the land is within a floodway, and

(b) the carrying out of the proposed development is likely:

(i) to adversely impede the flow of floodwaters on the land or land in its immediate vicinity, or

(iii) to imperil the safety of persons on that land or land in its immediate vicinity in the event of the land's being inundated with flood waters, or

(iv) to aggravate the consequences of floodwaters flowing on that land or land in its immediate vicinity with regard to erosion or siltation, or

(v) to have an adverse effect on the water table of that land or of land in its immediate vicinity."

A preliminary flood issues paper has been prepared by Northrop Engineers (see **Appendix 2**). A detailed flood study will be included in the Environmental Assessment.

6.3.1.6 Development in the vicinity of Alexandra Canal

Clause 40 of the SSLEP relates to development on land within 10 metres of the Alexandra Canal or any of its open secondary channels (a term not defined in the SSLEP).

The provisions of Clause 40 are as follows:-

"(1) A person must not erect any structure on land within 10 metres of:

(a) the bank of the Alexandra Canal, or

(b) any of its open secondary channels,

except with the consent of the Council.

(2) The Council must not consent to the erection of any structure on land having a frontage to Alexandra Canal or any of its secondary canals unless:

(a) it has made an assessment of the effect the erection of that structure would have on the existing aquatic environment and the potential use of Alexandra Canal and its foreshore for recreational purposes, and

(b) the conditions of that consent require the landscaping of a ten metre strip abutting the canal, and

(c) the conditions of that consent require the creation of a right of carriageway, or the dedication of land, for the purpose of permanent pedestrian or bicycle access within a ten metre strip abutting the canal."

Data Centre 2 will have a minimum 10-metre setback from the stormwater drainage channel which drains to the Alexandra Canal. This setback will accommodate part of the driveway area associated with Data Centre 2 but will mainly comprise landscaping along the drainage channel.

As shown on the preliminary architectural drawings in **Appendix 1**, a public walkway is proposed adjacent to the open drainage channel and otherwise to the site's southern boundary.

The Alexandra Canal is an identified heritage item in the SSLEP (see **Figure 5**).

6.3.2 South Sydney DCP 1997

6.3.2.1 Height and FSR

Pursuant to the provisions of South Sydney DCP 1997 (the SSDCP), the site is subject to an FSR maximum of 1.5:1 (see **Figure 6A**) and a height limit of 15 metres (see **Figure 6B**).

The proposed FSR is 0.6:1.

"Height" for the purposes of the SSDCP is measured from any point on the ceiling of the topmost floor to the natural ground level immediately below that point. Natural ground level is defined to be the natural ground level determined by Council. The proposal complies with the height limit of 15 metres.

6.3.2.2 Urban design principles

The Urban Design Principles of the SSDCP 1997 include:-

"Reinforce and extend Regional and Local open space networks including:-

- *The Regional open space system extending from Alexandra Canal into Sydney Park linking Eveleigh and Prince Alfred Parks; and*

- *The open space corridor adjacent the banks of Alexandra Canal and along the tributary drainage system."*

In pursuit of these principles, development is to:-

- *"Enclose, enhance and provide pedestrian access to all major parks, having regard to plans of management prepared by Council.*

- *Create 'green' corridors and boulevards between major open space areas using footpaths, setbacks, easements and median strips for landscaping, to reinforce pedestrian and cycle networks.*

- *Create a 'park-like' setting in the south sector whereby landscaped open spaces dominate the buildings.*

- *Ensure development incorporates publicly accessible open spaces and pedestrian paths that are well linked into the surrounding area, to provide a focus for community activities."*

The "Control" in the SSDCP to achieve the urban design principles is as follows:-

> *"Development reinforces edges and block and street patterns of the City, and provides a variety of accessible open spaces to expand the open space networks as shown in the Public Domain Improvement Plan."*

6.3.2.3 Public domain

Part C of the SSDCP relates to the Public Domain and makes reference to the "Public Domain Improvement Plan". Within Part C is a series of maps of various districts including the "Southern Industrial" district, which includes the subject site. An extract from the "Southern Industrial Public Domain Plan" is provided in **Figure 6C**. It identifies a "through site link" between Euston Road and Burrows Road adjacent to part of the site's southern boundary. The annotation on the legend of the plan states:-

> *"Development provides mid-block connections in large industrial sites and, where appropriate, utilising existing drainage channels to link the residential with recreational areas, such as Perry Park, and Alexandra Canal. Links should be a minimum width of 4 metres."*

The project provides for a pedestrian link 2 metres wide adjacent to the open drainage channel and otherwise along the site's southern boundary and is consistent with the intent and objectives of the SSDCP.

Notwithstanding the above provisions in the SSDCP, the more recent Sydney Park and Alexandra Canal Character Strategies in the Draft Southern Industrial Area Land Use and Urban Design Strategy identifies a 'new public open space with pedestrian link and active frontages extending between Euston Road and Burrows Road adjacent to the southern boundary of the site. Other pedestrian links are identified to the north and south of the site (see **Figures 7A** and **7B**).

6.3.2.4 Industrial development

Section 3 in Part F of the SSDCP relates to industrial development. Site planning objectives for industrial development include:-

> *"• To encourage the provision of mid-block connections as public rights-of-way through large industrial redevelopment sites to enhance the pedestrian networks.*
>
> *• To encourage the dedication to Council of publicly accessible rights-of-way and open spaces through the use of floor space bonuses."*

The "Control" to achieve these objectives is:-

> *"Mid-block connections are provided as identified in the Public Domain Improvement Plan in PART C Public Domain."*

The project is consistent with this requirement.

Within the industrial zone, buildings are limited to site coverage of 60% of the site area. The proposed buildings occupy around 30% of the site area and thus, compliance is readily achieved.

The project is also consistent with the parking, access and servicing requirements in Section 3.1.3 in Section 3 in Part F of the SSDCP.

As noted in Section 6.3.2.1 above, the proposal is consistent with the FSR and height controls in the SSDCP. The project is also consistent with the SSDCP requirements in Section 3.2.2 in Part F for a 6-metre setback from Euston Road and a 4-metre setback from Burrows Road.

6.3.2.5 Open space

Section 1.3 in Part E of the SSDCP states that Council will require the dedication of public open space on sites where dedicated land is required to link open space corridors and to provide a variety of open space networks. As shown on the "Open Space Dedication" map in the SSDCP (see **Figure 6D**), the subject site is identified as one which requires open space dedication in lieu of a Section 94 monetary contribution.

7. PRELIMINARY ASSESSMENT OF ENVIRONMENTAL ISSUES

7.1 Overview

The purpose of the preliminary environmental assessment is to identify potential environmental issues associated with the construction and operation of the project to assist the Director-General in formulating the DGEAR's and relevant information for assessment. The key potential environmental issues are identified and discussed below.

7.2 Land Use

The site is zoned 4. Industrial, in which all uses are permissible with consent. The impacts of the proposed use of the site for the purpose of a data centre are considered to be largely benign. There are no sensitive land uses adjacent or near to the site.

7.3 Site Layout and Design

The site has two road frontages which provide opportunity for a high level of internal and external traffic and access efficiency, and for the site to be occupied by two buildings, each with independent access, parking and on-site circulation. Each building addresses its respective street frontage.

The proposed setbacks from the two street frontages are consistent with the requirements of the SSDCP, providing adequate scope for effective landscaping. Importantly, the southern part of the site will accommodate a green corridor extending between the two street frontages (and between the environs of Alexandra Canal and Sydney Park). A public walkway will be provided within the corridor. This is consistent with the intent of the SSDCP to provide a link between Euston Road and Burrows Road within a landscaped connection.

7.4 Height and FSR

The height of the new building is less than the 15-metre maximum prescribed in the SSDCP. The roof-top chillers are centrally located on each building and well setback from the site's side boundaries.

The FSR of the project is only 0.6:1, which is well below the permissible limit of 1.5:1 in the SSDCP.

7.5 Traffic and Parking

The use of the site as a data storage centre will generate only limited traffic volumes which will be evenly distributed onto Euston Road and Burrows Road.

Parking spaces for 48 vehicles will be provided for employees and visitors.

7.6 Tree Removal

Most of the Hills Weeping Figs along the Burrows Road frontage will be removed. The stability of the Hills Weeping Figs and the past occurrence of failure in full can be attributed to their inappropriately close planting (for trees of this size and maturity), a lack of sufficient ground area for adequate development of a root plate and symmetrical crown habit, highly elongated (east-west) and asymmetrical crowns), a high water table, a predominantly tap root system and a loose, sandy soil profile comprising fill with a lack of properties for better cohesion between roots and soil. It is inevitable that future failure (probably in full) will occur. Failure above the footpath or road could be fatal. The loss of contribution that these trees make to the streetscape can be mitigated with new, more appropriate plantings. A detailed landscape plan will accompany the project application.

Various other, lesser trees along the Euston Road frontage will also be removed.

7.7 Greenhouse Gas Emissions and ESD

Future operation of the two data centres will require significant electricity consumption, particularly for cooling mechanisms and thus, the project will result in Greenhouse Gas Emissions.

A Power Usage Effectiveness target of 1.75 is proposed, consistent with best practice for Australian climate conditions.

A range of measures designed to reduce the energy requirements of the cooling system will be identified in the Environmental Assessment.

An ESD report will accompany the Environmental Assessment.

7.8 Flooding

A statement on site flood conditions has been prepared by Northrop Engineers (see **Appendix 2**). It notes that the south-eastern corner of the site is subject to inundation and that this area of the site needs to be maintained for flood storage, as is proposed.

Also proposed are bund walls designed and configured to protect the lower portions of the site from floodwaters. The bund walls will run along the northern side of the proposed green corridor and will separate the lower-lying landscaped area from the more elevated developed portion of the site. The walls will then continue around the eastern side of the site. Flood gates will be installed at the two driveway entrances to the site off Burrows Road. These gates will only be activated during flood events and will prevent floodwaters entering the site from either Burrows Road or the stormwater drainage channel.

7.9 Noise

The site does not adjoin sensitive receivers and data storage centres are not inherently noisy operations. Noise from rooftop chillers and from generators will be attenuated to achieve compliance with relevant criteria. An acoustics report will accompany the Environmental Assessment.

8. CONCLUSION

The site comprises No's 100–110 Euston Road, Alexandria which presently contains three warehouse-type buildings. The site has two street frontages and is highly accessible. It forms part of the Southern Industrial Precinct of South Sydney, which in turn forms part of the Global Economic Corridor identified in the Sydney Metropolitan Strategy. It is in close proximity to Sydney Airport.

The project comprises the demolition of the existing buildings on the site and construction of two separate buildings for data storage, each with attached ancillary offices, services, infrastructure, vehicular access, circulation and parking. The project has a capital investment value of $146 million.

Data storage centres are permissible with consent on the site. The surrounding area is predominantly industrial.

The proposed use is relatively benign, generating modest traffic volumes, only minor noise emissions, and no odours, dust or other significant pollutants. Consistent with the requirements of the SSDCP, the height of the project will be less than 15 metres and the FSR will be less than half the permissible maximum (i.e. 0.6:1 as opposed to 1.5:1). A green corridor will be provided along the southern boundary of the site. A public walkway will be provided within this green corridor.

The project involves the removal of fig trees along the Burrows Road frontage. They are too closely spaced, over-sized, prone to failure and discourage effective and efficient site planning. A compensatory landscape scheme will more than offset the proposed removal of existing trees and the project will have a high-quality landscape presentation to both street frontages.

FIGURES

APPENDICES

APPENDIX 1

Reduced Set of Preliminary Architectural Plans prepared by Daryl Jackson, Robin Dyke Pty Ltd

0 2 10 20 m
1: 200

Client
lindsay bennelong developments

Project
DATA CENTRES
100-110 Euston Street
Alexandria

09 448 SKETCH DESIGN

FLOOR PLAN
LEVEL 1

Drawing No :
SK 0003 D
SCALE 1: 200 @ A1
15/01/10

Architects
Daryl Jackson Robin Dyke Pty Ltd
Architects
64 Rose Street Chippendale NSW 2008
T +612 9319 2955 F +612 9698 1116
www.jacksonarchitecture.com

0 2 10 20 m

1: 200

Client

lindsay bennelong developments

Project

DATA CENTRES

100-110 Euston Street
Alexandria

09 448 SKETCH DESIGN

FLOOR PLAN
GROUND

Drawing No :

SK 0002 D

SCALE 1: 200 @ A1

15/01/10

Architects
Daryl Jackson Robin Dyke Pty Ltd
Architects
64 Rose Street Chippendale NSW 2008
T +612 9319 2955 F +612 9698 1116
www.jacksonarchitecture.com

JACKSON ARCHITECTURE

Client

lindsay bennelong developments

Project

DATA CENTRES

100-110 Euston Street
Alexandria

09 448 SKETCH DESIGN

SITE PLAN

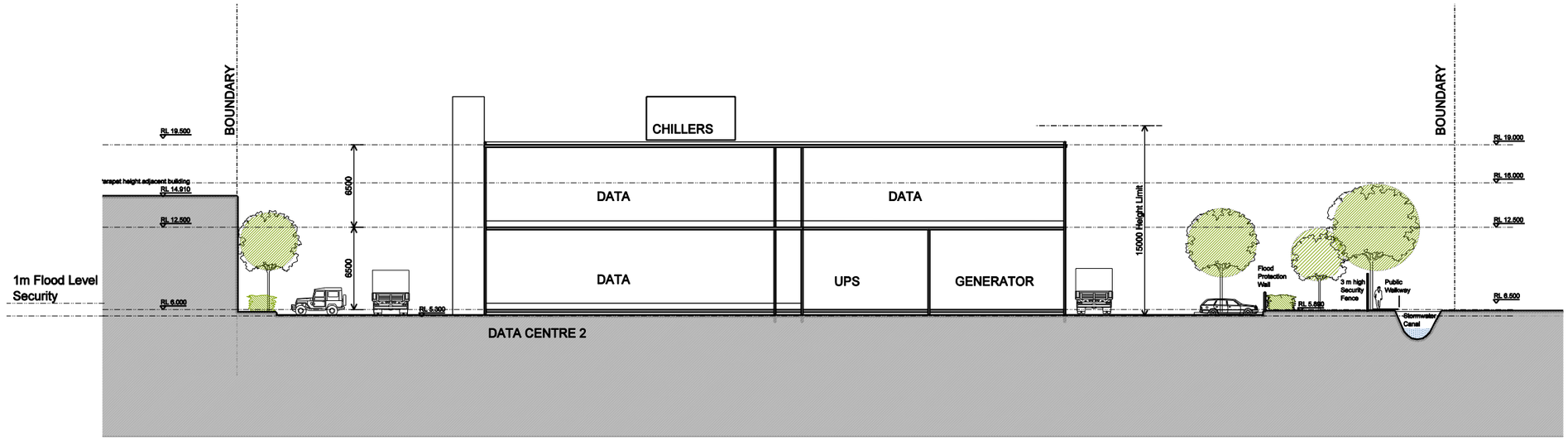
Drawing No :

SK 0001 D

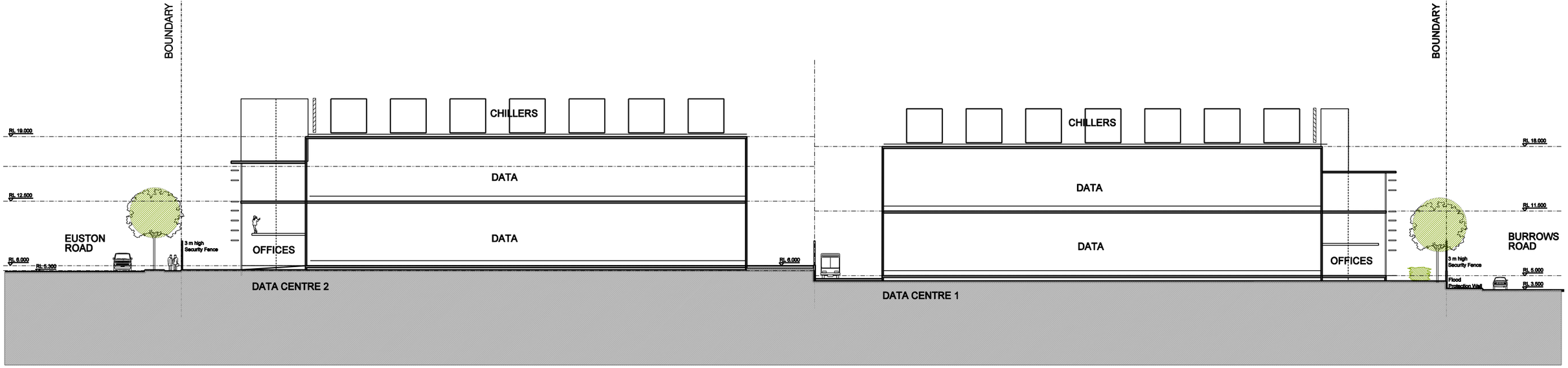
SCALE 1: 200 @ A1

15/01/09

Architects
Daryl Jackson Robin Dyke Pty Ltd
Architects
64 Rose Street Chippendale NSW 2008
T +612 9319 2955 F +612 9698 1116
www.jacksonarchitecture.com



Section AA



Section BB

0 2 10 20 m
1: 200

Client
lindsay bennelong developments

Project
DATA CENTRES
100-110 Euston Street
Alexandria

09 448 SKETCH DESIGN
SECTIONS

Drawing No :
SK 0005 D
SCALE 1: 200 @ A1
15/01/10

Architects
Daryl Jackson Robin Dyke Pty Ltd
Architects
64 Rose Street Chippendale NSW 2008
T +612 9319 2955 F +612 9698 1116
www.jacksonarchitecture.com

APPENDIX 2

Flood Issues Paper prepared by Northrop Engineers

NORTHROP Bringing people, ideas & engineering together

Level 1 Grafton Bond Store, 60 Hickson Road Sydney NSW 2000
PO Box H171 Australia Square NSW 1215
T (02) 9241 4188 F (02) 9241 4324 E sydney@northrop.com.au
www.northrop.com.au ABN 81 094 433 100

Job No. 08643

1st December 2009

Senior Development Manager – Simeon McGovern
Lindsay Bennelong Developments
PO Box 7993
Baulkham Hills BC NSW 2153

Email: simeon@bennelong.com

Dear Sir,

RE: PROPOSED DEVELOPMENT SITE - 110 EUSTON ROAD, ALEXANDRIA
STATEMENT ON SITE FLOOD CONDITIONS

We refer to the development site known as 110 Euston Road, Alexandria. Northrop provides this statement to describe the susceptibility of the subject site to flooding, and the potential impact on development and existing site features. It is also noted that there is potential for establishing Data (Security) Centres on the subject site.

'Trunk' Drainage Context

1. The site is located approximately 100m west (upstream) of Alexandra Canal.

2. An open channel is located on the southern side of the property and conveys water from Sydney Park Rd to Alexandra Canal. It is in control of Sydney Water.

Flooding

3. The site is affected by floodwaters resulting from backwater affects from Alexandra Canal – east side, and excess overland flow crossing Euston Road – west side.

4. The "Flood Planning Level" (FPL) is of particular relevance to development. This can be defined as the "threshold" level for achieving flood protection to habitable / operational floor areas, basements and basement car park entries.

Flood Study

5. A Detailed Flood Study was completed by Cardno in February 2009.

6. Results of the Flood Study indicate a portion of the south-eastern corner of the site is subject to inundation. In this regard, suspended construction (if any) above the PMF flood level is required in order to maintain this area for flood storage.

7. Cardno has recommended the minimum FPL for industrial-type development should be the greater of "the 100-year ARI storm event level + 500mm freeboard" or "the Probable Maximum Flood (PMF) level". This is in general accordance with City of Sydney Council Policy for other development areas, and similar policies for other Councils.

Flood Planning – Higher Risk-Profile Development

8. Standard approaches to calculating the Flood Planning Level (as outlined in 7.) may not be appropriate for higher risk-profile development (e.g. Data (Security) Centres). This is particularly the case in flood-prone areas.

9. Higher risk-profile developments require increased confidence in achieving protection from catastrophe (including flooding). This is with a view to protecting secured property, and essential services / infrastructure.

10. Flood protection for higher risk-profile development can include raising floor levels (above standard FPL) and incorporating physical measures (e.g. flood-gates and flood protection ('bund') walls).

11. Physical measures can be constructed to optimize space, while restricting floodwaters from entering lower portions of the site and affecting external operational areas (e.g. loading areas, car parks, access-ways, etc.). These measures also provide an important interface where levels of the development site and street are closely related (e.g. driveways, pathways, and building / site frontages).

Site Specific Considerations

12. Preliminary plans for development indicate opportunities to maintain existing site levels in the south-eastern corner. This is important to retain existing flood storage provisions on the site.

13. The Flood Planning Level (FPL) for development on either the Euston Rd or Burrows Rd frontages will be at least 1m higher than existing street / footpath levels. It is likely flood gates and / or 'bund' walls will be required to control potential inundation of the site; protect car parks, loading areas and access-ways; and integrate vehicle / pedestrian pathways required for connectivity to the street.

14. 'Bund' walls are constructed to offer long-term flood protection. In this regard, they will need to maintain their structural integrity throughout their design life. This will need to ensure the walls (a) are not exposed to potential cracking by tree roots or retained earth pressures, (b) withstand impact loads from debris during flood events, and (c) incorporate sound foundations.

    It is noted that the close spacing of existing trees along Burrows Road (and the high nature of tree roots), means installation and integrity of the 'bund' wall is likely to be compromised without affecting the trees and / or tree root system.

Northrop has provided these summary points to inform planning and consultation for development. We remain available to provide further information at your discretion.

Yours faithfully,

NORTHROP
Mathew Richards
Principal – Civil Engineering Manager