



**‘Kirrawee Brick Pit’ mixed use development
566 – 594 Princes Highway, Kirrawee**

**Environmental Assessment for Concept Plan
Part 3A Environmental Planning & Assessment Act 1979**

December 2010

EXECUTIVE SUMMARY

INTRODUCTION

This Environmental Assessment (“EA”) has been prepared under Section 75N of the Environmental Planning and Assessment Act (“the Act”) to accompany an application to the Planning Assessment Commission (as the delegate of the Minister for Planning) for the Concept Plan described below.

THE PROJECT SITE & CONTEXT

The Kirrawee Brick Pit represents one of the largest remaining “*brownfield*” sites in the Southern Sydney Region and is located within the suburb of Kirrawee, approximately 25km south of the Sydney CBD and within the Sutherland Shire LGA. The site is located immediately south of the Princes Highway at its intersection with Oak Road. The site has an area of 42,542m² and is located close to Kirrawee train station. The site is currently largely disturbed and vacant with an excavated water pit across the southern boundary of the site. A detailed analysis of the site and its context is contained in **Section 2** of this EA.

PROJECT DESCRIPTION

The application is for Concept Plan approval under Part 3A of the Act for a mixed use development comprising residential, retail and commercial uses and building envelopes principally between 5 and 12 storeys with one 15 storey building. The proposal also involves basement car parking and includes commuter parking, landscaping, services and the provision of a major new 0.9ha public park. A detailed description of the proposal is contained in **Section 3** of the EA. Reduced copies of the plans for the proposal are appended to this EA at **Appendix 3**.

The application is supported by two offers to enter into a Voluntary Planning Agreement (VPA) in which the proponent offers to fund and dedicate to Sutherland Shire Council the public park for the benefit of the local community and the construction of around 200 commuter car parking spaces to be transferred at no cost to Rail Corp.

The Capital Investment Value of the project is estimated at \$238 million as confirmed by the Quantity Surveyor Cost Report attached at **Appendix 26**.

ASSESSMENT CRITERIA

The Director-General of Planning has confirmed that the project is one to which Part 3A of the Act applies; has authorised the submission of the Concept Plan and has issued his requirements for the EA. The Director General’s requirements are detailed in **Section 4** of this EA. A summary of the key issues required to be assessed follows.

The Concept Plan application seeks to assess the general appropriateness of the scheme in relation to the assessed capability of the site. Further assessment of detail will be subject to subsequent applications if the Concept Plan is approved.

STATUTORY CONTEXT

The relevant statutory regime and assessment criteria applicable to the development comprise the following:

- Part 3A of the Environmental Planning & Assessment Act;
- Sydney Metropolitan Strategy & Draft South Sub-regional Strategy;
- State Environmental Planning Policy (Major Development) 2005;
- State Environmental Planning Policy (Building Sustainability Index: BASIX) 2004;
- State Environmental Planning Policy No. 55 - Remediation of Land;
- State Environmental Planning Policy No.65 - Design Quality of Residential Flat Buildings and Residential Flat Design Code;
- State Environmental Planning Policy (Infrastructure) 2007;
- State Environmental Planning Policy No. 19 – Bushland in Urban Areas.

An assessment of the proposal against these and other relevant planning controls is contained in **Section 5** of this EA.

KEY ISSUES

A detailed assessment of the key issues identified in the Director General's Requirements and our own identified issues is contained in **Section 6** of this EA. A summary of those issues follows.

Ecology

The site comprises a highly disturbed “*brownfield*” site and includes a Sydney Turpentine Ironbark Forest (STIF) community and also provides a water source for the Grey-headed Flying-fox (GHFF) and Eastern Bent-wing Bat (EBWB) endangered ecological communities.

A full ecological assessment and Biodiversity Management Plan have been prepared by Cumberland Ecology and submitted with the EA. These documents assess tree retention on the site and the potential impacts of the proposal on the natural environment. The ecological assessment concludes that:

“impacts as a whole on threatened species and the Sydney Turpentine Ironbark Forest community will be minor and no species or community is likely to be placed at risk as a result of the proposed development”.

Land use

The proposal involves mixed use development comprising residential units, commercial development, a number of showrooms, two (2) supermarkets along with other speciality retailing.

Within the Sutherland Local Environmental Plan (SLEP) 2006, the site is partly zoned 7 – Kirrawee Mixed Use and partly zoned 13 – Public Open Space. It is noted that the proposal is fully permissible, with the exception of the commuter car parking which is prohibited in Zone 13 (but may be approved by the Minister subject to approval of a Concept Plan under Part 3A).

The range and quantum of proposed uses is appropriate in the context of such a highly accessible site and assists in achieving a number of State and Regional planning objectives, particularly in relation to housing supply, job creation, environmental protection, recreation and encouragement of public transport usage.

A detailed economic impact assessment of the proposed retail element has been prepared as part of the EA by Hill PDA.

Hill PDA concludes that the proposal would not have a significant impact on the economic sustainability of surrounding Centres with the level of impact being less than 10% for all but one of nearby Centres (the exception being Kareela at 10.3%). Of particular relevance is the anticipated impact on the existing Kirrawee centre which is predicted to be only 6.1% up to 2014.

In addition, Hill PDA found that the proposal would deliver a wide range of social and economic benefits to the community (in addition to the financial analysis) and that it would be the scale of the opportunity that would ensure the urban renewal of this part of the Shire.

Built form and urban design

The EA addresses the height, bulk and scale of the proposed development within the context of the locality. It provides a comparable height study to demonstrate how the proposed height relates to the height of the existing developments surrounding the site as well as the future character as contemplated by the local planning controls. The EA also provides a comparative height analysis of a number of other “Villages” as defined in the Draft Sub-Regional Strategy, concluding that the proposed height is appropriate in this location.

An Urban Design Report has been prepared by GM Urban Design & Architecture (GMU) (refer **Appendix 4**). This assessment concludes that the proposed scheme will “*provide a high quality mixed use development*” and that the new buildings will “*provide a high quality, contemporary solution that will set a new benchmark for this locality and contribute to the activation and amenity of the area.*”

Public domain/open space and accessibility

The development incorporates a large proportion of what can be described as public domain and landscape works. It is noted that the Concept Application includes these elements as ‘indicative’ only with the intention being to agree the details once Concept Approval has been secured. In principle, these elements include the following:

- Provision of a large public park;
- Retention of the STIF;
- Provision of a water source sufficient for native fauna;
- Numerous pocket parks;
- Off site traffic improvements; and
- Widening of streets.

Whilst the detailed design of the public domain will be subject to future staged applications, the EA concludes that the size, location and distribution of the public domain features of the site are capable of providing a high quality landscaped public domain and public park.

The proponent's offer to fully fund the major public park on the site consistent with design principles formulated in consultation with Council represents a significant public benefit for the existing and future local community.

Environmental and residential amenity

Whilst only designed up to a conceptual stage, the EA determines that the residential element of the proposal is consistent with the design principles in SEPP 65 - Design Quality of Residential Flat Buildings. Future applications will outline the more detailed design elements of the development.

Shadow diagrams have been prepared which confirm the adequacy of solar access to both the apartments within the mixed use development and also to the park, public piazza and outdoor dining areas. In relation to the residential element, and whilst more details will be contained in future applications, the proposal allows the majority units to have the capability to obtain cross ventilation, visual and acoustic privacy and generally have the capacity to be compliant with or exceed the "rules of thumb" under SEPP 65. High quality community and private open spaces will provide a high level of amenity for the proposed residents and existing surrounding community.

Transport and accessibility

The Project Site is located in immediate proximity to the Princes Highway, and within easy walking distance of Kirrawee train station and local bus routes, thereby providing significant advantages in terms of connectivity to the public transport network.

As part of the EA, a Traffic Management and Accessibility Plan has been undertaken by Halcrow (refer **Appendix 17**). This report concludes that

- *"Subject to recommended improvements, traffic effects of the proposal would be satisfactory;*
- *The proposed parking provision is appropriate; and*
- *The development is very well located in terms of proximity to public transport and other local shops and services. It will benefit from the good transport facilities in the area and contribute to their viability."*

Noise and vibration

A noise assessment has been undertaken by Acoustic Logic. This report seeks to identify the source of any potential noise and vibration impact within the vicinity of the site and also assess the impact of the Princes Highway and the rail line on the proposal and concludes that, subject to a number of recommendations as outlined in the report, *"compliance with noise emissions goals is achievable"*.

Ecologically sustainable development

The details of environmentally sustainable development (ESD) initiatives to be incorporated into the development will be contained in any subsequent application.

At this stage, the general ESD principles upon which the concept is based include more accessible retail opportunities to reduce local private vehicle trips, the provision of commuter parking that in turn will promote public transport usage, overall building design and orientation enabling cross-ventilated, good natural daylight and solar access into primary living spaces and external living areas, the public domain, use of energy efficient appliances and water efficient devices, tanks for stormwater retention and reuse, substantial deep soil areas for significant planting, the ability of the proposal to satisfy BASIX and Green Star certification and compliance with Section J of the BCA.

In addition, the decision to build within the existing pit, rather than filling it, will result in significant ESD benefits as numerous truck movements will not be required to transport spoil to fill the hole, also avoiding disrupting and inconveniencing the local community over an extended period.

Drainage and stormwater management

A drainage and stormwater management report has been prepared in support of the application by Northrop Engineers. This details appropriate water management principles that can be incorporated into the proposed development at detailed design stage.

The report provides an assessment and recommendations in relation to stormwater management, water quality, site discharge, public domain and the operation of the temporary water body during construction. It concludes that the stormwater plans accompanying the application demonstrate the ability to adequately deal with water quantity and quality issues, having no adverse impacts on the adjoining properties or flooding downstream.

Contamination, human health risk assessment and geotechnical issues

Preliminary investigations into the physical suitability of the site for the proposed development have been undertaken by Jeffrey and Katauskas and have identified no encumbrances to that development.

Geotechnical analysis of the site concludes that conditions are suitable for the type of development proposed. In particular, it is considered that the site is suitable for the development, provided geotechnical issues are properly evaluated and addressed during planning and detailed design.

The report concludes that:

“Based on our assessment of the site we consider that from a geotechnical perspective the site is suitable for the proposed development, provided the geotechnical issues (discussed further below) are properly evaluated and addressed during planning and detailed design. The proposed development involves relatively standard building construction, completed on many sites within the Sydney area.”

Heritage

A Conservation Management Plan and Heritage Impact Statement has been prepared by Edward Higginbotham & Associates Pty Ltd. This recommends the conservation and retention of Pipe Kiln 1 in situ, together with the retention of part of the former brick pit.

The report concludes that this:

“complies with the ICOMOS Burra Charter and is the recommended outcome for this site. It ensures that the significance, fabric and authenticity of Pipe Kiln 1 and its setting is retained”

And that

“The level of change (namely the development, as designed to allow for the conservation, interpretation and display of Pipe Kiln 1m including the spatial relationship with the brick pit) will be appropriate for the level of cultural significance of the place, assuming appropriate design principles are put in place.”

The Conservation Management Plan and Heritage Impact Statement also refers to the historical relevance of the twin chimneys of the Kirrawee Brickworks, concluding that:

“The twin chimneys of the Kirrawee Brickworks were a landmark, until demolished in 1975. The proposed development should respect this former landmark in its design and appearance as a gateway to Sutherland”

CONCLUSION

The EA concludes that the site is highly suitable for the mixed development, subject to certain technical and design considerations. These include the retention of the STIF and the provision of a water source for the native fauna. In particular, it is submitted that the proposed mixed use components of the proposal are independently supportable in their own right. The development seeks to realise a range of regional and local planning objectives for what has been long recognised as a highly strategically important redevelopment site in the Sutherland Shire. In doing so, however, it seeks to move away from some of the more restrictive local planning controls which would render any complying development of the site unviable, with significant adverse social and economic consequences. The proposed development mix also enables the owner to construct and embellish a high quality 0.9 hectare public park and provide commuter parking.

Subject to compliance with the Statement of Commitments outlined in **Section 7**, on the basis of this environmental assessment, the report concludes in **Section 8** that the Concept Plan, warrants approval.

CERTIFICATION

I hereby certify that the information contained in this Environmental Assessment is neither false nor misleading:

PREPARED BY:



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Manager - Development

City Plan Strategy and Development Pty Limited

BA (Hons), MTP, MRTPI

Date: 6 December 2010

REVIEWED BY:



David Ryan

Executive Director

City Plan Strategy and Development Pty Limited


BTP (Hons), Dip Law (SAB), Grad Dip Leg Prac, MPIA, CPP

Date: 7 December 2010

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Job No/ Document No	Description of Issue	Prepared By/ Date	Reviewed by Project Manager/Director	Approved by Project Manager/Director
29135	Draft	CO September 2010	DR	 David Ryan - Executive Director
	Draft	CO 15 October 2010	DR	
	Final	CO 3 November 2010	DR	
Note: This document is preliminary unless it is approved by Director of City Plan Strategy and Development Pty Ltd				

LIST OF APPENDICES

No.	Item	Prepared by
1	Environmental Assessment Requirements	Director-General of Planning
2	Survey Plans	AWT Survey
3	Architectural Drawings	Woodhead Architects
4	Urban Design Report	GMU Design
5	Landscape Statement & Drawings	Site Image
6	Conservation Management Plan and Heritage Impact Statement	Edward Higginbotham
7	Community Consultation Report	Elton Consulting
8	Site Contamination Management Plan	EIS
9	Flora and Fauna Assessment	Cumberland Ecology
10	Biodiversity Management Plan	Cumberland Ecology
11	A Centres Study for Sutherland Shire	Hill PDA
12	Letter addressing DGR 4	Hill PDA
13	Geotechnical Assessment	Jeffrey & Katauskas
14	Acoustic Assessment of Proposed Mixed Use Development	Acoustic Logic
15	Services Statement	Wallis & Spratt
16	Stormwater Report	Northrop Engineering
17	Traffic Management and Accessibility Plan	Halcrow
18	Pedestrian Wind Environment Statement	Windtech
19	Groundwater Assessment	CM Jewell & Associates
20	Dewatering Plan	CM Jewell & Associates
21	Hydrogeological Data Report	CM Jewell & Associates
22	Long-Term Groundwater Management Plan	CM Jewell & Associates
23	Concept Design Principles for the Proposed Park	City Plan S&D
24	Offer to Enter into a Voluntary Planning Agreement with Sutherland Shire Council	Gadens Lawyers
25	Offer to Enter into a Voluntary Planning Agreement with Rail Corp	Gadens Lawyers
26	Quantity Surveyors Cost Verification	Rider Levett Bucknall
27	SEPP 65 Certification and Assessment against the NSW Residential Flat Design Code	Woodhead Architects

1 INTRODUCTION

1.1 Overview

This Environmental Assessment (“EA”) has been prepared for Henroth Investments Pty Limited by City Plan Strategy and Development Pty Ltd in respect of a Concept Plan Application to construct a mixed used development, park and associated facilities on land at the former Kirrawee Brick Pit.

The site is legally described as Lot 1 DP 179075; Lot 1 DP 589977; and Lot 2 DP 589977, and is known as No. 566-594 Princes Highway, Kirrawee.

The proposal comprises residential, retail and commercial uses and building envelopes principally between 6 and 12 storeys with one 15 storey building. The proposal also involves basement car parking and includes commuter parking, landscaping, services and the provision of a major new public park. The application is accompanied by a offers to enter into VPAs with Sutherland Council for the delivery of the public park and with Rail Corp for the delivery of the commuter car park. A more detailed description of the proposal is provided under **Section 3**.

Advice has been received from the Director General of the NSW Department of Planning that:

- he has formed the opinion that the proposal is development of a kind described in Schedule 1, Clause 13 of SEPP Major Development and is therefore a project to which Part 3A of the *Environmental Planning and Assessment Act 1979* (“the Act”) applies;
- he has authorised the submission of a Concept Plan for the proposal under Section 75M of the Act;
- because the proponent has disclosed a reportable political donation, the application will be referred to the Planning Assessment Commission for determination;
- Director General's Environmental Assessment Requirements for the project have been issued.

In accordance with this advice, this report contains the Environmental Assessment addressing the Director General's Requirements, as set out in **Appendix 1**.

1.2 Concept Plan

The application is made under the provisions of Section 75M of the Act, which relates to Concept Plan Applications.

Because the application includes conceptual proposals for the whole development, some of our assessment is general in nature and deals with the appropriateness and capability of the site for uses of the nature and size proposed. The level of assessment will be sufficient for the PAC to be confident that approval may reasonably be granted to the overall concept, subject to additional details being the subject of future planning applications.

1.3 Project Team

Discipline	Consultant
Architecture	Woodhead Architects
Urban Design	GMU Design
3D Imaging	Podgroup
Landscape Design	Site Image
Town Planning	City Plan Strategy and Development
Archaeology and heritage	Edward Higginbotham & Associates
Community Consultation	Elton Consulting
Contamination	EIS
Ecology	Cumberland Ecology
Economic Assessment	Hill PDA
Geotechnical	Jeffrey & Katauskas
Groundwater and dewatering	CM Jewell & Associates
Noise and Vibration	Acoustic Logic
Services Engineering	Wallis & Spratt
Stormwater	Northrop Engineering
Traffic engineering	Halcrow
Wind	Windtech

1.4 Consultation

The Concept Plan and this EA have been informed by consultation with the local community, Council and other key stakeholders. Details of these consultations are outlined in **Section 6.16**.

2 SITE ANALYSIS

2.1 The regional context and locality

The Kirrawee Site (“the site”) is located within the Southern Sydney suburb of Kirrawee, approximately 25km south west of the Sydney CBD, 1.5km east of Sutherland Town Centre and 3km west of Miranda. Kirrawee is located within the Sutherland Shire Local Government Area.

Kirrawee is in close proximity to the Royal National Park and Gymea Bay which offer excellent recreational opportunities.

The existing Kirrawee shopping strip fronts Oak Road to the south of Flora Street and north of the Kirrawee Rail Station. See **Figure 20** for an aerial image of the Kirrawee locality.

The Princes Highway is fronted by a range of land uses, including many showrooms and motor dealers which benefit from the good exposure provided by such a highly trafficked road.

On the northern side of the Princes Highway is the Kirrawee industrial area. On the western side of Oak Road are a number of three storey residential flat buildings. On the southern side of Flora Street are light industrial activities, and the James Cook Industrial Estate abuts the site to the east (refer to **Figure 25**).

In terms of vegetation and landscape, the Princes Highway frontage of the site does not display a strong landscape character with industrial development to the south and east also displaying little landscape character. West of the site, street tree planting is provided as well as vegetation within the residential development lots themselves. It is therefore considered that the site contributes to the natural environmental qualities of the Kirrawee Centre through the green edge along the Flora Street and Oak Road frontages which act as a landscape buffer between the more commercial/industrial areas to the east of Oak Road and ameliorates the visual impact of the parking areas along Flora Street.

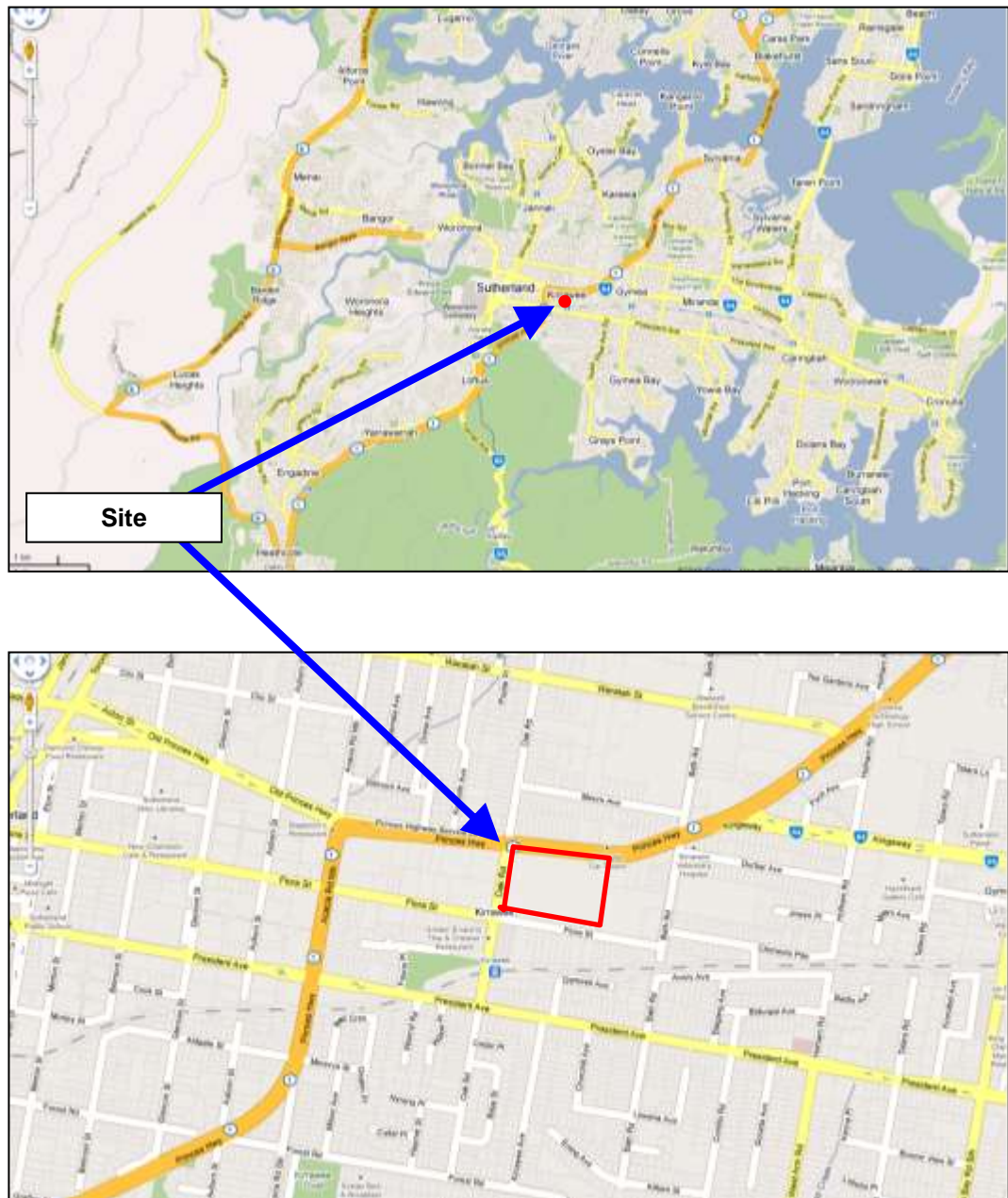


Figure 1: Regional and local context of the Project Site (source Google Maps)

Locality Images



Figure 2



Figure 3



Figure 4



Figure 5



Figure 6



Figure 7



Figure 8



Figure 9



Figure 10



Figure 11



Figure 12



Figure 13



Figure 14



Figure 15



Figure 16



Figure 17

- | | | | |
|--------------------|--|--------------------|---|
| Figure 2 - | Industrial development along Flora Street | Figure 3 - | Industrial development along Flora Street |
| Figure 4 - | James Cook Industrial Estate immediately east of the site and on Flora Street | Figure 5 - | James Cook Industrial Estate immediately east of the site and on Flora Street |
| Figure 6 - | Corner of Flora Street and Oak Road | Figure 7 - | Kirrawee shopping strip along Oak Road |
| Figure 8 - | Kirrawee shopping strip along Oak Road | Figure 9 - | Kirrawee train station |
| Figure 10 - | Medium density residential buildings west of the site and on Oak Road | Figure 11 - | Medium density residential buildings west of the site and on Oak Road |
| Figure 12 - | Medium density residential buildings west of the site and on Oak Road | Figure 13 - | BP station on the corner of Princes Highway and Oak Road |
| Figure 14 - | MacDonald's on Princes Highway and opposite the site | Figure 15 - | Existing industrial development on Princes Highway and opposite the site |
| Figure 16 - | Existing industrial building immediately east of the site and on the Princes Highway | Figure 17 - | Kirrawee Public School, east of the site |

2.2 Existing road and transport conditions

Existing traffic and transport conditions have been assessed by Halcrow Pty Limited in **Section 6** of their Traffic Management and Accessibility Plan (TMAP) (**Appendix 17**) and have been described by GMU in their Urban Design Report, an extract of which is provided below:



Figure 18 – Extract from the Urban Design Report illustrating the existing vehicle, parking and pedestrian networks around the site

The Princes Highway is classified as an RTA State Road and provides direct links to the CBD and airport to the north and Wollongong to the south. Flora Street adjoins the site to the south with Oak Road to the west (both of which are local unclassified roads performing the function of a sub-arterial or busy collector route).

The TMAP provides a detailed analysis of five intersections within the surrounding network, supplemented by traffic counts in nine locations. The analysis identifies that the Princes Highway/Acacia Road North route is the most significant north-south arterial route with President Avenue being the busiest west-east sub-arterial route.

Analysis using SIDRA indicates that all of the relevant intersections currently operate at a satisfactory level, notwithstanding that peak period traffic on the Princes Highway is high and that queuing regularly extends between intersections.

Kirrawee is serviced by a rail station on the Eastern Suburbs and Illawarra Line. This station provides direct and regular services to Redfern, Central Station, Town Hall and Bondi Junction train stations every fifteen minutes during commuting periods, and every 30 minutes outside these times. The site is also located only 1.4 km from Sutherland rail station which comprises a major stop on the South Coast Intercity line.

Kirrawee is located within 'Region 10' in relation to bus transport and is serviced by Veolia Transport NSW. This provides regular bus services to the CBD along the Princes Highway.

2.3 The Site

The site is legally described as Lot 1 DP 179075; Lot 1 DP 589977; and Lot 2 DP 589977, and is known as No. 566-594 Princes Highway, Kirrawee.

The site is located on the southern side of the Princes Highway and east of the Oak Road intersection. The site is rectangular in shape with frontages of 252.13 metre to the Princes Highway to the north, 160.75 metres to Oak Road to the west, 251.66 metres to Flora Street to the south, and 177.85 metres to the existing industrial area located immediately east. The site, which comprises three lots, has a total area of **42,542m²**.

The land slopes from the south-western corner down approximately 5 metres to the north-western corner and 10 metres to the eastern boundary.

The site's most obvious feature is a large excavated water filled pit which currently extends across the southern boundary of the site and is up to 20 metres deep, 18,000m² in area and 150,000m³ in volume.

The site is largely disturbed, vacant and cleared and provides a water source for native fauna, including two threatened species, the Grey-headed Flying-fox and the Eastern Bent-wing Bat. Remnant vegetation to the west of the pit is identified as Sydney Turpentine Ironbark Forest (STIF), an endangered ecological community.

An electricity substation, accommodated in a small brick building, and the footing and slabs of demolished buildings from the former brick pit use are located in the north of the site.

An aerial photo of the site is provided at **Figure 20**.



Figure 19: Local context of the Project Site (source Google Maps)



Figure 20: Aerial Photo of the Project Site (source Google Maps)

Site images



Figure 21



Figure 22

2.4 Historical context

The site was formerly owned by The Sutherland Brick Company and operated from the early 20th century until its closure and purchase by Sydney Water in 1974. The site has remained unused since that time.

At the height of its historical productive use as a brick pit, the site contained a number of kilns, buildings and was two tall kiln chimneys until their demolition in the late 1970's (refer **Figure 22**).

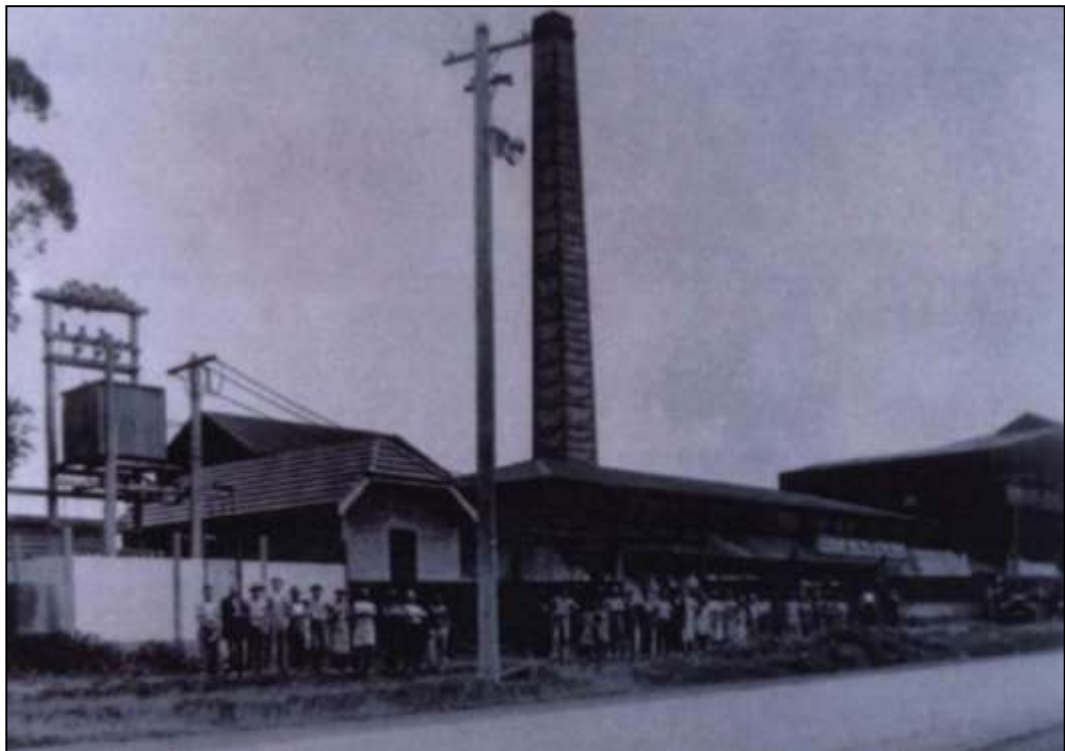


Figure 23 – Historical photo of one of the Kirrawee Brick Pit Chimney's

As indicated above, whilst little evidence of the former buildings remains (apart from some footings), the site still bears the evidence of its former use in the form of the dramatic pit with its excavated 'walls'.

Since its sale by Sydney Water was foreshadowed in the late 1990's, it was recognised for its potential to accommodate substantial productive development and strategic planning significance within the locality.

The Department of Planning formally established the Kirrawee Living Centres project in June 2001 as a partnership between Planning NSW, Sutherland Shire Council and Sydney Water. The Site was the focus of the Living Centres program assessment because of the potential for its redevelopment to act as a catalyst for the revitalisation of the Kirrawee town centre. The purpose of the project was to create place based planning controls for the Kirrawee town centre, including the Site.

The development of the Site was seen as a significant opportunity for achieving the Government's urban consolidation and employment generation aims due to its proximity to the train line and the Princes Highway, the proximity of retail, commercial and residential development in the locality as well as the size of the site and its single ownership.

The Living Centres Project resulted was the creation of the Kirrawee Local Area Masterplan (LAM) which was adopted by Sutherland Council in 2003. The LAM provides for 10,470 sq.m of employment floor area and 27,320 sq.m of residential floor area on the Site. The outcomes of the LAM were given statutory expression within Council's current planning controls, the Sutherland LEP 2006 and Sutherland DCP 2006 (DCP).

At the time of the formulation of the LAM, population and jobs targets were not at their current levels and concepts of transit oriented development were not as clearly recognised by the NSW government in its formal policy settings. The current local planning controls were premised on the earlier planning context and the "*block form*" urban design principles in vogue at that time.

2.5 Previous development proposal

A development application (DA) by the current site owner was submitted to Sutherland Council in 2008, broadly in conformity with SSLEP and DCP. However, a relatively modest amount of additional retail floor space (which was and remains fully permissible in the zone but more than had been contemplated by Council for the site at that time) was introduced into that DA.

Retrospective changes to Council's controls introduced after the DA was lodged and before it was determined, led in part to the proposal being refused by the Land and Environment Court (ref. NSWLEC 1096 of 2008). Whilst the Court acknowledged the site was suitable for the development and specifically retail and supermarket development, it stated that it was constrained from approving it because of its inconsistency with the zone objectives. To this end, we note that paragraph 134 of the Judgement states that:

*“by far, the key difference between the parties related to the retail component of the development and whether this met the Zone 7 objectives (j), (k) and (l). This issue did not focus on the use per se but on the **scale of the retail development**. There was general agreement that retailing and a supermarket should be provided on the site. The site was seen as ideal for such a use as the brick pit created a large hole that now needs to be filled. A supermarket and parking is suited to such a below ground use...”*

(emphasis added)

In other words, in broad terms its refusal of the retail component was as a result of a zoning constraint rather than any inherent unsuitability of the site or the merits of the application.

In this respect the Court, as was clear from its judgement, regarded itself as being constrained by the requirements of Part 4 of the Act and its requirement to give determinative weight to the provisions of the relevant Environmental Planning Instrument's and local planning controls.

Later sections of this EA will discuss the altered statutory and other circumstances applicable to the current application which differentiated it from the earlier situation.

2.6 Analysis of site, locality and planning context

A detailed site analysis has been prepared by Woodhead architects and forms part of the plan set for this application (Refer **Figure 24** below and **Appendix 3**).

Further site analysis appears in the Urban Design Report by GMU (**Appendix 4**).

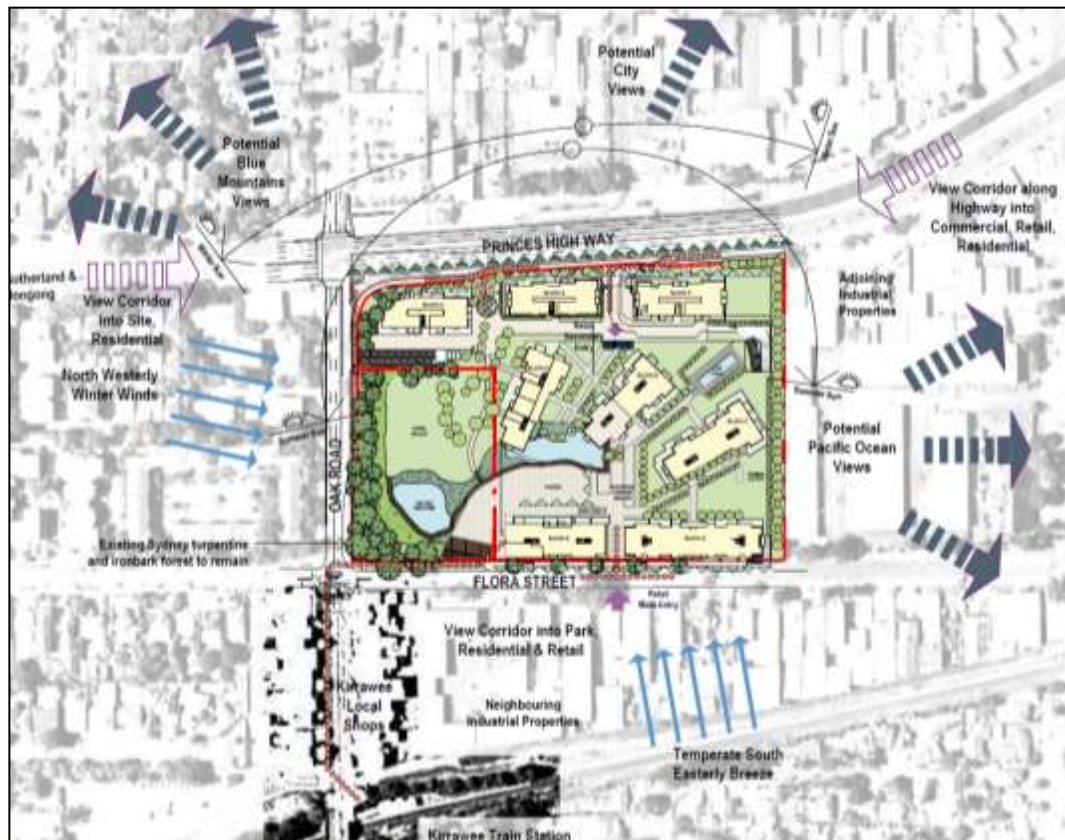


Figure 24 – Extract from Site Analysis Plan prepared by Woodhead

As detailed in the Urban Design Report, the site can be considered to be part of a transitional area, located north of the Kirrawee train station and retail shopping strip and south of the predominantly industrial character of land uses bordering the Princes Highway and east of the Site as detailed on **Figure 25** and **26** below:



Figure 25 - Site as part of the wider Kirrawee Centre



Figure 26 – Extract from the Urban Design Report illustrating the existing topographic, vegetation and open space character of the site and the surrounding area

A summary of the opportunities and constraints to future development presented by the site's location and context is contained in the following table:

Table 1: Constraints and Opportunities

Constraints/Challenges	Opportunities
<ul style="list-style-type: none"> • Heavily modified land form; • Costs and practicality of development of excavated site – geotechnical, filling etc; • Presence of threatened species; • Some items of archaeological heritage; and • Current road capacity and design limitations. 	<ul style="list-style-type: none"> • Very large site; • Single ownership; • Adjacent to the Princes Highway; • 150m from train station; • Services by major bus routes; • Services available; • Limited and manageable environmental sensitivities; • Few “sensitive” neighbouring land uses, mainly industrial/commercial; • Proximity of existing shops; • Scope to complement and enhance existing town centre; • The Princes Highway is nominated as a potential Enterprise Corridor in the draft Subregional Strategy (refer to Section 5); • Scope to use pit for beneficial and productive purposes; • Scope to supplement nearby Sutherland’s role as designated “Major Centre”; and • Can provide much needed retail and residential floorspace.

Courtesy: Planning Workshop Australia

The site presents significant constraints and challenges to its development, however these are not (subject to the further assessment contained in this EA) considered insoluble. On the other hand, as has been identified by the State Government and also Council, its development also presents significant opportunities for development which can bring vitality, convenience and outstanding environmental, social and economic outcomes to Kirrawee and the wider local community.

As such, the site represents one of the largest undeveloped ‘brownfield’ sites in single private ownership in the southern Sydney region.

The current application purposefully seeks to set aside the density and land use constraints and the urban design form embodied in the current local planning controls on the basis that they represent an underutilisation of a valuable brownfield site and a suboptimal urban form.

We submit that it is consistent with regional planning principles for those local controls to be set aside and for the Minister to maximise the utilisation of the site within its assessed environmental, traffic and other physical capacity constraints.

Underutilising the development potential of such a well located strategic redevelopment site represents an opportunity cost to the planning of the whole subregion. It underutilises established public infrastructure (such as the recently duplicated southern rail line) and generates a shortfall of housing stock and jobs that must be made up in other locations across the sub-region to meet Metropolitan Strategy housing targets. Given the scarcity of comparable redevelopment sites in the sub region, satisfying this shortfall may never be made up, and in any event, is likely to occur in areas with less amenity and accessibility than the Site.

Hill PDA has undertaken a detailed analysis of the demand and supply for various uses within the Sutherland Shire (Refer **Appendix 11**). This review sought to establish the demand for residential, industrial, commercial and retail uses across the Shire and land supply within the LGA to accommodate that growth.

Hill PDA identified significant demands in particular for residential and retail floor space and only modest or negligible demand for commercial and industrial floor space. It also identifies a need to accommodate an additional 1.3 million sq.m of floorspace for all uses by 2036 within the Sutherland Shire.

With limited available sites of substantial size available, the Site has an important role to play in assisting the Shire to meet its forecast land use demands.

In addition, Hill PDA found that the comprehensive redevelopment of this major site would deliver a wide range of social and economic benefits to the community. As will be detailed in later sections, redeveloping this prominent site that has been derelict for decades, to provide a range of homes, jobs, shops and community services, will shift perceptions and act as a catalyst for further investment in the area.

The designation of a substantial part of the site as a public park has the potential to unify the existing centre and the mixed use zone to create a single centre extending from the Princes Highway to the rail station – logical northern and southern extremities with the park at the ‘heart’ – a focal point for local community activity. As detailed elsewhere in this EA, the park will preserve endangered flora and fauna.

It is therefore considered that the Site represents a unique ‘opportunity site’ with the capability and capacity subject to appropriate engineering and architectural design, to assist in meeting broad Metropolitan Planning objectives (see further discussion in **Section 5**) and in enhancing and revitalising its locality.

3 DESCRIPTION OF THE DEVELOPMENT

3.1 Overview

Concept Plan approval is sought for:

- Residential development – approximately 450 dwellings within eight separate buildings (equating to approximately 50,000 sqm GFA);
- A retail shopping centre - including one full line supermarket and one smaller discount supermarket, specialty stores and a number of cafés with seating as part of a proposed piazza;
- Commercial and showroom uses;
- A commuter car park for approximately 200 spaces and parking for the residential, commercial and retail uses;
- All of these uses to be contained within structures below the “assumed” or actual ground level of the site and in a series of building envelopes of variable heights above the podium level;
- A public park (approximately 9,000 sq.m);
- Various pocket parks and urban spaces and general landscaping of the site;
- Associated site works (including dewatering), parking/loading, services and amenities; and
- External road improvements.

3.2 Changes to Concept Application since PEA

It is noted that a number of changes to the proposal have been made since the submission of the Preliminary Environmental Assessment in May 2010 and the subsequent issuing of the Director General’s Requirements (DGR”s) in August 2010. In brief, these changes principally relate to the following:

- Reduction in the proposed gross floor area;
- Reduction in relation to the number of residential units;
- Amendments to the proposed retail component;
- Reduction in the amount of car parking proposed;
- Retention of Pipe Kiln 1 in situ as opposed to its relocation;
- Increase in height on the proposed buildings to the centre of the site; and
- Reduction in the height of Block H.

These changes have principally arisen as a result of further specialist investigations undertaken in accordance with the Director General’s assessment requirements. Changes to the height of buildings have arisen as a result of the assessment of alternative options for the siting and layout of the building envelopes as required by DGR 4, which also included a height study, shadow analysis and view analysis undertaken by GMU in preparing its Urban Design Report. This has created a more modulated built form with reduced floor space and unit yields. Retention of the Pipe Kiln resulted from the required further archaeological assessment. Other refinements have arisen following further consultation with Sutherland Shire Council as detailed in **Section 6.16**

3.3 Development statistics

The Concept Plan now comprises the following development parameters, noting that as more detailed design development occurs, these figures may vary to a limited extent in the subsequent staged application:

Development Parameter	Proposed GFA (approximates)
Site Area	42,542 m ²
Gross Floor Area	64,837 m ²
Floor Space Ratio	1.52:1
Commercial/Employment	
Full Line Supermarket	3,810 m ²
Discount Supermarket	1,460 m ²
Mini Major	1,280 m ²
Speciality Shops, kiosks & cafe	2,810 m ²
Flora Street Commercial	660 m ²
Princes Highway Retail/Showrooms	2,930 m ²
Internal Mall	1,820 m ²
Toilets/Centre Management	230 m ²
Total Retail/Commercial	15,180 m²
Residential	
Block A	11,698 m ²
Block B	9,181 m ²
Block C	6,663 m ²
Block D	3,901 m ²
Block E	5,251 m ²
Block F	4,116 m ²
Block G	4,212 m ²
Block H	4,635 m ²
Total Residential	49,657 m²
Car Parking	
Retail and Commercial	506
Residential	643
Commuter Parking	200
Total Car Parking	1,349
Open Space	
Large Park	9,000 m ²
Pocket Parks/Communal Open Space	7,700 m ²

Source: Woodhead

3.4 Concept details

More detailed descriptions of the various elements of the Concept Plan are outlined below.

Site works

Site works will involve the dewatering of the existing brick pit, cutting and filling of the site to create the finished level of the development site and the park, minor site remediation, stormwater management, erosion and sedimentation control, tree removal and tree protection, temporary water body and other associated preliminary works.

Basement level

Three levels of basement car parking of sufficient size to meet the car parking demands of the site development within the Zone 7 land and a single level of commuter car park within the Zone 13 land.

Lower Ground

At lower ground floor level, the proposal involves one full line supermarket, one discount supermarket and one mini major. An open public piazza and associated outdoor dining, cafes and retail areas are proposed. Speciality retailing will span either side of a central spine linking the Princes Highway and Flora Street. Loading facilities are provided for the retail uses.

Commercial space will be provided along the Flora Street frontage, with retail showrooms along the Princes Highway frontage.

Access

Access to the site will be provided as follows:

- Left in via a westbound deceleration lane off the Princes Highway;
- Left in/left out to Oak Road;
- Left and right in/out of Flora Street; and
- Service vehicles entry via the princes Highway driveway and exist via Flora Street.

Vehicular access and egress to the site will be provided at lower ground level with access and egress for the commuter car parking, retail and residential parking provided off Oak Road, close to the intersection with the Princes Highway. Vehicular access and egress to the retail parking areas will also be provided off Flora Street to the south eastern corner of the site and accessed only via a new slip lane off the Princes Highway.

Pedestrian access will principally be provided via a stepped terrace from Flora Street near the Oak Road intersection, enabling direct linkages with the train station and the existing Oak Road shops. In addition, dedicated retail entrances for pedestrians will be provided at either end of the central spine; off Flora Street and the Princes Highway approximately mid way across the site.

Public park

9,000 m² of the south western part site is designated as a public park comprising the land Zoned 13 Public Open Space in the SSLEP 2006. No detailed design of the park is proposed as part of this Concept Plan, only a set of principles relating to the elements of the park to be included in any future detailed planning applications. These principles have been formulated in consultation with officers of Sutherland Shire Council. Of most significance are conservation principles involving the retention and protection of the original STIF community and provision of a water body for threatened fauna species (subject to appropriate ecological assessment). These principles are outlined at **Appendix 23** and discussed further at **Section 6.14** of this EA. They remain in draft form since while they largely reflect agreements reached with Sutherland Council officers, discussions are ongoing at the time of preparing this EA.

The delivery of this park is the subject of the Offer of Voluntary Planning Agreement (VPA) accompanying this application at **Appendices 24**. In brief, the Offer involves the dedication and full embellishment of the park at the cost of the proponent. This Offer is proposed to be the subject of further discussions with Sutherland Shire Council, with a view to executing the agreement at the time of any subsequent detailed planning approval for the site, should the Concept Plan be approved. Should negotiations not lead to an agreement in these general terms, the proponent may potentially provide the park in lieu of any potential Section 94 contributions, or pay the ordinary Developer Contributions towards the acquisition and embellishment of open space applicable to the development.

Upper level building envelopes

Above ground level, the Concept Plan involves eight separate building envelopes. Described as Blocks A – H, the proposed envelopes will vary in height between five and fourteen storeys.

As detailed on the architectural plans and **Figure 23** below, Blocks E and D will be erected along the Flora Street frontage of the site with Blocks H, G and F along the Princes Highway frontage. Blocks A, B and C will be located to the centre of the site.



Figure 27 – Excerpt from site plan (source Woodhead)

In detail, the eight (8) blocks will comprise the following:

- Block A:** Block A is located to the centre of the site and immediately east of the proposed park. This block will comprise approximately 103 residential units and will rise to between 6 and 14 storeys above the podium.
- Block B:** Block B is located immediately east of Block A, this block will comprise approximately 77 residential units and will rise to between 6 and 10 storeys above the podium.
- Block C:** Block C is located east of Block B and will comprise 103 residential units and will rise to between 6 and 14 storeys above the podium.
- Block D:** Block D is located at the south eastern corner of the site and will comprise 4 storeys with a 5th floor set back. The block will provide commercial uses at street level along Flora Street with approximately 54 residential units above.
- Block E:** Block E will be located west of Block D and will comprise 5 storeys with a 6th floor set back. This block will include commercial uses fronting Flora Street with approximately 42 residential units above.
- Block F:** Block F will be located to the north eastern corner of the site and will comprise 5 storeys with a 6th floor set back. This block will include

showrooms at street level along the Princes Highway with approximately 36 residential units above.

Block G: Block G will be located west of Block F and will comprise 5 storeys with a 6th floor set back. This block proposes showrooms along the Princes Highway with approximately 36 residential units above.

Block H: Block H will be located west of Block G and will comprise 5 storeys and approximately 44 residential units.

Landscaping

A Landscape Concept Plan and Design Report has been prepared by Site Image (refer **Appendix 5**).

This concept splits the site into eight integrated landscape areas reflecting the various spaces and uses across the site. Further information on the proposed landscaping is provided at **Section 5** of this EA.

Commuter car parking

The proposal also involves a dedicated commuter car park within the Zone 13 land on the site. Located at Basement 1, this will be accessed from Oak Road and will provide commuter car parking for up to 200 cars. The car park would be contained within a separate “stratum lot” to the public park above it.

Preliminary discussions have been held with NSW Transport in relation to this element of the proposal. As a result of these discussions, it is understood that, if accepted by the NSW government, it is likely that Rail Corp would manage and operate the commuter car parking, however this is to be the subject of further discussions with the relevant agencies.

Should no agreement be reached on this element of the Concept, the Commuter Car Park will be removed from the Concept Plan and the volumetric space it comprises would simply be filled with clean fill.

Refer to **Section 6.14** of the EA for further discussion on this element of the Concept Plan.

Staging

Indicative staging of the Proposal is as follows:

Stage 1 - Retail, basement car parking and Blocks D + E. Construction of substrate element of the park to include the original STIF retention and temporary water body;

Stage 2 - Blocks A, B and C;

Stage 3 - Princes Highway Blocks F, G + H.

Stage 4 - Full embellishment of public park (note – timing of this stage will be subject to the outcome of VPA negotiations, and may come ahead of Stages 2 and/or 3).

3.5 Development plans

Development, as described above, will be generally in accordance with architectural and landscape plans submitted with this application, reduced copies of which are attached to this EA as **Appendix 3**.

Architectural plans by Woodhead Architects	
Drawing 0001	COVER SHEET - VIEW FROM OAK ROAD
Drawing 0002	VIEW FROM PRINCES HIGHWAY
Drawing 0015	SITE PHOTOS
Drawing 0016	SITE PHOTOS
Drawing 0020	CONTEXT PLAN
Drawing 0021	SITE CONTEXT AND ANALYSIS
Drawing 0030	EXISTING SITE CONTOURS
Drawing 0040	SITE PLAN
Drawing 0041	LANDSCAPE PLAN
Drawing 0100	TYPICAL TOP LEVEL RESIDENTIAL FLOOR PLAN
Drawing 0110	TYPICAL RESIDENTIAL FLOOR PLAN
Drawing 0120	UPPER GROUND FLOOR PLAN
Drawing 0130	LOWER GROUND FLOOR PLAN
Drawing 0140	BASEMENT 1 PLAN
Drawing 0150	BASEMENT 2 PLAN
Drawing 0160	BASEMENT 3 PLAN
Drawing 0180	FLOOR PLANS BUILDING A TO C
Drawing 0181	FLOOR PLANS BUILDING D,E,F,G AND H
Drawing 0300	INDICATIVE SECTIONS EAST WEST (MASTERPLAN)
Drawing 0301	INDICATIVE SECTIONS NORTH SOUTH (MASTERPLAN)
Drawing 0400	SUN STUDY - WINTER
Drawing 0401	SUN STUDY – SUMMER
Drawing 0402	SUN STUDY PUBLIC AREAS
Drawing 0500	INDICATIVE ELEVATIONS NORTH & EAST
Drawing 0501	INDICATIVE ELEVATIONS SOUTH & WEST
Drawing 0502	INDICATIVE ELEVATIONS COLOURED
Drawing 0503	INDICATIVE ELEVATIONS COLOURED
Drawing 0600	INDICATIVE STAGING – LOWER GROUND STAGE 1
Drawing 0602	INDICATIVE STAGING – UPPER GROUND STAGE 1
Drawing 0603	INDICATIVE STAGING – UPPER GROUND STAGE 2
Drawing 0604	INDICATIVE STAGING – UPPER GROUND STAGE 3

Landscape plan by Site Image	
Drawing SS10-2242 A	Landscape Concept Plan

3.6 Capital Investment Value

The Capital Investment Value of the project is estimated at \$238 million. This figure is confirmed by the Quantity Surveyor Cost Report attached at **Appendix 26**.

3.7 Future applications

Should Concept Plan approval be granted, subsequent project or development applications containing detailed building design, materials, apartment layouts and the like will be required to be lodged and assessed before any development may take place on the site.

4 DIRECTOR-GENERAL'S ASSESSMENT REQUIREMENTS

The Director-General's Assessment Requirements (DGRs) for the proposal were issued on 24 August 2010. A copy of the DGRs is appended at **Appendix 1**. The key issues to be addressed in the EA are set out the following table along with an indication of where they have been addressed in this EA.

Table 2: Director General's Requirements

KEY ISSUES	WHERE ADDRESSED IN EA
<p>1. Relevant EPI's policies and guidelines to be addressed</p> <p>Planning provisions applying to the site, including permissibility and the provision of all plans and policies including:</p> <ul style="list-style-type: none"> • NSW State Plan 2010; • Draft South Subregional Strategy; • Metropolitan Transport Plan 2010; • State Environmental Planning Policy (Building Sustainability Index: BASIX) 2004; • State Environmental Planning Policy No. 55 - Remediation of Land; • State Environmental Planning Policy No.65 - Design Quality of Residential Flat Buildings and Residential Flat Design Code; • State Environmental Planning Policy (Infrastructure) 2007; • State Environmental Planning Policy No. 19 – Bushland in Urban Areas; • Acid Sulphate Soil Assessment Guidelines (Acid Sulphate Soil Management Advisory Committee 1998); • NSW Roads and Traffic Authority Guide to Traffic Generating Developments; and • SCATES Traffic Analysis Programme. 	<p>Section 5, 6.7 and 6.11</p>
<p>2. Ecological Impacts</p> <p>The EA shall address:</p> <ul style="list-style-type: none"> • Impact of the development on existing flora and fauna and their habitats, having regard to the Threatened Species Assessment Guidelines; • A Habitat Management Plan for the Grey-Headed Flying Fox; • A Vegetation Management Plan providing for the retention, on going care and improvement of the existing Sydney Turpentine Ironbark Forest (STIF); • Assess the impact of the proposal on any remnant areas of STIF and how any losses will be offset; • Assessment of the significance of impact on the STIF and the Grey-headed Flying Fox as per the Environmental Protection and Biodiversity Conservation Act (1999) 	<p>Section 6.2, Appendix 9 and 10</p>

<p>3. Land use</p> <ul style="list-style-type: none"> The EA shall address the economic impact of the proposal and include a detailed investigation into the impact of the proposed retail floor space upon the hierarchy of centres as outlined within the relevant subregional strategy The EA shall address how the proposal will relate to Kirrawee village centre and the adjacent employment area to the north 	<p>Section 6.3, Appendix 4, 11 and 12</p>
<p>4. Built form and Urban Design</p> <ul style="list-style-type: none"> The EA must demonstrate the proposal will achieve a high standard of urban design/excellence The EA shall address the height, bulk, scale and visual impact of the proposed development within the context of the locality, and the desired future character contemplated by local planning controls Detailed envelope/height and contextual studies should be undertaken. Particular attention shall also be given to the siting and layout of the proposed building envelopes Analysis of how the proposed built form, siting, level and arrangement of retail and commercial space will integrate with future retail and commercial development within Zone 7 Mixed Use-Kirrawee; The EA shall also provide the following: <ul style="list-style-type: none"> Comparable height study to demonstrate how the proposed height relates to the height of the existing/approved developments surrounding the site; Options for the siting and layout of the building envelopes; and View analysis to and from the site from key vantage points 	<p>Section 6.4, Appendix 4, 11 and 12</p>
<p>5. Public Domain/Open Space and Accessibility</p> <ul style="list-style-type: none"> The EA must provide details on the type, function and landscape character of the proposed areas of public/private open space The EA shall provide details on the interface between the proposed uses and public domain, and the relationship to and impact upon the existing public domain and address linkages with and between other public domain spaces. Particular consideration of the Kirrawee town centre should be documented The EA shall demonstrate how the compensatory water body will be maintained during the development stages and how the level and quality of water in the temporary water body will be maintained throughout the stages of development 	<p>Section 6.5, Appendix 4 and 5</p>
<p>6. Environmental and Residential Amenity</p> <p>The EA must address solar access, acoustic and visual privacy, view loss, overshadowing and microclimate issues such as wind and identify mitigation measures where necessary</p>	<p>Section 6.6, Appendix 4, 14, 18 and 27</p>

<p>The EA must address the design principles of SEPP 65 and the Residential Flat Design Code.</p>	
<p>7. Transport and Accessibility (Construction and Operational)</p> <p>The EA shall address:</p> <ul style="list-style-type: none"> • Provide a Traffic and Accessibility Impact Study in accordance with the RTA's Guide to Traffic Generating Developments • Provide an assessment of the implications of the proposed development for non car travel modes • Demonstrate the provision of sufficient on-site parking for the proposal having regard to local planning controls and RTA guidelines • Provide an investigation into the provision of suitable pedestrian facilities between the commuter parking area and the Kirrawee Railway Station. The EA shall also identify the ownership and continued maintenance responsibility for the commuter car park 	<p>Section 6.7 and Appendix 17</p>
<p>8. Noise and Vibration Assessment</p> <p>The EA should address the issue of noise and vibration impact from the Princes Highway and rail line along with any proposed amelioration measures</p>	<p>Sections 6.8 and Appendix 14</p>
<p>9. Ecologically Sustainable Development</p> <ul style="list-style-type: none"> • The EA shall detail how the development will incorporate ESD principles in the design, construction and ongoing operation phases of the development. • The EA must demonstrate that the development has been assessed against a suitably accredited rating scheme to meet industry best practice for the relevant components of the development 	<p>Section 6.9 and Appendix 4</p>
<p>10. Drainage and Stormwater Management</p> <ul style="list-style-type: none"> • The EA shall address drainage/groundwater/flooding issues associated with the development/site • An urban design integrating 'best practice' stormwater management principles • Measure to ensure that water quality in the ornamental pond is continuously maintained to a standard suitable for wildlife known to drink from the existing water body, and to a standard suitable with public safety and amenity • Measure to ensure that stormwater flows from the site are controlled and appropriately treated to ensure that there will be no short term or long term detrimental impacts to the receiving waters or environment • A methodology to dewater the brick pit in preparation for construction of the development that addresses the following: <ul style="list-style-type: none"> • Measures to protect against possible environmental impacts associated with dewatering the pit • Opportunities to reuse the water for beneficial 	<p>Section 6.10 and Appendix 16</p>

<p>purposes in preference to disposal</p> <ul style="list-style-type: none"> • Analysis of water quality and risk to the receiving environment • Impact of dewatering the brick pit on wildlife habitat • Affect of withdrawing the water from the brick pit on the groundwater resource; and • Stability of the empty impoundment and potential for bank failure, particularly the influence on Flora Street 	
<p>11. Contamination, Human Risk Assessment and Geotechnical Issues</p> <p>Contamination and geotechnical issues associated with the proposal should be identified and address in accordance with SEPP 55</p>	<p>Section 6.11, Appendix 8 and 13</p>
<p>12. Staging</p> <p>The EA must include details regarding the staging of the proposed development</p>	<p>Section 6.12 and Appendix 3</p>
<p>13. Utilities</p> <p>In consultation with relevant agencies, the EA shall address the existing capacity and requirements of the development for the provision of utilities including staging of infrastructure works.</p>	<p>Section 6.13 and Appendix 15</p>
<p>14. Contributions</p> <p>The EA shall address any Section 94 Contributions Plan/ State Infrastructure contributions and/ or details of any Voluntary Planning Agreement.</p>	<p>Section 6.14, Appendix 24 and 25</p>
<p>15. Heritage</p> <p>The EA shall include a Heritage Impact Statement which outlines the significance of heritage items on the site and how they will be preserved on site and protected during construction works.</p>	<p>Section 6.15 and Appendix 6</p>
<p>16. Consultation</p> <p>The EA shall demonstrate that an appropriate level of consultation in accordance with the Department's Major Project Community Consultation Guidelines October 2007 is to be undertaken and a Community Consultation Strategy shall be provided.</p>	<p>Section 6.16 and Appendix 7</p>
<p>17. Statement of Commitments</p> <p>The EA must include a draft Statement of Commitments detailing measures for environmental management, mitigation measures and monitoring of the project</p>	<p>Section 7</p>

In addition, Appendix B of the DGR's sets out the plans and documents that must accompany the Application as set out the following table along with an indication of where they have been provided in this EA.

Table 3: Plans and documents accompanying the EA

Plans and Documents to accompany the Application		
General	<ol style="list-style-type: none"> 1. An executive summary 2. A thorough site analysis including site plans, aerial photographs and a description of the existing and surrounding environment; 3. A thorough description of the proposed development; 4. An assessment of the key issues specified above and a table outlining how these key issues have been addressed; 5. An assessment of the potential impacts of the project and a draft Statement of Commitments, outlining environmental management, mitigation and monitoring measures to be implemented to minimize any potential impacts of the project; 6. The plans and documents outlined below; 7. A signed statement from the author of the Environmental Assessment certifying that the information contained in the report is neither false nor misleading; 8. A Quantity Surveyor's Certificate of Cost to verify the capital investment value of the project (in accordance with the definition contained in the Major Project SEPP); and 9. A conclusion justifying the project, taking into consideration the environmental impacts of the proposal, the suitability of the site, and whether or not the project is in the public interest. 	<ol style="list-style-type: none"> 1. Refer to Page 1 - 7 2. Refer to Section 2 and Appendix 4 3. Refer to Section 3 4. Refer to Section 4 5. Refer to Section 6 and Section 7 6. Refer to Appendices 7. See pages 6 & 7 8. Refer to Appendix 26 9. Refer to Section 8
Plans and Documents	<ol style="list-style-type: none"> 1. An existing site survey plan 2. A site analysis plan 3. A locality / context plan 4. Architectural drawings 5. Visual and View analysis 6. A physical model 7. Shadow diagrams 8. Landscape plan 9. Stormwater / Drainage Concept Plan 10. Site Contamination Assessment/Human Health Risk Assessment 11. Geotechnical Report 12. Groundwater Assessment 	<ol style="list-style-type: none"> 1. Refer to Appendix 2 2. Refer to Appendix 3 3. Refer to Appendix 3 4. Refer to Appendix 3 5. Refer to Appendix 4 6. The model has been built and will be provided 7. Refer to Appendix 3 8. Refer to Appendix 5 9. Refer to Appendix 16 10. Refer to Appendix 8 11. Refer to Appendix 13 12. Refer to Appendix 19

5 STATUTORY PLANNING CONTEXT

5.1 Overview

The Director General's requires the assessment of the Concept Plan application in relation to the following strategy documents and statutory instruments:

- Part 3A of the Environmental Planning & Assessment Act;
- NSW State Plan 2010;
- Metropolitan Transport Plan 2010;
- Sydney Metropolitan Strategy & Draft South Sub-regional Strategy;
- State Environmental Planning Policy (Major Development) 2005;
- State Environmental Planning Policy (Building Sustainability Index: BASIX) 2004;
- State Environmental Planning Policy No. 55 - Remediation of Land;
- State Environmental Planning Policy No.65 - Design Quality of Residential Flat Buildings and Residential Flat Design Code;
- State Environmental Planning Policy (Infrastructure) 2007;
- State Environmental Planning Policy No. 19 – Bushland in Urban Areas

In addition, the EA has also considered the provisions contained within Draft State Environmental Planning Policy (Competition) 2010.

Other local planning controls which are not strictly applicable to this assessment but which have nonetheless been considered are:

- Sutherland Local Environmental Plan 2006; and
- Sutherland Development Control Plan 2006.

These controls and guidelines are addressed in the following sections.

5.2 Part 3A of the Environmental Planning & Assessment Act 1979

This application is made under Part 3A of the Act and seeks the Minister's approval for the Concept Plan under Section 75O of the Act.

5.3 NSW State Plan 2010

The NSW State Plan was issued in March 2010. The State Plan is the State Government's vision for the future of NSW, which envision that:

1. *"Our transport network is world class—safe, reliable and integrated. Our cities and towns are great places to live, and we experience a high quality of life*
2. *Our economy grows stronger—supporting jobs and attracting business investment*

3. *Our children are better educated, our people more skilled and we are known for our research and innovation*
4. *Our health system provides the highest quality care accessible to all*
5. *Our energy is clean, our natural environment is protected and we are leaders in tackling climate change*
6. *Our community is strong and the most disadvantaged communities and our most vulnerable citizens are supported*
7. *Our police and justice system keep the community safe.”*

The State Plan includes eight (8) key priorities as identified below:-

1. *Better transport and liveable cities;*
2. *Supporting business and jobs;*
3. *Clever state;*
4. *Healthy communities;*
5. *Green state;*
6. *Stronger communities;*
7. *Keeping people safe; and*
8. *Better government.*

The proposal is consistent with the relevant priorities, as demonstrated in the sections below.

1. *Better transport and liveable cities*

It is considered that the proposed Concept Plan is consistent with this chapter of the State Plan in that it offers the unique opportunity to increase housing affordability and choice by 450 dwellings to assist in satisfying the 19,240 new homes required for the next 10 years. Moreover the site is also located within 5 minutes walk of Kirrawee train station and adjacent to a major bus route running along the Princes Highway.

The proposal is also consistent with the idea of accelerating the establishment of residential centres within walking distance of public transport opportunities and enhancing the quality of life by making it easier for people to travel from home to work and to have access to services as well as providing local shopping for residents and senior citizens within the immediate and local area.

2. *Clever state*

The site is located within walking distance of local schools and within 5 minute drive of Sutherland Hospital and TAFE which will assist in providing ease of access to knowledge and training.

3. *Healthy communities*

The Concept Plan will increase the opportunity for walking and cycling, thereby promoting a healthy lifestyle and also the proposed scheme seeks to maximise green open space on the site.

4. Green state

The proposal has had regard for the Green Star and BASIX multi-residential rating tool. Whilst it is noted that the application is for a Concept Plan, it is submitted that the future buildings, consistent with the proposed building envelopes, are capable of complying with BASIX, BCA Section J and Green star rating, and that details will be submitted with future development applications for those buildings (refer to **Appendix 15**).

5. Keeping people safe

Although the proposal has been submitted in concept form, the layout and design of the land uses is such that the development will have an active environment after business hours giving good passive surveillance to the residential occupants and an active public domain.

In addition, the creation of a well-kept and attractive public park will help to attract more people, and thus reduce the likelihood of crime and/or anti-social behaviour. The design of the development reflects opportunities for appropriate “security design” based on CPTED principles, the details of which will be provided at detailed design stage.

5.4 Sydney Metropolitan Strategy and Review – Sydney Towards 2036

Sydney Metropolitan Strategy – City of Cities

In December 2005 the NSW Department of Planning (DOP) released the Sydney Metropolitan Plan (the “Metropolitan Strategy”).

The Metropolitan Strategy aims to enhance Sydney’s liveability through: providing a more diverse range of housing choices; strengthening Sydney’s long term economic prosperity; providing equitable access to employment, services and lifestyle opportunities; creating a more environmentally sustainable city; and, facilitating and managing the growth of Sydney over the next 35 years.

The Metropolitan Strategy establishes principles for how the growth targets may be met in the most environmentally, socially and economically sustainable manner.

The emphasis within the Strategies is very much on developing sites which are within established urban areas, close to reliable transport and other urban services.

The Metropolitan Strategy originally set the framework for creating more than 600,000 new dwellings and 500,000 new jobs in Sydney Metropolitan area by 2031.

Metropolitan Strategy Review – Sydney Towards 2036

The schedule five yearly review of the Metropolitan Strategy commenced in March 2010 with the release of the discussion paper “Sydney Towards 2036”. This paper reviews the current progress of the Metropolitan Strategy and identifies and reviews a number of issues that have not been addressed since the original document was released in 2005.

The discussion paper reviews the targets contained within the Metropolitan Strategy with those in the Metropolitan Transport Plan (refer **Section 5.6**). It is also envisaged that the Subregional Strategies will also be revised, albeit they have not yet been adopted (refer **Section 5.5**).

In overview, Sydney Towards 2036 focuses on achieving 760,000 new jobs and 770,000 more homes. Of relevance to this application, the Strategy recognises that development should take place in the right locations and specifically within existing urban areas with good access to public transport.

The paper also sets out a number of proposed directions and questions to be considered by the community as follows:

- More jobs with a particular emphasis on reducing journeys to work;
- More housing, particularly within existing urban areas;
- Changing housing needs; and
- Encouraging urban renewal and building communities through redevelopment. Of particular relevance to this application, the Paper refers to “transforming under-used or dilapidated areas”. Indeed, the review also emphasises mixed use development as a key strategy to encourage the vitality of centres and the integration of a wide range of land uses and activities.

The proposal is considered to be consistent with the aims and objectives of the Metropolitan Strategy and the review paper, in that it will provide a mixed use development on a large brownfield site and will deliver 450 dwellings and opportunities for up to 514 jobs in a location that is less than 5 minutes from a train station.

5.5 Draft South Subregional Strategy

To implement the Metropolitan Strategy, ten ‘subregions’ have been established. The Sutherland LGA is part of the South Subregion with the Rockdale, Canterbury, Hurstville, Kogarah and Marrickville LGA’s.

The Draft South Subregional Strategy was released on 14 December 2007. It was prepared by the DOP to implement the actions and objectives of the Metropolitan Strategy at a sub regional level, whilst also providing for the geographic allocation of the additional jobs and housing targets.

The ‘vision’ within the Subregional Strategy is that, by 2031, the South subregion will (p4):

- *“Retain its high quality environmental, tourism and lifestyle attributes.*
- *Provide superior lifestyle and amenity, allowing residents to live and work within the subregion.*
- *Support the function of the Global Economic Corridor.*
- *Have a diverse community supported by a greater range of housing choice.*

- *Have greater public transport use through a series of rail infrastructure improvements and encouragement of walking and cycling.”*

The Draft South Subregional Strategy targeted 35,000 new houses and 29,000 new jobs within the South Sydney Subregion by 2031. Of these, 10,100 additional dwellings and 8,000 jobs are to be provided within the Sutherland LGA. The strategy also requires that 80% of dwelling growth should occur within the defined radii of identified centres.

The Metropolitan and draft Subregional Strategies establish six land use strategies: economy and employment; centres and corridors; housing; transport; environment and resources; parks, public places and culture; and, Implementation and Governance.

The relevant key directions for the south include the following:-

- *Retain strategic employment lands;*
- *Identify and investigate renewal areas for the south;*
- *Recognise diversity across the subregion; and*
- *Protect scenic, heritage and environment.*

The proposal is consistent with the land use policies of the draft Subregional Strategy, as demonstrated in the sections below.

Economy and Employment

The Metropolitan Strategy and draft Subregional Strategies have nominated locations to support increased employment growth over time. It is anticipated that by 2031, the majority of jobs will likely be located in centres or employment lands, which will provide the basis for more sustainable and targeted infrastructure and transport planning.

The objectives of the draft Subregional Strategy include:

- *“A1.1.1 South Councils to prepare Principal LEPs...which will provide sufficient zoned commercial and employment land to meet employment capacity targets.*
- *A3.2 Increase integration of employment and housing markets”*

The proposed development will assist in satisfying the aims of the draft Subregional Strategy through the creation of 5603 job years in relation to the construction and a net increase of 485 direct retail jobs and a number of commercial jobs in a site co-located with significant housing and that is highly accessible to public transport (refer **Appendix 11**).

Centres and Corridors

The draft Subregional Strategy identifies Kirrawee as a “Village” centre. Relevant aims and actions of the draft Subregional Strategy “Centres and Corridors” include:

- *“B2 - Increas[ing] densities in centres whilst improving livability.*
- *B2.1 Plan for Housing in Centres consistent with their employment role.*

- *B2.1.3 - Councils to investigate increasing densities in all centres where access to employment, services and public transport are provided or can be provided.”*

These benefits of these aims, which promote urban consolidation within centres, are described by the draft Subregional Strategy as follows:

“The benefits of concentrating activities in centres include:

- *improved access to retail, office, health, education, leisure, entertainment and cultural facilities and community and personal services;*
- *encouraging collaboration, healthy competition and innovation amongst businesses from clustering;*
- *making better use of existing infrastructure; and*
- *promoting sustainable transport and healthier communities by giving more people the option of taking public transport, walking and cycling and enabling people to carry out a number of activities in one location.*

Increasing residential densities within the walking radius of smaller local centres can make these places more vibrant and provide much needed housing choice for the ageing and changing population. In planning for these local centres councils will need to consider their employment role. Housing growth will need to be planned so it does not undermine the identified employment needs.

Land use relationships and local infrastructure improvements will need to ensure that opportunities are provided to enable increased use of active transport—particularly walking and cycling.

Across the Strategic Centres within the South Subregion, there are a range of approaches to accommodate housing to ensure that residential growth does not undermine, but rather supports and revitalises the centres’ commercial and retail roles.”

Due to the site’s proximity to Kirrawee rail station, the proposal achieves the objectives of the “Centres and Corridors” chapter of the draft strategy as it will increase the residential and working population that is accessible to public transport, shops, open space and will be a catalyst for the revitalization of the Kirrawee centre.

Housing

Much of the housing in the Sutherland LGA has developed along the rail line, Princes Highway and coastline and is predominantly of a lower-density form. The draft Subregional Strategy aims to:

- *C1.3 - Plan for increased housing capacity targets in existing areas*

Across the metropolitan region a target of 60-70 per centre of new housing will be accommodated in existing urban areas, focused around centres and corridors.

This will take advantage of existing services such as shops and public transport and reduce development pressures in other parts of Sydney

- C2 - Plan for a housing mix near jobs, transport and services

Focus residential development around Centres, Town Centres, Villages and Neighbourhood Centres.

The Metropolitan Strategy aims to focus residential development within centres and corridors with access to public transport and local services. Focusing residential development around centres with access to public transport will support achieving the targets set for increasing the share of peak hour journeys on a safe and reliable public transport system as well as the target set for Priority E5 'Jobs Closer to Home'.

- C2.1.1 South Councils to ensure location of new dwellings improves the subregion's performance against the target for the State Plan Priority E5"

The proposed development will deliver approximately 450 new dwellings within the Kirrawee centre. The co location of housing with employment and retail uses in close proximity to established public transport services and recreation facilities means that the proposal is consistent with the Metropolitan Strategy. The mixed use development is environmentally sustainable as it embodies the principles of a walkable city. It will also be a catalyst for the revitalization of the Kirrawee town centre, whilst reducing development pressures on nearby low-density residential areas.

Transport

The "Transport Strategy" primarily relates to the opportunities for increasing walking, cycling and enhancing public transport infrastructure. To this end, the Site is located only 150 metres north of Kirrawee train station which has only recently had its tracks duplicated.

In addition, the site is located adjacent to the Miranda-Heathcote (Corridor 22) Strategy Bus Corridor. It is envisaged that the Strategic Bus Corridors will provide fast, frequent, direct and convenient bus services between Sydney's major centres.

Subject to NSW government agreement, the Concept's proposal to provide a commuter car park for up to 200 cars on the site will benefit commuters using the Kirrawee train station. Offered to be constructed and funded by the proponent, this would augment the government's commuter car park program currently being implemented (largely fully taxpayer funded) at various other rail station locations across the State.

Environment, Heritage and Resources

As identified in **Section 6.2** of this EA, the site contains an area of 'Sydney Turpentine Ironbark Forest' (STIF) which is listed as a State endangered ecological community and is also scheduled under the *Environment Protection and Biodiversity Conservation Act 2000*.

As detailed in **Section 6.2**, Cumberland Ecology was engaged to undertake an Ecological Impact Assessment of the proposal (refer to **Section 6.5** and **Appendix 9**).

In addition to the STIF, the Assessment also identified the Grey-Headed Flying Fox and Eastern Bent-wing Bat endangered ecological communities on the site, and concludes that as the proposal includes the retention of the majority of STIF remnant woodland subject to the implementation of mitigation measures, the impacts to these species are unlikely to be significant. Therefore, the proposal will not unreasonably impact upon the endangered ecological communities on the site,

In addition to the endangered flora and fauna species on the site, the remnants of kilns on the site have been identified as an item of non-Aboriginal archaeological significance in the SSLEP Refer to **Section 6.15** for additional information on this element of the proposal.

Parks and Public Places

In relation to “Parks and Public Place Strategy”, the aims of the draft Subregional Strategy include:

- *“F2.1 Improve the quality of local open space.*
- *F2.1.1 Councils will prepare strategies for the provision and management of new open space areas and embellishments to existing open space areas to serve the needs of the existing and future residents of the South Subregion.*
- *F2.1.6 Councils to continue to maintain or enhance the provision of local open space particularly in centres and along transport corridors where urban and particularly residential growth is being located.*
- *F2.2 Investigate Future Options for Open Space Provision and Management.*

Although the application is for a Concept Plan only, it involves the provision of a 0.9ha ‘public park’. Discussions have been held with Council in relation to establishing a number of principles for the future development of this park. Although the embellishment and details of the park will be subject to detailed design as part of future applications, it is considered that the proposed park has the potential to satisfy all of the aforementioned objectives.

Conclusion

The site comprises a significant “brownfield” site located approximately 150 metres from Kirrawee rail station and just over one kilometre from Sutherland. It provides an opportunity for a major redevelopment not only to revitalize Kirrawee, but also to complement and supplement Sutherland’s future Major Centre role.

It is considered that the Concept Plan satisfies the aims of the draft Subregional Strategy as follows:

- The proposal will increase the residential and working population with easy and close access to Kirrawee train station;

- The mixed use development is environmentally sustainable as it embodies the principles of a walkable city;
- The proposal will reduce development pressures on nearby low-density residential areas;
- The proposal will result in 0.9 ha of new public open space that will serve Kirrawee's residents and workers as well as surrounding residents;
- The park will enable the protection of the STIF forest;
- The equivalent of 5603 job years will be generated during the construction period; and
- The proposed retail uses will directly generate 485 ongoing full-time and part-time jobs, indirectly generate 461 jobs as well as approximately 28 direct jobs 27 indirect commercial jobs.

It therefore represents a major, valuable asset to assist in meeting Metropolitan and sub regional housing and jobs targets and other planning objectives.

5.6 Metropolitan Transport Plan 2010

The Metropolitan Transport Plan, *"Connecting the City of Cities"*, sets out a 25 year vision for transport planning in Sydney. The Plan is supported by a 10 year funded package of transport infrastructure and is intended to be considered in conjunction with the Metropolitan Strategy, which together provides one overarching strategy for the Sydney Metropolitan area.

The core theme of the Plan is concentrating development and supporting transport services in Sydney's centres. Fundamental to this study is the vision that:

"Much of Sydney's growth challenge will be met by making the most of the city's existing urban areas. New housing, workplaces, public spaces and improved transport will be integrated to achieve genuine renewal."

Under the requirements of the plan, the State Government will also set up a Sydney Metropolitan Development Authority to coordinate future transit-orientated development and urban renewal.

Of relevance to this application, the Metropolitan Transport Plan adopts the Department of Planning's latest employment and dwelling targets for the Sydney Metro Region between 2006 – 2036.

Under the latest version of the Plan, Sydney is expected to accommodate the development of 699,800 dwellings and generate an additional 713,920 jobs by 2036. In terms of the South Subregion, the Plan envisages an additional **52,900 dwellings** and **47,530 new jobs**.

It is noted that these targets differ from those set in the NSW Metropolitan Strategy and the draft Sub Regional Strategy, as such, although it is noted that these revised targets were not recognised within the Sydney Metropolitan Strategy Review, it is understood

that the Department of Planning is expected to recognise these figures as its official employment and dwelling targets for future Metropolitan planning.

It is considered that the Concept Plan Application is consistent with the aims of the Transport Plan as it offers the opportunity to contribute 450 dwellings and 1002 direct and indirect jobs towards meeting the housing and jobs targets in the Plan. Moreover the site is located within 5 minutes walk of rail transport which has the capacity to carry passengers to and from the Sydney CBD and other Centres throughout Sydney. It therefore represents a major, valuable asset to assist in meeting housing and jobs targets.

5.7 SEPP (Major Development) 2005

Clause 6(1) of SEPP Major Development 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 sets out “*Part 3A projects – Projects – Classes of Development*”. Clause 13 refers to Group 5 Residential, commercial or retail projects, and includes:

(1) Development for the purpose of residential, commercial or retail projects with a capital investment of more than \$100 million.

The proposed mixed use development and associated works and improvements will have a capital investment value of more than \$100 million. This application is therefore made in accordance with the provisions of Part 3A of the Act.

5.8 State Environmental Planning Policy No. 55 - Remediation of Land

State Environmental Planning Policy No. 55 – Remediation of Contaminated Lands (SEPP 55) establishes State-wide provisions to promote the remediation of contaminated land.

Clause 7 of the SEPP 55 requires that a consent authority must not grant consent to a development unless it has considered whether a site is contaminated, and if it is, that it is satisfied that the land is suitable (or will be after undergoing remediation) for the proposed use.

EIS has prepared a Contamination Management Plan (CMP) in relation to the application (refer **Appendix 8**).

The CMP includes a review of a number of historical reports and documents undertaken on the site between 1996 and 2006 and provides a methodology to remove the existing

site facilities, impacted fill material, and other unknown, unexpected contaminants that may be encountered during site works.

As a result of these investigations, EIS sets out a number of issues that are likely to require management during the site preparation stage of the development as follows:

- Management of unexpected materials and/or contamination sources;
- Presence of asbestos containing materials;
- Off-site disposal of excess excavated material;
- Evaluation of suitability of site materials to backfill the brick pit;
- Importation of select fill material for site reinstatement;
- Control of imported material; and
- Management of potential contamination in the remnant bushland area.

The CMP also identifies a number of assessment criteria for the various materials that will be handled during the process as well as validation sampling and contingency plans in the event that contaminated material is encountered during site works.

The report concludes (pp55) that:

“The site is considered to be suitable for the proposed development provided that the management of potential contamination measures outlined in this CMP are successfully implemented as applicable. A validation report should be prepared on completion of site works to document all site contamination related activities undertaken during the site development works.”

Refer to **Appendix 8** for further information in this regard.

5.9 State Environmental Planning Policy No. 65- Design Quality of Residential Flat Buildings

State Environmental Planning Policy No.65 – Design of Residential Flat Buildings (SEPP 65) was gazetted on 26 July 2002 and aims to improve the quality of design of residential flat buildings across the State.

Clause 2 of the SEPP sets out the aims of SEPP 65 which include:

“(1)...to improve the design quality of residential flat development in New South Wales...”

In accordance with Clause 4, SEPP 65 applies to new (or substantially altered) residential flat buildings, which have:

“(a) 3 or more storeys (not including levels below ground level provided for car parking or storage, or both, that protrude less than 1.2 metres above ground level), and

(b) 4 or more self-contained dwellings (whether or not the building includes uses for other purposes, such as shops)..."

Therefore, SEPP 65 applies to the residential flat building component of this application.

As stated, because this application is a Concept Plan and lacks detailed design, the level of assessment under SEPP 65 is necessarily restricted to the broader elements of its design, such as the appropriateness of the overall placement and interrelationship of its components on the site, suitability of proposed heights and the like. Whilst it is necessary to ensure that the concept, if approved, would have the capability of complying with the detailed design principles of the SEPP, these will only be able to be assessed once future more detailed applications are submitted for assessment.

The development has been designed by Woodhead Architects. As such, a SEPP 65 Certification and assessment of the Concept Plan has been provided at **Appendix 27**. The 10 design principles of SEPP 65 have been addressed in Section 7 of the Urban Design Report prepared by GMU Architects and Urban Designers (GMU), included as Appendix 4 and discussed at **Section 6.4** of the EA. The Report concludes that the proposal appropriately addresses the 10 design principles of SEPP 65.

5.10 State Environmental Planning Policy (Building Sustainability Index: BASIX) 2004

SEPP (BASIX) aims to encourage sustainable residential development.

As this is a Concept Plan, which if approved will not allow for the construction of any buildings without further consent, no BASIX certification is required at this stage. Notwithstanding this, there is nothing associated with the Concept Plan which would prevent the certification and completion of BASIX commitments at the subsequent stages.

Wallis & Spratt has prepared a report on ecological sustainability (refer **Appendix 15**) and has concluded that:

"future buildings, consistent with the proposed building envelopes, are capable of complying with BASIX, BCA Section J and Green star rating, and that details will be submitted with future development applications for those buildings"

5.11 State Environmental Planning Policy (Infrastructure) 2007

Clause 104 of SEPP (Infrastructure) requires that before granting consent to a development for residential flat buildings with 300 or more apartments, Councils must refer the application to the Roads and Traffic Authority for comment and must consider the accessibility of the site, including:

- the efficiency of movement of people to and from the site and the extent of multi-purpose trips, and

- the potential to minimise the need for travel by car, and
- any potential traffic safety, road congestion or parking implications of the development.

Whilst these requirements do not strictly apply to a Part 3A application, a Traffic Management and Accessibility Plan prepared by Halcrow, which addresses the relevant issues is appended to this EA at **Appendix 17**. A summary of its findings and conclusions is contained in **Section 7** of this EA.

5.12 State Environmental Planning Policy No. 19 – Bushland in Urban Areas

State Environmental Planning Policy No. 19 – Bushland in Urban Areas (SEPP 19) establishes provisions for development that affects bushland in urban areas, including the Sutherland LGA. Clause 4 of SEPP 19 defines “bushland” as:

“...land on which there is vegetation which is either a remainder of the natural vegetation of the land or, if altered, is still representative of the structure and floristics of the natural vegetation.”

Part of the site is occupied by bushland, including the Sydney Turpentine Ironbark Forest endangered ecological community, and consequently SEPP 19 is applicable to this proposal.

In accordance with Clause 2, the aims and objectives of SEPP 19 are:

- “(1) The general aim of this Policy is to protect and preserve bushland within the urban areas referred to in Schedule 1 because of:*
- (a) its value to the community as part of the natural heritage,*
 - (b) its aesthetic value, and*
 - (c) its value as a recreational, educational and scientific resource.*
- (2) The specific aims of this policy are:*
- (a) to protect the remnants of plant communities which were once characteristic of land now within an urban area,*
 - (b) to retain bushland in parcels of a size and configuration which will enable the existing plant and animal communities to survive in the long term,*
 - (c) to protect rare and endangered flora and fauna species,*
 - (d) to protect habitats for native flora and fauna,*
 - (e) to protect wildlife corridors and vegetation links with other nearby bushland,*
 - (f) to protect bushland as a natural stabiliser of the soil surface,*

- (g) to protect bushland for its scenic values, and to retain the unique visual identity of the landscape,
- (h) to protect significant geological features,
- (i) to protect existing landforms, such as natural drainage lines, watercourses and foreshores,
- (j) to protect archaeological relics,
- (k) to protect the recreational potential of bushland,
- (l) to protect the educational potential of bushland,
- (m) to maintain bushland in locations which are readily accessible to the community, and
- (n) to promote the management of bushland in a manner which protects and enhances the quality of the bushland and facilitates public enjoyment of the bushland compatible with its conservation.”

Clauses 6 and 7 of SEPP 19 apply to land reserved for public open space (land zoned 13 within the SSLEP):

- “(1) A person shall not disturb bushland zoned or reserved for public open space purposes without the consent of the council.
- (2) Nothing in subclause (1) requires development consent for the disturbance of bushland where it is being disturbed:
 - (a) for the purposes of bushfire hazard reduction,
 - (b) for the purpose of facilitating recreational use of the bushland in accordance with a plan of management referred to in clause 8 of this Policy,
 - (c) for the purpose of constructing, operating or maintaining:
 - (i) lines for electricity or telecommunication purposes, or
 - (ii) pipelines to carry water, sewerage or gas or pipelines licensed under the Pipelines Act 1967, or
 - (d) for the purpose of constructing or maintaining main roads.
- (3) Pursuant to section 30 (4) of the Act, the provisions of sections 84, 85, 86, 87 (1) and 90 of the Act apply to and in respect of development referred to in subclause (1) in the same way as those provisions apply to and in respect of designated development.
- (4) A consent authority shall not consent to the carrying out of development referred to in subclause (1) unless:
 - (a) it has made an assessment of the need to protect and preserve the bushland having regard to the aims of this Policy,
 - (b) it is satisfied that the disturbance of the bushland is essential for a purpose in the public interest and no reasonable alternative is available to the disturbance of that bushland, and
 - (c) it is satisfied that the amount of bushland proposed to be disturbed is as little as possible and, where bushland is disturbed to allow construction work to be carried out, the bushland will be reinstated upon completion

of that work as far as is possible.”

In addition, Clause 9 of SEPP 19 establishes the following provisions for land adjoining land zoned for public open space (land zoned 7 within the SSLEP):

“9 Land adjoining land zoned or reserved for public open space

- (1) *This clause applies to land which adjoins bushland zoned or reserved for public open space purposes.*
- (2) *Where a public authority:*
- (a) *proposes to carry out development on land to which this clause applies, or*
 - (b) *proposes to grant approval or development consent in relation to development on land to which this clause applies, the public authority shall not carry out that development or grant the approval or development consent unless it has taken into account:*
 - (c) *the need to retain any bushland on the land,*
 - (d) *the effect of the proposed development on bushland zoned or reserved for public open space purposes and, in particular, on the erosion of soils, the siltation of streams and waterways and the spread of weeds and exotic plants within the bushland, and*
 - (e) *any other matters which, in the opinion of the approving or consent authority, are relevant to the protection and preservation of bushland zoned or reserved for public open space purposes.”*

The proposal is consistent with the aims and objectives of SEPP 19 as the proposed park will enable the conservation and protection of much of the remnant bushland and STIF, in a location that is accessible to the community.

Furthermore, Cumberland Ecology has been engaged to prepare a Flora and Fauna Assessment of the proposal (**Appendix 9**). Cumberland Ecology conclude that:

“impacts as a whole on threatened species and the Sydney Turpentine Ironbark Forest community will be minor and no species or community is likely to be placed at risk as a result of the proposed development”.

Therefore, the proposal satisfied the requirements of SEPP 19.

5.13 Draft State Environmental Planning Policy (Competition) 2010

The Department of Planning released the draft State Environmental Planning (Competition) Policy 2010 in August 2010. The draft SEPP aims to promote economic growth and competition, and remove anti-competitive barriers in environmental planning and assessment.

Clause 3 sets out the relevant aims of the policy as follows:

- “(a) to promote economic growth and competition, and
- (b) to remove anti-competitive barriers in environmental planning and assessment.”

As set out at **Section 6.3** of the EA, Hill PDA has undertaken an economic assessment of the proposal. As a result of this analysis, it is submitted that the development of the Site will bring with it significant economic benefits to the existing centre, and indeed as set out in Hill PDA's assessment, the the impact on the Kirrawee Village is assessed to be “*net positive*” and that “*Kirrawee will enjoy an increase in trade of at least five fold*”. Refer to **Section 6.3** of this EA for further information.

Clause 10 of the draft SEPP states that:

“A restriction in an environmental planning instrument or development control plan on the number of a particular type of retail premises in any commercial development, or in any particular area, does not have effect.”

Current provisions in the Sutherland DCP 2006 which seek to restrict the establishment of a supermarket on the site are inconsistent with this specific provision and the general intention of the draft SEPP.

5.14 Sutherland Local Environmental Plan 2006

Whilst not strictly applying to this application, the Sutherland Shire Local Environmental Plan (SSLEP) 2006 prescribes the main land use zoning and development standards for the site.

Within the SSLEP, the site is partly zoned 7 – Kirrawee Mixed Use and partly zoned 13 – Public Open Space. It is noted that the proposal is fully permissible, with the exception of the commuter car parking which is prohibited in Zone 13 (but may be approved by the Minister subject to approval of a Concept Plan under Part 3A).

Planning objectives for Zone 7 are outlined in Clause 12 of SSLEP 2006, with relevant objectives generally being:

- a) to take advantage of the zone's access and profile from the Princes Highway,
- b) to create development that mixes employment activities within a liveable urban environment,

- c) *to encourage high employment-generating development that encompasses high technology industries, commercial display centres and light industries compatible with the existing locality and adjoining residential buildings,*
- d) *to allow the zone to support a live-and-work culture that provides for local employment and acts as a transition between employment activity and strict residential uses in the surrounding neighbourhood,*
- e) *to permit light industrial uses that are compatible with the desired future residential amenity of the zone,*
- f) *to ensure the design of all residential buildings is of a high architectural quality and all residential buildings have an attractive streetscape setting,*
- g) *to ensure development is carried out in a way that addresses the street concerned (achieving an attractive and vibrant streetscape) and reinforces surveillance of the public domain,*
- h) *to make provision for a prestigious gateway development capable of employing a substantial workforce,*
- i) *to provide a substantial area of public open space for employees, residents and the local community,*
- j) *to facilitate the re-vitalisation of the Kirrawee Town Centre and the Kirrawee railway station precinct,*
- k) *to ensure any expansion of retail activity within the zone maintains the role and function of Kirrawee Town Centre and does not adversely impact on the sustainability of other centres in the Sutherland Shire,*
- l) *to ensure any new shops integrate with and support the existing Kirrawee Town Centre,*
- m) *to ensure development is compatible with, and does not adversely impact on, the amenity of the surrounding residential area, particularly in terms of air pollutants, noise emissions and visual effects.*

The proposal is for the use of a site that is zoned to accommodate residential and employment generating development.

The proposal presents a design that responds well to the size and shape of the site, providing an acceptable balance between retail, commercial, residential and open spaces. It will transform the site from its current isolated and vacant usage to one that connects physically and characteristically with the surrounding Kirrawee Town Centre and railway precinct. The development will incorporate high-quality urban design features and architectural merit and will create a landmark gateway development which takes advantage of the site's access and profile from the Princes Highway.

The proposal will also create a sense of entry to Kirrawee centre from the Princes Highway and will provide active retail type uses fronting onto Flora Street that enliven the proposed public open space on the site whilst extending the main street character of the existing shops along Flora Street to link towards the primary school. The proposed open piazza will also create a "heart" to the town centre which currently does not exist.

Retailing is one of the highest forms of employment generating development, significantly more than typical business park and light industrial uses. The proposal will provide a transition between the existing employment activities and residential uses in the surrounding neighbourhood whilst facilitating the re-vitalisation of the Kirrawee Town Centre and railway station precinct.

Under Part 3A, the SSLEP does not strictly apply to the consideration of this application and although it does contain certain development standards that ordinarily apply to the development of the site, we consider that those controls are not consistent with current regional planning principles described earlier in this EA and therefore should be given only limited weight in the assessment of this proposal. The proposal departs from the primary development standards in the SSLEP of floorspace ratio (by 52%) and height by varying degrees towards the centre of the site.

Recent discussions with Sutherland Council have confirmed Council's preparedness to consider alternative physical forms that embody improved urban design outcomes. The proposed departures from the SSLEP standards are considered necessary to obtain the improved regional planning and urban design outcomes encompassed within the current Concept Plan.

It is noted that the PAC under Part 3A is not constrained under the Act in the same manner as a consent authority under a Part 4 application. If it were to conclude that the current application has merit, it is not bound by the objectives and prescriptions of an LEP (as expressly prescribed in Section 75R of the Act). Indeed, we submit that where the provisions of an LEP or DCP are incompatible with or constrain the achievement of State or regional planning objectives, the PAC should give greater weight to regional policies above local policies where there is an inconsistency.

5.15 Draft Sutherland Local Environmental Plan

By 2010, all NSW Councils are to have prepared a comprehensive LEP in the new standard template form. The new format incorporates standard zones and definitions and requires Council to satisfy the requirements of the Metro Strategy and draft Sub-Regional Strategies in relation to the zoning of land to provide for housing and jobs.

The preparation of the draft Sutherland LEP is currently in its early stages with little or no public documentation prepared to date.

However, and as part of the LEP review process, Sutherland Council has commenced a Housing review into the options available in order to increase future housing supply in line with the Sub-regional Strategy's requirements. Although the majority of this research has been undertaken confidentially and is not public at this stage, a number of Council committee reports appear to set out Council's latest position on this issue (*Sutherland Shire Council; Strategy and Direction Committee meetings, 1/12/08 and 2/2/09*)

In detail, we note that the Council has assessed each of the 21 "centres" within the Sutherland Shire, as defined within the Sub-regional Strategy, in terms of their comparative advantages, and their suitability as a location for additional dwellings. The

analysis was based on the strengths and weaknesses of each centre with each centre being rated (low, medium and high) based on a number of criteria. As a result of the assessment, an overall rating for each centre was then determined to allow the comparative advantages and suitability of each locality to be compared.

The criteria, along with the ranking given to Kirrawee, are set out below:

- Accessibility (**medium**);
- Development/redevelopment potential (**medium**);
- Potential for local economic benefits (**low**);
- Potential contribution to community character and vitality (**medium**);
- Environmental risk and desirability of environment (**medium**);
- Residential amenity/quality (**medium**);
- Fit with existing centre characteristics (**medium**); and
- Adequacy of infrastructure.

In summarising Kirrawee's overall potential, Council allocated it an overall "**medium**" suitability rating for providing additional dwellings.

As a result of this analysis, Council's assessment concluded that Kirrawee did not have the potential for an increase in dwelling numbers but that 10 centres within the Shire did have the potential for such an increase.

Of relevance, Gymea was included as one of the 10 centres where there was potential, despite also only receiving a "medium" suitability rating from the Council. Like Kirrawee, Gymea is also categorised as a "village" within the draft South Sub-regional Strategy.

In breaking down further Council's assessment of the two centres, it is noted that the only difference between the assessment of Kirrawee and Gymea was their assessment of economic benefits where Kirrawee scored "low" and Gymea scored "medium". Aside from this, Gymea and Kirrawee scored identically.

As set out elsewhere in this EA, it is submitted that the development of the Site will bring with it significant economic benefits to the existing centre, and indeed as set out in Hill PDA's economic assessment of the proposal, the the impact on the Kirrawee Village is assessed to be "*net positive*" and that "*Kirrawee will enjoy an increase in trade of at least five fold*". Refer to **Section 6.3** of this EA for further information.

It is therefore considered that, should the Concept Plan be approved, Kirrawee would score "high" in relation to economic impact, and therefore should be considered as a centre appropriate for increasing dwelling numbers.

However, and notwithstanding this, it is noted that Council's overall assessment of Kirrawee concluded that Kirrawee had the potential for:

"increased residential population could rejuvenate existing retail development and support developing café strip"

And that:

“new dwellings could meet the demands of young singles/couples and childless working households seeking proximity to amenities.....no significant environmental constraints”

In terms of facilitating the increase in dwelling supply in these centres, and of relevance to the proposal, Council has suggested a number of options to include:

1. Rezoning land to a zone that permits a higher density form of development
2. Changing the permissible FSR within a zone
3. Increasing height limits in areas where the permissible FSR potential can rarely be achieved; and
4. Changing other key development standards in the LEP and DCP that currently act as barriers to redevelopment.

The proposal is therefore considered to be consistent with the range of options that Council is currently considering in order to facilitate the additional housing demand, and in particular, the increased height and density that the development proposes will help Sutherland to deliver residential units and meet the requirements as set by the draft Sub-regional Strategy and within an area that Council clearly consider is appropriate for additional dwellings.

5.16 Sutherland Development Control Plan 2006

The Sutherland DCP 2006 (DCP) provides more detailed provisions, supplementing the provisions of SSLEP 2006.

Although urban design guidelines for the Project Site are provided within the current DCP, Amendment 4, it is noted that this DCP is based on an urban design model that was prepared between 2001 and 2003 and which Council staff accept warrants review.

It is considered that the proposed scheme provides a more economically sustainable and improved urban design and built form outcome than the guidelines as proposed within the DCP. Indeed, Hill PDA, when assessing the economic viability of the proposal (**Appendix 11**), concluded that in relation to a ‘DCP compliant scheme’ that:

“The DCP compliant scheme provides a very poor return with a Development Margin of negative 8% and an internal rate of return of only 1.5% compared to 20% under the preferred scheme. Under this option it is evident that it would not be viable to develop the site even if the opportunity cost of the land was valued at zero. The resultant margin of 7.5% is still well below an acceptable level given the risks involved.”

Whilst economic return to a developer is not necessarily a planning consideration, in terms of the object of the Environmental Planning and Assessment Act to promote the “orderly and economic use and development of land” it is important to confirm that planning controls are not so restrictive as to inhibit the economic use of land.

The proposal presents an innovative solution to the economic use of the land and relies on utilising the existing hole for productive floor space, thus reducing the need for introduced fill and concealing much of the bulk of the proposal below ground in the hole.

Because the proposed Concept varies so fundamentally from the design outlined in the DCP, there is no utility in undertaking a compliance review against those guidelines and the Concept is best considered on its own merits on regional planning and SEPP 65 design principles.

6 ENVIRONMENTAL IMPACT ASSESSMENT

6.1 Overview

In addition to the statutory controls addressed in **Section 5** of this EA, the Director-General's Requirements state that the environmental impacts of the proposal must be assessed, and specify key issues to be considered. These relate to ecology, land use, built form and urban design, public domain environmental and residential amenity, transport and accessibility, noise and vibration, ecologically sustainable development, contamination and geotechnical, staging, heritage, utilities, contributions and consultation. This section contains the assessment of those and other relevant considerations.

Again, as this application is a Concept Plan and lacks detail design, the level of assessment is limited to the broad assessment of the capability and suitability of the site, within its context, for a development of the size, nature and general layout of that proposed. Assessment of more detailed elements of the proposal will be necessarily undertaken once subsequent applications are lodged.

6.2 Ecology (DGR 2)

Cumberland Ecology has prepared a Flora and Fauna Assessment and Biodiversity Management Plan (incorporating a Vegetation Management Plan and Habitat Management Plan) in support of the Concept Plan (refer **Appendix 9** and **10**). The report has been prepared to assess the ecological values and predict any potential impacts on flora and fauna. Particular reference is made to the impacts on the Eastern Bent-wing bat, the Grey-headed Flying-fox and the Sydney Turpentine Ironbark Forest ("STIF") community, and consideration of appropriate offsets to compensate any impacts that may occur.

It is noted that the STIF community, whilst listed as an Endangered Ecological Community under the NSW Threatened Species Conservation Act 1997, and as Critically Endangered under the Commonwealth Environment Protection and Biodiversity Act 1999, the small extent of the community within the site precludes it from falling within the definition of Turpentine-Ironbark Forest under the Environmental Protection and Biodiversity Act.

The report summarises a number of historical studies and surveys that have been undertaken on the site and over a range of seasons and conditions with the most recent surveys conducted in late 2008.

Existing flora and fauna

Cumberland Ecology notes that the existing vegetation on the site varies in condition with no threatened plant species recorded during the historical field surveys.

The primary fauna habitats located on the site are:

- Sydney Turpentine Ironbark Forest;

- Permanent water body within the former quarry;
- Exotic vegetation; and
- Derived native grassland.

The remnant patches of vegetation provide habitat for a number of bird species, while small hollows on the site provide roosting and nesting locations for birds, bats and arboreal mammals. The water within the brick pit itself provides habitat for aquatic and semi aquatic species.

Two threatened fauna species were recorded during the historical surveys, these being the Eastern Bentwing-bat and the Grey-headed Flying-fox.

Impact assessment on the existing flora and fauna

The majority of the site has been historically cleared and the site remains highly disturbed and supports remnant/regrowth vegetation surrounding a large artificial water body.

The primary impact of the proposal therefore will be the clearing of 0.2 ha of vegetation within the development area, of which 0.16 ha represents the STIF community. The majority of this clearing is focussed on the more highly disturbed, low resilience vegetation with approximately 65% of the native vegetation to be retained as part of the proposal. Therefore, with appropriate management, the long term impacts of the proposed development on the STIF are expected to be minimal.

As detailed within the Vegetation Management Plan, compensatory planting of STIF vegetation is proposed to be carried out off-site, and in parks or reserves close to the Site, and of similar geology likely to support the STIF vegetation.

Total areas to be replanted (including both on-site and off-site) will be determined based on the amount of STIF to be cleared on-site and the available land for replanting. However, this is expected to be no less than a ratio of 2:1. To this end, discussions with Council are currently underway about potential locations for offsite planting

No impacts are expected on the existing fauna species. All tree hollows will be retained on the site, as will the best quality foraging habitat. As detailed in **Section 6.10** of this report, the existing water source will be removed temporarily during the construction period, albeit supplementary sources of water will be provided during this time. It is therefore not expected that the draining of the pit will result in the loss of habitat for any water dependant threatened species.

It is also noted that fauna habitat on the site is limited to areas of native vegetation that will remain intact under any future development. Indeed, the primary areas of fauna habitat occur within the STIF community that will remain intact under future development of the site. Much of the fauna habitat within the remainder of the site has been heavily altered by clearing associated with the previous industry.

These features provide potential foraging, nesting and shelter habitat for these species. At the completion of the development, habitat to be retained will be subject to habitat enhancement procedures for the subject lands.

As detailed on the submitted plans, the proposal also involves the creation of a drinking resource for the Grey-headed Flying-fox and threatened microbats. Habitats for these species will also be improved due to the retention of hollow bearing trees and the planting of feed trees for the Grey-headed Flying-fox.

Biodiversity Management Plan

Cumberland Ecology has also prepared a Biodiversity Management Plan (BMP), incorporating a Habitat Management Plan and a Vegetation Management Plan.

The BMP has been prepared in accordance with the guide “*How to Prepare a Vegetation Management Plan*”, assesses the vegetation management issues relating to the site and the proposal and outlines a range of actions required for the replanting and rehabilitation of the proposed compensatory areas of STIF. The BMP also provides details in relation to the construction and maintenance requirements for the permanent and freshwater ponds as well as specifying appropriate vegetation management measures and a schedule of works for these works. Refer to **Appendix 10** for further information.

6.3 Land Use (DGR 3)

Hill PDA has prepared a Centres Study for Sutherland Shire (refer **Appendix 11**). This study reviews the economic impact of the proposed mixed use scheme, and in particular assesses the impact of the proposed retail element of the proposal on the surrounding centres as detailed in the draft South Sub-regional Strategy (refer **Section 5.5**).

The study is split into two sections, Part A and Part B. Part A of the study provides an overview of the Sutherland Shire in terms of the amount of existing and forecast floorspace needed up to 2036; concluding that by 2036, in addition to estimated emerging supply (including this proposal) plus an additional 20% supply contingency, the Shire will need to provide the following floorspace:

- 92,500 sq.m of retail floorspace;
- 56,000 sq.m of office floorspace; and
- 855,000 sq.m of residential floorspace (estimated at approximately 10,000 dwellings).

Part A of the Study also assesses where this floorspace could be accommodated, focussing on nine centres within the Sutherland Shire. These centres (and their role as defined within the Draft Sub-Regional Plan) are as follows:

- Caringbah (town centre);
- Cronulla (town centre);
- Menai (town centre);
- Miranda (town centre);
- Sutherland (town centre);
- Engadine (village);
- Gymea (village);

- Kirrawee (village); and
- Southgate (small village).

Part A of the Study concludes by identifying that only six of the nine centres “*have reasonable capacity and potential to accommodate growth*” including Kirrawee.

Part B of the Study focuses on the Kirrawee Site in the light of the conclusions reached in Part A and provides a review of the site’s capacity to make a contribution towards the highlighted growth requirement. Part B also provides a detailed assessment of the economic impact of the proposal.

Economic impact of the proposal

In detailing the impact of the proposal, Hill PDA has based this assessment on an expected turnover from the centre of \$88m in 2014.

In order to quantify the scope of this turnover as captured from the existing centres within the Shire, Hill PDA prepared a “bespoke gravity model”. This model was based on the premise that the level of redirected expenditure from a centre is directly proportional to the turnover of that centre and indirectly proportional to the distance from the site.

The estimated impact on the existing retail centres is set out in Table 2 of the Hill PDA report, which is replicated below:

Column #	1	2	3	4	5	6	7	8	9
Retail Centre	Distance from Subject Site (km)	Approx. Retail Floor Space	Turnover in 2007 (\$m)	Turnover in 2014 without Proposal	Turnover in 2014 with Proposal	Immediate Shift in turnover (\$m)	% Shift in turnover in 2014	Shift in turnover 2007 to 2014	% Shift in turnover 2007 to 2014
Proposed Centre					87.9	87.9			
Kirrawee	0.3	2,900	15.5	17.3	16.4	-0.9	-5.1%	0.9	6.1%
Miranda	3.1	113,500	804.0	899.1	868.5	-30.6	-3.4%	64.5	8.0%
Caringbah	5.2	25,200	254.0	287.0	278.0	-9.0	-3.1%	24.0	9.4%
Southgate	5.3	19,450	170.0	193.4	187.5	-5.9	-3.1%	17.5	10.3%
Gymea	1.5	6,550	40.5	45.3	42.5	-2.8	-6.2%	2.0	4.9%
Taren Point	5.1	3,700	32.0	36.4	34.5	-1.9	-5.2%	2.5	7.8%
Sutherland	1.5	14,300	67.0	99.1	91.5	-7.6	-7.6%	24.5	36.6%
Kareela	2.6	3,900	43.0	48.1	43.1	-5.0	-10.3%	0.1	0.3%
Jannali	3.3	6,850	38.0	42.5	40.8	-1.7	-4.1%	2.8	7.3%
Cronulla	9.0	24,500	145.0	163.8	162.1	-1.7	-1.0%	17.1	11.8%
Engadine	8.5	23,150	213.0	239.3	235.0	-4.3	-1.8%	22.0	10.3%
Menai	7.5	24,900	202.0	222.0	217.9	-4.2	-1.9%	15.9	7.9%
Other Localities						-12.3			
Total		268,900	2024.0	2293.4	2301.2	0.0	0.5%	193.8	13.9%

Figure 28 – Excerpt from Hill PDA “A Centres Study for Sutherland Shire” (Source – Hill PDA)

It is noted that in addition to those centres included in Part A of the Study, Taren Point (no classification), Kareela (small village), and Jannali (small village) were also included in this assessment.

As the table above details, Hill PDA calculates that the greatest impact from the proposed development will be on Miranda Centre, which will experience a loss of approximately \$31m, with around one third of the proposed centre’s turnover to be redirected from

Miranda (Westfield). However, this only represents 3.4% of Miranda's overall retail turnover and therefore the percentage impact is considered only minor.

In terms of percentage loss, the biggest impact will therefore be on the existing Kirrawee shops (5.1%), Sutherland Centre (7.6%) and Kareela Centre (10.3%). In assessing these impacts, Hill PDA has advised that impacts under 10% are generally not considered significant.

Based on the above, Hill PDA considers that the impact on Kirrawee shops is:

"insignificant and further the modelling does not take into consideration the benefits to Kirrawee from three potential sources – firstly the commuter car park.....secondly the establishment of two anchor retailers....thirdly the additional population from the 450 apartments..."

Impact on Kirrawee

In detail, Hill PDA considers that the impact on the Kirrawee Village will be *"net positive"* and that *"Kirrawee will enjoy an increase in trade of at least five fold"*.

In reaching this conclusion, Hill PDA notes the following:

- Kirrawee Village presently lacks any anchor retailer such as a large supermarket. Such anchors typically stabilise a centre and attract additional expenditure from a wider trade area and therefore generate additional expenditure for other retailers;
- The proposed development will comprise an expansion of an existing centre rather than the creation of a new centre. As such, it will give Kirrawee a number of strong anchor tenants, recapture escape expenditure and result on a higher level of trade within the retail centre;
- The proposal will create a new northern anchor to balance the station which provides an anchor at the southern end of the centre; and
- Whilst the potential for closure of one or two speciality stores is possible, these are likely to be replaced with speciality shops that will fill underrepresented store types.

Ability of the centres to absorb the impacts

Hill PDA has assessed the ability of the existing centres to absorb the impacts as set out above. Hill PDA assesses that the existing retail centres at Westfield, Southgate, and Menai are respectively trading at 16%, 29% and 34% above the median turnover for a centre of those sizes and therefore the loss of trade as detailed on Figure 24 would not affect the sustainability of the centres.

Hill PDA therefore concludes that the high expenditure levels, combined with high turnover figures for these centres, are all *"testimony to the need for additional retail facilities in the Shire"*.

Whilst not being proposed by this Concept Plan, for the purposes of assessing the size of centre required before retail impacts are substantive, Hill PDA has also assessed the

impact that the creation of a new sub-regional centre would have on the existing retail centres. It concludes that again the biggest impact would be on Miranda (in terms of dollars), Kirrawee and Kareela (in terms of percentage impact), however, even a centre of this size would only have a “moderate” impact with Kareela, as an example, returning to its trading level by 2015..

As a base from which to assess impacts, Hill PDA concludes that in 2007 the Shire had around 287,000 sq.m of occupied retail space, which was approximately 75,000 sq.m, or 20% below what was required to serve its population. As a result of this under supply, many of the centres within the Shire are currently trading between 10% and 20% above national benchmarks.

6.4 Built form and urban design (DGR 4)

As indicated in **Section 5.6** of this EA, the development has been designed in consideration of the design principles in SEPP 65 - Design Quality of Residential Flat Buildings.

As also indicated, because this is a concept and therefore not fully developed design, it is necessarily only in ‘block form.’ However because the essential elements of the design are well considered, it provides a suitable canvas for a finished design of high quality, which we consider can readily meet the more detailed elements of good residential design outlined in SEPP 65 and high quality general commercial design and public and private open spaces. This greater detailing will be demonstrated and assessed as an essential consideration for subsequent planning applications for the site.

Options consideration

The DGR’s require that consideration be given to alternative options for the siting and layout of the building envelopes and this be documented in the EA. To this end, an assessment of the various options has been undertaken by GMU as part of their Urban Design Report (refer **Appendix 4**).

As such, GMU has provided an urban design assessment of the previous DA scheme on the site along with four concepts that have been based on the scheme that was submitted with the PEA.

Taking each of these options in turn, we would comment as follows:

OPTION 1: PREVIOUS DEVELOPMENT APPLICATION

This option comprises the previous development application that was rejected by the Land and Environment Court. Submitted in 2008, this application was broadly in conformity with the SSLEP and DCP with an element of additional retail floor space proposed due to a fully complying scheme being unviable and to improve its overall performance.

In terms of urban design and built form, this proposal sought to maintain the existing street grid pattern throughout the site with a low scaled mixed-use edge to Flora Street and a public park to the west of the site as detailed below:

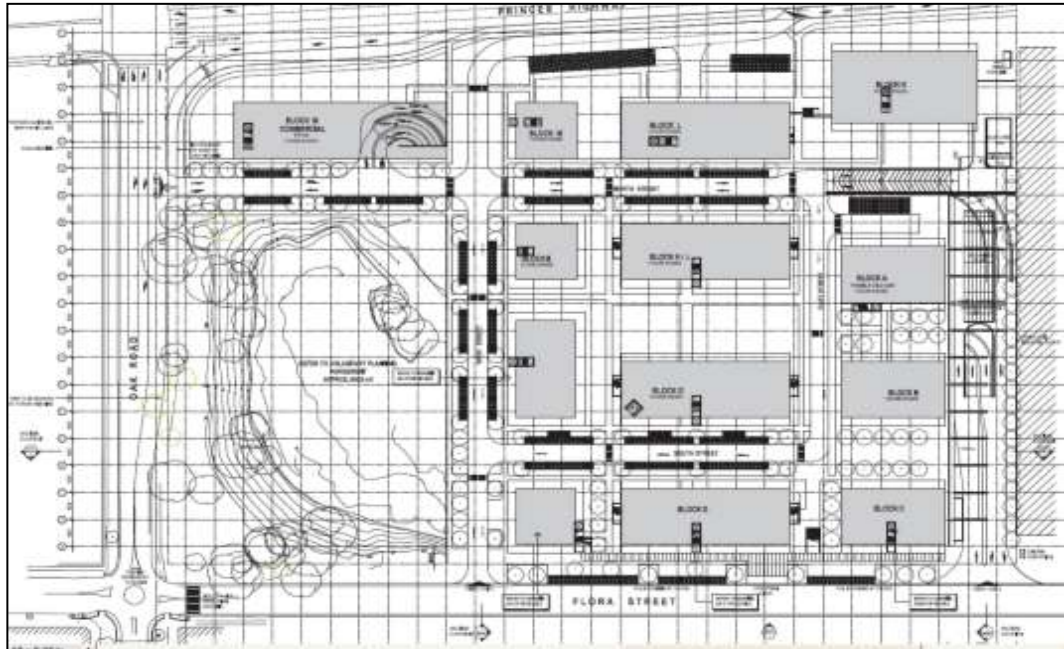


Figure 29 – Floor plan of the previous DA (Source – GMU/Woodhead)

Although this application was eventually refused principally due to the fact that the proposal did not conform to the specific zone objectives as outlined in the SSLEP, from an urban design perspective, GMU consider that the proposal includes the following advantages and disadvantages:

Advantages

- Essentially maintained the vision of the DCP;
- Extension of existing street grid through the site;
- Compliant with height in DCP;
- Connection and address to Princes Highway;
- Provision of public park;
- Low scale edges to Flora Street;
- Significant landscape setback to east;
- Connection to existing Kirrawee centre; and
- Preserves the majority of the STIF.

Disadvantages

- Limited opportunity to create an iconic scheme;
- Park location isolates the development from the existing Kirrawee shopping centre;
- Water body as proposed could be considered “token”;

- Council's Architectural Review Panel considered that the previous DA lacked sense of place and constituted "manufactured landscaping" due to requirement to plant over slab; and
- Arguably an underutilisation of the site.

As set out in the Urban Design Report, since the refusal of this DA, changes to State and local policies, principally in relation to retail and residential uses necessitated a fresh look at the site. As such, a number of schemes have evolved from this process, including the scheme that was the subject of the PEA.

These schemes are considered further below:

CONCEPT 1

This option involves various radiating fingers of residential development with edge built form, whilst also retaining the existing Brick Pit water body as detailed below:

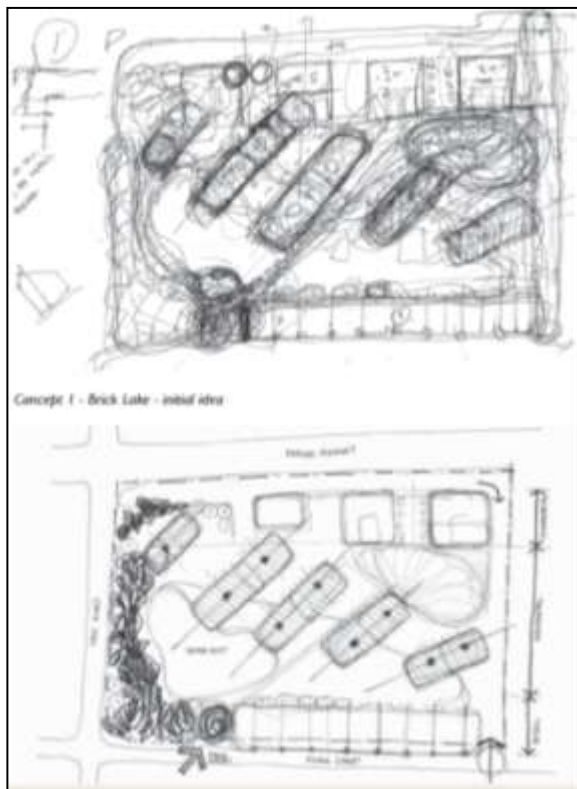


Figure 30 – Concept 1 – “Brick Lake: (Source – GMU)

As set out in the Urban Design Report, the advantages and disadvantages of this concept include the following:

Advantages

- Maintain existing water body;
- Reinforce streets with edge development;
- Maintain low scale to streets compliant with the DCP;

- Provision of iconic marker to Kirrawee through taller built form;
- Provision of pedestrian only network through the site (no vehicles); and
- Character of site established by STIF and lake with grading height to residential development.

Disadvantages

- Water level very low relative to existing ground plane;
- Questionable stability of pit walls;
- Water quality of existing pit;
- Not economically viable; and
- Majority of open space occupied by the existing pit, which reduced the opportunity for usable public park.

CONCEPT 2

This option involves linear staggered forms across the site as detailed below:

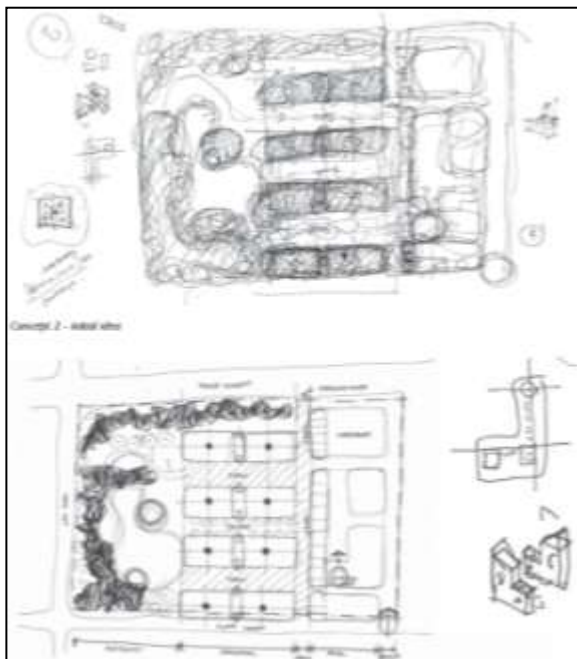


Figure 31 – Concept 2 (Source – GMU)

As set out in the Urban Design Report, the advantages and disadvantages of this concept include the following:

Advantages

- Linear form with excellent solar access;
- Expanded public park from highway to Flora Street;
- Strong north-south street connection through site;
- Good pedestrian connectivity north-south and from Oak to east of site; and
- Low scale edges to Princes Highway and Flora Street.

Disadvantages

- Potential solar access subject to proximity of linear blocks;
- Regimented form;
- Loss of Brick Pit water body;
- Not economically viable; and
- Less outlook across public park.

CONCEPT 3

Both Options 1 and 2 were thought to have merit and these were consolidated to form the basis for Concept 3 as detailed below:

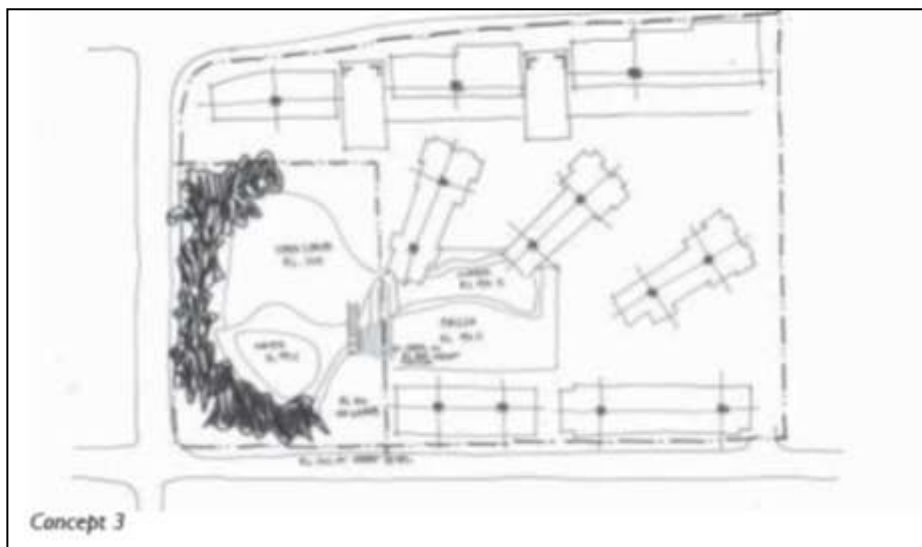


Figure 32 – Concept 3 (Source – GMU)

As set out in the Urban Design Report, the advantages and disadvantages of Concept 3 include the following:

Advantages

- Achieves good building to building separation;
- Locates more massing onto the highway;
- Raises park to previous natural ground level;
- Low scale edge to Flora Street;
- Excellent buffering to Highway;
- Provides piazza rather than full water body dues to issues with retention of lake; and
- Good relationship of piazza to Flora Street.

Disadvantages

- loses the reference to 'brick pit' heritage;
- Likely loss of STIF due to raised level of park and water;
- Solar access issues for leg of development to highway;
- Expanded public park from Highway to Flora Street;

- Strong north-south street connection through site;
- Good pedestrian connectivity north-south and from Oak to east of site; and
- Low scale edges to Highway and Flora Street.

CONCEPT 4

Concept 4 evolved as an alternative to Concept 1 as illustrated below:

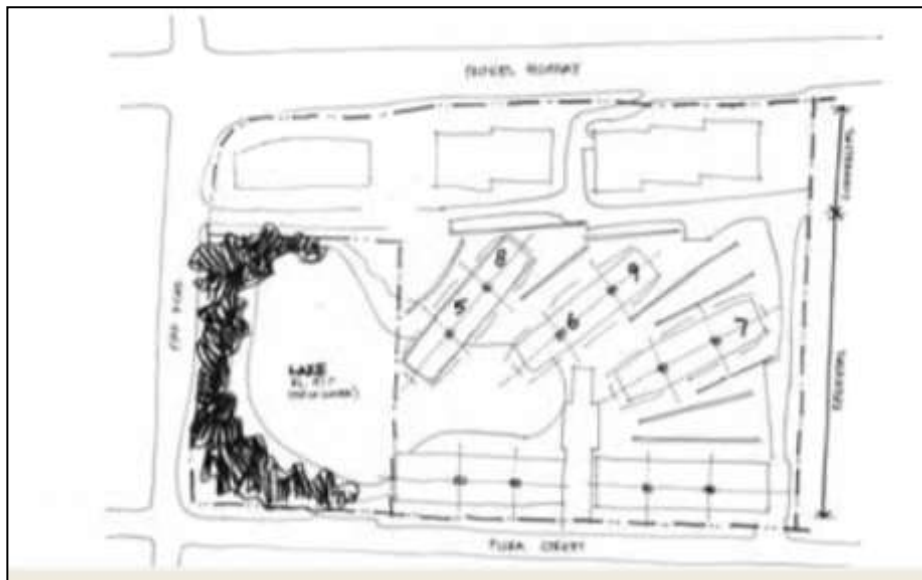


Figure 33 – Concept 4 (Source – GMU)

As set out in the Urban Design Report, the advantages and disadvantages of Concept 4 include the following:

Advantages

- Celebrates the 'brick pit' unique heritage by reinterpretation of lake;
- Celebrates gateway height of original chimneys;
- Creates iconic forms with new water body that stretches through the site in different forms;
- Edge development responds to the STIF as a lower scale built edge of similar height;
- Maintains STIF but elevates rest of water body to level of new piazza/link;
- Good pedestrian connectivity possible;
- Excellent sense of place; and
- Maintains east-west new street and allows future connection to site at east.

Disadvantages

- Replaces existing water body;
- Locates taller form too close to adjacent site; and

- Introduces taller forms overall.

As a result of this assessment, it was concluded that Concept 4 offered the best opportunity for a “high quality iconic marker” for Kirrawee, enabling a “*dramatic town plaza, water body and open air retail centre whilst maintaining a lower scale edge to the site.*”

In summary, the current Concept Plan displays the following advantages and disadvantages:

Advantages

- On grade connection from public piazza to Flora Street and new water body;
- Maintains original ‘STIF’ and water level for ‘natural’ park;
- Much greater public space, combined with parkland;
- Showroom connection with Princes Highway maintained with strong built edge;
- Higher residential towers are located centrally to the site and provide built form markers for Kirrawee as chimneys used to do;
- Creates active frontages around piazza, spilling out to the public park and onto Flora Street
- Greater passive surveillance and increased safety at night;
- Dramatic residential built form cantilevering over new water body;
- Potential stronger and more dramatic visual and physical connection from piazza and retail to existing Centre;
- Lower scale edges responding to STIF canopy height;
- Maintains potential east-west connection for eastern site; and
- Retains a substantial part of the Brick Pit.

Disadvantages

- No level connection between Flora Street and public park due to required level of water body;
- Increased height of built form;
- Replaces existing water body; and
- Locates taller form closer to adjacent site.

Urban design/design excellence

As detailed within the Urban Design Report prepared by GMU, the Concept Plan has been inspired by the “iconic forms” of the Marie Tjibaou Cultural Centre in New Caledonia which was created by the architect Renzo Piano, and in particular the use of taller forms to the centre of the site, so as to create a distinct silhouette that is visible above the canopy of the trees on approach to the site.

GMU has provided an assessment of the Concept Plan against Clause 48 and 49 within the SSLEP and provides the following comments:

“The proposal will provide a high quality mixed use development.....the quality of the streetscapes, open spaces and new buildings will provide a high quality, contemporary

solution that will set a new benchmark for this locality”

And that:

“the built form has the potential to create a high quality design solution that provides an iconic identity for Kirrawee....the development will set a benchmark for the desired future character...”

Analysis of the proposed built form and its integration within Kirrawee

Hill PDA has prepared an economic assessment of how the proposal will integrate within the Zone 7 land, and particularly along Flora Street and the Princes Highway (refer **Appendix 12**).

As such, the Hill PDA assessment has considered how the proposed development could help to stimulate further investment in Kirrawee and deliver urban renewal in the areas around the Site that are zoned for a mix of uses.

Hill PDA’s assessment breaks down the impact of the proposal into macro, micro and design considerations and concludes that:

“there is considerable potential to uplift values of those lands within the mixed use zones close to the site. The potential scale of the uplifts should be adequate to stimulate investment”

And that:

“the scale of the proposed development will transform the character of the area from what is a low grade industrial precinct to a high quality, urban community.”

From a design perspective, Hill PDA conclude that the proposal reinforcing the street frontages as is proposed along Flora Street, Oak Road and the Princes Highway is important from a market perspective in that locations with good frontages tend to generate the attractive retail rents, benefitting from high levels of visibility. For this reason, Hill PDA conclude that:

“the proposed development not only integrates well with its current surrounds but would work when the surrounding industrial areas become more mixed use in nature.”

In addition, Hill PDA has identified a number of opportunities close to the Site that appear well placed to transition from industrial to a mix of uses.

Overall, Hill PDA concludes that the proposed development:

“maximises the potential to deliver the urban renewal of its surrounds”

Comparable Height Study

DGR 4 requires the EA to include a comparable height study so as to demonstrate how the proposed height relates to the height of the existing and approved developments surrounding the Site as well as the context of the existing locality.

This assessment is undertaken at Sections 3.0 and 6.0 of the Urban Design Report prepared by GMU.

As such, it is noted that the Concept Plan proposes the following building heights:

- 5 storey street wall with setback 6th level to Princes Highway.
- 4 storey street wall with setback 5th level to Flora Street.
- three taller forms in the centre of the site:
 1. **Building A** - 6-14 storeys above podium with upper 2 floors as 'pop ups'.
 2. **Building B** - 6-10 storeys above podium with upper two floors as greatly reduced footprints to articulate the top of the building.
 3. **Building C** - 6 storeys at the eastern boundary rising to 7 storeys to the west.

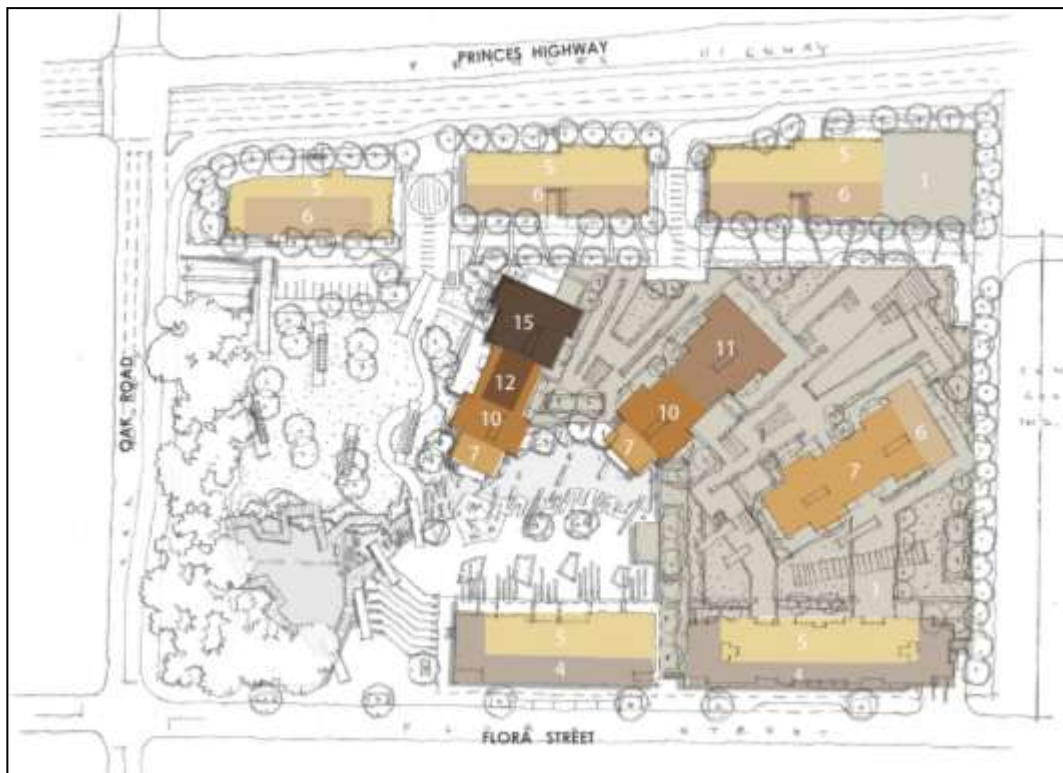


Figure 34 – Building Heights (Source – GMU)

As detailed in the Urban Design Report, the height of the buildings will be lowest towards the edge of the site in response to the existing scale of the neighbouring buildings and to the STIF forest which forms the south western corner scale of the site. The tallest building on the site will be the 14 storey building to the north west of the site. This will act as a

gateway to the site, as a marker for Kirrawee and will provide an interpretative response to the original Kirrawee chimneys on the site (refer **Figure 23**).

The Urban Design Report concludes that the location of the edge built form will “reinforce the new and existing street alignment and provide excellent passive surveillance with activation to all ground floors”.

In addition to an assessment of height within the immediate locality, Hill PDA has undertaken an assessment of other comparable centres within the Sydney Metropolitan Region, as defined within the draft Sub-regional Strategy.

The analysis was undertaken to establish whether the proposed scale of the development could be considered to be reasonable in a broader context and involved assessing the following centres:

- Meadowbank (small village);
- West Ryde (village);
- Hillsdale (village);
- Wolli Creek (village); and
- Balgowlah (village)

As such, these centres exhibited the following heights:

Table 4: Comparison of the permitted heights within various Centres

Centre	Height	Proximity to train station
Kirrawee (post development)	4-14 storeys providing approximately 450 units	150m
Meadowbank	5/6 storeys	500m
West Ryde (marketplace)	8/9 storeys	250m
Hillsdale	12 storeys	No train station
Wolli Creek (Discovery Point)	21 storeys	200m
Balgowlah (The Village)	8 storeys	No train station

Based on this analysis, we note the following:

- Each of these centres plays a significant role in servicing the surrounding areas;
- None of the centres is located within close proximity to a major employment area such as the Kirrawee industrial precinct to the north of the site; and
- The majority of the centres are within 300m of a rail station.

In conclusion, we therefore submit that the proposed height is not out of context when compared to other similar centres of a similar size and a similar hierarchy and within the relevant draft Sub-regional strategies.

View Analysis

Section 6.0 of the Urban Design Report prepared by GMU provides a detailed visual impact analysis of the Concept Application (refer **Appendix 4**).

This analysis compares of a number of views taken from key points in the vicinity of the site as illustrated below:

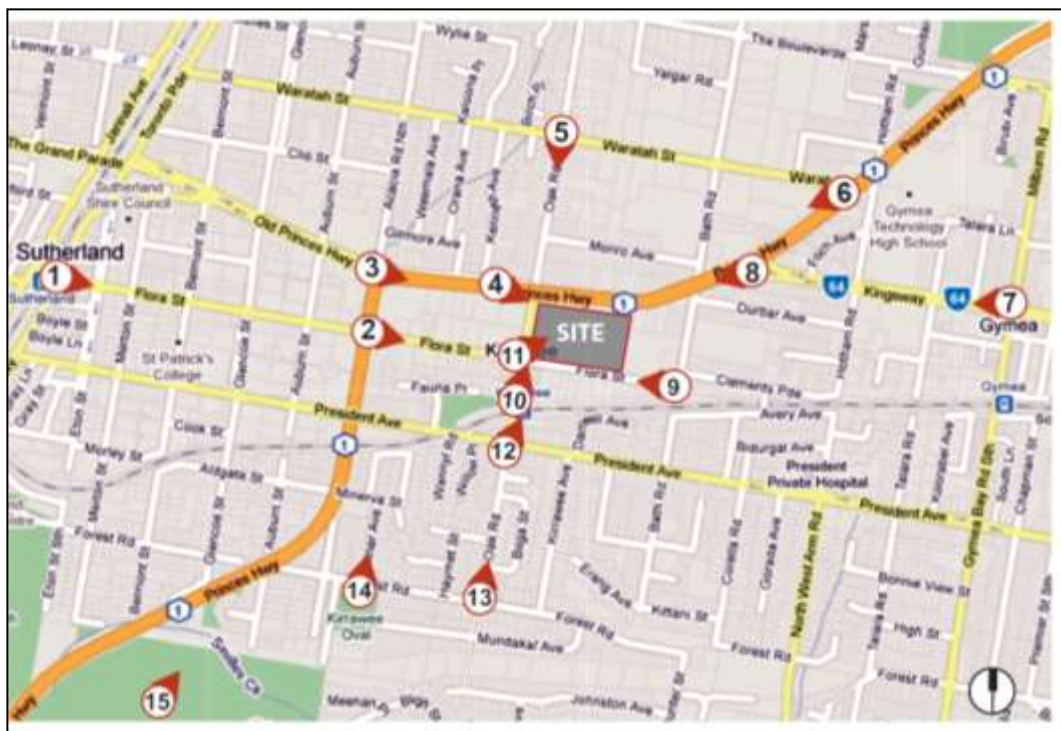


Figure 35 – Location of view analysis (Source – GMU)

The view analyses positions have been chosen to include locations that involve both close and distant proximity impacts.

In particular, it is noted that the view from Sutherland and Kirrawee Railway Stations (Views 1 and 10) as well as from Kirrawee Oval (View no.14) and the National Park (View no.15) looking north were selected due to their high public usage. Close proximity views such as those from the corner of Princes Highway and Kenneth Avenue (View 4) and the corner of Oak Road and Flora Street (View 11) were selected due to their role as 'iconic views' and 'gateway markers' for Kirrawee and the site.

In assessing the view impact, each of the views were been given a 'view impact designation' based on a low, moderate and high impact. The criteria for each designation were as follows:

- No impact: The proposal is not visible at all within the view frame.

- Low impact: The proposal creates little or no discernible.
- Moderate impact: The proposal is visible from that vantage point, but no significant obstruction of sky or landmarks occurs and the built form blends with the existing surroundings.
- High impact: A discernible change occurs within the view frame. Mitigation measures may be suggested unless impact is appropriate as a gateway marker.

While the full Visual Impact Analysis is provided within Section 6 of the Urban Design Report (**Appendix 4**), a summary of the impact on each of the above views is provided below:

View 1: No impact	View 2: No impact	View 3: Moderate impact
View 4: High impact	View 5: Moderate impact	View 6: Moderate to low impact
View 7: No impact	View 8: High impact	View 9: Low impact
View 10: No impact	View 11: Moderate impact	View 12: Low impact
View 13: No impact	View 14: No impact	View 15: No impact

Based on this assessment, the Visual Impact Analysis concludes that:

“The most significant impacts are shown to occur close to the site mainly along the Princes Highway. This is to be expected and given the concept is to mark the entry to Kirrawee, reinterpreting the historic role of the chimneys this is considered reasonable. The forms mark the ridge and do not create adverse private view impacts or obscure existing landmarks or water views. More distant views have very minimal impacts where the scheme reads as part of the built form / landscape skyline or has no impact at all. Therefore the proposed view impacts are considered reasonable.”

6.5 Public domain/open space and accessibility (DGR 5)

At grade pedestrian access to the site will be provided at four locations across the site with primary pedestrian access to be provided from Flora Street, and as close to its intersection with Oak Road as possible given the requirement to conserve the STIF in the south western corner of the site. The main retail pedestrian entry will also be taken from Flora Street.

Pedestrian access will also be provided to the site from the Princes Highway with two dedicated pedestrian entrances as detailed on the annotated extract from the vehicle and network plan provided in the Urban Design Report and set out below:

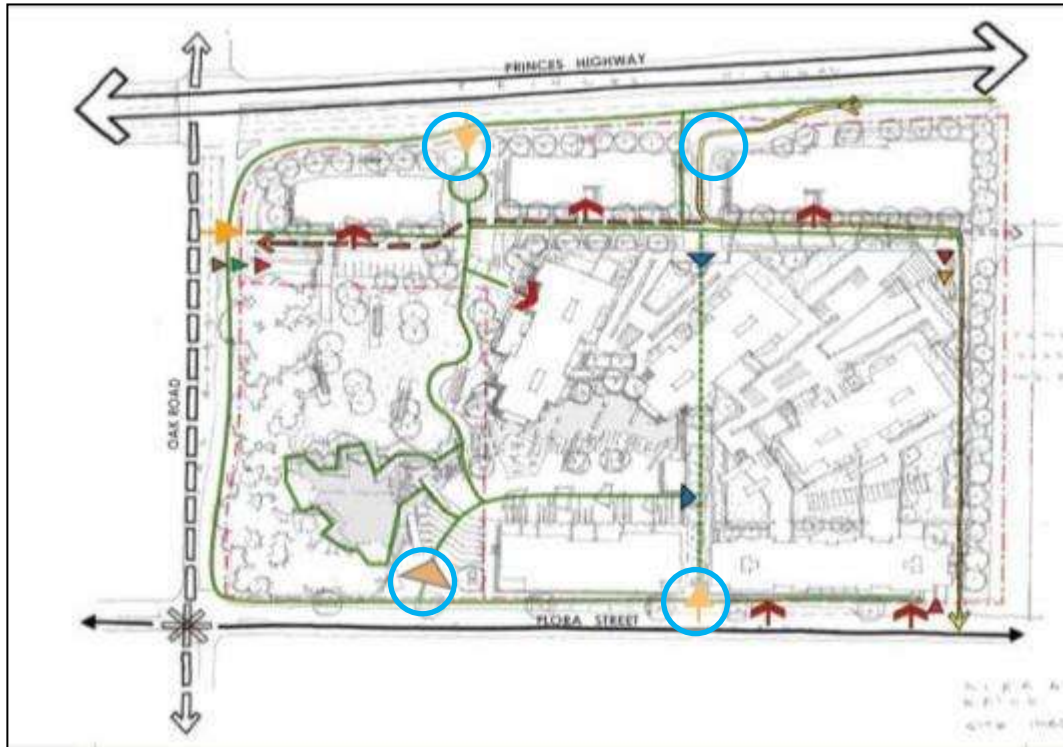


Figure 36 – Excerpt from vehicle and pedestrian network (Source: GMU)

A Landscape Concept Plan and Design Report has been prepared by Site Image (refer **Appendix 5**). This Concept Plan highlights the design intent and is intended to provide a high-level summary and as a basis for a general appraisal of the potential landscape elements on the site.



Figure 37 – Excerpt from Landscape Concept Plan (source Site Image)

This landscape concept has been informed by a number of key issues as follows:

- Ecology and vegetation;
- Habitat protection;
- Civic address towards the south-west (train station and retail precinct)
- Interface with the various streetscapes;
- Urban form and civic amenity;
- Residential identity and amenity;
- Public qualities and value of parkland;
- Development mix; and
- Engineering considerations.

The proposed landscape concept splits the site into eight integrated landscape areas reflecting the various spaces and uses across the site and taking into account the above issues.

Although detailed design on each landscaped precinct will be provided in subsequent applications, the following precincts are proposed:

- Quarry Park – this will comprise the proposed public park area along the western boundary of the site and will include dedicated at grade parking for the park area;
- Brick Pit Lake – this will comprise the proposed compensatory habitat water body;
- Oak Road / STIF Frontage – this will comprise the western boundary of the site and will include the area of STIF retention;
- Flora Plaza – this will comprise the proposed public piazza area;
- Civic address – this will comprise the principal pedestrian access to the site from Flora Street;
- Internal shareway – this will comprise the internal streetscape immediately south of Blocks F and G;
- Roof top common open space – This will comprise the rooftop gardens associated with the residential blocks; and
- Boundary landscape buffer – this will comprise the eastern boundary of the site and adjacent to the James Cook Industrial Estate.

As the intention is to dedicate the Zone 13 land to Council as a public park, its ultimate design will be driven substantially by Council's requirements. As such, the Concept Plan is indicative only and approval is not sought for the specific design features.

Rather, consultation with Council in the formulation of this EA has lead to the identification of a number of principles which Council has indicated it desires to incorporate in the final design of the park. These principles are provided in full at **Appendix 23**, with some of the key principles set out below:

- A public park providing opportunities for a variety of active and passive recreation activities for residents of the development and the general community;
- Minimum depth of soil over 80% of the park to be 2.5m;
- Conservation of original STIF in south western corner of site on original soil;
- A water body approximately 800 m² in area located somewhere in the park, if required by endangered flying foxes for drinking;
- Public parking for 6 – 12 cars;
- A path of travel at an accessible grade for pedestrians from near the intersection of Flora Street and Oak Road to the park and between the various elements of the park; and
- Ability to achieve a line of sight from at least one point along each surrounding road (footpath) into a significant part of the park.

The realisation of these principles is readily achievable in the 9,000m² area identified in the Concept Plan for the park. These will be further articulated in future planning applications.

6.6 Environmental and residential amenity (DGR 6)

Wind

Windtech has prepared a Pedestrian Wind Environment Statement for the Concept Plan (refer **Appendix 18**). This report assesses the likely impact of the proposed design on the local wind environment, and in particular on the critical outdoor areas within and around the development.

The report also assesses the proposal against each of the three predominant wind directions for the Sydney region (being north easterly, southerly and westerly winds), and in particular, the interaction between the wind and the building morphology.

The study concludes that, generally, the expected wind conditions around the site will be suitable for their intended use, subject to a range of measures that will be subject to future design assessment and a range of mitigation measures which will also be explored as part of the detailed design phase, and as part of future applications.

Acoustic

Acoustic Logic has assessed noise emissions from the site to maintain the amenity of the adjoining properties (refer **Appendix 14**). This assessment looks at noise arising from mechanical plant and the increase in traffic/vehicles that will be generated on the local road network, concluding that it is considered that plant can be satisfactorily attenuated to levels complying with the Industrial Noise Policy.

In terms of the management and use of the loading docks, the operation of these areas will also be assessed at the detailed design phase, and although noise levels already exceed the DECCW standards along Flora Street, noise generated by the site should not result in an increase in existing noise levels by more than 2dBA, with further details to be provided as part of further applications.

Acoustic Logic has also assessed the residential amenity of the proposed residential units in relation to their internal and external private spaces and has suggested appropriate mitigation measures to ensure high levels of amenity are achieved.

Solar access

As detailed in the Urban Design Report, the proposed buildings on the site have been oriented to maximise solar access whilst managing overshadowing to the public open spaces. In particular, the taller forms have been aligned so that they radiate from a central common point located near the entry steps into the site; this in turn allows for their longest facade to be oriented generally to the north west so as to orientate and maximise good solar access, cross ventilation and view sharing to most apartments without major impacts to adjoining sites.

Shadow analysis in relation to the impact of the proposal has been undertaken by Woodhead Architects and is provided as part of the architectural plans at **Appendix 3**. In addition GMU has assessed the potential for solar access into the proposed residential units.



Figure 38 – Shadow diagrams for 21 June at 12pm and 2pm (Source: Woodhead)

As the diagrams above demonstrate, overshadowing will extend into the eastern site from approximately 1pm with a long shadow through the afternoon. In relation to Flora Street the development shadows will not impact on the southern properties.

The taller built form is located towards the centre of the site and will not have any adverse overshadowing on any of the adjacent properties.

The piazza and park area will experience some internal overshadowing. This is unavoidable if northerly sun is to be provided to the built form. The location and orientation of the building currently ensures that at least 45-64% of the piazza receives sun between noon and 2pm. However, as the design develops this will be further refined to ensure a minimum of 50% is achieved.

In terms of solar access to the residential apartments, the orientation of the central buildings have been designed to maximise good solar access as well as cross ventilation and view sharing to most apartments without major impacts to adjoining sites.

The orientation of the central taller blocks (A, B and C) also has the potential for excellent daylight access and natural ventilation to most units.

Furthermore, the proposal has been designed in accordance with the 10 principles of SEPP 65, including built form. Although not fully designed yet, it is considered that the proposed residential units have the potential for corner or dual aspect apartments with excellent solar access, outlooks and amenity.

Visual privacy

The proposal is for a Concept Plan and therefore the buildings have not yet been designed with further details to be provided as part of subsequent applications. However, and notwithstanding this, GMU conclude in their Urban Design Report that:

“the envelopes have the potential to maximize their orientation and benefit from northerly aspect and cross ventilation. Taller buildings forms will benefit from a high quality outlook and orientation with district views and vistas to the new park and communal open space. The apartments have the potential to achieve appropriate visual and acoustic privacy, and separation distances and solar access.”

SEPP 65

Although it is noted that the proposal has only been designed up to a conceptual stage and therefore future applications will outline the more detailed design elements of the development, an assessment of the concept against the design principles of SEPP 65 and the Residential Flat Design Code has been undertaken by GMU (in the case of SEPP 65) and Woodhead Architects (in the case of the Residential Flat Design Code) respectively. Refer to **Appendix 4** and **27** for more information. Both assessments conclude that the residential element of the proposal has been designed to be consistent with the design principles of SEPP 65 and the Residential Flat Design Code.

6.7 Transport and accessibility (Construction and Operational) (DGR 7)

As detailed on the architectural plans submitted with the Concept Plan, vehicular access to the site is to be provided as follows:

- Left in via a westbound deceleration lane off the Princes Highway;
- Left in/left out to Oak Road;
- Left and right in and out of Flora Street; and
- Service vehicles entry via the Princes Highway driveway and exits via Flora Street.

Halcrow has prepared a Traffic Management and Accessibility Plan (TMAP) for the Concept Plan (refer **Appendix 17**). Incorporating a Traffic and Parking Study, the report provides an assessment of external traffic impacts as well as a feasibility consideration of the proposed internal traffic and parking arrangements. The report also cross references the historical work undertaken in support of the previous application on the site and the road improvement initiatives that were proposed in support of that scheme.

Given that the proposal is being prepared in concept, with detailed design to be provided as part of subsequent applications, the TMAP provides only a feasibility assessment of the proposed internal traffic and parking arrangements with resolved designs to be prepared as part of subsequent applications.

The TMAP sets out a number of objectives for the development as follows:

- Minimise car trips;
- Support and promote sustainable travel to and from the site;
- Maintain satisfactory operation on the local road network; and
- Manage freight movements generated by the centre.

Existing situation

In assessing the existing external transport situation, the TMAP provides a detailed consideration of five intersections in the surrounding network, supplemented by traffic counts in nine locations. This assessment concludes that the Princes Highway/Acacia Road North route is the most significant north-south arterial route, with President Avenue being the busiest west-east sub-arterial route.

Proposed improvements

Based on the proposed development mix as detailed in **Section 3.3** of the EA, the combined traffic generation of the proposal would be as follows:

- Thursday evening peak hour – 1,089 veh/hr;
- Saturday peak hour – 1,064 veh/hr; and
- Weekday morning peak hour – 428 veh/hr.

In addition to this, the proposed commuter car parking would have a weekday morning and evening trip generation of up to 80 vehicles per hour.

The TMAP concludes that the additional traffic generated by the proposed development would necessitate improvements at several external locations. As such, the TMAP sets out a number of staged improvements as recommended by the RTA that will be necessary to cater for the development of the site at the following locations:

Stage 1

- **Intersection of Princes Highway and Oak Road** – This will involve the creation of three northbound lanes on Oak Road on the southern leg of the intersection, a new slip lane on the westbound carriageway of the Princes Highway into Oak Road, the creation of one southbound lane on the southern leg of the intersection and a median island on Oak Road;
- **Intersection of Oak Road and Flora Street** – Existing roundabout to be replaced by traffic signals;
- **Entry deceleration lane on Princes Highway** – for a minimum of 60m; and
- **Road Safety Audit.**

Stage 2

Stage 2 works were previously required due to increased traffic generation that would have arisen as a result of the previous scheme and pursuant to approval for a new Bunnings which, at the time of the previous application, had been approved but not erected.

The new Bunnings is now operational and therefore any impact of the new store has been included within the fresh traffic surveys undertaken for the proposed development. As such Halcrow has concluded that the previously proposed Stage 2 works are now not required.

Internal traffic arrangements

Although the TMAP only provides a feasibility assessment of the internal traffic arrangements, it is noted that both the car parking design and loading area design will comply with the relevant Australian Standards. Further details would be provided at detailed design stage and as part of subsequent applications on the site.

Parking

Retail and commercial parking requirements have been based on Sutherland Shire Council's guidelines, with the total number of non-residential spaces required being 513. This figure has been reduced to 500 based on the parking rates agreed as part of the previous application for the site. As such, the Concept Plan includes the provision of 500 retail and commercial car parking spaces.

Residential parking is proposed at a rate that is lower than that which would be required under the Sutherland Shire Council guidelines, with 641 car parking spaces proposed. This is in accordance with transit oriented development principles which acknowledge that a location with good public transport and a range of shops and services within easy walking distance has a lower requirement for car parking than a comparable development without these advantages. Indeed, with these additional spaces, the effective visitor provision rate would be greater than the RTA's 1 space per 5 units recommended provision rate for residential units.

In addition, approximately 200 commuter car parking spaces will be provided on the site. The impact of these spaces in relation to traffic generation has been assessed within the TMAP with Halcrow concluding that commuter traffic would potentially comprise about 6 or 7% of the forecast evening peak traffic generation and therefore easily accommodated by the conservative traffic forecasts for the centre provided within the TMAP. In addition it is most likely commuters would at times be shoppers within the centre as well.

In relation to the park, there will be 6-12 dedicated at grade parking spaces provided.

Motorcycle and bicycle parking will be provided in accordance with Council's controls.

Construction traffic management and Green Travel Plan

Although the application is being submitted in concept, general principles on construction measures have been set out within the TMAP. In addition, a number of general principles that will be incorporated into the Green Travel Plan have also been included within the TMAP. Further details on each of these initiatives will be provided as part of subsequent applications and at the detailed design stage.

Implications of the proposed development for non-car travel modes

As detailed above, the proposal will utilise the existing public transport infrastructure, and in particular Kirrawee train station and the numerous bus routes that provide connections between the site and the wider Sydney metropolitan area.

As noted in **Section 5** of the EA, the Site is located only 150 metres north of Kirrawee train station which has only recently had its tracks duplicated and therefore is capable of accommodating additional capacity.

In addition, the site is located adjacent to the Miranda-Heathcote (Corridor 22) Strategy Bus Corridor. It is envisaged that the Strategic Bus Corridors will provide fast, frequent, direct and convenient bus services between Sydney's major centres.

Subject to NSW government agreement, the Concept's proposal to provide a commuter car park for up to 200 cars on the site will also benefit commuters using the Kirrawee train station and will significantly the number of commuter car parking spaces available to the users of Kirrawee station.

In relation to bike travel, a pedestrian and cycle network will be provided across the site. This will encourage bike movement throughout the site.

Assessment of pedestrian facilities between the commuter car park and Kirrawee and identification of ownership

As noted in **Section 6.14** of the EA, the applicant will offer to construct the commuter car park providing approximately 200 spaces.

To this end, the applicant has been negotiating with Transport NSW and Railcorp in relation to the ownership and maintenance of the proposed commuter car park. As such, it is noted that neither Sutherland Shire Council nor the applicant wish to own or maintain the commuter car park (refer to **Section 6.16** for confirmation of Council's position). It is therefore likely that the commuter car park would be owned and operated by Railcorp. It is noted that at the time of lodgement of the EA, these discussions are still ongoing.

These negotiations have included the Railcorp 'standard' specifications in relation to pedestrian facilities to and from the commuter car parking and from Kirrawee train station.

It is noted that the proposal involves the creation of additional traffic signals and the junction of Oak Road and Flora Street, thereby facilitating linkages between the site and the Kirrawee shopping strip and train station.

To this end, the applicant will continue to discuss the proposed commuter car park with Railcorp in relation to its standard specifications and will also work with Council in relation to its requirements for any additional public domain works that may be required as a result of the proposed commuter car park.

6.8 Noise and vibration (DGR 8)

Acoustic Logic has prepared an Acoustic Assessment of the proposal. This report seeks to identify the source of any potential noise and vibration impact within the vicinity of the site. The assessment has been undertaken in accordance with the “*Interim Guidelines for Development near Rail Corridors and Busy Roads*”

As such, the report sets out a number of noise sensitive areas surrounding the site as follows:

- Traffic noise along the Princes Highway and to a lesser extent those facing the industrial developments to the east and the Flora Street driveway entry to the underground parking;
- Noise from the adjacent industrial development to the east of the site; and
- Noise generated from within the site.

It is noted that Acoustic Logic determined that the rail line would have no adverse impact on the proposal.

Acoustic Logic has assessed the potential for noise from each of these sources and concludes that the traffic noise from the Princes Highway and Flora Street will be the dominant noise impact. As such, the report concludes that internal noise complying with acoustic criteria can be achieved through single glazed windows of varying thickness with acoustic seals. To this end, although further details will be provided at the detailed design stage, the report sets out a range of minimum glazing thicknesses for each of the residential blocks.

In addition, the Acoustic Report provides acoustic mitigation measures for the proposed winter gardens, external walls, ventilation and roof construction.

6.9 Ecologically sustainable development (DGR 9)

Whilst the details of environmentally sustainable development initiatives to be incorporated into the development will be contained in subsequent detailed applications, general ESD principles upon which the concept is based are outlined in the Urban Design Report at **Appendix 4** and include:

- Use of multiple cores enabling 60% of apartments to be cross-ventilated with good natural daylight and solar access into primary living spaces and external living areas;
- Energy efficient appliances and water efficient devices will be used;
- Water cycle management, including the use of reclaimed water supply to meet all irrigation and toilet flushing needs as outlined in Section 6.11 above;

- Substantial deep soil areas for significant planting; and
- Compliance with BASIX, BCA Section J and Green Star rating.

6.10 Drainage and stormwater management (DGR 10)

Northrop Engineers have prepared a Drainage and Stormwater Management Report for the application (refer **Appendix 16**). This report specifically addresses drainage, groundwater and flooding associated with the proposed concept. The report draws on the outcomes of previous discussions with Sutherland Shire Council and various studies prepared by Northrop and Evans and Peck.

Stormwater management

As part of its report, Northrop has prepared a Concept Stormwater Management Plan. This stormwater plan specifically addresses the following principles:

- Drainage and infrastructure;
- Groundwater;
- Flooding; and
- Water Sensitive Urban Design.

The report also sets out various opportunities within the concept design to reuse collected/treated site rainfall runoff and specifically for the proposed habitat and piazza water body as well as landscaping across the site. To this end, the Concept Plan has been designed such that rainwater harvesting tanks of a sufficient size dedicated to servicing the water bodies and the landscaping can be provided.

In addition to this, other rainwater harvesting initiatives will seek to minimise the generation of stormwater from the development. In this regard a number of initiatives will also be considered at detailed design phase. These may include toilet flushing, laundry washing, car washing, irrigation and water body replenishment. Further details of these measures will be provided as part of subsequent applications.

Water quality

As set out above, the water supply to the proposed two water bodies will be sourced from rainfall runoff from the site.

Northrop has assessed the quality of this runoff and has recommended a number of water treatment measures that could be integrated within the detailed design phase and as part of subsequent applications. These measures include the following:

- Soil profiles supporting grassed over structure to allow runoff to infiltrate and collect in subsurface drainage systems before discharge; and
- Landscaped rainwater treatment gardens.

To this end, Northrop has calculated that approximately 600m² of bio-retention treatment area is required to process runoff being directed to the various rainwater tanks.

In addition to the treatment of the surface water, Northrop has also outlined concept measures that could be implemented for the treatment of stored water within the rainwater harvesting tanks and also water in the surface water bodies to satisfy the ecological and aesthetic recreational objectives as per the relevant ANZECC, DECC and NHMRC guidelines as well as human interaction. Further details on these measures will be provided in subsequent applications.

Site discharge

In relation to the control of site discharge, Northrop has provided indicative advice on the existing catchments and how post development flows will be dealt with. In particular, Northrop advises that the 'northern one-third catchment' represents the area surrounding proposed buildings F, G and H and that runoff from this catchment will be discharged according to current site conditions.

In relation to the southern two-thirds catchment, Northrop has set out discharge criteria for controlling post development runoff. This is based on the hydraulic capacity of the 450mm diameter discharge pipe that previously discharged from the south-eastern corner of the site ($Q = 0.52\text{m}^3/\text{s}$).

In addition, the Concept Plan proposes an on-site detention system to service the full 'southern two-thirds catchment' to limit post-development flow-rates to the capacity of the 450mm discharge pipe.

Northrop also provides a number of stormwater treatment measures that will apply to each of the respective runoff areas, prior to discharging to the public drainage system. Further details on these measures will be provided in subsequent applications.

Public domain/open space and accessibility

As detailed on the architectural plans, the proposed location for the temporary water body during construction will be within the north-western corner of the site. This location has been chosen to ensure convenience for the Grey-headed Flying Foxes to roost in the existing trees, and it is situated within a part of the site least likely to be affected by construction works.

Northrop sets out a number of principles for maintaining storage depths, surface area and water quality within the 'temporary water body'. These include measures in relation to the water storage/supply and the water quality. Further details on these measures will be provided in subsequent applications.

Methodology to dewater the brick pit

CM Jewell & Associates has prepared a Dewatering Plan and associated Hydrogeological Data Report and Long-Term Groundwater Management Plan (refer **Appendix 22**). These reports are informed by the conclusions of the Groundwater Assessment also undertaken by CM Jewell (refer **Appendix 19** and **Section 6.10** of this EA).

Dewatering

The current water level in the lake is 91.7m AHD. Given that the construction working level of the proposal will be 84.90m AHD; this will require that the groundwater and lake level be lowered to approximately 84 m AHD. This will involve the lowering of the water level by approximately 7.2m.

It is envisaged that the dewatering of the pit will discharge to the existing stormwater system and will be undertaken using pumps with the rate of dewatering to be determined by slope stability, the capacity of the drainage systems and the availability of pumping plant and associated pipe work.

CM Jewell recommend that the pit be dewatered over a period of approximately seven weeks but that this will be extended if monitoring of the slope stability controls requires it.

The dewatering plan is based on the results obtained from the Hydrogeological Data Report and the Groundwater Assessment which conclude that the hydraulic conductivity of the shale, and the upper part of the weathered sandstone on the site, lies towards the upper end of the “regional range” (as described in the data report).

The Dewatering Report therefore sets out a number of management principles for the dewatering process to include the following:

- Pumps to be mounted on pontoons tethered to the middle of the lake;
- Water pressure in the banks to be carefully monitored;
- A pumping rate of 15 L/s be used;
- Discharge rate and pumping rate to be continuously monitored;
- Measures to be implemented to manage the anoxic layer below 87.2m
- Measures to be implemented to manage the sediment at the base of the pit;
- Water to be discharged to the stormwater system;
- Monitoring to be carried out in Dents Creek and Oyster Gully, and below the stormwater discharge points; and
- Water to be made available to anyone willing to collect it from the site if required.

Groundwater Management

CM Jewell & Associates has prepared a Long-Term Groundwater Management Plan (refer **Appendix 22**). This plan sets out a strategy for the management of groundwater inflow to the brick pit, once dewatering has been completed.

The Management Plan concludes that:

“long-term groundwater drainage during the life of the development can be effectively managed by collection, treatment and discharge to the stormwater drainage system without adverse impact.”

To this end, the groundwater plan clarifies that no long-term management of the groundwater should be required if a fully tanked basement design is adopted. However, if

a drained basement design is adopted then the following management strategies should be adopted to ensure that the groundwater flows can be managed:

- A drainage system be installed that incorporates a perimeter drain around the base of the quarry wall and a drainage layer installed beneath the floor slab;
- The drainage system should be designed for an average flow of 0.5 L/s and a peak flow of 1.5 L/s;
- The drainage system should also incorporate a system to manage clogging by precipitated iron and manganese hydroxides;
- Collected groundwater be treated to remove iron and manganese; and
- Treated water can then be discharged to the stormwater system or reused on site.

6.11 Contamination and geotechnical issues (DGR 11)

Investigations into the physical suitability of the site for the proposed development have identified no encumbrances to that development.

Geotechnical

Jeffrey and Katauskas have undertaken an assessment of existing geotechnical data and have assessed any geotechnical issues likely to affect the proposed development, and the methods required to address these issues (refer **Appendix 13**).

As part of their assessment, Jeffrey and Katauskas have reviewed a number of historical geotechnical reports undertaken on the site between 2003 and 2009.

In particular, the report examines the inferred subsurface conditions associated with the existing brick pit area and the residual portion of the site and considers the following potential geotechnical issues:

- Dewatering of the brick pit and the removal of the softened material;
- Stability of the brick pit cut faces, including:
 - Southern brick pit face;
 - Eastern brick pit face;
 - Northern brick pit face; and
 - Western brick pit face.
- Seepage within the basement excavation;
- Backfilling the western portion of the brick pit;
- Building footings; and
- Basement floor slabs.

The geotechnical investigation recommends engineering solutions for each of the above issues and identifies additional investigations that may be required at detailed design and constructions stages, and as part of any future applications.

The report concludes (pp9) that:

“Based on our assessment of the site we consider that from a geotechnical perspective the site is suitable for the proposed development, provided the geotechnical issues (discussed further below) are properly evaluated and addressed during planning and detailed design. The proposed development involves relatively standard building construction, completed on many sites within the Sydney area.”

Land contamination

EIS have prepared a Contamination Management Plan (CMP) in relation to the application (refer **Appendix 8**).

The CMP provides a methodology to remove the existing site facilities, impacted fill material, and other unknown, unexpected contaminants that may be encountered during site works.

The CMP includes a review of a number of historical reports and documents undertaken on the site between 1996 and 2006.

As a result of these investigations, EIS sets out a number of issues that are likely to require management during the site preparation stage of the development as follows:

- Management of unexpected materials and/or contamination sources;
- Presence of asbestos containing materials;
- Off-site disposal of excess excavated material;
- Evaluation of suitability of site materials to backfill the brick pit;
- Importation of select fill material for site reinstatement;
- Control of imported material; and
- Management of potential contamination in the remnant bushland area.

The CMP also identifies a number of assessment criteria for the various materials that will be handled during the process as well as validation sampling and contingency plans in the event that contaminated material is encountered during site works. The report concludes (pp55) that:

“The site is considered to be suitable for the proposed development provided that the management of potential contamination measures outlined in this CMP are successfully implemented as applicable. A validation report should be prepared on completion of site works to document all site contamination related activities undertaken during the site development works.”

The site is not subject to any other known physical constraints to the proposed development.

Groundwater contamination

CM Jewell has prepared a Groundwater Assessment and Hydrogeological Data Report for the site.

The Groundwater Assessment Report summarises the historical groundwater sampling, pit water profiling and sampling and pit floor profiling and sampling that has been historically undertaken on the site on four separate occasions between 1999 and 2008. This report informs the Dewatering Plan and Long Term Groundwater Management Plans, also prepared by CM Jewell (refer **Appendix 21** and **22**) and outlined in **Section 6.10** of this report.

In detail, the plan concludes that the following materials have historically been found as a result of the various sampling:

- Chloride, bicarbonate, carbonate, sodium and sulphates were found across the various monitoring wells;
- Elevated concentrations of copper, lead, zinc and, to a lesser extent mercury and cadmium have historically been located as a result of groundwater sampling;
- Sampling undertaken in 2008 recorded levels for copper, and zinc that were in excess of the trigger values set for the protection of 95% of species in fresh water. However, in CM Jewell's opinion, these concentrations are typical of urban groundwater in low-permeability formations in the Sydney metropolitan areas;
- High concentrations of iron and manganese were found within most of the monitoring wells. Whilst these metals are regarded as naturally occurring components, the high measured concentrations of these metals will be a significant factor in the future management of the site;
- Only low concentrations of nutrients have been found within the samples; and
- Organic contaminants were found in a number of places

As a result of this sampling, CM Jewell recommends that the quarry lake water be discharged to the stormwater system.

However, and notwithstanding the above, it is noted that groundwater will comprise less than 10% of the total water volume that will be removed during pit dewatering. Therefore, whilst the results of the various sampling conclude that the groundwater is anoxic and has relatively high concentration of iron and manganese, the groundwater inflow will mix with oxygenated water in the lake, and therefore most of the iron and manganese will precipitate there. CM Jewell therefore considers that there is no reason to expect any adverse ecological impact due to the chemical quality of the discharged water.

The Groundwater Assessment Report also sets out a number of management recommendations for the dewatering process and the water disposal which have been incorporated into the Dewatering Plan and Long Term Groundwater Management Plan (refer **Section 6.10** and **6.11** for discussion).

Hydrogeological Data Report

The Hydrogeological Data Report concludes that the top 4.5m of the lake is of a high quality with salinity low, oxygenation high, temperature and pH within an ecologically neutral range and with the exception of boron, no nutrients or toxicants are present in significant concentrations.

The Hydrogeological Data Report also provides an assessment of the sediment at the base of the quarry pit. This assessment details that this sediment layer is generally less than 150mm thick and is partly decayed leaf litter, is anoxic and has a strong odour. The sediment also contains relatively high concentrations of phosphorus, and low concentrations of heavy metals. As a result of these investigations, the Dewatering Plan includes a recommendation that measures be implemented to manage the anoxic layer below 87.2m and to include the sediment at the base of the quarry.

Further details on these remediation measures will be provided at detailed design stage.

6.12 Staging (DGR 12)

The Concept Plan seeks approval for the indicative staging of the proposal. As detailed on the staging plans submitted with the Concept Plan, this will broadly occur in three phases as follows:

Stage 1 - Retail, basement car parking and Blocks D + E. Construction of substrate element of the park to include the original STIF retention and temporary water body;

Stage 2 - Blocks A, B and C;

Stage 3 - Princes Highway Blocks F, G + H.

Stage 4 - Full embellishment of public park (note – timing of this stage will be subject to the outcome of VPA negotiations, and may come ahead of Stages 2 and/or 3).

6.13 Utilities (DGR 13)

Wallis & Spratt have been engaged to assess the demand requirements of the proposed development in relation to electrical, mechanical, hydraulic and fire series. Their report can be found at **Appendix 15**.

Electrical Services

Electricity supply to the site will be provided by Energy Australia and from an enclosed sub chamber station compound on the site. This will include a multi transformer chamber.

It is anticipated that the total maximum electrical demand for the proposed development will be 6,664 kVa.

It is noted that this loading has been forwarded to Energy Australia as part of the consultation process. To date, no comment not been received back from Energy Australia.

Communications

Existing fibre optic cabling is located in Oak Road and Flora Street. These cables and pits may need to be relocated to suit the proposed development. To this end, the construction phase of the buildings will be planned to accommodate any existing and relocated cabling required.

In terms of telephone services, it is envisaged that a fibre optic backbone cabling will be used where possible.

Television and internet services will be provided to all residential, commercial and retail tenants subject to negotiations with the respective suppliers.

It is noted that Wallis & Spratt have consulted with Telstra in relation to the proposal.

Hydraulic Services

The hydraulic services for the development will consist of cold water service, natural gas, sewerage and trade waste systems. This will involve connection to the existing Sydney Water sewer main, extension of and connection to the existing Sydney Water water main, roof stormwater drainage and re-use system, on site detention, and discharge to Council's stormwater system and sub-soil drainage.

In terms of the demand for the overall development, this is estimated at 29.2L/sec.

It is noted that Wallis and Spratt have held discussions with Sydney Water which has confirmed that the site is included in its Sydney Water Growth Service Plan for June 2009 to June 2014.

Fire Services

Fire services for the development will consist of hydrants, hose reels and automatic fire sprinkler systems and will comply with the relevant BCA and Australian Standards.

Sprinkler systems would be provided to the following:

- All residential blocks over 25.0m in height.
- All retail areas.
- All underground car parking areas.
- All associated areas that are positioned in ground, e.g., all pump and plant areas.
- All areas would be designed to conform to AS.2118/2006 and BCA.E.1.5.
- All required pumping sets would be in a single centrally positioned.
- Full size tank storage would be required of approximate 788,000 litres which would be built as a split tank for the sprinkler and hydrant system.

In addition, the storage tanks would be filled via the Sydney Water mains and any re-use water.

Natural Gas

Natural gas will be provided to all residential units for cooking and will also be provided as a backup heating source for hot water system for residential and retail areas. Natural gas will also be provided to all retail areas for commercial cooking. It is noted that Wallis & Spratt have consulted with Jemena as part of the consultation process. To this end, Jemena has confirmed in a letter dated 19 October 2020 that Natural Gas is available in the vicinity of this site. A copy of this letter is provided at **Appendix 15**

In summary therefore, utilities will be available to service the proposed development.

6.14 Contributions (DGR 14)

Sutherland Council has three Section 94 Contribution Plans that apply to the Kirrawee Site. These are:

- Section 94A Contributions Plan Kirrawee – Mixed Use Zone 7 Land;
- 2005 Sutherland Shire Council Contribution Plan Shire-Wide Open Space and Recreation Facilities; and
- 2003 Community Facilities in Sutherland Shire Contribution Plan.

It is noted that a section 94A levy cannot be imposed on the same development application if a Section 94 contribution is required.

Under Council's Section 94A Contributions Plan, this requires the payment of a 1% levy on the total development cost (\$2,380,000m). This is to be used to fund the purchase and embellishment of the Brick Pit Park.

Of relevance to this plan, the SSLEP also imposes an obligation on Council to acquire the Zone 13 Public Open Space land on which the park will be provided. However, Council has recently advised the land owner that it no longer seeks to acquire the land and may amend this zoning to remove the acquisition liability. It is therefore likely that Council may not be able to levy contributions under its Section 94A Contributions Plan.

The 2005 Sutherland Shire Council Contributions Plan and 2003 Community Facilities Plan are based only on the residential portion of the development. Based on approximately 450 dwellings, the two traditional S94 plans would require a total contribution of approximately \$4 million.

Notwithstanding the contributions payable under the three plans, the applicant has been negotiating with Council to construct and provide (in lieu of contributions under these Plans) a fully embellished public park of approximately 9,000 sq.m. This park will be available for use by the wider community as well as residents of the development.

Additionally, the applicant will also offer to construct the commuter car park providing approximately 200 spaces.

The delivery of these material public benefits and issues such as their ownership, transfer, ongoing management, maintenance and operation have been subject to discussions with the relevant authorities including Sutherland Shire Council and Transport NSW, and have been will be incorporated into a set of “Concept Design Principles’ (refer **Appendix 23**) and a draft offer for a VPA which is provided at **Appendix 24** and **25** of this EA.

In summary, the draft offer to Sutherland Council involves the following principles:

The Applicant will:

- Construct a ‘substrate’ to the park enabling its subsequent development consistent with the (above) design principles (including measures for STIF conservation and temporary water body during construction phase in accordance with any conditions of planning approval). Substrate may consist of clean fill or (subject to planning approval) built structure;
- At its discretion either construct the park to its complete design form (consistent with relevant planning approval) or pay Council the reasonable costs of its embellishment;
- Transfer at no cost to the Council a minimum of 9,000m² of the site designated for the park (exclusive of any (stratum) lots in separate public ownership); and
- Meet all costs associated with the above.

The Council will:

- Waive all developer contributions otherwise attributable to the development of the site in accordance with this Concept Plan application;
- Accept ownership of the transferred land; and
- Maintain the park in accordance with the (above) design principles in relation to ‘boundary conditions’ with the mixed use parts of the site.

6.15 Heritage (DGR 15)

Edward Higginbotham & Associates have prepared a Conservation Management Plan and Heritage Impact Statement (HIS) for the Concept Plan (refer **Appendix 6**). This report summarises a number of historic reports prepared for the previous application for the site and sets out the operating history of the former brickwork operation from its opening in 1912 by the Sutherland Brick Company through to the closure of the site’s operation in 1974.

The report details that five separate pipe kilns were constructed on the site between 1927 and 1961. An archaeological excavation of the site in 2007 revealed that Pipe Kilns 3-5 were poorly preserved, Pipe Kiln 4 had been removed from the site and that only Pipe Kilns 1 and 2, being the later pipe kilns, survived to just below finished floor level on the site, exposing the underfloor flue arrangement. Of these two kilns, it was determined that Pipe Kiln 1 was the best preserved in that it still demonstrates the workings of a pipe kiln.

Pursuant to these investigations, a Heritage Impact Statement was prepared in 2009 for the previously redevelopment proposal for the site. As part of this assessment, it was concluded that other aspects of the brick manufacturing technology were considered to be well preserved on other sites in Sydney and therefore the demolished remains of the other brick kilns were not considered worthy of retention. This report therefore considered three principal options for the conservation of Pipe Kiln 1 as follows:

- Option 1 – Conservation in situ;
- Option 2a – Dismantle and reconstruct in adjacent park, former brick pit;
- Option 2b – Dismantle and reconstruct in part in adjacent retail centre; or
- Option 3 – Interpretation and display alone.

These options have been carried forward into the current Concept Plan. As a result of further investigations, and following discussions with the Project Team, Option 1 was selected as the most appropriate option to allow for the conservation of Pipe Kiln 1 in situ, to include the retention of the spatial relationship between the kiln and the adjacent brick pit, together with appropriate interpretation and display.

It is considered that this option complies with the ICOMOS Burra Charter and will ensure that *“the significance, fabric and authenticity of Pipe Kiln 1 and its setting is retained”* due to the following (as detailed in section 9.1 of the HIS):

- *“The kiln is retained in situ without dismantling or reconstruction;*
- *It retains the setting of the place (Policy 1). This will further be enhanced with the retention of the spatial relationship between Pipe Kiln 1 and the brick pit (Policy 2);*
- *It retains significance;*
- *The changes to the fabric of the kiln are minimal;*
- *It retains authenticity;*
- *The level of change (namely the development, as designed to allow for the conservation, interpretation and display of Pipe Kiln 1m including the spatial relationship with the brick pit) will be appropriate for the level of cultural significance of the place, assuming appropriate design principles are put in place.”*

In addition, it is proposed to retain part of the former brick pit within the proposed park, and in particular on its western and southern faces. This is subject to geotechnical advice that will be provided at the detailed design phase and as part of subsequent applications.

It is also noted in the HIS that the previous Kirrawee Brickworks provided two chimneys on the site. These chimneys were considered a local landmark indicating that travellers were approaching Sutherland, until their demolition in 1975. It is therefore a recommendation of the HIS that the proposed development interpret this historical landmark in the appearance of the development as a gateway to Sutherland and a local market for Kirrawee.

6.16 Consultation (DGR 16)

Community Consultation

Elton Consulting was engaged to consult with the community and local stakeholders in accordance with the Department of Planning's Major Project Community Consultation Guidelines 2007. Elton Consulting undertook this consultation between 7 September 2010 and 7 October 2010.

The consultation undertaken by Elton included the following:

- A newsletter distributed to local stakeholders setting out information about the proposal, the process and the relevant timeframes;
- A stand-alone project website
- A walk up survey of local stakeholders; and
- One on one stakeholder briefings and interviews

As detailed at Section 6 of the Consultation Outcomes Report, the following is a summary of the feedback received during the consultation process along with a response as to where these comments are addressed within the EA.

Table 5: Summary of community consultation feedback

Comments	City Plan Response
Generally respondents welcome the introduction of new amenity in Kirrawee	Noted
Generally there is support for the proposed investment in Kirrawee and the role the development would play in the revitalisation of the area	Noted
There is a desire to preserve the existing Kirrawee atmosphere – the local, village feel	Noted
Some respondents welcomed the substantial housing component proposed while others were concerned about the scale and number of units	Refer to Section 6.4 for an assessment of the proposed bulk and scale of the proposal. Refer to Section 6.3 for an assessment of the number of units proposed.
There is support for the increased foot	Refer to Section 6.3 for an assessment

traffic that the new development would bring however, some shop owners are concerned that the development will compete with their business and impact viability	of the economic impact of the proposal.
Existing traffic and parking issues were highlighted and respondents were interested in how the proposal would address these issues or concerned that it may worsen the problem.	Refer to Section 6.7 for an assessment of the traffic and parking issues associated with the proposal.

Council Consultation

A consultation meeting with senior staff of Sutherland Shire Council was held on 16 September 2010.

A summary of the issues raised at the meeting, along with the response is set out in **Table 6** below:

Table 6: Summary of Sutherland Shire Council comments

Comments	City Plan Response
Council confirmed that there had been historical debate within Council as to whether the current DCP allowed for the full potential of the site to be realised. Some Councillors considered that the DCP controls were inadequate for a variety of reasons.	Noted.
Council acknowledged that there is the potential that their position in relation to the site could change such that it was understood that the development of the site should explore opportunities for innovative development further than what the DCP allowed.	Noted and agreed
Council acknowledged that the Local Area Masterplan (LAM), prepared by the DOP, may have been appropriate at the time but circumstances have changed and there may now be new opportunities. If it is intended to develop within the brick pit then the controls contained within the LAM were largely irrelevant.	Noted and agreed
Council consider that retail on the site could	Noted and agreed

attract shoppers back to the Shire who were currently shopping elsewhere if the retail uses meet a need that is not currently satisfied. This is considered a good thing.	
Some Councilors have “accepted” that 1 x supermarket may have to be accepted on the site. Some would still oppose any supermarket.	Noted
Council officers explained that the concern does not relate to the presence of retailing but rather the type of retailing. Supermarkets cause concern but it was suggested that a discount department store along with showroom uses along the Princes Highway may be appropriate uses	Noted
Council considers that showroom/ Office Works type uses may be appropriate along the Princes Highway frontage. However, ecological constraints (i.e. STIF) may prevent the location of the retail moving further west to abut Oak Road.	Noted
Land Use Mix and Quantum	
<p>Council confirmed that it is preparing a housing strategy.</p> <p>This will seek to identify those sites that are capable of accommodating additional dwellings in accordance with the requirements of the draft Metro Strategy. Preliminary findings indicate that 6 x storeys was generally acceptable on some sites where existing trees can be retained to a height of 20m.</p> <p>Council is considering whether 10 x storeys is acceptable on the more dense centres such as Miranda and Caringbah, based on the context.</p>	<p>The housing strategy is being prepared as part of Council's draft LEP. As set out in Section 5.14 of the EA, the preparation of this document is very much in its infancy with little or no public documentation prepared to date.</p> <p>In relation to Kirrawee, it is noted that Council's early analysis considers that the centre has the potential for increasing dwelling numbers.</p> <p>It is also noted that Council is considering increasing densities and height limits within a number of centres to allow more dwellings to be built. As such, it is considered that the Site provides an opportunity for Council to satisfy part of the additional housing demand as required by the draft South Sub-regional Strategy.</p>

	Refer to Section 5.14 for further information.
Council's view is that it does not believe that it requires the Site to meet the housing requirement as there are numerous sites suitable for residential development.	<p>As detailed in Section 5.14 of the EA, Council's early assessment of where to locate the additional dwellings required by the draft Sub-Regional Strategy concludes that Kirrawee has the potential for <i>"new dwellings could meet the demands of young singles/couples and childless working households seeking proximity to amenities....no significant environmental constraints"</i></p> <p>In addition, it is submitted that the proposed development will bring significant economic benefits to Kirrawee Centre.</p> <p>This is discussed further in Section 5.14 of this EA.</p>
Council does not consider high density residential a suitable use of the site and believe that the site is suitable for something "bigger and bolder"	<p>As detailed in Section 5.5 of the EA, SSC needs to provide an additional 10,000 dwellings by 2031.</p> <p>To provide for this level of demand, SSC are currently preparing a Housing Strategy. Although the preparation of this document is in its infancy, the early recommendations of the Council are to increase residential densities within established centres. Although Kirrawee has not been identified as a centre that is capable of accommodating additional dwellings, as Section 5.5 of this EA sets out, the development of the Site will enable SCC to go some way towards satisfying the required dwelling targets and indeed the site can provide some 5% of the Council's dwelling targets up to 2031.</p>
Apartment buildings as shown in the concept don't suit the lifestyle and character of the "Shire"	As set out at Section 5.5 of the EA, SSC needs to provide an additional 10,000 dwellings by 2031.

	<p>As further detailed at Section 5.14 of the EA, SSC has commenced the preparation of a Housing Review to inform the preparation of a draft LEP.</p> <p>As part of that review, a number of options are being considered to facilitate the required increase in dwellings. These include increasing densities, increasing FSR's and increasing height limits within existing centres.</p> <p>These measures are clearly aimed at providing more residential units within the Shire as opposed to other forms of residential dwellings.</p> <p>It is therefore submitted that in order to meet the required housing targets, additional apartments will need to be provided across the Shire. To this end, the introduction of an additional 450 units on the Site will significant aid Council in meeting these targets.</p>
An illustration was provided of a school student attending Kirrawee Primary School and how the environment produced in the concept did not accord with accepted Shire lifestyles	<p>We understand that this issue principally relates to separate access for the proposed residential and retail elements of the scheme to prevent school children having to access the residential units via the proposed retail areas.</p> <p>Although the proposal is being submitted in concept form with detailed layout to be provided as part of future applications, the layout plans clearly detail separate pedestrian entrances and lobby spaces for the residential elements of the scheme such that access to the residential units can be provided without having to access the retail areas.</p>
Council believes that mixed use development, as shown in the concept, does not suit the culture of the Shire and	It is considered that mixed use development of a scale that is proposed has been historically successful around

that retail-residential mixed use has historically not been successful around Sydney.	Sydney with particularly successful examples being the recent developments at Balgowlah, and Cammeray where retail, commercial and residential uses have been successfully integrated onto the same site.
Council noted that a cinema complex and/or entertainment centre is an example of a better use than car parks and shops within the existing pit area because such facilities are not currently available in this vicinity.	<p>The applicant has historically considered a range of alternative uses for the Site.</p> <p>In relation to a cinema, this is not considered feasible and would in fact result in a development that would realise a loss and would therefore not proceed.</p>
Council are supportive of utilising the existing brick pit hole as part of the redevelopment if this is technically feasible	Noted and agreed
Urban Design	
Council is supportive of utilising the existing brick pit hole as part of the redevelopment if this is technically feasible	<p>Noted and agreed.</p> <p>Refer Section 6.11 of the EA for a discussion on the geotechnical requirements for the proposal, including the re-use of the existing brick pit.</p>
Noise from the Princes Highway. Amenity impact for residents	Refer Section 6.8 of the EA for a discussion on the noise impacts of the Princes Highway.
Council queried quality of the STIF on western slope of Brick Pit and whether it was worthy of retention?	Refer Section 6.2 of the EA for a discussion on the areas of STIF to be retained as part of the proposal.
Council is concerned about the difference in levels between the site and the surrounding area and in particular to the Kirrawee shopping strip and the transition between the site and the shopping area	Refer Sections 6.3 and 6.5 of the EA for a discussion on the relationship between the site and the surrounding area and the Kirrawee shopping strip.
Council is concerned about the level of connectivity between the proposed retail on	Refer Sections 6.3 and 6.5 of the EA for a discussion in relation to the

the site and the surrounding residential precincts	proposed connectivity between the retail and the surrounding residential precincts.
Council queried whether the retail element could be located closer to the Kirrawee shopping strip to provide an opportunity for linkages	<p>Refer Section 6.4 of the EA for a discussion in relation to the various options that were considered for the siting and layout of the proposed buildings.</p> <p>In addition, it is noted that the western part of the site provides for a STIF community. Further discussions on the retention of this area of STIF is provided at Section 6.2 of the EA.</p>
The perceived “Internalisation” of space could preclude outside visitors to the site. It was suggested that the internal areas of public open space do not present as areas of public space to those who are outside the site	<p>Although the proposal is being submitted in concept form, the indicative layout of the site has been designed to be permeable and with through-links for pedestrians along a north-south and east-west axis via an internal street. In addition, through site links will be provided through to the park and piazza and along the new street through to the east.</p> <p>In terms of the park, this will have new pedestrian pathways along its eastern edge linking to the Brick Kiln site and east-west shareway as well as the Princes highway.</p> <p>To the north, the east-west shareway will define the park to the north.</p>
Concern was raised as to the internal delineation between public and private space within the site	<p>The Concept Plan includes large areas of open space including communal open space. New public areas include 9000 sq.m of public park plus a public piazza and 7700 sq.m of communal open space.</p> <p>Although the application is being submitted in concept, as detailed on the Landscape Concept Plan, these spaces will be clearly delineated by the proposed podium level, public</p>

	<p>walkways, boardwalks, pathways and other landscaped features which will seek to define these areas as public spaces within the site.</p> <p>Every apartment will have the potential for generous balconies or terraces which would meet the DCP and design code in width and allow for passive recreation.</p>
<p>Council was concerned that there is only a “narrow opportunity” to see into the site from Princes Highway – this could lead to the “privatisation of the site”</p>	<p>The Concept Application proposes three buildings along the Princes Highway frontage (Blocks F, G and H).</p> <p>As described in the Urban Design Report at Appendix 4, the separation distance between these buildings will be 26m (between Block H and Block G) and 20m (between Block F and Block G).</p> <p>Pedestrian access will be provided between blocks F, G and H as detailed on Figure 36.</p> <p>It is considered that these separation distances, combined with the location of the two dedicated pedestrian entrances along this frontage will allow pedestrian visitors to view and easily access the site from the Princes Highway</p>
<p>Council requested more appropriate access for children to the residential elements of the site without having to access retail areas. Separation between children and public vs. private space</p>	<p>Refer above</p>
<p>Council was comfortable with the location of the higher buildings to the centre of the site</p>	<p>Noted and agreed</p>
<p>Council accepted two taller landmark buildings in the adopted DCP and could be open to some taller buildings based on merit</p>	<p>Noted and agreed. Discussion on the design changes since the PEA are set out in Section 3.2 of the EA.</p>
<p>Council advised that the 6 x storey height requirement arises from tree and canopy</p>	<p>Noted and agreed. Discussion on the design changes since the PEA are set</p>

heights within the Shire as well as an assessment of any impact of additional height on skyline and views	out in Section 3.2 of the EA.
Council considers that reduced footprints should be considered for taller residential buildings with up to 5 x units per floor. This would enable compliance with SEPP 65.	Discussion on the compliance of the Concept Plan with the principles of SEPP 65 are set out in Section 6.4 of the EA.
Council is receptive to the argument for increased height if it will increase public benefit for the site	Refer to Section 6.14 of the EA for a discussion on the public benefit of the Concept Application.
Park	
Council doesn't want the park as it is currently proposed and embellished on the plans (submitted with the PEA)	Pursuant to this meeting, a parks working group has been established comprising members of the applicant's design team and Council. Further discussion on this issue is provided at Section 6.14 of the EA.
Council wants a park on the site just not the park as currently proposed or in the location identified (in the plans submitted with the PEA).	Refer above and Section 6.14 of the EA. The park is purely a concept at the moment with the detail to be agreed at a later stage.
Council confirmed that it would be happy to negotiate further in relation to the detailing and location of the park, including within its currently proposed location, subject to meeting Council's design principles.	Pursuant to this meeting, a parks working group has been established comprising members of the applicant's design team and Council. Further discussions on this issue is provided at Section 6.14 of the EA.
Traffic	
Separation between retail and residential car parking to be considered within the EA	Refer Section 6.7 of the EA for a discussion on the traffic and transport impacts of the proposal.
Council noted that the proposed car park was not sustainable as it requires mechanical ventilation and artificial lights	Refer Section 6.9 of the EA for a discussion on the ESD impacts of the proposal.
New traffic counts are to take account of local traffic including that associated with the new Bunnings	Refer Section 6.7 of the EA for a discussion on the traffic and transport impacts of the proposal.
Council expressed concern in relation to the capacity of Flora Street and Oak Road to deal with the out flows from the site.	Refer Section 6.7 of the EA for a discussion on the traffic and transport impacts of the proposal.

Drainage/stormwater	
There is no discharge at present. The Council principle for stormwater management is to reduce runoff so that existing surcharge flows in the downstream Council drainage system were not increased by more than 50L/s.	Refer Section 6.10 of the EA for a discussion on the stormwater impacts of the proposal.
It is envisaged that the proposed “ornamental pond” will be topped up by rainwater	It is proposed to top up the ornamental pond by rainwater. Refer Section 6.10 of the EA for a discussion on the stormwater impacts of the proposal.
Council suggested modeling to demonstrate the proposed site catchments suit the capacity of the respective site discharge points.	Refer Section 6.10 of the EA for a discussion on the stormwater impacts of the proposal.
Ecology	
Flying foxes would be dealt with appropriately through the provision of a suitable drinking source	As detailed on the submitted plans, the proposal involves the provision of a compensatory water habitat for the Grey-headed Flying-fox. This will be provided within the park area. Further discussions on the ecological impacts of the proposal are set out at Section 6.2 of the EA.
Offsets to be agreed as part of the VPA	Refer to Section 6.14 of the EA for further discussions in relation to the proposed VPA.
Flying foxes /STIF Management Plan prepared for previous project.	A Vegetation Management Plan and Habitat Management Plan have been prepared by Cumberland Ecology and submitted in support of the EA. Refer to Section 6.2 of the EA for discussion on these plans, and Appendix 9 and 10 for copies of the relevant plans.

In addition to the general consultation as outlined above, additional consultation with Council on specific elements of the proposal and with other key stakeholders has occurred, which have informed the Concept Plan and this EA, as outlined in the following table.

Table 7: Summary of consultation

Consultation undertaken	Outcome
Sutherland Shire Council	
Meeting with Environmental Services Director and Council Parks Team on 29 September 2010	<p>Council generally accepted that its desired outcomes for the park could be achieved in principle, subject to the resolution of detailed design issues.</p> <p>Council identified issues with details of the proposed park upon which it sought further resolution. These are addressed further in Table 5 of the EA.</p>
Meeting with Council General Manager, Environmental Services Director, Engineering Manager and Property Manager on 15 October 2010	Council again generally accepted the principle of the park, subject to detailed design issues and the establishment of a number of principles to be included within the VPA. Refer to Section 6.14 for further discussion.
Ongoing email communication with Council	To formulate a set of agreed principles for the future design of the park and as a basis for negotiations on a future VPA.
Updated note from Council in response to DOP's request for comments	Copy of letter attached to DGR's (refer Appendix 1)
Letter from Sutherland Shire Council dated 6 September 2010	Council confirmed that they did not wish to own or manage the proposed commuter car parking.
NSW Transport	
Letter dated 17 August 2010 from NSW Transport in response to DOP's request for comments	Copy of letter attached to DGR's (refer Appendix 1).
Meeting with NSW Transport on 23 September	Confirmed that the site appears suitable for commuter car parking. Railcorp would be the most likely entity to own and operate the car park, however any such transfer would be subject to further detailed negotiations with Railcorp. Agreed that any transfer of the ownership could be undertaken as part of a VPA.
Various email and telephone communication between NSW Transport and City Plan S&D	NSW T provided advice on Rail Corp commuter car park design requirements and government procedures for dealing

	with the proposed offer.
RTA	
Letter 13 September 2010 in response to DOP's request for comments	Copy of letter attached to DGR's (refer Appendix 1)
Attendance at the RTA's Sydney Regional Development Advisory Committee (SRDAC) meeting on 7 October	Refer to Section 6.7 of the EA for further discussion on the traffic impacts of the proposal.
Various email correspondence between Halcrow and the RTA following the SRDAC meeting	RTA agreed to waive the requirement for micro-simulation modelling as the difference in traffic generation between the current and previous application is not significant enough to warrant a micro-simulation model.
Others	
Letter dated 11 August 2010 from DECCW in response to DOP's request for comments in response to DOP's request for comments	Copy of letter attached to DGR's (refer Appendix 1).
Email dated 5 August 2010 from Energy Australia	Copy of email attached to DGR's) refer to Appendix 1).
Various letters between Wallis and Spratt and Energy Australia, Telstra, Sydney Water, and Jemena	Copy of letters attached to Services Report at Appendix 15 .
Response from Jemena dated 19 October 2010	Copy of letter attached to Services Report at Appendix 15 .

The outcome of the applicant's consultations with Sutherland Council in relation to the delivery and embellishment of the proposed park is a set of "Park Principles". Further discussion on this issue is provided at **Section 6.14** of the EA.

7.0 DRAFT STATEMENT OF COMMITMENTS (DGR 17)

The proponent commits to the following matters should approval be granted to this application:

ISSUES	ACTION
1. Subsequent applications	Applications (hereafter called “subsequent applications”) consistent with the Concept Approval will be lodged with the relevant consent authority and will incorporate the following features.
2. Ecology	Subsequent applications will incorporate the recommendations of the Biodiversity Management Plan as described in Section 6.2 of the EA
3. ESD	Subsequent applications will incorporate the ESD principles and features as described in Section 6.9 of the EA.
4. Design quality	Subsequent applications will demonstrate a level of detailed design consistent with the design principles of SEPP 65.
5. Wind	Subsequent applications will incorporate the relevant and applicable measures recommended in the Pedestrian Wind Environment Statement by Windtech dated 18 October 2010.
6. Noise and vibration	Subsequent applications will incorporate the relevant and applicable measures recommended in the Acoustic Assessment prepared by Acoustic Logic dated 21 October 2010.
7. Traffic and accessibility	Subsequent applications will incorporate the relevant staged improvements (Stage 1) as detailed in the TMAP prepared by Halcrow and dated October 2010.
8. Drainage and stormwater management	Subsequent applications will be based on the stormwater concept design prepared by Northrop Engineers dated 29 October 2010.
9. Dewatering	The dewatering of the existing pit will be undertaken in accordance with the management principles as set out in the Dewatering Report prepared by CM Jewell and dated October 2010.

10. Groundwater management	The management of the existing groundwater will be undertaken in accordance with the recommendations of the Long-Term Groundwater Management Plan prepared by CM Jewell and dated October 2010.
11. Geotechnical	Further geotechnical investigations of the site will accompany subsequent applications. These will include the engineering solutions as detailed in the Geotechnical Report prepared by Jeffrey and Katauskas and dated October 2010
12. Contamination	Subsequent applications will address the management of unexpected contamination on the site in accordance with the recommendations of the Contamination Management Plan prepared by EIS and dated November 2010.
14. Heritage	Subsequent applications will incorporate the retention in situ of Brick Kiln 1, and in accordance with the recommendations of the Conservation Management Plan and Heritage Impact Statement prepared by Edward Higginbotham & Associates and dated 27 October 2010.
15. Developer contributions	<p>The applicant will enter into negotiations with Sutherland Council and relevant government agencies and use its best endeavours to enter into Voluntary Planning Agreements generally in the terms of its Offers detailed at Appendix 24 and 25, at the time of the first substantive subsequent application.</p> <p>Should no VPA be entered into with Council:</p> <p>EITHER, the open space proposed within the Zone 13 land in this application will be made accessible to the general public and will be provided in lieu of any contributions applicable to the development of the site under any subsequent application OR ordinary contributions applicable to any element of the development of the site will be levied on the relevant subsequent application for that element.</p>

8 CONCLUSION

The proposed Concept Plan for the “Brick Pit” redevelopment at 566-594 Princes Highway, Kirrawee proposes to introduce approximately 450 residential units, two retail supermarkets and associated speciality retail, commercial floorspace, commuter parking and commercial car parking together with a major community park and associated facilities on a 42,500 sq.m vacant and degraded site in single ownership.

The assessment in this EA concludes that the site presents a unique opportunity and is highly suitable for the development, subject to certain technical and design considerations. The development seeks to realise a range of regional and local planning objectives from what has been long recognised as a highly strategically important redevelopment site in the Sutherland Shire. In doing so, however, it seeks to move away from some of the more restrictive local planning controls which would render any complying development of the site uneconomic, with significant adverse social and economic consequences. The proposed development mix also enables the owner to construct and embellish a high quality 0.9 hectare public park and provide commuter parking.

The current application is for a Concept Plan under Section 75M of the Act. As such, it seeks approval only for the broad development envelopes, road and park locations, dwelling numbers and mix and car parking and other associated items. As a consequence, the level of assessment in this EA has been sufficient to demonstrate the capability of the site and the suitability of the proposed concept development in its context. The detailed design of the development will be contained in subsequent applications which will necessarily address the more detailed assessment considerations not able to be dealt with in this EA.

The proposed development is consistent with the relevant State planning strategies and controls, most particularly the Metro Strategy and draft Sub-regional Strategy.

The assessment of the overall impacts of the proposal contained in this EA concludes that those impacts are acceptable and reasonable subject to the measures outlined in the draft Statement of Commitments.

In conclusion, the Concept Plan is a significant improvement to the current use of the site and an appropriate response to the physical characteristics of the site, its locality and the changing character of the immediately surrounding area. The approval will be in the public interest. The granting of Concept Approval under Section 75O of the Act is recommended.