

Environmental Assessment Report Project Application

23-37 Lindfield Avenue, Lindfield
Mixed Use Development

Submitted to
Minister for Planning
On Behalf of Coogee Bay Village Pty Ltd

November 2010 ■ 08196

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This report has been prepared by: Claire Wright

Signature  Date 17/11/10

This report has been reviewed by: Gordon Kirkby

Signature  Date 17/11/10

Statement of Validity

This Environmental Assessment has been prepared and submitted under Part 3A of the *Environmental Planning and Assessment Act 1979* (as amended) by:

Environmental Assessment

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Qualifications	BSc(Hons), Dip TP, MRTPI
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In respect of	Project Application

Project Application

Applicant name	Coogee Bay Village Pty Ltd
Applicant address	PO Box 727, Edgeliff, NSW 2027
Land to be developed	23-37 Lindfield Avenue, Lindfield
Proposed development	Construction of a mixed use development comprising: <ul style="list-style-type: none">▪ 2,988m² GFA retail floorspace;▪ 102 residential apartments; and▪ basement car parking

Environmental Assessment	An Environmental Assessment (EA) is attached
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Certificate	<p>I certify that I have prepared the content of this Environmental Assessment and to the best of my knowledge:</p> <ul style="list-style-type: none">▪ It is in accordance with the Environmental Planning and Assessment Act and Regulation.▪ It is true in all material particulars and does not, by its presentation or omission of information, materially mislead.
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Signature



Name

Claire Wright

Date

17 November 2010

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- J** SEPP 65 Design Verification Statement and Residential Flat Design Code Table of Compliance
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PTI Architects
- Q** Waste Management Plan
JD MacDonald
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Windtech
- S** Natural Ventilation Statement
Windtech
- T** Access Assessment Report
PSE Access Consulting
- U** Stormwater Plans and Report
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GHD
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GHD

Executive Summary

Purpose of this report

This submission to the Department of Planning (the Department) comprises an Environmental Assessment for a Project Application under Part 3A of the *Environmental Planning and Assessment Act 1979* (EP& A Act). It relates to the site at 23-37 Lindfield Avenue in Lindfield (the site) on which a mixed use development is proposed.

The site forms part of 'Site 4', which was previously identified as a targeted multi-unit housing site under Schedule 4 of *State Environmental Planning Policy 53 Metropolitan Residential Development* (SEPP 53). SEPP 53 was amended on 25 June 2010 to remove the application of the policy to the Lindfield town centre (in which the site is located) and other town centres within the Ku-ring-gai local government area (LGA).

Clause 15 in Schedule 2 (Specified sites) of *State Environmental Planning Policy (Major Development) 2005* (Major Development SEPP), entitled 'Housing in Ku-ring-gai', previously identified development for the purpose of multi-unit housing on sites within the Ku-ring-gai area listed in Schedule 4 of SEPP 53 as a Major Development to be assessed under Part 3A of the EPA Act. However, the Major Development SEPP was also amended on 25 June 2010 to omit Clause 15.

On 17 December 2008, prior to amendments to SEPP 53 and the Major Development SEPP being made, a request for consideration of the proposal as a Major Development under Part 3A was made to the Minister for Planning (Minister). The Director-General (as a delegate of the Minister) issued the declaration for the Project Application on 15 January 2009. The Director General's Environmental Assessment Requirements (DGRs) for the Project Application were issued 19 February 2009.

This submission is in accordance with the Department's guidelines for Project Applications lodged under Part 3A, and addresses the issues raised in the DGRs.

Overview of Project

The proposal seeks approval for the following elements:

- the demolition of existing structures on the site;
- excavation of the site to an approximate level of RL 89.5m;
- construction of a mixed use development totalling 11,429m² GFA, comprising:
 - 2,988m² retail floorspace;
 - 102 residential apartments within two residential towers;
 - basement parking for 150 car spaces within two basement levels; and
 - associated landscaping, servicing and infrastructure.

The Site

The site is located at 23-37 Lindfield Avenue in the Lindfield town centre and is located directly opposite the Lindfield train station. It has secondary frontages to Kochia Lane (south) and Havilah Lane (east).

The site currently accommodates a mixed use development with ground floor retail premises with commercial and residential premises above. Surrounding the site is a mix of land uses including residential, commercial and retail. A local heritage item is located south-east of the site (on the other side of Kochia Lane). The development of a five-storey residential flat building has recently been completed to the north-east of the site on the other side of Havilah Lane. To the south-east of the site (on the other side of Kochia Lane) is an above-ground Council carpark which is identified as a future town square under Ku-ring-gai strategic planning documents.

Planning Context

As detailed above, the project has been declared to be a Major Development under the Major Development SEPP as it was previously identified as a targeted multi-unit housing site under SEPP 53.

The *Ku-ring-gai Sites Reports* (Site Reports) set out the development controls for the targeted multi-unit housing sites under SEPP 53. The site is identified as Site 4 in the Site Reports. Although SEPP 53 no longer applies to the site, SEPP 53 and the associated Site Reports have not been repealed.

The Site Report notes the following in relation to Site 4:

The central location and close proximity of existing services and infrastructure of Lindfield town centre and Lindfield Station presents an opportunity for the intensification of retail, commercial and residential uses on the site.

On 25 May 2010, *Ku-ring-gai Local Environmental Plan (Town Centres) 2010* (Town Centres LEP) was gazetted. The Town Centre LEP provides planning controls for key town centres within the Ku-ring-gai LGA including the Lindfield town centre. The Town Centres LEP states that the provisions of SEPP 53 and other environmental planning instruments (EPI) which provide planning controls for sites within town centres no longer apply.

However, in accordance with sections 75R and 75J of the EP&A Act, the provisions of local environmental plans (LEPs) do not apply to projects assessed under Part 3A. Thus, the provisions of the Town Centres LEP do not apply to the site. As of 25 June 2010, the provisions of SEPP 53 and the associated design controls in the Site Report for Site 4 also no longer apply to the site.

However, in the absence of any other relevant planning and development controls, the provisions of the Town Centres LEP and SEPP 53 (and associated Site Report for Site 4) have both been considered in the design of the development.

Environmental Impacts

The site is located in proximity to the Lindfield train station and northern rail line. Rail noise will be an important consideration in ensuring that the amenity of future residents on the site can be retained.

In addition, the site's location in close proximity to the train station will promote the use of public transport by future residents and customers accessing the retail shops. Therefore a reduction in car parking on the site has been an important consideration in the design of the development.

The following other environmental and site constraints have also been considered in the design of the development:

- the location of the site opposite an existing local heritage item;
- the movement of pedestrians and enhancement of pedestrian activity along Lindfield Avenue and Kochia Lane;
- the desired future character for the area, particularly the proposed town square on the southern side of Kochia Lane;
- ensuring that surrounding sites, within the broader street block occupied by the site, can still be developed; and
- provision of appropriate amenity to residential apartments within the development and maintenance of appropriate amenity to surrounding residential buildings.

Conclusion

The proposed mixed use development at 23-37 Lindfield Avenue will provide retail floor space to serve the needs of the surrounding community and will provide high quality residential apartments in close proximity to public transport and services. Potential amenity impacts resulting from the proposal have been mitigated through design mechanisms. The project is a suitable use in this town centre location.

1.0 Introduction

This Environmental Assessment Report (EAR) is submitted to the Minister pursuant to Part 3A of the EP&A Act to fulfil the Environmental Assessment Requirements issued by the Director General (DGRs) (Appendix A) for the preparation of an Environmental Assessment of a Project Application for the mixed used development at 23-37 Lindfield Avenue, Lindfield.

This Project Application seeks approval:

- the demolition of existing structures on the site;
- excavation of the site to an approximate level of RL 89.5m;
- construction of a mixed use development totalling 11,429m² GFA, comprising:
 - 2,988m² retail floorspace;
 - 102 residential apartments within two residential towers;
 - basement parking for 150 car spaces within two basement levels; and
 - associated landscaping, servicing and infrastructure.

The report has been prepared by JBA Planning(JBA), for the proponent, Coogee Bay Village Pty Ltd. It is based on urban design and architectural information provided by PTI Architects and supporting technical documents provided by the expert consultant team.

This EAR describes the site, its environs and the proposed development, and includes an assessment of the proposal in accordance with the DGRs. It should be read in conjunction with the information contained within and appended to this report.

This report:

- Provides a background to the development of an appropriate design for the project;
- Describes the site and surrounding area;
- Provides a detailed description of the proposed development;
- Provides an assessment of the project against relevant EPIs, strategic planning documents, relevant development controls plans (DCPs) and planning guidelines and policies;
- Provides an assessment of the project against the environmental assessment requirements in the DGRs; and
- Includes a draft Statement of Commitments to ensure any potential amenity impacts from the development are mitigated.

The report is structured as follows:

Section 1: Introduction, background, project team and approvals process.

Section 2: Site analysis, overview of existing site conditions, and summary of opportunities and constraints.

Section 3: The current strategic and statutory planning framework and context applying to the site.

Section 4: Summary of the key issues from Consultation.

Section 5: Description of the project.

Section 6: Environmental assessment of the Project Application.

Section 7: Conclusion

The draft Statement of Commitments is included at **Appendix B**. The Appendices also include a range of technical studies undertaken to inform the Project Application and its environmental assessment. These studies address the DGRs (**Appendix A**). They provide a technical assessment of the environmental impact of the proposed development, and recommend proposed mitigation measures to manage potential environmental impacts associated with the proposal.

1.1 Background

The site has been historically used primarily for commercial and retail purposes, with some limited residential uses. The adjoining Council carpark at the northern boundary of the site (Lot 21 in DP713 207) previously formed part of the site. In accordance with a condition on a previous development consent for the property (DA411/82), the previous owner of the site (Lindfield Arcade Pty Ltd) transferred this allotment to Council for a nominal amount of \$1 (see attached documentation at **Appendix C**). This carpark accommodates parking spaces for 25 vehicles.

Information relating to DA411/82 was subsequently lost in a Council fire. However, it is understood that the 25 car parking spaces provided on the adjoining Council carpark site (which had been transferred to Council for a nominal amount) was intended to serve the parking needs of the retail/commercial development on the site.

The site was bought by Coogee Bay Village Pty Ltd between 2006 and 2007 (the allotments were purchased in separate parcels in an attempt to consolidate the site for development) at which time consideration was given to developing the site for mixed use purposes in accordance with SEPP 53. The car parking provided in the Council car park adjoining the site has been taken into account in the overall car parking provision for the proposed mixed use development (see Section 6.4 below).

A meeting was held with the Department of Planning (the Department) on 6 November 2008, at which preliminary plans of the proposed development were presented. At this meeting, it was agreed with the Department's officers that the scheme be amended to include an improved retail entry at the corner of Kochia Lane and Lindfield Avenues and a more activated street frontage.

Revised plans were presented to the Department at an on-site meeting on 4 December 2008. The Department indicated its support for the improvements to the retail entry and requested that a change be made to the communal open space to elevate it to level three of the proposed development and to extend the proposed commercial area at level two.

On 17 December 2008, a request to the Minister was made seeking that the Minister form the opinion that the development proposal was a development of the kind described in Schedule 2 of the Major Development SEPP and therefore a Major Development to be determined under Part 3A of the EP&A Act. A preliminary environmental assessment report and preliminary plans reflecting the Department's request to amend the location to the communal open space were also submitted to assist the Director-General in preparing the environmental assessment requirements for the project.

The Director-General (as delegate to the Minister) issued the declaration for the project on 15 January 2009 and DGRs for the project were issued on 19 February 2009 (see **Appendix B**). The project declaration noted that careful consideration should be given to the visual relationship between the proposed development and the existing residential development and the heritage building opposite the site.

The declaration also noted that particular care should be given to the treatment of the loading dock area and ensuring appropriate sunlight access to the private communal open space on the site.

On 8 October 2009, a further meeting was held with the Department to provide an update on progress of the project and in July 2010, this EAR was submitted to the Department of Planning for Test of Adequacy.

1.2 Capital Investment Value

The proposed development will have a Capital Investment Value (CIV) of \$49,275,000.00 as detailed in the Quantity Surveyor's Report at **Appendix D**.

The CIV for the project has been calculated in accordance with the *Environmental Planning and Assessment Regulation 2000* (EPA Reg) as required under the recently-gazetted *State Environmental Planning Policy Amendment (Capital Investment Value) 2010* (SEPP CIV).

1.3 Project Team

An expert project team has been formed to deliver the project and includes:

Proponent	Coogee Bay Village Pty Ltd
Architecture and Urban Design	PTI Architects
Urban Planning	JBA Urban Planning Consultants
Landscape	Peter Glass and Associates
Quantity Surveyors	Heymann-Cohen Quantity Surveyors
Geotechnical	Jeffery and Katauskas Pty Ltd
Contamination	Environmental Investigation Services
Stormwater	GHD
ESD	GHD
Traffic and Transport	Varga Traffic Planning
Heritage	Graham Brooks and Associates
Noise	Acoustic Logic Consultancy
Access	PSE Access Consulting
Solar Access	Windtech

2.0 The Site

The subject site is an irregular-shaped site with an approximately 3,099m² site area located some 50m northeast of Lindfield Station. It has a frontage of some 60m to Lindfield Avenue in the south-west, and secondary frontages to Kochia and Havilah Lanes to the south-east and north-east respectively. It is owned by Coogee Bay Village Pty Ltd.

The proposed development site includes Nos 23 to 37 Lindfield Avenue and has a legal property description of Lot A in DP 418801, Lot 11 in DP 713206, Lots 101, 102 and 103 in DP 1067930 and Lot 3 in DP 713505. The adjoining three-storey property at the corner of Havilah and Kochia Lanes (2 Kochia Lane) is currently excluded from the development proposal. The site has a slight downward slope from the west to the east. A survey of the site is provided at **Appendix E**.

A location plan is provided at **Figure 1** and photographs of the site and surrounds are provided at **Figures 2 and 3**.

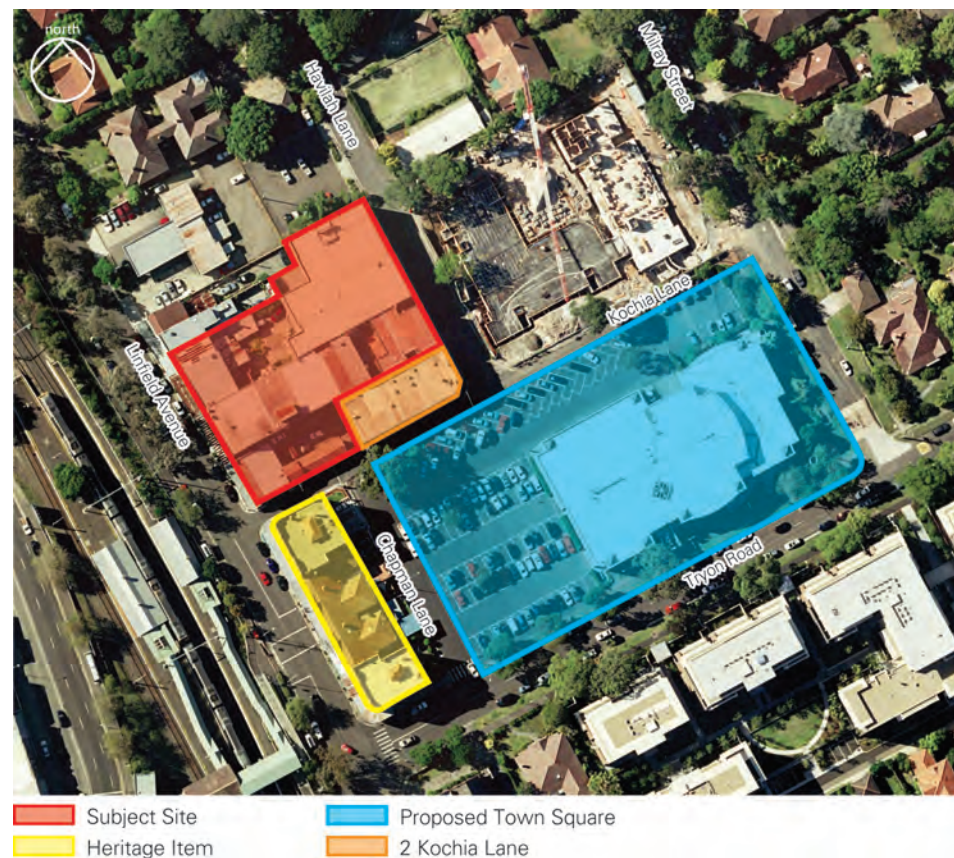


Figure 1 – Site location plan

The site currently accommodates ground floor retail premises with commercial premises above. There is also a small residential flat. Surrounding the site is a mix of land uses including residential, commercial and retail. A local heritage item is located south-east of the site (on the other side of Kochia Lane) at 1 to 21 Lindfield Avenue (see **Figure 1 and 2**).

The site forms part of a precinct targeted for multi unit housing development under Schedule 4 of State Environmental Planning Policy 53 - Metropolitan Residential Development (SEPP 53).

2.1 Surrounding Development

The site is located in the Lindfield Town Centre in which a mix of retail and commercial uses are located. Some sites accommodate medium density residential development above ground floor retail and/or commercial uses. The area surrounding the town centre to the north, south and east is made up of a mix of low to medium density residential development. The Pacific Highway is located on the western side of the Northern Rail Line to the west of the site and accommodates a strip of commercial and retail uses along the Highway with some residential above.

The development of a five-storey residential flat building has recently been completed to the north-east of the site on the other side of Havilah Lane. To the south-east of the site (on the other side of Kochia Lane) is an above-ground Council carpark. There is a Council carpark adjoining the north-western boundary of the site.

As part of its vision for the Lindfield Town Centre, Council proposes to redevelop the Kochia Lane Council carpark as a town square with below ground carparking and public open space.



Figure 2 – View of site from the south with the heritage item in the foreground



Figure 3 – Kochia Lane Council car park (proposed town square)

2.2 Summary of Site Opportunities and Constraints

The site benefits from the following opportunities:

- it is located in close proximity to the Lindfield train station and benefits from excellent access to public transport services;
- the location of the site in the Lindfield Town Centre provides excellent access to services and other facilities for future residents; and
- the Lindfield Town Centre is currently being transformed into a vibrant mixed use centre that will provide a range of services and a public town square - the proposed development will initiate this transformation.

The site is affected by the following constraints:

- consideration needs to be given to the future potential development of sites within the broader block in which the development site is located;
- potential amenity impacts on existing surrounding development need to be minimised;
- noise and vibration impacts from the nearby rail line need to be considered in the design of the development;
- careful consideration needs to be given to providing appropriate vehicle access to the site, particularly for loading vehicles associated with the retail component of the development; and
- potential impacts on the heritage item opposite the site need to be considered.

The constraints affecting the site have been addressed through appropriate design solutions and mitigation measures.

3.0 Planning Framework and Context

3.1 Strategic Planning

The Metropolitan Strategy

The Metropolitan Strategy seeks to plan for Sydney's growth to 2031. It's objectives include:

- containing Sydney's development footprint; and
- providing fair access to housing, jobs and services and open space.

The Strategy also identifies six sub-regions across the Sydney Metropolitan area and sets housing and employment targets for each sub-region. The site is situated within the Northern Subregion in which the following overall dwelling and employment targets to be achieved by the year 2031:

- 21,000 new dwellings; and
- 8,000 new jobs.

Although the dwelling target is relatively modest, the Strategy requires that all new residential development provide a variety of housing types to meet demand and demonstrates a high quality of urban design.

The proposed introduction of residential, commercial and retail uses on the site will assist in continuing to improve the range of facilities available within an existing urban area. In addition, it makes an important contribution toward the containment of residential growth within Sydney's existing urban footprint in an area that is served by public transport and connected to numerous job opportunities.

The proposal therefore assists the State government in achieving the objectives and strategies included in the Sydney Metropolitan Strategy.

Draft North Subregional Strategy

The Draft North Subregion Subregional Strategy was released by the Department of Planning (the Department) in October 2007. The draft Subregional Strategy comprises a key part of the State government's implementation of the Metropolitan Strategy. It seeks to translate the Metropolitan Strategy at a local level and provides the framework to guide local councils in the preparation of new LGA wide principal LEPs.

The proposed development is consistent with the following key directions for Sydney's North:

- Better access to a variety of housing choice; and
- Enhance the subregion's local centres.

In addition, the proposal will enable the Ku-ring-gai local government area to move closer towards its housing capacity target of an additional 10,000 dwellings over the next 25 years, which equates to an average of 778 dwellings each year.

Lindfield itself is designated as a 'small village'. These are classified as generally having a small strip or group of shops servicing daily shopping needs adjacent to a residential area containing between approximately 800 to 2,700 dwellings.

Amongst other things, the strategy seeks to concentrate housing growth within centres that are well serviced by public transport and renew the local centres to improve economic viability and amenity. The proposed development is consistent with the actions contained within the North Subregional Strategy.

3.2 Relevant Planning Legislation and Instruments

The planning legislation, instruments and planning policy documents relevant to the site and the proposed development comprise:

- The Environmental Planning & Assessment Act 1979 (EP&A Act) (in particular the objects of the Act in section 5(a))
- State Environmental Planning Policy 55 – Remediation of Land (SEPP 55);
- State Environmental Planning Policy 65 – Design Quality of Residential Flat Development (SEPP 65) and associated Residential Flat Design Code (RFDC);
- State Environmental Planning Policy (Infrastructure) 2007 (SEPP Infrastructure); and
- State Environmental Planning Policy (Building Sustainability Index: BASIX) 2004 (SEPP BASIX).

In addition, SEPP 53 and the associated Site Report for Site 4 have been taken into consideration as this EPI (and associated guidelines) forms part of the planning framework under which the original Part 3A declaration was made.

The following local planning controls are not strictly relevant to Part 3A projects but have nevertheless been taken into account in the design of the development:

- Ku-ring-gai Local Environmental Plan (Town Centres) 2010 (Town Centres LEP); and
- Ku-ring-gai Draft Town Centres DCP (Town Centres DCP).

The provisions of the Ku-ring-gai Planning Scheme Ordinance (KPSO) are not relevant to the site. Were the project to be undertaken as a development application under Part 4 of the EP&A Act, the development controls in the Town Centres LEP would apply and not those within the KPSO. In addition, the KPSO does not provide planning controls for sites to which SEPP 53 applies. For this reason, the planning controls in the KPSO have not been considered.

The primary controls within relevant EPIs and DCPs are outlined in **Table 1** below:

Table 1 – Relevant EPIs and DCPs

Relevant EPIs and DCPs	Details
EP&A Act (section 5(a))	The following relevant objectives apply to the proposal: <i>(a) to encourage:</i> <i>(ii) the promotion and co-ordination of the orderly and economic use and development of land,</i> <i>(vii) ecologically sustainable development, and</i> <i>(viii) the provision and maintenance of affordable housing.</i>
SEPP 55	SEPP 55 requires the consent authority to determine whether the site on which a development is proposed is, or is likely to be contaminated and whether remediation of the site is required to accommodate the proposed use on the site.
SEPP 65 and the RFDC	SEPP 65 provides ten design principles to guide the development of residential flat building (RFB) development in NSW. A Design Verification Statement prepared by a registered architect is required to be submitted with any application for a RFB (including those in mixed use developments). The SEPP is supported by Rules-of-Thumb in the RFDC.

Relevant EPIs and DCPs	Details
SEPP Infrastructure	<p>In accordance with SEPP Infrastructure, new development of more than 75 dwellings that connect to a road which links with a classified road (such as the Pacific Highway) are required to be referred to the Roads and Traffic Authority (RTA) for comment.</p> <p>Where residential development may be affected by rail noise the following noise criteria will apply:</p> <ul style="list-style-type: none"> - maximum 35 dB (A) at any time between 10,00pm and 7.00am in any bedroom in the building; and - maximum 40 dB(A) at any time anywhere else in the building (other than a garage, kitchen, bathroom or hallway). <p>This would be a consideration for development on the site as the site is located in relatively close proximity to the rail line.</p>
SEPP BASIX	Requires compliance with the energy and water saving targets within the SEPP for new residential development in NSW.
SEPP 53	This SEPP (prior to its amendment) encouraged the redevelopment of six specific sites and localities within the Ku-ring-gai LGA for multi-unit housing (including multi-unit housing combined with development for any other purpose). Under the SEPP, the development site was situated within 'Site 4' which was targeted for multi-unit housing alongside retail and commercial uses. The SEPP required that a development application for multi-unit housing take into consideration the development controls for the targeted sites as set out in the Site Reports.
Town Centres LEP	<p>The Town Centres LEP provides key planning controls for sites within Ku-ring-gai LGA's town centres including those within the Lindfield Town Centre. As detailed above, it is not strictly relevant to the proposed development which as assessed under Part 3A of the EP&A Act. However, its provisions have been considered in the design of the development and include the following key controls:</p> <ul style="list-style-type: none"> - The site is zoned B2 (Local Centre) in which retail development and shop top housing is permissible; - A maximum height of 20.5 metres is permissible on the site; - A maximum floorspace ratio (FSR) of 2.5:1 applies with a maximum FSR of 1:1 applying to the retail component of the development; - The site is identified as a key site on which an additional FSR of 0.5:1 and additional height of 3m is permitted subject to compliance with the design excellence requirements of the LEP; and - The building to the south of the development site at 1-21 Lindfield Avenue is identified as a local heritage item.
Town Centres DCP	The Town Centres DCP was adopted by Council on 8 June 2010 and provides detailed planning controls for the town centres identified in the Town Centres LEP. Specific controls and guidelines are provided for the Lindfield Town Centre, as well as for mixed use developments. Additional controls such as waste management and parking controls are also provided in the DCP. Further detail is provided in Section 6.2 below.
Ku-ring-gai Section 94 2004 -2009 Contributions Plan (Amendment 2)	<p>The S94 plan applies to all form of new residential development. The following contributions rates apply to the high density development:</p> <ul style="list-style-type: none"> - \$16,422.01 per 1 bedroom dwelling - \$23,152.34 per 2 bedroom dwelling - \$27,728.96 per 3 bedroom dwelling
Ku-ring-gai Town Centres Development Contributions Plan 2008	<p>In addition, the following contributions rates also apply to the residential component of the development:</p> <ul style="list-style-type: none"> - \$4,593 per 1 bedroom dwelling - \$6,475 per 2 bedroom dwelling - \$7,755 per 3 bedroom dwelling

4.0 Consultation

In accordance with Part 3A of the EP&A Act, consultation is required to occur at the following stages:

- the Director-General of the Department is required to consult with relevant public authorities in preparing the DGRs for the Project Application; and
- the Director-General is required to advertise and exhibit the EAR and appended reports and documentation.

In preparing the DGRs for the Environmental Assessment, the Department of is understood to have consulted with the following assessment authorities and groups:

- Ku-ring-gai Council;
- Ministry of Transport
- RTA; and
- Railcorp.

Comments and issues raised by these authorities and groups were considered in preparing the DGRs and are included in **Appendix A**.

Consultation meetings were held with Ku-ring-gai Council on 13 March 2007 and 7 May 2008.

5.0 Description of Development Proposal

This section of the report provides a detailed description of the proposed development.

5.1 Overview

This Project Application seeks approval:

- the demolition of existing structures on the site;
- excavation of the site to an approximate level of RL 89.5m;
- construction of a mixed use development totalling 11,429m² GFA¹, comprising:
 - 2,988m² retail floorspace;
 - 102 residential apartments within two residential towers;
 - basement parking for 150 car spaces within two basement levels; and
 - associated landscaping, servicing and infrastructure.
- the internal fit-out of the retail premises (details to be provided at the construction certificate stage).

Architectural drawings and photomontages of the proposed development prepared by PTI Architects are included at **Appendix D** and landscape plans prepared by Peter Glass Associates are included at **Appendix E**. **Figure 4** below illustrates the proposed development's floorplate.

1 ***gross floor area*** means the sum of the floor area of each floor of a building measured from the internal face of external walls, or from the internal face of walls separating the building from any other building, measured at a height of 1.4 metres above the floor, and includes:

- (a) the area of a mezzanine, and
- (b) habitable rooms in a basement or an attic, and
- (c) any shop, auditorium, cinema, and the like, in a basement or attic,

but excludes:

- (d) any area for common vertical circulation, such as lifts and stairs, and
- (e) any basement:
 - (i) storage, and
 - (ii) vehicular access, loading areas, garbage and services, and
- (f) plant rooms, lift towers and other areas used exclusively for mechanical services or ducting, and
- (g) car parking to meet any requirements of the consent authority (including access to that car parking), and
- (h) any space used for the loading or unloading of goods (including access to it), and
- (i) terraces and balconies with outer walls less than 1.4 metres high, and
- (j) voids above a floor at the level of a storey or storey above.

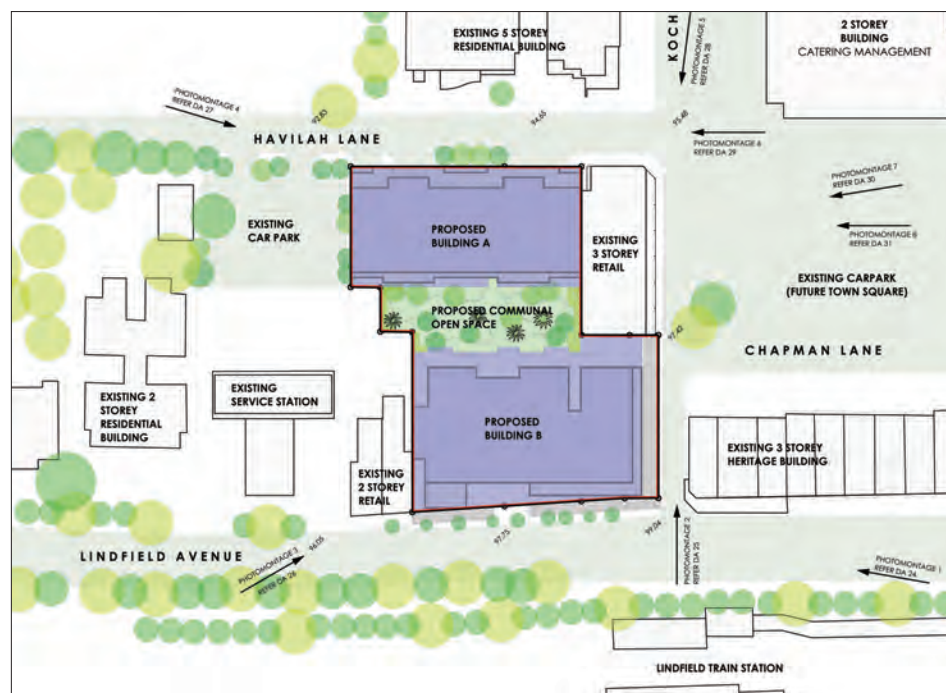


Figure 4 – Site plan of the proposed development

5.2 Numerical Overview

The proposed development will have the following key development statistics:

Table 2 – Numerical overview of the project

Key Statistic	Proposed
Site Area	- 3,099m ²
Gross Floor Area	- Retail - 2,988m ² - Total - 11,429m ²
FSR	- Retail FSR - 0.96:1 - Total - 3.7:1
Number of units	- Total of 102 units including - 53 x 1 bed units; - 44 x 2 bed units; and - 5 x 3 bed units
Private communal open space	- 494m ²
Building height ²	- 26.97m at the Lindfield Avenue frontage (south-west elevation); - 26.37m at the Kochia Lane frontage (south-east elevation); - 23.27m at the Havilah Lane frontage (north-east elevation); and - 28.38m (Building A) and 23.27m (Building B) at the north-west elevation.
Storey height	- 6 storeys (Building A) - 7 storeys (Building B)

² **building height** (or **height of building**) means the vertical distance between ground level (existing) at any point to the highest point of the building, including plant and lift overruns, but excluding communication devices, antennae, satellite dishes, masts, flagpoles, chimneys, flues and the like.

Key Statistic	Proposed
Parking	<ul style="list-style-type: none"> - 150 basement car parking spaces (including 2 accessible spaces) comprising: <ul style="list-style-type: none"> - 102 residential spaces; - 48 retail spaces. - 25 at-grade retail spaces on Lot 21 in DP713207.

5.3 Level by Level Description

A level by level description of the proposal is provided in **Table 3** below:

Table 3 – Level by level description

Level	Proposed works
Basement	<ul style="list-style-type: none"> - 89 car spaces (including 7 car share spaces); - storage space for the residential units; - bicycle parking; and - storage space.
Lower Ground Floor	<ul style="list-style-type: none"> - 61 car spaces (including 2 accessible spaces); - bicycle parking; - plant room space; and - residential garbage rooms.
Level	Proposed works
Upper Ground Floor	<ul style="list-style-type: none"> - 1 large retail premises for a super market; - travelators from Havilah Lane and retail forecourt; - 1 smaller retail premises fronting Lindfield Avenue; - storage and plant room space at rear of site; - loading area; and - residential lobby.
Level 1	<ul style="list-style-type: none"> - 3 retail premises and pedestrian circulation space in the Building B; - 10 residential units in the Building A; - storage space; and - landscaped courtyard (494m²) between Buildings A and B
Level 2	<ul style="list-style-type: none"> - 10 residential units in the Building B; and - 10 residential units in the Building A.
Level 3	<ul style="list-style-type: none"> - 10 residential units in the Building B; and - 10 residential units in the Building A.
Level 4	<ul style="list-style-type: none"> - 10 residential units in the Building B; and - 10 residential units in the Building A.
Level 5	<ul style="list-style-type: none"> - 10 residential units in the Building B; and - 4 residential units in the Building A.
Level 6	<ul style="list-style-type: none"> - 10 residential units in the Building B.
Level 7	<ul style="list-style-type: none"> - 8 residential units in the Building B
Roof	<ul style="list-style-type: none"> - Plant room space

5.4 Vehicular and Pedestrian Access

Vehicular Access

Access into and from the basement parking (both retail and residential) will be via Havilah Lane. A private right of way is also to be provided from the lower ground level parking area to the rear of the existing two-storey retail properties situated to the north-west of the site.

Pedestrian Access

Due to the slope of the site, pedestrian access into Retail Area 1 (proposed supermarket) is primarily from Kochia Lane via a set of escalators and from the lower ground parking level via ramps. Pedestrians will also be able to walk the 10m across the lane from the Town Square car park to the Kochia Lane entrance.

Pedestrian access into Retail Area 2 will be directly from Lindfield Avenue at street level. Access to Retail Areas 3 and 4 is provided via a staircase from Lindfield Avenue into the retail entry and access to Retail Area 5 is via a separate stair from Lindfield Avenue and street level from Kochia Lane.

Direct access into the residential lobby is gained via Lindfield Avenue and a second secure ground floor entry to the residential component is provided from Lindfield Avenue via the retail entry.

Four lifts are also provided within the development. These are accessible from the basement parking levels and provide access to the residential lobby at upper ground level (Lifts 3 and 4), the Level 1 retail areas (Lift 4) and all residential levels (Lifts 1-4).

Servicing and vehicle access for the proposed development is located at the rear of the site where it will not impact on areas of identified pedestrian flow.

5.5 Open Space and Public Domain

The proposed development will provide a private communal area of open space at level (494m²). This area will be landscaped and will receive good solar access (see Section 6.9 below). The open space at this level will also act as a link between the Buildings A and B in the development but will only be accessible to the residents within the development.

A landscape plan for the area has been prepared by Peter Glass and Associates (**Appendix G**). The landscape plan provides for elevated planter boxes at the perimeter of the communal open space area which will accommodate a range of small trees, large and small to medium shrubs and ground cover. Seating and paving of the outdoor area will also be provided with details to be determined at the construction certificate stage.

A number of mechanisms have been included in the design of the development to activate the public domain in the immediate vicinity of the site and to acknowledge the future town square envisaged in the location of the existing Council carpark on the southern side of Kochia Lane. As part of the proposal, two retail premises will have direct street access to Lindfield Avenue and Kochia Lane and will include a setback to the streetscape which will provide a colonnade-like structure at the street frontages in which innovative paving will be incorporated into the design of the setback area to encourage integration with the public domain. This shall simulate the appearance of a wider footpath.

5.6 Servicing

Servicing for the retail component (e.g. delivery of merchandise to the supermarket and collection of retail waste) will be accommodated in the loading area off Havilah Lane. The loading area provides sufficient space for two trucks side by side and accommodate vehicle entry and exit in a forward direction. The loading area will also be screened from Havilah Lane for both aesthetic and acoustic purposes.

This loading dock will allow direct unloading of goods into the supermarket, which shall be a significant improvement to the existing situation which requires using a goods lift to bring goods up to the supermarket storage area. The proposed improvements should in turn mean that vehicles are able to unload in a more expeditious manner.

Waste storage areas for the residential component of the development will be provided in the western and eastern parts of the lower ground level basement and waste storage for the retail component will be provided adjoining the loading dock.



Figure 5 – Materials and Finishes schedule

5.7 Materials and Colours

A materials and finishes schedule is included within the Architectural Drawings package at **Appendix F** and **Figure 5**. This illustrates a range of materials and finishes appropriate to the setting in which the development is located have been selected including glazed frontages to the retail spaces at ground floor (fronting Lindfield Avenue and Kochia Lane).

The residential towers above the retail space will be made up of face brick walls, powder-coated aluminium glazing, frameless glass balustrades and sliding mesh screens to balconies. Small areas of rendered and painted masonry will be included at the upper level and powder-coated aluminium louvres will be provided to the plant room space.

A neutral palette of colours is proposed which will ensure that the development integrates with the surrounding area, and does not adversely impact on the nearby heritage item. A physical sample board of materials and finishes is also submitted under separate cover.

5.8 Staging

The proposed development will not be staged. It will be developed as a single development.

5.9 Developer Contributions

Developer contributions will be paid to Council in accordance with the *Ku-ring-gai Section 94 Contributions Plan 2003-2009 - Amendment 2* and *Ku-ring-gai Town Centres Development Contributions Plan 2008*.

The existing 3,640m² of retail/ commercial GFA is approximately 650m² greater than the 2,988m² of retail GFA proposed as part of the development. As a result, the retail component of the development will not result in any additional demand for services and no contributions should be payable for the retail component of the development.

In addition, **Table 4** below provides the applicable rates (indexed to current CPI) and the developer contribution rate calculation which will be paid to Council prior to the Occupation Certificate being issued, as included in the Draft Statement of Commitments at **Appendix B**.

Table 4 – Contribution rate calculations

No of Bedrooms	S94 Plan 2004-2009	Town Centres S94 Plan	Total Rate per dwelling	Number of Units	Total S94 Amount
1 Bed	\$16,422.01	\$4,593	\$21,015.01	53	\$1,113,795.53
2 Bed	\$23,152.34	\$6,475	\$29,627.34	44	\$1,303,602.96
3 Bed	\$27,728.96	\$7,755	\$35,483.96	5	\$177,419.80
Total					\$2,594,818.29

Furthermore, it is considered that a number of public benefits will also be provided by the proposed development, these include:

- replacement of outdated retail and commercial floorspace, with new and upgraded retail floorspace, which will encourage greater economic activity in the locality;
- provision of a new supermarket, which is designed to better meet shoppers needs;
- activation of the streetscape at ground floor level, thereby increasing the level of passive surveillance and safety and security to the area;
- the development will act as a catalyst for the transformation of the area into a vibrant and mixed use centre; and
- the development will provide high quality residential accommodation to meet the needs of the local community in a highly accessible town centre location.

6.0 Environmental Assessment

This section of the report assesses and responds to the environmental impacts of the Project Application proposal. It addresses the matters for consideration set out in the DGRs (see Section 4.0).

The draft Statement of Commitments at **Appendix B** complements the findings of this section.

6.1 Director General's Environmental Assessment Requirements

Table 5 provides a detailed summary of the individual matters listed in the DGRs and identifies where each of these requirements has been addressed in this report and the accompanying technical studies.

Table 5 – Director General's Environmental Assessment Requirements

Director General's requirements		Location in Report/Application
Matter	Details	
Key Issues		
Relevant EPIs, Guidelines to be addressed	<p>Planning provisions applying to the site, including the permissibility and the provisions of all plans and policies including:</p> <ul style="list-style-type: none"> - Objects of the EP&A Act - SEPP53, SEPP55, SEPP65, SEPP (Infrastructure) 2007, SEPP (BASIX) 2004 - Ku-ring-gai Planning Scheme Ordinance (KPSO) - Ku-ring-gai Council's Town Centres LEP and Draft Town Centres DCP [now current] - Ku-ring-gai Sites Report (Development Controls and Design Guidelines) - Draft North Subregional Strategy - Nature and extent of any non-compliance with relevant environmental planning instruments, plans and guidelines and justification for any non-compliance. 	<p>Sections 3.0 and 6.2, SEPP65 Design Verification Statement and RFDC Table of Compliance at Appendix J, Stage 1 Preliminary Environmental Assessment at Appendix I and Table of Compliance Part 3A Town centres DCP at Appendix O.</p> <p>Note: The Ku-ring-gai Planning Scheme Ordinance does not apply to the site.</p>
Architectural, Building and Urban Design Impacts	The EA shall address the visual impact of the development in the context of adjoining development, in particular the impact on the adjoining heritage item (1-21 Lindfield Avenue).	Sections 6.5 and 6.10 and Statement of Heritage Impact at Appendix N .
	The EA shall also address design quality with specific consideration of the presentation of the building to the street, impact on surrounding sites and on the desired future character of the area, use of colours, materials/ finishes and landscaping with are complimentary to the locality, safety by design and public domain.	Sections 5.5, 5.7, 6.5 and 6.13.
	The EA shall address the failure to amalgamate the subject land with No.2 Kochia Lane. In this regard, the EA shall provide details of steps taken to incorporate that site, either through purchase or joint venture, or to demonstrate that this site can be redeveloped as a viable stand-alone development in the future.	Section 6.6
Built Form	The EA shall address the height and bulk and scale of the proposed development within the context of the surrounding development and mitigate any potential impacts relating to loss of sunlight, privacy at neighbouring properties and the public domain.	Sections 5.0, 6.2, 6.5, 6.7 and 6.9 and SEPP65 Design Verification Statement and RFDC Table of Compliance at Appendix J .
	<p>The EA shall provide the following documents:</p> <ul style="list-style-type: none"> - Comparable height study to demonstrate how the proposed height relates to the height of the existing development surrounding the subject site; and - Options of building massing and articulation. 	Sections 2.0 and 6.5 and Architectural Plans at Appendix F , SEPP65 Design Verification Statement e at Appendix J .

Director General's requirements		Location in Report/Application
Matter	Details	
Environmental and Residential Amenity	The EA shall address acoustic and visual privacy issues, both internally on site and external to the site, and shall demonstrate a high level of environmental and residential amenity.	Sections 6.7 and 6.8 and Statement and RFDC Table of Compliance at Appendix J , Shadow Diagrams at Appendix F and Environmental Noise and Vibration Impact Report at Appendix L .
Public Domain	<p>The EA shall consider:</p> <ul style="list-style-type: none"> - Potential improvements to the public domain including local streets, footpaths; - Interface of proposed development and public domain (particularly along the Kochia lane and Lindfield Avenue frontages), with particular regard to providing and maintaining active street frontages and vitality to the public domain; - Relationship to and impact on existing public domain; and - Provision of linkages with and between other public domain spaces including access rights and "safer by design" (CEPTED) issues, as detailed in a separate CPTED assessment. 	Sections 6.5 and 6.13.
Car Parking and Traffic	<p>The EA shall address the following matters:</p> <ul style="list-style-type: none"> - Provide a Transport & Accessibility Impact Study prepared in accordance with the RTA's <i>Guide to Traffic Generating Development</i>, considering traffic generation, any required road/ intersection upgrades, access, loading dock(s), car parking arrangements, measures to promote public transport usage and pedestrian and bicycle linkages. The Key intersections to be examined/ modelled include: <ul style="list-style-type: none"> - Pacific Highway/Havilah Road and Balfour Street; and - Lindfield Avenue and Tryon Road. - Provide an assessment of the implications of the development for non-car travel modes (including public transport, walking and cycling); the potential for implementing a location specific travel plan; and the provision of facilities to increase the non-car mode share for travel to and from the site. - Identify measures to mitigate potential impacts for pedestrians and cyclists during the construction stage of the project. 	Section 6.4, Traffic and Parking Assessment Report at Appendix K and Construction Management Plan at Appendix P .
Ecologically Sustainable Development (ESD)	The EA shall detail how the development will incorporate ESD principles in the design, construction and ongoing operation phases of the development including water and energy usage, waste minimisation and recycling strategies.	Section 6.12 and ESD Report at Appendix H .
Noise, Lighting and Vibration Impacts	Demonstrate that the proposal will be designed, constructed, operated and maintained so that there is no unacceptable level of noise impacts (specifically from any loading dock services facing Havilah Lane) on the amenity of the adjoining residential properties. The EA should also demonstrate appropriate measures to protect the acoustic privacy of residents from the noise and vibration of trains from the adjoining railway line, and shall include an acoustic assessment demonstrating how the proposed development will comply with the Department of Planning's Interim Guidelines for <i>Development near Rail Corridors and Busy Roads</i> .	Section 6.8 and Environmental Noise and Vibration Impact Report at Appendix L .
Drainage and Flooding	The EA shall address drainage/ flooding issues associated with the development/ site, including stormwater, the potential effects of climate changes, sea level rise and an increase in rainfall intensity, drainage infrastructure and incorporation of Water Sensitive Urban Design measures.	Section 6.14 and Stormwater Plans and Report at Appendix U .
Contributions	The EA shall address provision of public benefit, services and infrastructure having regard to the Council's Section 94 Contribution Plan and/ or details of any Voluntary Planning Agreement.	Section 5.9

Director General's requirements		Location in Report/Application
Matter	Details	
Contamination	The EA is to demonstrate compliance that the site is suitable for the proposed use in accordance with SEPP 55. This should include a Preliminary Contamination Investigation (Stage 1) in accordance with the requirements of the <i>NSW EPA Guidelines for Consultant Reports on Contaminated Sites</i> .	Section 6.16 and Stage 1 Preliminary Environmental Site Assessment at Appendix I .
Consultation	Undertake an appropriate and justified level of consultation in accordance with the Department's Major Project Community Consultation Guidelines October 2007.	Section 4.0
Heritage	The EA shall provide a Heritage Impact Assessment detailing and evaluating any impacts that the development would have on the adjoining heritage listed buildings at 1-21 Lindfield Avenue.	Section 6.10 and Statement of Heritage Impact at Appendix N .
Utilities	In consultation with relevant agencies, address the existing capacity and requirements of the development for the provision of utilities including any staging of infrastructure works	Section 6.17 and Correspondence from Sydney Water and Energy Australia at Appendix W .
Construction Impacts/ Site Access	The EA shall address measures to ameliorate potential impacts arising from the consultation of the proposed development in a Construction Management Plan, in particular outline measures to ensure minimal disruption to the Lindfield Town Centre.	Section 6.18 and Construction Management Plan at Appendix P .
Geotechnical & Hydrological Requirements	The EA shall provide a Geotechnical Report addressing the proposed excavation of the site. Matters to be addressed should include excavation methods and support (particularly to Council roads and infrastructure and the adjoining properties and structure), likely vibrations and any requirements for vibration monitoring (particularly in relation to the neighbouring heritage item at 1-21 Lindfield avenue, and any recommendations for a dilapidation survey. The report shall also address the potential of any development to intersect groundwater flows and the measures proposed to mitigate the impact of the development.	Section 6.8, 6.15 and Geotechnical and Hydrogeological Assessment at Appendix V and Vibration Statement at Appendix X .
Staging	The EA must include details regarding the staging of the proposed development (if proposed).	Section 5.8
Plans and Documents to Accompany the Application		
General	An Executive Summary.	Page vi
	A thorough site analysis including site plans, aerial photographs and description of the existing and surround development.	Section 2.0 and Architectural Plans at Appendix F .
	A through description of the proposed development.	Section 5.0
	An assessment of the key issues specifies above and a table outlining how these key issues have been addressed.	Section 6.1 Table 5
	An assessment of the potential impacts of the project and a draft Statement of Commitments, outline environmental management, mitigation and monitoring measures to be implemented to minimise any potential impacts of the project.	Appendix B
	A Transport and Accessibility Impact Study prepared in accordance with the RTA's Guide to traffic Generating Developments.	Appendix K
	A signed statement from the author of the Environmental Assessment certifying that the information contained in the report is neither false nor misleading.	Page v
	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 Projects SEPP).	Appendix D . Note: SEPP CIV was gazetted on 7 May 2010 and requires the CIV for the project to be calculated in accordance with the definition under the EPA Reg.
	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	Section 7.0

Director General's requirements		Location in Report/Application
Matter	Details	
Plans and Documents	<p>An existing site survey plan drawn at an appropriate scale illustrating:</p> <ul style="list-style-type: none"> - The location of the land, boundary measurements, area (m2) and north point - The existing levels of the land in relation to buildings and roads - Location and height of existing structures on the site - Location of adjoining rail boundary and infrastructure - Location and height of adjacent buildings and private open space; and - All levels to be Australian Height Datum 	Appendix E
	<p>Site Analysis Plan which identifies existing natural elements of the site (including all hazards and constraints), existing vegetation, footpath crossing levels and alignments, existing pedestrian and vehicular access points and other facilities, slope and topography, utility services, boundaries, orientation, view corridors and all structures on neighbouring properties where relevant to the application (including windows, driveways, private open space etc).</p>	Appendix F
	<p>A locality/ contact plan indicating:</p> <ul style="list-style-type: none"> - Significant local features such as parks, community facilities, open space and heritage items; - The location and uses of existing uses of buildings, shopping and employment areas; - Traffic and road patterns, pedestrian routes and public transport nodes; and - Including photographs of existing buildings and streetscapes and any significant views and vistas. 	Appendix F
	<p>Architectural Drawings illustrating:</p> <p>The location of proposed building envelopes and/ or structures on the land in relation to the boundaries of the land and any development on adjoining land;</p> <ul style="list-style-type: none"> - The height (AHD) of the proposed development in relation to the land - The level of the lowest floor, the level of any unbuilt area and the level of the ground; and - Any changes that will be made to the level of the land by excavation, filling or otherwise. 	Appendix F
	<p>Landscape Plan illustrating:</p> <ul style="list-style-type: none"> - Treatment of open space on the site, screen planning along common boundaries and tree protection measures both on and off the site. 	Appendix G
	<p>Shadow diagrams showing solar access to the site and adjacent properties including open spaces areas (where appropriate) at summer solstice (Dec 21) winter solstice (June 21) and the equinox (March 21 AND Sept 21) at 9.00am, 12.00pm midday and 3.00pm.</p>	Appendix F
	<p>Staging Plan illustrating how the development will be staged for implementation.</p>	Not required as development to be built as a single stage.
	<p>Photomontages detailing the proposal in the context of adjacent buildings and streetscapes.</p>	Appendix F
	<p>Stormwater Concept Plan illustrating the concept for stormwater management.</p>	Appendix U
	<p>Erosion and Sediment Control Plan showing the nature and location of all erosion and sedimentation control measures to be utilised on the site.</p>	Appendix U

Director General's requirements		Location in Report/Application
Matter	Details	
Plans and Documents	Heritage Impact Statement illustrating the impact of the proposed development on the adjoining heritage item at 1-21 Lindfield Avenue.	Appendix N
	Access Report demonstrating compliance with the various Discrimination and Disability regulations for the building and open space areas, as well as access to the surrounding public spaces.	Appendix T
	Traffic and Transport Study	Appendix K
	Contamination Report	Appendix I
	Geotechnical Report	Appendix V
	Acoustic Report demonstrating that the proposed development will be built to provide appropriate noise and vibration attenuation for the proposed residential properties and also the servicing of the site with regards to the neighbouring residential properties.	Appendix L
	Waste Management Plan addressing both construction and operation use of the proposed development.	Construction waste addressed in Construction Management Plan at Appendix P and operational waste addressed in Waste Management Plan at Appendix Q.

6.2 Consistency with Relevant Strategic and Statutory Plans and Policies

The proposal is generally consistent with relevant planning controls. Further detail is provided in **Table 6** below. As detailed above, the provisions of SEPP 53 provide planning controls that guide development on the site. In accordance with the DGRs, the provisions of the Town Centres LEP and DCP have also been addressed. However, it is noted that the provisions in the LEP (and DCP) do not apply to Part 3A projects in accordance with Section 75R and 75J of the EP&A Act.

Table 6 – Consistency with relevant EPs and DCPs

Relevant EPs and DCPs	Details
EP&A Act (section 5(a))	<p>The proposed development is consistent with the relevant objectives of the EP&A Act. It will encourage:</p> <ul style="list-style-type: none"> - the promotion and co-ordination of the orderly and economic use of land by providing a suitable mix of retail and residential development on a strategically-located site in close proximity to public transport and existing services; - ecologically sustainable development through the application of the proposed ESD measures described in the ESD Report at Appendix H; - the provision of affordable housing by providing apartments in close proximity to the station suited to the needs of the Ku-ring-gai community.
SEPP 55	<p>A Stage 1 Preliminary Environmental Assessment has been prepared by Environmental Investigation Services (Appendix I) which concludes that the potential for significant widespread contamination at the site is moderate. As a result the Preliminary Environmental Assessment makes a number of recommendations in relation to further investigation works on the site which have been included in the Draft Statement of Commitments at Appendix B. Further detail is also provided in Section 6.16 below.</p>
SEPP 65 and the RFDC	<p>The residential component of the proposed development will be consistent with ten design principles in SEPP 65 (see Design Verification Statement at Appendix J). The proposal is also generally consistent with the Rules-of-Thumb in the RFDC, in particular, those relating to daylight/sunlight access and natural ventilation to units. A Table of Compliance for the RFDC is included at Appendix J and further detail is provided in Section 6.7 below.</p>

Relevant EPIs and DCPs	Details
SEPP Infrastructure	<ul style="list-style-type: none"> - In accordance with SEPP Infrastructure, the proposed development will be referred to the RTA for comments. The RTA's comments, made during the consultation process in preparing the DGRs, have been taken into account and have been addressed in the Traffic Report at Appendix K and in Section 6.4 below. - An Environmental Noise and Vibration Impact Report is included at Appendix L which confirms that the proposed development will be capable of complying with the maximum noise criteria for sites affected by rail noise. Further detail is provided in Section 6.8 below.
SEPP BASIX	A BASIX Certificate and BASIX plans are included at Appendix M which confirm that the residential component of the proposed development is capable of complying with the water and energy saving targets in SEPP BASIX.
SEPP 53	The development site forms part of 'Site 4', which was previously identified as a targeted multi unit housing site under the recently-amended Schedule 4 of SEPP 53. Clause 8 of Schedule 4 previously stated that development for the purposes of multi unit housing on Site 4 may also include development for retail and commercial purposes, thereby permitting the proposed mixed use development on the site. Part 4 of SEPP 53 required that the targeted sites for multi unit housing be developed in accordance with the development standards set out in Schedule 4, despite the provisions of any other EPI applying to the sites. The Site Reports (referenced in Schedule 4 as part of the document entitled <i>Development Controls and Design Guidelines—Six SEPP 53 Sites in Ku-ring-gai</i> dated January 2003) sets out the development controls for the targeted sites including the site. The Site Reports and SEPP 53 have not been repealed although SEPP 53 no longer applies to the site. The proposal's compliance with the controls in the Site Report for 'Site 4' is nevertheless discussed in detail below.
Town Centres LEP	<p>The proposed development is generally consistent with the development controls in the Town Centres LEP although these are not strictly applicable to Part 3A projects:</p> <ul style="list-style-type: none"> - The proposed retail and residential (shop top housing) uses are permissible in the B2 zone; - The proposed development will have a maximum building height 26.97m at the Lindfield Street frontage, 26.37m at the Kochia Lane frontage, 23.27 at the Havilah Lane frontage and 28.38 (Building B) and 23.27m (Building A) on the north-western frontage. Although this is higher than the 20.5m height control under the Town Centres LEP, it is noted that an additional 3m in height would be permissible on the site were the design excellence provisions of the LEP to apply (see discussion below). The proposed development is consistent with the storey height controls in SEPP 53. - The proposed development will have a maximum FSR of 3.7:1 which is higher than the permissible FSR of 2.5:1. However, it is noted that a maximum FSR of 3:1 would be permissible on the site were the design excellence provisions of the Town Centres LEP to apply (see discussion below). The proposed development is generally consistent with the built form controls in SEPP 53. - Some 2,988m² of retail space (equivalent to a FSR of 0.96:1) is proposed on the site. This is below the maximum permissible FSR of 1:1 for retail development on the site.
Town Centres DCP	<p>The Town Centres DCP provides the following controls which are of particular relevance to the proposed development:</p> <ul style="list-style-type: none"> - Part 2E - Lindfield Town Centre Urban Structure; - Part 3 - Mixed Use Development Controls; and - Part 4 - General Development Controls. <p>The proposal is generally consistent with the controls in the relevant sections of the DCP. Further detail is provided below. The proposal's consistency with the relevant heritage controls is addressed in the Statement of Heritage Impact at Appendix N.</p>

6.2.1 Compliance with SEPP 53 and Site Report for 'Site 4'

The Site Report for 'Site 4' identifies a range of development densities, height limits and setback controls, and establishes an urban design scheme for the whole of Site 4. The proposed development occupies the south-eastern portion of Site 4 and will be developed generally in accordance with Site Report design guidelines.

The Site Report envisages the amalgamation of the site with land to the north and provides planning controls suitable to the development of the overall block of land within Site 4. Due to the fragmentation of land ownership in the area, it is not possible to achieve complete consistency with the planning controls under Site 4. However, the proposal generally complies with relevant planning controls, including the height controls, and will achieve consistency with the intent of the controls in the Site Report.

The Department has previously indicated that exact compliance with the SEPP 53 design scheme was not expected as the Scheme relied on the amalgamation of the entire Site 4 development area. However, consistency with the vision and intent of the SEPP 53 guidelines is achieved by the proposal.

Table 7 – Compliance with SEPP 53 and Site Report for 'Site 4'

Control	Compliance
Lindfield Avenue (western portion of site) A higher-density development zone fronting Lindfield Avenue with the following development parameters: <ul style="list-style-type: none"> - a maximum seven storey height limit; - zero front setback for the first five storeys; - 2.5m setback for storeys above; and - An implied FSR of 4.3:1 	<ul style="list-style-type: none"> - The proposed development will have a maximum height of seven storeys at the frontage to Lindfield Avenue. - A zero setback is provided at the Lindfield Avenue frontage. Although the retail tenancy in the north-western corner of the site will have a nominal setback of 3m to Lindfield Avenue, this has been designed to provide an activated street frontage consistent with the Department's comments. This setback area will be used as part of the retail tenancy. - Above level 1, a varied setback of between 0m and 7.5m is proposed which will achieve the intent of the control. - The built form envisaged under SEPP 53 results in a FSR of approximately 4.3:1 on the boarded block of Site 4 of which the site forms a large proportion. Accordingly, the proposed FSR of 3.7:1 for the proposed development is consistent with the bulk and scale envisaged for the site under SEPP 53 and the Site Report for Site 4.
Havilah Lane (eastern portion of site) - A transitional development zone fronting Havilah Lane, with the following development parameters: <ul style="list-style-type: none"> - a six storey height limit - zero setback for the first four storeys - 2.5m for the topmost storey. 	<ul style="list-style-type: none"> - A maximum of six storeys will be provided at the frontage to Havilah Lane; and - A zero setback will be provided at the ground floor and levels 1 and 2. At levels 3 to 5 a varied setback of between 0m and 1.1m will be provided. Whilst the louvres and balcony of the Level 5 apartments are only set back between 0m and 1m, the bulk of the building is setback, between 3.5 and 6.25m. The articulated setback at this frontage is considered appropriate and achieves the intent of the control.
The provision of a central open space area above the retail/commercial level	A central open space area of 494m ² will be provided at level 1 between Buildings A and B.

Control	Compliance
A setback of 4.5 metres to Kochia Lane for the first five storeys increasing to 9.5 metres for floors above. The ground floor setback will allow for the widening of Kochia Lane as envisaged in the design scheme for Site 4	A ground floor setback of 4.1m will be provided to Kochia Lane. An increased setback of 6.6m is proposed at level 1, with levels 2-6 setback approximately 5m. Level 7 is setback 6.16m. It is not considered appropriate to increase the setback above level 5 to 9.5m as the site only occupies a small portion of Kochia Lane and the increased setback will be inconsistent with the established built form along the rest of the street. Furthermore, the design of the development provides for the emphasis of the Kochia Lane and Lindfield Avenue which links to the train station opposite the site and will emphasise the entrance to the proposed future town square. The Statement of Heritage Impact at Appendix N confirms that the design of the proposed development will have no adverse impact on the existing local heritage item opposite the site at the corner of Lindfield Avenue and Kochia Lane.
Potential to connect to the proposed town square on the southern side of Kochia Lane.	The proposed development will provide for potential future pedestrian connections to the proposed town square on the southern side of Kochia Lane.

In addition, the proposed will be consistent with the following relevant Site 4 'Design Principles':

- Situate higher-density development along Lindfield Avenue to reinforce the local town centre
- Locate the site's primary address along Lindfield Avenue
- Include retail uses at the ground floor with residential and mixed-uses above
- Provide street-edge, awning-based development in the town centre
- Carefully relate development to existing heritage building to the south
- Introduce a new public street between Lindfield Avenue and Havilah Lane (Note: the proposal will not affect the introduction of this new public street)
- Use transitional scale development to link higher-density development with adjacent buildings.
- Consolidate open space in the middle of the block to form a useful landscape space for residents.

The proposal is generally consistent with the design principle and controls for Site 4. Any departures from the Site 4 design scheme are proposed in response to the current ownership of the Site 4 allotments, and to enable compliance with SEPP 65 and the RFDC. Furthermore, the design of the development will ensure that other sites in Site 4 can be developed in the future (see Section 6.14 below for further details). It is also noted that the provisions of Site 4 no longer apply to the site but have been taken into account to facilitate an appropriate design solution for the site.

6.2.2 Design Excellence Provisions under the Town Centres LEP

Development Applications (DAs) that seek to take advantage of the floor space and height bonuses permitted under the Design Excellence provisions for key sites of the Town Centres LEP are required to be forwarded to an Urban Design Excellence Panel (Panel) for consideration. In deciding whether a development proposal is eligible for additional height and floor space, the Panel must be satisfied that:

- (a) the proposal demonstrates urban design excellence, and*
- (b) the site planning, building form and external appearance of the proposed development will improve the quality and amenity of the public domain on and surrounding the site, and*
- (c) a very high standard of architectural design, materials and detailing, appropriate to the building type and location, will be achieved, and*
- (d) the proposal addresses the following matters:*
 - (i) environmental impacts such as sustainable design, overshadowing, wind and reflectivity,*
 - (ii) the achievement of the principles of ecologically sustainable development,*
 - (iii) pedestrian, cycle, vehicular and service access and circulation requirements, and*
- (e) the proposal allows the development of adjoining sites in a way that is consistent with this Plan.*

As the proposal is for a Part 3A project, it is not required to comply with the Design Excellence provisions of the Town Centres LEP. Nevertheless, the proposed development satisfies the criteria for design excellence in the Town Centres LEP. It will achieve a high standard of design quality and will provide for the revitalisation of a currently underutilised and downgraded site. The proposed architectural design and materials to be used will ensure that the proposed development will make positive contribution to the built form quality in the area and the public domain (see Section 6.5 below for further detail).

The proposed development will achieve a high standard of ESD performance (see Section 6.12 below and the ESD Report at **Appendix H**). It will also include extensive bicycle parking facilities, facilitate the introduction of a car share scheme and will promote an improved pedestrian environment along Lindfield Avenue and Kochia Lane. No unacceptable overshadowing impacts will result from the proposal (see Section 6.9 below).

Thus, the proposal is considered to be consistent with the Design Excellence provisions of the Town Centre LEP. Further detail on Design Excellence is provided in relation to the Town Centres DCP below.

6.2.3 Town Centres DCP

Part 2E - Lindfield Town Centre Urban Structure

Part 2E of the Town Centres DCP provides guidelines and general development controls for development within the Ku-ring-gai town centres including the Lindfield Town Centre.

The Structure Plan for the Lindfield Town Centre identifies a supermarket on the development site and notes the requirement for active street frontages to be provided along Lindfield Avenue and Kochia Lane with a supporting street frontage along Havilah Lane. It also identifies the potential for an underground vehicular link to be provided between the site and the proposed town square on the southern side of Kochia Lane.

The proposed development responds to the key characteristics of the Structure Plan. A supermarket will be provided on the site and active street frontages will be provided to Lindfield Avenue and Kochia Lane. The proposed development does not eliminate the opportunity to provide an underground link to the proposed town square in the future. Subject to the availability of the adjoining site at 2 Kochia Lane, an underground link from the lower ground parking area through to the future town square site could be achieved.

The development site is located in 'Key Site L4: Tryon Road and Lindfield Avenue Retail Area'. The built form envisaged for the site under Part 2E is generally consistent with that envisaged under SEPP 53 (Site Report 4) and includes a retail podium with a eastern and western residential tower (Buildings A and B).

The relevant Base Design Principles and Controls for Site L4 are described in **Table 8** below:

Table 8 – Relevant Base Design Principles and Controls for Site L4

Principle/Control	Proposal's Compliance
Relevant Base Design Principles	
Provide active street frontages to Kochia Lane and Lindfield Avenue.	The proposed development has been designed to provide active street frontages to both Lindfield Avenue and Kochia Lane. See Section 6.5 below for further detail.
Locate and design buildings to retain adequate solar access to the new town square.	The proposed design will ensure that appropriate solar access will be provided to the town square. See discussion in Section 6.9 below.
Establish a consistent three storey wall that is built parallel to the street alignment of Lindfield Avenue to complement the traditional 'main street' facades. All levels above the street wall height are to have a setback.	The proposed development will have a zero setback at the Lindfield Avenue frontage (apart from a small setback to the ground floor retail premises to provide an active street frontage).
Provide a building setback to Kochia Lane to allow for road modifications and new footpaths.	An appropriate building setback is proposed to Kochia Lane to allow for its future widening.
Provide building setback to Havilah Lane to allow for road modifications and new footpaths.	No setback will be provided to Havilah Lane. This is consistent with the design provisions under SEPP 53 (and the associated Site Report) and will also allow for appropriate vehicle access and servicing arrangements to be accommodated at the rear of the site away from active street frontages.
Provide internal retail arcade linking Lindfield Avenue with Havilah Lane.	The Structure Plan suggests that the internal retail arcade is required to be provided to the north of the site when these sites are developed in the future.
Provide private garden courtyards between the residential buildings on the podiums for residential amenity.	A private courtyard is proposed between Buildings A and B.

Principle/Control		Proposal's Compliance
Relevant Base Design Controls		
Building Setbacks	4m setback to Kochia Lane required.	A 4m setback will be provided to Kochia Lane.
	1m setback to Havilah Lane required.	As detailed above, it is considered appropriate to not provide a setback to Havilah Lane.
Access	Vehicle and service access to be provided from Havilah Lane	Vehicle and service access will be provided from Havilah Lane.
	Residential lobbies and foyers are to be located off Lindfield Avenue or Kochia Lane	The residential lobby will be accessed off Lindfield Avenue.

Mixed Use Development Controls

Part 3A of the Town Centres DCP provides detailed planning controls for mixed use development. However, the built form controls in Part 2E of the DCP take precedence where there is an inconsistency. The proposed development is generally consistent with the relevant numerical controls in Part 3A of the DCP. Further detail is provided in the Table of Compliance at **Appendix O**.

General Development Controls

Part 4 of the Town Centres DCP provides general controls for development within the Ku-ring-gai town centres. The following provisions of the DCP are of particular relevance to the project and have been considered in the design of the development:

- Development near Rail Corridors and Busy Roads - requires all new development near a rail corridor to be designed in accordance with the Departments' *Development Near Rail Corridors and Busy Roads - Interim Guidelines* (December 2008). The provisions of this guideline have been taken into account in the design of the development and are addressed in the Environmental Noise and Vibration Impact Report at **Appendix L** (see Section 6.6 below for further details).
- Waste Management- the DCP includes controls for the design of waste management areas as well as guidelines for management of operational waste and recycling in new developments. Construction waste management is addressed in Section 6.18 below and in the Construction Management Plan at **Appendix P**. A Waste Management Plan is included at **Appendix Q**.
- Vehicle access and carparking - provides controls for vehicle access to basement carparks, parking layouts, visitor parking, bicycle parking and facilities and provision of accessible parking. These controls have been considered in the design of the carpark for the development and are addressed in the Traffic and Parking Assessment Report at **Appendix K**.

6.3 Site Suitability

The site is wholly suited to the proposed development. It is located in close proximity to the Lindfield train station and existing services which will support increased residential densities on the site. The site has been specifically identified for medium to high density residential development in strategic planning documents and is identified in the recently-gazetted Town Centres LEP as suitable for shop top housing above ground floor retail.

The site is not affected by any adverse environmental constraints that would prevent the proposed mixed-use development on the site. The Lindfield Town Centre is an area which has been identified for future growth and will accommodate a new town square. In this context, the development of a new retail and residential development within the town centre is appropriate.

6.4 Traffic and Parking

A Traffic and Parking Assessment Report has been prepared by Varga Traffic Planning (see **Appendix K**). The report considered the traffic and parking implications of the proposed development, and addresses the servicing arrangements for the site.

Traffic Generation and Intersection Performance

An indication of the traffic generation potential of the proposed development is provided by reference to the Roads and Traffic Authority's publication *Guide to Traffic Generating Developments*.

The application of these traffic generation rates to the supermarket, retail and residential components of the development yields a traffic generation potential of approximately 110 vehicle trips per hour during the morning commuter peak period and 348 vehicle trips per hour during the afternoon commuter peak period.

However, the Traffic and Parking Assessment Report notes that the future level of traffic generation from the development should be offset by the existing volume of traffic from the existing use on the site in order to determine the nett increase or decrease in traffic generation that may result from the proposed development.

Application of the RTA traffic generation rates to the existing uses on the site yields a traffic generation potential of approximately 94 vehicle trips per hour during the morning commuter peak period and 220 vehicle trips per hour during the afternoon commuter peak period. Accordingly, it is likely that the proposed development will result in an increase in the traffic generation potential on the site by approximately 15 vehicle trip per hour during the morning commuter peak, and 126 vehicle trips per hour in the afternoon peak.

The assessment of intersection performance within the vicinity of the site (both before and after the proposed development) has assumed that the site is currently vacant to provide an even more rigorous assessment of the traffic implications of the proposed development. As detailed in the Traffic and Parking Assessment Report, even when the site is assumed to be vacant ahead of development, the proposed mixed use development will not result in any change to the existing level of service at key intersections around the site (includes Pacific Highway, Havilah Lane and Balfour Street and Lindfield Avenue and Tryon Avenue).

Thus the Traffic and Parking Assessment Report concludes that the potential increase in the afternoon peak traffic generation as a result of the proposed development will not have unacceptable implications in terms of road network capacity and the proposed development does not require any upgrades to nearby roads and intersections.

Carparking

Off-street carparking requirements for the site are provided under Council's Town Centres DCP (although this DCP is not strictly applicable to Part 3A projects it has been used as the appropriate reference for parking provision on the site). The DCP sets out the following minimum and maximum parking requirements for the mixed use development:

Table 9 – Minimum and Maximum Parking Requirements under the Town Centres DCP

Unit Type/Use	Minimum	Maximum
1-bedroom apartment	0.6 spaces per dwelling	1 space per dwelling
2-bedroom apartment	1 space per dwelling	1.25 spaces per dwelling
3-bedroom apartment	1 space per dwelling	1.5 spaces per dwelling
Shops	1 space per 26m ²	1 space per 33m ²

In addition 1 visitor space per 6 dwellings is required. Based on the above parking requirements, a minimum of 97.8 retail parking space and 80.8 residential spaces are required. Seventeen residential visitor spaces are required.

The proposed development makes provision for a total of 175 off-street carparking spaces, comprising 48 retail spaces and 102 resident spaces within the basement carpark, plus a further 25 carparking spaces in the adjoining carpark that were provided as a 'contribution in lieu' to Council. This results in a 'shortfall' of 21 parking spaces in accordance with the Town Centres DCP.

However, the traffic report suggested that future parking demand for the development should be offset by the current parking demand and 'shortfall' in parking provision on the site from the existing development. The off-street parking requirements applicable to the existing development are specified in Ku-ring-gai Council's Development Control Plan No 43 - Car Parking. The rates in this DCP would require 140 parking spaces to be provided on the site for the existing development. However, the development currently only provided 63 off-street parking spaces (taking into account the 25 spaces on the adjoining carpark allotment). This represents a shortfall of 77 parking spaces which means that the development is not currently meeting the parking demand for uses on the site.

The proposed development will result in a reduced shortfall in carparking provision on the site and will therefore reduce the on-street parking demand in the vicinity of the site.

Furthermore, in order to gain an accurate appreciation of the general availability of carparking on the site and adjacent road network, a detailed survey of carparking accumulation was undertaken between 8:00am and 8:00pm on a Thursday and Saturday. The cumulative results of the parking accumulation surveys indicate that there is substantial spare parking capacity on the vicinity of the site at all times.

It is also noted that the actual parking demand likely to be generated by the proposed development is somewhat less than that suggested in the Town Centres DCP as a substantial proportion of retail customers are expected to be railway commuters and/or bus commuters who will stop at the shops or supermarkets on their way to or from the train/bus station to make smaller, 'daily needs' purchases. In addition, the site's proximity to excellent transport services means that most residents are likely to use public transport to travel to and from work and even on the weekends.

The proposed carparking facilities also make provision for seven car share spaces such as 'Go Get' cars which may be shared by participants of the car share scheme. The car share schemes operate throughout the metropolitan Sydney area and encouraged reduced reliance on private car travel and ownership.

Finally, the large Council carpark located to the south of the site assists considerably in easing the parking load for surrounding streets. This carpark is expected to remain in the foreseeable future and may be provided below ground and extended under Council's proposed Town Square plan. The provision of carparking on the site is considered appropriate.

Servicing

The loading docks proposed at the rear of the site will be capable of accommodating a variety of trucks up to and including a 19 metre long articulated truck and a 12 metre long heavy rigid truck simultaneously. This servicing and loading area is considered appropriate to meet the needs of the development.

It should be noted that the unloading of goods will be conducted in a considerably more efficient manner than the current situation owing to the provision of on grade unloading to the supermarket, the siting of goods storage areas for the supermarket close to the loading dock and the provision of front forward access. This will reduce the time required for a truck to be in the loading area. In addition, the larger loading dock will allow larger trucks, which should minimise the number of deliveries required.

Sustainable Transport

The location of the site in close proximity to the Lindfield train station and within the Lindfield town centre means there will be a reduced demand for car trips from residential living within the proposed development as well as for customers to the retail tenancies and supermarket within the proposed development.

This is supported by the provision of extensive bicycle parking on the site, as well as seven car share spaces. In addition, the proposed development meets the minimum carparking requirements for the development under the Town Centres DCP and does not seek to provide the maximum number of parking spaces permitted. This minimisation of carparking on the site is a direct response to its accessible location and seeks to encourage reduced reliance on private vehicle use.

6.5 Built Form, Urban Design and Public Domain

Careful consideration has been given to the design of the development in terms of its relationship to surrounding development (both existing and future development), as well as the public domain.

In particular, in response to the DGRs, a viability statement has been prepared which details how the design of the proposal will accommodate the future development of surrounding sites (see Section 6.6 below).

The development has been designed to provide a one storey podium with residential towers above (retail will be accommodated at level 1 of Building B). Building B is seven storeys high and will provide a landmark entry to the Lindfield town centre and mark the entry to the future town square off Kochia Lane.

Ground floor retail premises at the Lindfield Avenue frontage and at the corner of Lindfield Avenue and Kochia Lane will have a direct address to the streetscape and will include a small setback area within the building footprint which will accommodate retail/cafe uses within the retail tenancy but linked to the public domain. This will activate the streetscape and support the creation of a vibrant town centre. Bi-fold doors are proposed to these retail tenancies and unique paving design will be incorporated to connect the tenancies to the public domain.

The proposed development will provide an increased setback to Kochia Lane to accommodate the future widening of this lane and provides an appropriate setting to the future town square on the southern side of Kochia Lane. An awning will be provided over the footpath at the Lindfield Avenue and Kochia Lane site frontages.

Careful consideration has also been given to the materials and colour palette for the proposed building and articulation of the built form through varied setback to balconies and building elements. This also allows for greater solar access and a view corridor to Council's proposed Town Square. The separation of the two residential towers reduces the bulk of the development and provides a view corridor for future development to the north and south.

In addition, the location of the taller tower at the Lindfield Avenue frontage will emphasise the entrance to the Lindfield town centre and minimises the overshadowing impact of the proposed development.

As shown in the photomontages at **Appendix F**, the proposed development will not have an adverse impact on the existing heritage item opposite the site (see Section 6.11 below) nor will it result in unacceptable overshadowing impacts on surrounding buildings or the future town square (see Section 6.10).

Further detail on the proposed development's appropriateness in terms of built form, urban design and public domain is provided in the SEPP 65 Design Statement prepared by PTI Architects at **Appendix J**.

Built Form Options

A number of built form options were considered in the design of the development. However, the basic design of the development was predominantly lead by the built options under the Site Report for Site 4 which have now been generally translated into the site-specific design requirements for Key Site L4 under the Town Centres DCP.

The original proposal for the site (submitted as part of the Preliminary Environmental Assessment Report in December 2008) provided for a substantially taller and bulkier development than the current proposal. A six to eight level development with two levels of basement car parking was initially proposed. The original proposal also included ground floor retail with commercial above and only 70 residential units.

In response to comments received during the consultation period following submission of the Preliminary Environmental Assessment Report and the release of the then-draft controls in the Town Centres LEP and DCP, the proposed development was reduced in height and the proposed commercial component of the development was removed and additional residential units included. The focus on residential development is consistent with the aims of SEPP 53, the Metropolitan Strategy and the Draft Subregional Strategy.

The current proposal represents an improved built form option for the site.

Comparable Height Study

A comparable height study of the surrounding area is provided in the site analysis plan at **Appendix F**. The majority of sites to the north of currently two storeys in height. However, it is noted that these sites will be able to be developed to approximately that same scale as the proposed development in line with planning controls for Key Site L4 under the Town Centres LEP and DCP.

In addition, as detailed in the Town Centres DCP, Council is proposing to development the existing building to the east of the proposed town square as a five to six storeys development with commercial/retail space at the ground floor and level 1 and residential space above.

To the east of the site is a five storey residential development which is approximately the same height as the Building A of the proposed residential development.

In this context the proposed height of the development is considered appropriate.

6.6 Viability Statement

The Department has requested that an assessment of the proposal's impact on the development potential of adjoining sites within the overall block of land in which the site is located (particularly 2 Kochia Lane) be addressed.

Existing at 2 Kochia Lane is a three-storey commercial building on an approximately 400m² allotment. As development on the site has not been declared a Part 3A project, any future application for development on the site would be assessed under Part 4 of the EP&A Act and the provisions of the Town Centre LEP and DCP would apply. In accordance with the Town Centre LEP, a maximum FSR of 2.5:1 and a maximum building height of 20.5m applies.

Thus, a mixed use development of approximately five storeys in height could be developed on the site with retail at ground floor (and potentially at level 1) and residential units above.

At ground floor, the proposed development will provide a blank wall to the northern and western boundaries of Kochia Lane. Thus, retail floor space could be developed at this level without any adverse impact on either the proposed development on the site, or the potential development at 2 Kochia Lane.

At level 1, the proposed development will provide a blank wall at the common east-west boundary between the site and 2 Kochia Lane. A blank wall is also proposed for the majority of the southern facade of the Building A with balconies to residential units orientated to the east and west. Should retail floor space be developed at level 1 of 2 Kochia Lane a blank wall is expected to be provided at the northern facade of the building which would not result in adverse privacy impacts on the residential units or communal private open space proposed at this level.

Should residential units be proposed above ground level at 2 Kochia Lane, it is expected that two units per floor would be proposed. They, most likely, would be orientated to the south and east with the corridor provided against the northern facade. Thus, a blank wall would be provided at the shared northern/southern boundary between the sites.

The design of the development accommodates the future development of 2 Kochia Lane in accordance with the provisions of the Town Centres LEP as shown on Plan DA 33, which is included within the Architectural Drawing package at **Appendix F**.

To the north of the site (adjoining the eastern part of the site's northern boundary) is a Council carpark. The proposed development will not have an adverse impact on the operation of this carpark. Adjoining the site to the north (in the western portion of the site) are 2 two-storey buildings with ground floor retail and a service station. As the balconies to residential units in both Buildings A and B are generally orientated to the east and west with a blank wall provided at the northern facade for most of the building, sites to the north will be able to be developed in accordance with the Town centre LEP controls.

At level 2, a balcony is proposed to the northernmost units of the Building B. However, it is expected that future development of site to the north would not locate windows or balconies at this facade as preferable solar access conditions and views would be available to the north, west and east.

The proposed development will not adversely impact on the viable development on immediately surrounding land.

6.7 Residential Amenity

The residential component of the proposed development has been designed to achieve a high level of residential amenity. Units have been orientated to the east and west (with some units having a secondary orientation to the north) to ensure that units receive an appropriate level of daylight/sunlight access. All units will have access to private open space, as well as a large area of communal private open space at level 1.

As detailed in the RFDC Table of Compliance (**Appendix J**), the residential component of the development will be generally consistent with the Rules-of-Thumb in the RFDC. Where non-compliances occur, they are generally minor and the proposed development will still be consistent with the intent of the relevant Rules-of-Thumb.

A Solar Access Analysis (**Appendix R**) and a Natural Ventilation Statement (**Appendix S**) have been prepared by Windtech for the residential component of the development which confirms the solar access provisions and natural ventilation provision for individual units.

The location and design of the proposed development ensures privacy to existing and potential future development will be maintained (see Viability Statement at Section 6.6 above and RFDC Table of Compliance at **Appendix J**).

The Design Verification Statement (**Appendix J**) demonstrates how the proposed development will be consistent with the ten design principles for RFB development under SEPP 65, in particular, the principle relating to SEPP 65.

6.8 Noise and Vibration Impact

Acoustic Logic Consultancy have prepared an Environmental Noise and Vibration Impact Report for the proposed development (**Appendix L**) which assesses the potential rail noise and vibration and traffic noise impact on the amenity of the proposed development and recommends appropriate mitigation measures. It also considers the potential noise impacts resulting from the proposed development and recommends appropriate measures to ameliorate any potential acoustic impact on surrounding properties.

Traffic noise and train noise and vibration have been assessed in accordance with the requirements of the Department's *Development Near Rail Corridors and Busy Road - Interim Guideline* (Department Guidelines) and Australian Standard AS2107:2000. The assessment has also been conducted in conjunction with the requirements for Rail Corporation Interim Guidelines for developments near rail corridors and busy roads (RailCorp Guidelines).

Traffic Noise and Train Noise

The noise criteria for the development have been adopted from the RailCorp Guidelines, as well as the criteria specified in SEPP Infrastructure and the Australian Standard and are as follows:

Table 10 – Internal Noise Criteria

Type of Occupancy	Noise Source	Applicable Time Period	Noise Level LAeq dB(A)
Sleeping Areas (bedroom)	Train Noise	Night (10pm - 7am)	35
Other habitable rooms (excl. garages, kitchens, bathrooms & hallways)	Train Noise	At any time	40
Sleeping Areas (bedroom)	Traffic Noise	Night (10pm-7am)	40
Other habitable rooms (excl. garages, kitchens, bathrooms & hallways)	Traffic Noise	At any time	45

Structural borne noise measurements have been calculated at the potentially worst affected receiver and were found to be within the permitted noise criteria identified in **Table 8** above. Train noise measurements were obtained at the western boundary of the site during a typical peak afternoon period on 27 May 2010. Measured noise levels were as follows:

Table 11 – Measured/ Predicted External Rail Noise Levels

Location	Time of Day	LAeq(1 hour) dB(A)
Western Facade of the Future Development	Day (7am-10pm)	69
	Night (10pm-7am)	65

Traffic noise measurements were obtained at a number of locations surrounding the site (including two on Lindfield Avenue and one on Kochia Lane). Traffic noise levels recorded at the facade of the future development were as follows:

Table 12 – Measured External Traffic Noise Levels

Location	Measures Noise Level LAeq dB(A)
Lindfield Avenue (North)	66
Lindfield Avenue (South)	67
Kochia Lane	53

As the measured train and traffic noise levels will exceed the recommended internal noise criteria, the Environmental Noise and Vibration Impact Report makes a number of recommendations to ensure that internal noise levels within the proposed development meet the recommended internal noise criteria.

The following glazing types in **Table 13** are recommended to reduce internal noise levels to within the nominated criteria for the various internal spaces:

Table 13 – Recommended Glazing for Windows and Doors

Facade	Room	Glazing Thickness	Acoustic Seals
Western facade of Building facing Lindfield Avenue	Bedrooms	10.28 laminated	Yes
	Living Areas	10.38 laminated	Yes
Northern and Southern Facades (both Buildings)	Bedrooms	6.38 laminated	Yes
	Living Areas	6.38 laminated	Yes
Western Facade of eastern building	Bedrooms	6.38 laminated	Yes
	Living Areas	6.38 laminated	Yes
Eastern Facade of both buildings	Bedrooms	6.38 laminated	Yes
	Living Areas	6.38 laminated	Yes

In addition, the Noise and Vibration Impact Report also recommends minimum STC ratings for the glazing and specifications for the acoustic seals which have been included in the Draft Statement of Commitments.

The Environmental Noise and Vibration Impact Report also recommends that where internal noise levels with windows or doors open exceed the criteria by more than 10dB(A), the design of the ventilation for these rooms should be such that occupants can leave windows closed, if they so desire, and also provide an alternative outside air source or air condition compliant with relevant mechanical and ventilation codes.

Mechanical ventilation, that is compliant with relevant codes will be installed within the residential component of the development. This is included in the Draft Statement of Commitments.

Railway Vibration

As the site is located within 60 metres of the railway tunnels, a vibration assessment is recommended by Rail Infrastructure Corporation's *Interim Guidelines for Councils - Consideration of rail noise and vibration in the planning process*. The Guideline recommends that habitable rooms of services apartments and office spaces of commercial buildings should comply with the criteria in British Standard BS 6472:1992 - Evaluation of Human Exposure to Vibration in Buildings. Human response to vibration has been shown to be biased at particular frequencies which are related to the orientation of the person. As the orientation of the future residents in the development are unknown or varying, the weighting filter used is based on the combined base curve as given in ISO 2631 & Australian Standard 2670 - Evaluation of Human Exposure to Vibration and Shock in Buildings. The standard assesses the annoyance of intermittent vibration by using the Vibration Dose Value (VDV) - see **Table 14**. For this project, the aim will be for a low probability of adverse vibration impact.

Table 14 – Vibration Dose Values (m/s 1.75) above which various degrees of adverse impact may be expected in residential buildings

Place	Low probability of adverse impact	Adverse impact possible	Adverse impact probable
Residential buildings 16hr days	0.2 to 0.4	0.4 to 0.8	0.8 to 1.6
Residential buildings 8hr night	0.13	0.26	0.51

Train vibration measurements were obtained at the western boundary of the site between 3pm and 4:30pm on 27 May 2010. The maximum train passby ground vibration acceleration, the typical passby period (gained from both the noise and vibration measurements) and the estimated number of train passbys were used to calculate the overall VDV values for each period of the day. The results are presented in **Table 15** below:

Table 15 – Vibration Dose Values

Time Period	Calculated VDV m/s 1.75	Criteria VDV m/s 1.75	Complies
Day (7am - 10pm)	0.07	0.2	Yes
Night (10pm - 7am)	0.05	0.13	Yes

The results of the structure borne and tactile vibration investigation indicate that internal structure borne noise levels and human comfort will comply with the relevant criteria without any additional acoustic treatments.

Noise Impacts from Loading Dock

Potential noise sources from the loading dock include small truck reversing alarms, trucks manoeuvring or reversing, truck air bakes, truck doors closing and truck starting. The Environmental Noise and Vibration Impact Report assigns an expected sound emission level to all of the above activities with the majority of the noises expected to be transient.

Based on these sound emission levels, noise levels for nearby residences were predicted based on the noise emission levels identified for the above noise sources.

Although the noise levels resulting from the loading dock (**Table 16**) are considered acoustically acceptable, the Environmental Noise and Vibration Impact Report recommends the following measures to mitigate any potential noise impacts from the loading dock:

- Typical operating hours for the loading docks, deliveries, garbage removals, etc to be between 7am and midnight.
- Bail and/or garbage compactors are to be used only within the loading dock areas.
- Loading dock perimeter walls to fully enclosed from external environment.
- Neoprene rubber buffers should be installed on the vertical face of the loading dock where vehicles park to absorb impacts.
- A detailed assessment of noise emissions from plant and equipment associated with the loading dock is required to be conducted prior to installation in conjunction with Ku-ring-gai council requirements.
- Vibration isolated floor matting to be installed to the areas of the loading dock where stacking of pallets and the like are required.
- All entry grates and grills to be securely fixed.

Table 16 – Predicted Noise Emission Levels

Locality/Activity	Receiver	Predicted Noise Level at Residence (at building facade externally) Leq, 15mins	Predicted Noise Level within Residences above (internal Noise levels) Leq, 15 min	Discussion
Truck loading/unloading within loading dock	Potentially worst affected residence	42dB(A) Day 42 dB(A) Evening	<30 dB(A) <30dB(A)	Acoustically acceptable

The above measures have been included in the Draft Statement of Commitment at **Appendix B**. It is noted that the loading dock will be capable for being fully enclosed with automatic sliding doors proposed to allow delivery vehicle access to the dock.

The Environmental Noise and Vibration Impact Report concludes that noise impacts from the proposed development will be acoustically acceptable provided treatments recommended in the Report are implemented. A commitment to implement the recommendations within the Environmental Noise and Vibration Impact Report where practicable is included within the Statement of Commitments (**Appendix B**).

Vibration Impacts during Construction

GHD - the structural engineers for the project have advised (**Appendix X**) that due to the anticipated ground conditions on the site, vibration effects associated with the intended excavation of the site are required to be considered.

It is anticipated that large hydraulic rock breakers will be used and therefore GHD have recommended measures to monitor and ameliorate any potential adverse impacts on surround properties, in particular 1-21 Lindfield Avenue (the heritage building). The measures recommended by GHD are as follows:

- prior to any works commencing on site, undertake dilapidation reports on adjoining buildings and roads;
- within 1-21 Lindfield Avenue limit the peak particle velocity to a threshold of 3mm/s for 10Hz to 30Hz and 3-5 for 30Hz to 60 Hz;
- within 21 Lindfield Avenue seek to fit a real time alarm and vibration logging; and
- undertake full time qualitative monitoring to confirm vibrations on adjoining structures are within tolerable limits.

These recommendations have been included in the Draft Statement of Commitments at **Appendix B**.

6.9 Solar Access & Overshadowing

The shadow impacts of the proposed development on surrounding residential development and the future town square, as well as the proposed communal private open space, were important considerations in the design of the proposed development. Shadow diagrams for the proposed development showing the shadow effect from the proposed development at mid winter, equinox and the summer solstice have been prepared by PTI Architects and are included at **Appendix F**.

Excellent solar access will continue to be provided to the proposed town square to the south of the site. The proposed development will have no significant overshadowing impact on the proposed town square apart from partial overshadowing of the proposed square in the afternoon in midwinter. It is noted that the existing development on the site, in any case, partially overshadows the proposed square at this time. Almost full solar access will be provided to the town square at all other times.

The proposed development will not have an adverse shadow impact on the residential flat building to the east.

Solar access to the communal private open space on the site will be predominantly maintained during the afternoons at equinox and in the summer solstice. Some solar access to the communal private open space will also be available during the afternoon in midwinter.

6.10 Heritage

A Statement of Heritage Impact (**Appendix N**) has been prepared by Graham Brooks and Associates which considers the potential impact of the proposed development on the existing local heritage item opposite the site on the corner of Kochia Lane and Lindfield Avenue.

The Statement of Heritage Impact assesses the proposed development against relevant local and State heritage legislation and guidelines. The proposed development will limit some views to and from the northern facade of the upper floor of the heritage-listed building, and will be visible in the background in the background of some views of the heritage item. However, as the architectural presentation of the heritage-listed building will not be affected in any way, the Statement of Heritage Impact concludes that the minor impact on views will not have an adverse impact on the building's established heritage significance.

The Statement of Heritage Impact concludes that the proposed development will not have an adverse impact on the nearby heritage item and makes only one recommendation in relation to the archival photographic recording of the heritage item. This has been included in the Draft Statement of Commitments at **Appendix B**.

6.11 Access and Mobility

An Access Assessment Report has been prepared for the proposal by PSE Access Consulting (**Appendix T**) which assesses the proposal against the relevant provisions of the Building Code of Australia (BCA), relevant Australian Standards, Ku-ring-gai Council Development Control Plan 31 Access (Access DCP) and the *Disability Discrimination Act 1992* (DDA).

The key findings of the Access Assessment Report are:

- within the basement car park, the appropriate headroom, number, location and dimensions of the dedicated accessible car spaces are provided in accordance with the relevant provisions;
- wheelchair accessible lifts are provided for access to all levels of the building and have a lift car sizes in excess of the general requirement; and will have appropriate controls/ grab rails and emergency phone facilities;
- six of the proposed 102 units will be adaptable for a person with a disability and all of the remaining units being identified as visitable by a person with a disability including wheelchair users;
- all stairways, walkways and ramps are compliant with the relevant design and technical specifications of the Australian Standards;
- appropriate lift access is provided from the principal public entrance on Kochia Lane to the upper ground level (Retail 1) and Level 1 (retail areas 3, 4 and 5) and the residential units;
- the entrance doorways into the retail units have clear and appropriately dimensioned openings.

As confirmed in the Access Assessment Report, all areas of compliance are catered for within the development and the requirements of the Access DCP and NSW Governments DGRs have been implemented in the design of the residential apartments, including the dedicated 'adaptable units'. Where relevant, assumptions or recommendations made in the Access Assessment Report have been included in the Draft Statement of Commitments at **Appendix B**.

6.12 Ecologically Sustainable Development

An ESD Report has been prepared by GHD (**Attachment H**) which details the initiatives which may be included within the development to achieve a high level of ESD performance.

The ESD initiatives set out within the ESD Report comprise:

- architectural ESD initiatives;
- water ESD initiatives;
- mechanical ESD initiatives;
- electrical ESD initiatives;
- indoor environmental quality;
- materials ESD consideration;
- waste considerations; and
- transportation design.

It is intended that where practicable, these initiatives will be implemented. A commitment to this effect is set out within the Draft Statement of Commitments in **Appendix B**.

GHD has also undertaken a BASIX assessment for the residential component of the development (see BASIX certificate and plans at **Appendix M**). The BASIX Certificate includes a 'Schedule of commitments' which are required to be implemented within the development to ensure that the residential component will achieve the energy and water saving targets under the BASIX SEPP. A commitment to implement the commitments set out within the BASIX certificate has also been included in the Draft Statement of Commitments (**Appendix B**).

6.13 Crime and Public Safety

The proposal has been assessed against the core principles of Crime Prevention Through Environmental Design (CPTED):

Principle 1 - Natural Surveillance

The orientation of residential apartments (particularly balconies and adjoining living areas) to the west and east overlooking Lindfield Avenue and Havilah Lane respectively will encourage casual surveillance of these streetscapes and the nearby train station.

The provision of retail premises at the ground floor (with glazed bi-fold doors) will also support casual surveillance of the Lindfield Avenue and Kochia Lane streetscapes during trading hours.

The location of the entrance to the Franklins supermarket will also encourage a steady flow of pedestrian traffic into and out of the entry off Kochia Lane. This will provide surveillance of this streetscape and future town square opposite the site.

Principle 2 - Access Control

A security roller door is provided to the entry/ exit of the basement car park.

Secure access will also be provided to the pedestrian entry to the residential component of the development off Lindfield Avenue. In addition, secure lift access will be provided to residential floors within the development.

Security control will also ensure that access to the courtyard will not be available from the retail space at level 1 as this space will be provided as communal private open space for the residential development. Access to the residential levels will thus be restricted to authorised residents only. In addition, an intercom security system will be installed in each apartment for authorising access to the residential areas by non-residents/visitors.

The above has been included in the Draft Statement of Commitments at **Appendix B**.

Principle 3 - Territorial Reinforcement

Publicly-accessible areas in the proposed development will be clearly separated from private areas associated with the residential component of the development (see Principle 2 above). In addition, at the ground floor frontage, specialised paving design will be used to demarcate the retail space from the public domain.

Landscape elements and signage will also be used to identify the nature of the site as privately-owned.

Principle 4 - Maintenance

Durable and high-quality materials are proposed which will ensure that minimal maintenance is required for the proposed development. A separate strata committee will be provided for the residential component of the development which will manage the maintenance of the residential parts of the site including the communal private open space at level 1. The retail component will be managed by a managing agent.

The proposed materials, particularly at the lower levels include glazing and articulated surfaces which discourage graffiti.

6.14 Stormwater, Flooding and Water Quality Management

A Stormwater Management Report and Stormwater Plan have been prepared by GHD (**Appendix U**). Also included at **Appendix U** is a typical sediment and erosion control plan for the development.

At present, the site stormwater discharges to Lindfield Avenue. The proposed development will contain on-site detention (OSD) and there will be no increase in stormwater discharge from the site.

In addition, due to the location of the site near the top of the ridge, no flooding is anticipated in the vicinity of the proposed development. As the site is not located in the vicinity of any watercourses, it not expected that changes in rain and flood patterns (as a result of climate) will affect existing flood patterns in the vicinity of the site.

It is proposed to have a combined on-site retention(OSR)/OSD tank between the upper and lower ground floors, in the northwest corner of the site. The minimum volume of this tank will be 168m³. Stormwater will discharge from the site via a pipe to the kerb on Havilah Lane. Emergency overflows from the OSD tank (in the event of a blockage of the outlet pipe or extreme storm event) will be via a gated surcharge pit on Lindfield Avenue.

Water Sensitive Urban Design (WSUD) solutions to promote sustainable water cycle management on the site have been explored for the proposal. WSUD for the project is achieved through the collection and re-use of rainwater. Rainwater is collected and stored in a 100m³ tank that is used to supply water for toilet flushing in the residential units. This reduces the volume of stormwater discharged from the fully developed site as well as reducing the demand for potable water, both positive WSUD outcomes.

Bulk earthworks will involve the excavation of the entire site below the surrounding area. As such, there will be little opportunity for stormwater to leave the site directly. Stormwater will be collected in a basin at the base of the excavation, and after the sediment has settled out, the water will be pumped out to the kerb on Havilah Lane.

Exits to the site will require shaker grids to remove sediment from vehicle tyres before they leave the site. There should also be adequate dust control measures put in place during the construction phase. These sediment control measures have been incorporated into the Draft Statement of Commitments at **Appendix B**.

6.15 Geotechnical and Hydrogeological

A Geotechnical and Hydrogeological Assessment (**Appendix V**) has been prepared by Jeffery and Katauskas for the proposed development which details the findings of a desktop assessment of the likely geotechnical issues associated with the proposed mixed use development on the site and, where necessary, recommends measures to address any geotechnical issues that may arise from the design and construction of the proposed development. The Geotechnical and Hydrogeological Assessment also provides preliminary comments and recommendations on geotechnical and hydrogeological aspects of the proposed development.

The site is located within an area mapped as being underlain by Ashfield Shale, but is close to the Hawkesbury Sandstone region which is just to the east/downhill.

Based on nearby investigations, it is expected that subsurface conditions would comprise the following:

- Surficial fill will be present over some areas of the site, with slightly deeper fill in some areas possibly up to a depth of about 1m;
- Residual silty clays of high plasticity and typically very stiff strength;
- Weathered shale bedrock at relatively shallow depths of about 1m to 2m or so (weathered shale is likely to be of very poor quality, generally no stronger than low to low strength and is likely to contain significant thicknesses of extremely weathered shale and shaly clay, but with stronger sandstone, siltstone and ironstone seams and bands;
- Shale bedrock of medium and high strength from depths of possibly 3m to 4m below the existing surface levels; and
- Only minor groundwater seepage will probably be encountered within the excavation.

Jeffery and Katauskas note that, from a geotechnical perspective, the proposed development is suitable for the subject site and will involve relatively common construction techniques and methodologies carried out on many sites within the area. The primary geotechnical issues relating to the development will be as follows:

- There will be variable excavation conditions and the requirement for retention of at least the soil and shale parts of the profile for both temporary and permanent cases. The temporary support for the shoring may require rock anchors extending beyond the site boundaries. This has been included in the Draft Statement of Commitments at Section 9.0 below.
- Excavation conditions are expected to be quite variable, comprising residual clay in the shallower areas and poor quality weathered shale with thick zones of clay, while the lower metres of excavation are likely to be in medium and high strength sandstone probably requiring the use of a rock breaker attachments to hydraulic excavators. Vibration effects (associated with general excavation but more critically sandstone excavation) on adjoining structures will need to be considered. This has been included in the Draft Statement of Commitments.

- The footings are likely to be found within competent sandstone bedrock.
- Minor groundwater seepage could occur above bulk excavation level and therefore drainage behind the shoring and below basement slabs is likely to be necessary. This has been included in the Draft Statement of Commitments.

The Geotechnical and Hydrogeological Assessment provides a number of detailed recommendations in relation to excavation conditions, excavation batters and retention and footing design. All of these recommendations have been included in the Draft Statement of Commitments at **Appendix B**.

6.16 Contamination

Environmental Investigation Services (EIS) has prepared a Stage 1 Preliminary Environmental Site Assessment (**Appendix I**) for a proposed mixed retail and residential development on the site which investigates the potential risk of significant widespread contamination of the site.

The Stage 1 Assessment provides a desktop review of historical data relating to any potential contamination of the site. Based on historical information and observations made during the site inspection, potential contamination at the site is expected to be associated with:

- Potentially contaminated, imported fill material;
- Use of chemical for manufacturing purposes at 11 Havilah Lane;
- Potential asbestos contamination associated with former site use in 11 Havilah lane portion of the site, and associated with demolition of the former site buildings/sheds;
- Historical use of the wider site for commercial/industrial purposes;
- Historical activities such as use of pesticides;
- The two grease traps located in the north-east section of the site;
- The service station located cross-gradient and to the north-west of the site; and
- Unidentified underground storage tanks (USTs).

On this basis, EIS consider the potential for significant widespread contamination at the site is moderate.

Based on the scope of work undertaken for this assessment, EIS consider that the site can be made suitable for the proposed mixed retail and residential development provided that:

- A hazardous building materials inspection is undertaken prior to the demolition of the existing site buildings;
- The demolition works are undertaken in accordance with the recommendations made within the hazardous buildings materials report;
- A preliminary soil and groundwater investigation is undertaken prior to the commencement of excavation/construction works at the site. Any recommendations made within the preliminary soil and groundwater investigation report should be appropriately addressed;
- A waste classification is assigned to the fill and natural soils prior to off-site disposal; and
- The site is inspected by experienced environmental personnel during demolition and excavation works to assess any unexpected conditions or subsurface facilities that may be discovered.

All of the recommendations made in the Stage 1 Preliminary Environmental Site Assessment have been included in the Draft Statement of Commitments at **Appendix B** below.

6.17 Infrastructure and Utilities

Consultation with Sydney Water and Energy Australia has been undertaken to inform the infrastructure and servicing requirements for the proposed development. A Feasibility Statement from Sydney Water (**Appendix W**) confirms that the proposed development can be appropriately serviced by sewer and water services.

On 12 April 2010, an application was made to Energy Australia in relation to the required electrical connections for the site. Energy Australia responded on 13 May 2010 (see **Appendix W**) and indicated that a kiosk substation will be required for the development. A kiosk substation has been included in the design of the development (at the upper ground level) which ensures that the proposed development will be able to be serviced by appropriate electricity supply.

6.18 Construction Management

A Construction and Waste Management Plan (CMP) has been prepared by PTI Architects (**Appendix P**) which sets out the proposed site access, worksite requirements and waste management for the construction of the proposed development.

The construction management will be under the control of a Head Contractor who will be appointed once Project Approval is given. The Head Contractor will prepare a detailed Construction Management Plan for the development. This has been included in the Draft Statement of Commitments.

The CMP also includes a number of recommendations in relation to hoarding and fencing, the creation of alternate pedestrian and traffic routes during construction, air quality management, the control of noise and vibration on the site and waste management during demolition and construction.

All of these measures have been incorporated into the Draft Statement of Commitments at **Appendix B** to ensure that the proposed development will not result in any adverse construction impacts.

6.19 Waste Management

A Waste Management Plan (WMP) has been prepared by JD Macdonald for the operational stage of the development (see **Appendix Q**). The plan outlines measures to achieve the following:

- Avoid the generation of unnecessary waste;
- Minimise the quantities of waste generated ending up as landfill;
- Recover, reuse and recycle waste generated on the site where possible; and
- Comply with any (waste-related) codes and policies that may apply to the development.

The WMP estimates that waste generation rates for the residential and retail components of the proposed development based on Ku-ring-gai Council's Town Centres DCP. However, it adopts a cautious approach and overestimates the generation of retail waste.

The WMP estimates that some 8,160 litres of general waste and 4,080 litres of recyclable waste will be generated per week by the residential component of the development, and that approximately 1,169 litres of general waste and 586 of recyclable waste will be generated daily by the retail component of the proposed development.

The residential buildings will be serviced by two garbage chutes per building which discharge directly to 1,000 litre mobile garbage bins. The bins will be located in four dedicated garbage rooms at the lower ground floor. Recyclable waste will be stored in 240 litres colour-coded garbage bins in the residential garbage rooms.

Each retail tenant will be responsible for the storage of their own garbage during the day and transferral of their garbage to retail garbage area at the loading dock each day. Recycle bins will also be provided in this location.

Residential garbage will be collected on a weekly basis by Ku-ring-gai Council's collection vehicles and retail garbage will be collected by a private waste contractor on a daily basis. All garbage vehicles will use the loading dock during the collection of garbage.

A waste caretaker will be employed to manage the waste system on the site. The WMP includes a number of recommendation in relation to the waste caretaker which have been included in the Draft Statement of Commitments at **Appendix B**. All organic waste will be handles and managed by the landscape contractor. This has also been included in the Draft Statement of Commitments.

The WMP also makes a number of recommendations in relation to waste equipment and garbage room design which have been included in the Draft Statement of Commitments at **Appendix B**. Provided the recommendations in the WMP are implemented, there will be no adverse impact resulting from the storage and collection of garbage on the site.

6.20 Social and Economic Issues

The proposed development will make significant social and economic contributions to the Lindfield Town Centre and broader area. The proposed development will provide upgraded retail floor space within the town centre which will encourage increased economic activity in the locality.

The existing supermarket will be replaced with a new, modern supermarket which will continue to serve the needs of the local community. The proposed development will provide active uses at the ground floor street frontages and will activate the streetscape. At the same time the new development will revitalise the Town Centre and will initiate the transformation of the area into a vibrant mixed use centre as envisaged under local and State planning strategies.

The provision of 102 high-quality residential apartments in close proximity to public transport and existing services will ensure that suitable residential accommodation, to meet the needs of the community, is provided in an appropriate location. These units have been designed to ensure they can be sold to the local community at an affordable price range to meet the housing needs of demographic within the area.

The proposed development will replace the existing retail premises on the site with new and upgraded premises but will not result in an increase in retail floor space in the locality. This will ensure that there is scope for the rest of the Town Centre to develop a diverse range of viable, retail uses. The proposed supermarket currently operates as a local shopping facility and will continue to serve the needs of the local community. The new supermarket will have significant improvements which will benefit customers including:

- higher ceilings;
- better-planned aisles;
- better parking;
- travelators;
- more use-friendly ;
- a larger entrance; and
- improved disabled access.

7.0 Conclusion

The proposed development of a mixed use development in close proximity to the Lindfield train station will not only provide additional affordable and high quality residential accommodation in close proximity to the train station, but will also upgrade the existing retail offering in the Town Centre and ensure that the daily service requirements of the local community can continue to be met.

The design of the proposed development is generally consistent with controls under the Ku-ring-gai Town Centres LEP and DCP, as well as the Site Report for Site 4 which supports SEPP 53. The design provides active street level uses at the Lindfield Avenue and Kochia Lane frontages and locates service and vehicle access components of the development on Havilah Lane away from the main street frontages. This will encourage a vibrant and active street frontage opposite the station and future Town Square on the southern side of Kochia Lane.

The proposed development will not result in any unacceptable amenity impacts on surrounding development and will ensure that appropriate solar access is maintained to the square. Appropriate noise mitigation measures have been incorporated into the design of the development to ensure that the acoustic amenity of surrounding residential development is maintained, and that an appropriate level of acoustic amenity is provided for the residential component of the proposed development. The design of the proposed loading dock at the rear of the site will result in significant improvements to both the visual and acoustic amenity at this property frontage.

There will be no adverse impact on the nearby heritage item as a result of the proposal.

The proposed development is consistent with local and State government strategic planning objectives to provide increased residential densities in close proximity to transport hubs such as the Linfield rail and bus interchange, as well as locate a range of uses within town centre locations.

The proposed development provides a high design quality development accommodating an appropriate mix of uses in a suitable location. It is considered worthy of the Minister's approval.