



Ivanhoe Estate Redevelopment Concept Plan & Stage 1

State Significant
Development Assessment
(SSD 8707 & SSD 8903)



April 2020

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Cover photo

Visualisation of proposed Ivanhoe Estate concept plan (Source Applicant's RRTS)

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Glossary

Abbreviation	Definition
ARH SEPP	State Environmental Planning Policy (Affordable Rental Housing) 2009
ADG	Apartment Design Guide
AHD	Australian Height Datum
AIA	Arboricultural Impact Assessment
Applicant	NSW Land and Housing Corporation
BAR	Biodiversity Assessment Report
BC Act	<i>Biodiversity Conservation Act 2016</i>
BCA	Building Code of Australia
CEEC	Critically Endangered Ecological Community
CIV	Capital Investment Value
CPTED	Crime Prevention Through Environmental Design
Consent	Development Consent
Council	City of Ryde
Department	Department of Planning, Industry and Environment (Planning and Assessment Group)
DES	Design Excellence Strategy
Design Guidelines	Ivanhoe Estate Design Guidelines
DCP	Development Control Plan
Education SEPP	State Environmental Planning Policy (Educational Establishments and Child Care Facilities) 2017
EESG	Environment, Energy and Science Group of the Department of Planning, Industry and Environment (former NSW Office of Environment and Heritage)
EIS	Environmental Impact Statement
EPA	Environment Protection Authority
EP&A Act	<i>Environmental Planning and Assessment Act 1979</i>
EP&A Regulation	<i>Environmental Planning and Assessment Regulation 2000</i>
EPBC Act	<i>Environment Protection and Biodiversity Conservation Act 1999</i>
EPI	Environmental Planning Instrument
ESD	Ecologically Sustainable Development
FSR	Floor Space Ratio
GANSW	Government Architect NSW
GFA	Gross Floor Area
GSC	Greater Sydney Commission
Heritage Division	Heritage Division of the Department of Premier and Cabinet (former Heritage Division of the Office of Environment and Heritage)

ISEPP	State Environmental Planning Policy (Infrastructure) 2007
LEP	Local Environmental Plan
LGA	Local Government Area
Minister	Minister for Planning and Public Spaces
RACF	Residential Aged Care Facility
RLEP 2012	Ryde Local Environmental Plan 2012
RTS	Response to Submissions
RRTS	Revised Response to Submissions
SEARs	Secretary's Environmental Assessment Requirements
Secretary	Secretary of the Department of Planning, Industry and Environment
Seniors SEPP	State Environmental Planning Policy (Housing for Seniors or People with a Disability) 2004
SEPP	State Environmental Planning Policy
SEPP 55	State Environmental Planning Policy No 55 – Remediation of Land
SEPP 65	State Environmental Planning Policy No 65 – Design Quality of Residential Apartment Development
SRD SEPP	State Environmental Planning Policy (State and Regional Development) 2011
SSD	State Significant Development
TfNSW	Transport for New South Wales
TfNSW (RMS)	Transport for New South Wales (RMS)
TSCA	<i>Threatened Species Conservation Act 1995</i>
VIA	Visual Impact Assessment
VPA	Voluntary Planning Agreement



Executive Summary

This report provides an assessment of a concept State Significant Development (SSD) application for the redevelopment of the Ivanhoe Estate, Macquarie Park (SSD 8707) and an SSD application for Stage 1 of the proposed redevelopment (SSD 8903). The proposed redevelopment of the Ivanhoe Estate would be the first major project to be delivered under the Communities Plus Program, a \$22 billion NSW Government program which will facilitate non-government and private sector partnerships to redevelop Land and Housing Corporation (LAHC) sites throughout Sydney and regional NSW.

The concept proposal seeks approval for the redevelopment of the Ivanhoe Estate into a mixed-use development comprising social, affordable, seniors and market housing, community and retail uses, a primary school and childcare centres, parks and landscaping. In total, approximately 3,300 dwellings are proposed, including 950 social housing, 128 affordable housing and 273 seniors living dwellings.

The Stage 1 application seeks approval for site preparation works, construction of a new internal road network, a new bridge over Shrimptons Creek, and construction of two buildings (A1 and C1) containing a total of 740 residential apartments (including 259 social housing apartments of which 43 are for seniors or people with a disability) and a childcare centre.

The Applicant for both applications is NSW Land and Housing Corporation (LAHC) and the site is located within the City of Ryde local government area. The Minister for Planning and Public Spaces is the consent authority for both applications.

Engagement

Concept

The Department publicly exhibited the concept proposal for 28 days from 12 April until 9 May 2018. In response to submissions received, the concept proposal was revised on two separate occasions and exhibited from 23 May 2019 to 19 June 2019 and again from 21 November to 11 December 2019.

Key changes made to the proposal included, deleting one of the proposed towers, adjusting building heights across the site and increasing the proposed building setbacks along Epping Road to reduce the potential biodiversity impact of the proposal.

Following exhibition of the current revised concept proposal in November 2019, the Department received a total of 23 submissions comprising three submissions from government agencies, a submission from Council, two submissions from special interest groups and 17 from the public, 14 of which were objections.

Council's submission maintained several key concerns, including the loss of trees/biodiversity, setbacks, an insufficient buffer zone to Shrimptons Creek and a lack of open space. Key issues raised in public submissions related to the loss of trees, biodiversity impacts, amenity impacts and the proposed scale of the development.

Stage 1

The Department publicly exhibited the Stage 1 application for 28 days from 23 May until 19 June 2019. The Department received a total of 30 submissions, comprising six submissions from government agencies, two submissions from special interest groups and 22 from the public, all of which were objections. Council considered the Stage 1 application to be premature and did not make a formal submission. Key issues raised in public submissions related to trees, biodiversity impacts and the height and scale of the proposed buildings.

Assessment

The Department has undertaken a detailed assessment of the concept and Stage 1 proposals and has carefully considered the issues raised in submissions. The Department considers the proposals are acceptable for the reasons outlined below.

Strategic Planning Framework

The Department considers the proposal is consistent with the strategic planning framework established for the site. In particular, the proposal is consistent with the objectives of the Greater Sydney Region Plan and North District Plan as it would deliver a new master planned estate with increased social and affordable housing near excellent public transport, employment opportunities and services. The proposal is also consistent with the scale and density of development within the Herring Road Priority Precinct which is transitioning from lower density development to higher density development with larger scale buildings.

Built form

The Department considers the revised concept and Stage 1 proposal would result in an acceptable built form outcome for the site. The amendments made to the proposal, including the deletion of one of the proposed towers, adjusting building heights across the site and increasing the setbacks along Epping Road, have improved the layout of the proposal, increased open space, reduced visual and amenity impacts to neighbouring properties and increased the number of trees to be retained on the site.

While the proposal would exceed the maximum FSR control (by 3.3%) and the height control (for 5 out of 15 buildings) the Department is satisfied these exceedances are minor and acceptable. The Department is satisfied the revised proposal would not result in any significant visual or amenity impacts compared to a fully compliant scheme and the height and scale of the development is consistent with the desired future character of the area. Future development applications would also be guided by a set of Design Guidelines and a Design Excellence Strategy to ensure a high-quality architectural, landscape and urban design outcome is achieved.

Residential amenity

The Department is satisfied the concept proposal incorporates a layout and design that would allow future residents to enjoy a high level of residential amenity. The concept proposal satisfies the ADG building separation recommendations in all locations except for minor variations associated with Building A2 which would not result in any adverse amenity impacts to the adjacent Buildings A1 and A3. The proposed concept design would also ensure ADG recommendations regarding solar access and cross-ventilation are capable of being satisfied. In addition, the Department considers the proposed Stage 1 buildings satisfy the ADG recommendation and would provide a high level of amenity to future residents.

Public domain

The Department is satisfied the proposed size and types of open space would satisfactorily cater for future residents, would receive acceptable levels of solar access and would enable a high-quality public domain outcome within the estate. The concept proposal includes a hierarchy of diverse, publicly accessible open spaces across the estate, linked by pedestrian connections. This includes a minimum 3,300 m² central Village Green, a 1,009 m² Forest Playground, a 566 m² Town Square, secondary open spaces and playgrounds and an upgraded Shrimptons Creek riparian corridor.

The Stage 1 application includes construction of new streets, footpaths and adjacent road reserves, including the planting of 476 new trees. A paved plaza in association with Building A1 and a neighbourhood garden in association with Building C1 are also proposed, resulting in a high-quality public domain outcome for the site.

Traffic/proposed road network and parking

The Department considers the proposed road upgrade works including the construction of a new bridge over Shrimptons Creek, intersection upgrades and a new estate road network would ensure the surrounding road network has sufficient capacity to accommodate the additional traffic movements generated by the development. The site also benefits from being located close to excellent public transport services, including a new Metro Train Station at Macquarie Park. The concept proposal also includes various traffic mitigation measures, including sustainable travel strategies, infrastructure improvements to pedestrian and cyclist access and the implementation of a new developer funded community bus.

The proposed car parking rates are in accordance with the relevant controls and guidelines, except for a reduced visitor car parking rate. The Department considers a reduced visitor rate is acceptable as it would provide an appropriate balance between meeting the parking demands of visitors and mitigating traffic impacts on the surrounding road network.

Trees and ecological impacts

The Department considers the revised concept proposal has appropriately minimised tree loss and biodiversity impacts. The revised concept proposal significantly increased setbacks to avoid tree removal along Epping Road and Shrimptons Creek. This has increased the number of trees to be retained from 231 to 453. The revised proposal has also appropriately minimised impacts on the Sydney Turpentine Ironbark Forest (STIF) located on the site, with only 0.02 hectares of the 1.64 hectares of STIF being impacted by the redevelopment.

The loss of 853 trees, including 547 from a separate demolition approval, would also be offset by 950 replacement trees. Further, the retirement of 16 ecosystem credits would offset the remaining unavoidable impacts of the project. The Department is therefore satisfied the potential biodiversity impacts are acceptable.

Public Benefits

The Department considers the concept proposal would result in a number of significant public benefits including:

- the provision of 950 social housing, 128 affordable housing and 273 seniors living dwellings
- a 430-place primary school and two childcare centres
- 2.76 hectares of open space, a new skate park and public domain improvements
- a new road link between Herring Road and Lyonpark Road, including a new bridge over Shrimptons Creek, together with new pedestrian and cycle facilities and environmental restoration works
- contributions and works-in-kind in the order of \$45.5 m.

The Department is therefore satisfied the proposal would result in desirable public benefits and is in the public interest.

Conclusion

The Department considers the concept development application would deliver on the aim of the NSW Government's Communities Plus Program through the provision of significant social and affordable housing renewal. This would be achieved through the delivery of a new integrated social, private and affordable housing community, combined with significant new community facilities and open space with good access to transport and employment. It would also contribute to meeting overall housing need and aligns with the objectives of the Greater Sydney Region Plan and North District Plan in relation to increasing housing supply, choice and affordable housing in a highly accessible location.

The Department's assessment of the revised concept proposal has found it is of an appropriate density and scale that is consistent with the evolving character of the area, minimises environmental impacts and tree removal where possible, would have acceptable traffic impacts and would have negligible impacts to the amenity of neighbouring sites.

The Department's assessment of Stage 1 development has found it is consistent with the concept proposal, including the proposed Ivanhoe Estate Design Guidelines, and would provide a high level of amenity to future residents.

The Department concludes the proposals are in the public interest and recommends the applications be approved, subject to recommended conditions.



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1. Introduction

1.1 Introduction

This report provides an assessment of a concept State Significant Development (SSD) application for the redevelopment of the Ivanhoe Estate, Macquarie Park (SSD 8707), and an SSD application for Stage 1 of the proposed redevelopment (SSD 8903). The Applicant for both applications is the NSW Land and Housing Corporation (LAHC).

The concept development application seeks approval for the redevelopment of the Ivanhoe Estate into a mixed-use development comprising social, affordable, seniors and market housing, community and retail uses, a primary school and childcare centres, parks and landscaping, and a new road network. In total, approximately 3,300 dwellings are proposed, including approximately 950 social housing, 128 affordable housing and 273 seniors living dwellings.

The Stage 1 application includes approval for site preparation works across the estate, construction of the new internal road network and new bridge over Shrimptons Creek, and construction of Buildings A1 and C1 containing a total of 740 residential apartments (including 259 social housing apartments) and a child care centre (within Building A1).

1.2 Macquarie Park

Macquarie Park is located approximately 12 km to the north-west of the Sydney Central Business District (CBD) and is within the City of Ryde local government area (LGA). It is 6.8 km² in size and extends east to Delhi Road, south to Epping Road, west to Culloden Road and north to the Lane Cove River. **Figure 1** identifies the location of the site within Macquarie Park.

Strategic plans have consistently identified Macquarie Park as an important centre within Sydney's Global Economic Corridor which runs from Sydney Airport, through the Sydney CBD to the north-west and Parramatta.

Macquarie Park is the largest non-CBD office market in Australia and is projected to become Australia's fourth largest commercial precinct by 2030. The suburb is also significant for the cluster of health, education and high-tech industries.

1.3 State Significant Precinct

In July 2012, the Macquarie University (Herring Road) Priority Precinct, was nominated by Council as a priority growth area due to its excellent access to transport, services, jobs, shopping and education. In July 2015, the precinct was rezoned by the Department to allow high-density residential development to occur along both sides of Herring Road within Macquarie Park.

The Precinct is intended to deliver a significant number of new dwellings by 2031, transforming the area into a vibrant centre in close proximity to jobs, public transport, retail and education facilities. Consequently, the area is currently undergoing significant change, with a number of projects constructed, approved or proposed that will substantially alter the built form and character of the area.

The site forms part of the Macquarie University (Herring Road) Priority Precinct and benefits from the associated increased height and density controls (**Section 7.1**).

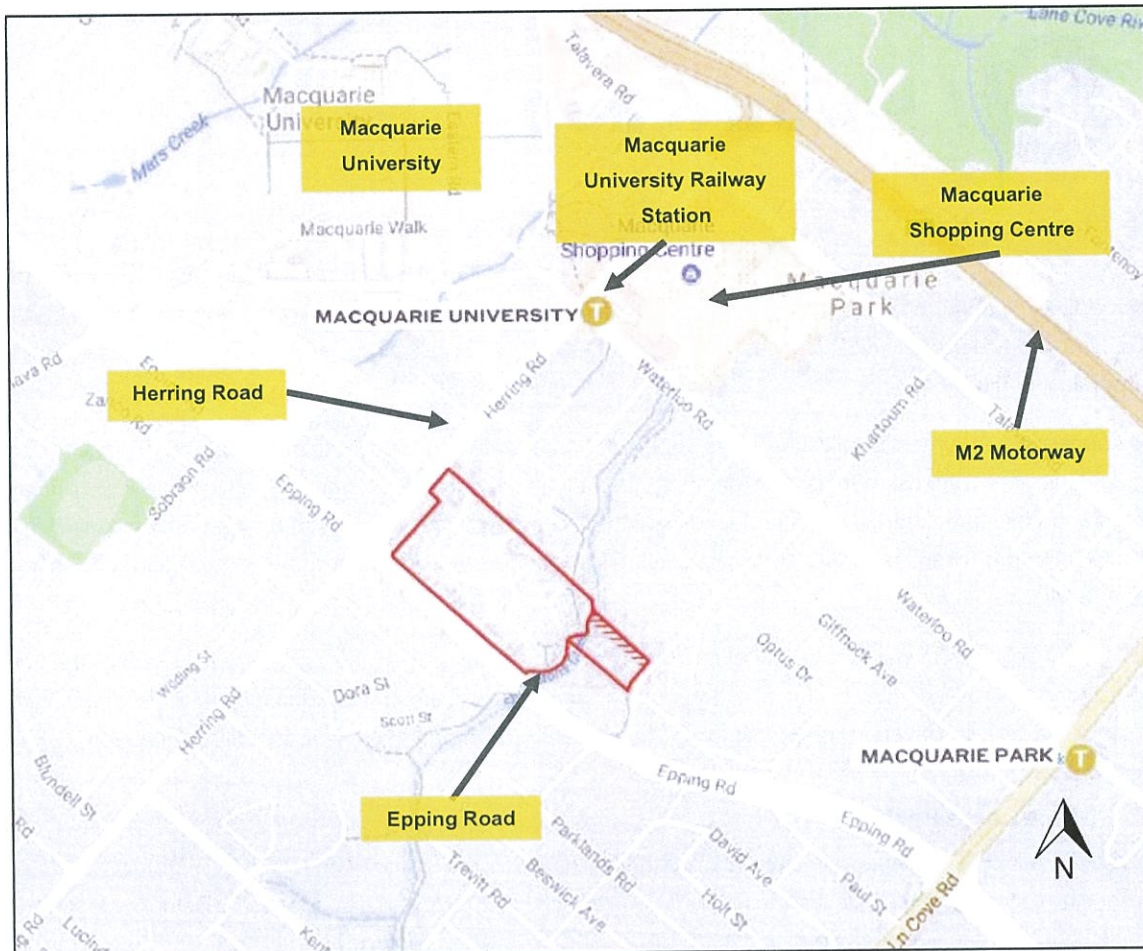


Figure 1 | Site location plan. Site shown outline in red (Base source: Applicant's Concept EIS)

1.4 The Site (Ivanhoe Estate)

The site has a total area of 8.2 hectares, comprising 17 individual allotments and is located on the south-eastern corner of the intersection of Epping Road and Herring Road (**Figure 2**). The site also incorporates adjoining land, being a portion of Shrimptons Creek and 2-4 Lyonpark Road.

The site contains 259 social housing dwellings comprising a mix of two-storey townhouses and four-storey apartment buildings set around a cul-de-sac street layout (**Figure 3**). The apartment buildings are located on the southern side of Ivanhoe Place, the main road through the estate, with townhouses located on the northern side. Vehicular access to the site is via a roundabout at the intersection of Ivanhoe Place and Herring Road.

The site is currently unoccupied and partial demolition of the estate, undertaken in accordance with Part 5 of the *Environmental Planning and Assessment Act 1979* (EP&A Act), commenced in April 2018 (area of demolition shown circled orange in **Figure 3**).



Figure 2 | Site location (outlined in red) (Base source: Applicant's Concept EIS)

The concept site slopes down 29 metres from Herring Road (RL 71) to Shrimptons Creek (RL 42). There are 3.4 hectares of vegetation (1,238 trees) dispersed throughout the site, including dense concentrations along the Epping Road and Shrimptons Creek frontages. The vegetation includes 1.64 hectares of Sydney Turpentine Ironbark Forest (STIF), a critically endangered ecological community (CEEC) under the *Biodiversity Conservation Act 2016* (BC Act) and the *Commonwealth Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

Shrimptons Creek and the associated riparian corridor forms the south-eastern boundary of the estate. The setback/buffer zone between the creek and the existing estate includes a shared path which forms part of the regional cycle network and extends from Epping Road in the south-eastern corner of the site to Peach Tree Road in the north-eastern corner. A skate park is also located within the creek setback.

A commercial office building is located at 2-4 Lyonpark Road. The building is surrounded by car parking and landscaping with the north-western portion of the site forming a buffer zone to Shrimptons Creek. The site is shown in **Figures 4 to 6**.

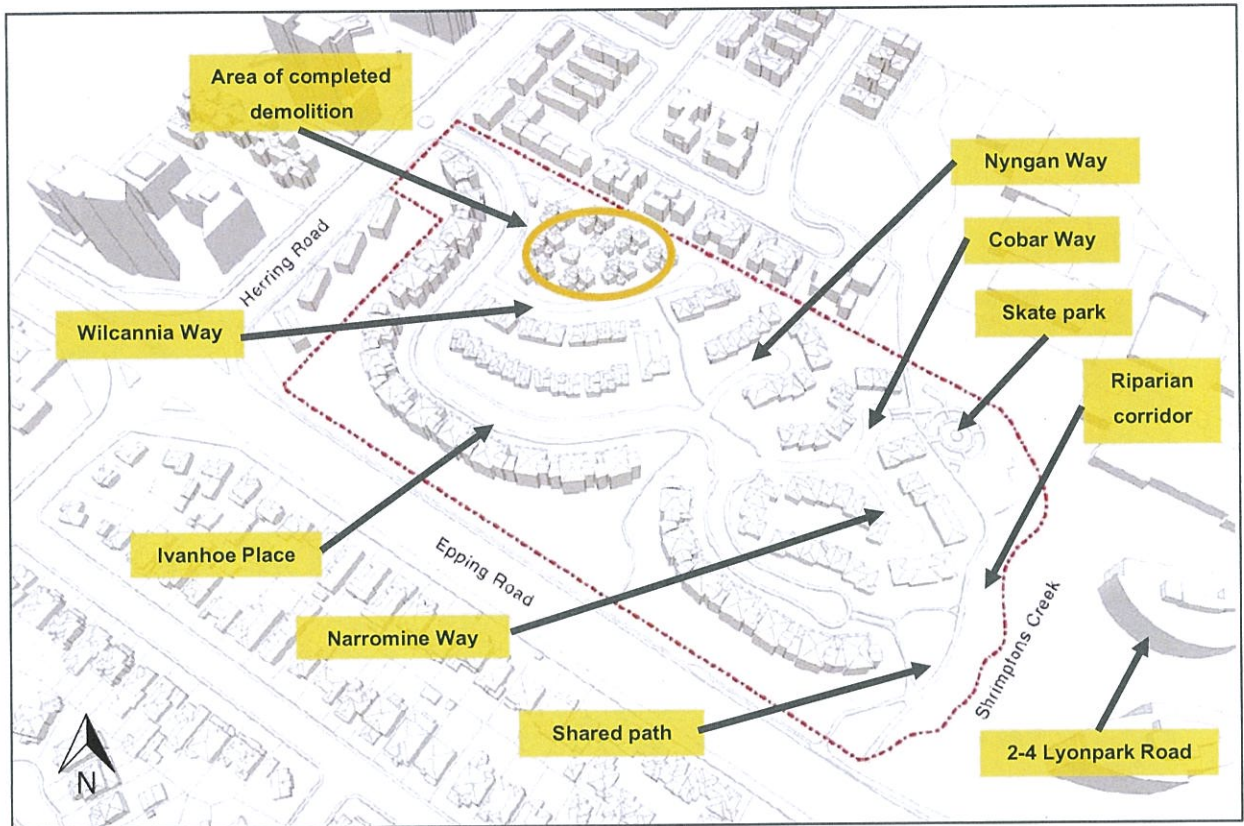


Figure 3 | The site (excluding 2-4 Lyonpark Road) shown outlined in red. Area of completed demolition shown circled orange (Base source: Applicant's Concept EIS)



Figure 4 | Ivanhoe Place looking north-west (Source: Department's photograph)



Figure 5 | Shrimptons Creek setback looking south-west (Source: Department's photograph)



Figure 6 | Epping Road setback looking east (Source: Department's photograph)

1.5 Surrounding Context

The surrounding area is characterised by the following mix of buildings and uses:

- business parks and large-scale commercial office buildings to the east and south-east
- predominately four storey residential apartment buildings within Peach Tree Road to the immediate north-east (part of the Cottonwood Estate).

- predominately three storey residential apartment buildings on the eastern side of Herring Road between Ivanhoe Place and Waterloo Road
- Macquarie Shopping Centre, Macquarie University and Macquarie University Railway Station approximately 500 m further to the north-east
- new high-density residential apartment buildings, 22 to 23 storeys in height, to the north-west on the western side of Herring Road
- a construction site to the immediate north-west (137-143 Herring Road) for two, 22-storey residential apartment buildings
- low density residential dwellings to the south-west, on the opposite side of Epping Road, an eight-lane arterial road.

The Department also notes the Cottonwood Estate, immediately to the north-east of the site (**Figure 2**) is undergoing a transformation consistent with the planning controls adopted for the Herring Road Priority Precinct. Recent developments approved within the Cottonwood Estate include a 20-storey building containing 172 apartments at 15-21 Cottonwood Crescent and a 14-storey building containing 143 apartments at 2-10 Cottonwood Crescent. **Figures 7 to 9** illustrate the evolving context of the site and surrounding area.

The site is directly serviced by buses with stops located on Epping Road and Herring Road. A bus interchange, serviced by a broader range of routes, is located at the Macquarie Shopping Centre. Macquarie University Railway Station is located adjacent to the shopping centre.



Figure 7 | High-density development on western side of Herring Road looking south-west towards Epping Road
(Source: Department's photograph)



Figure 8 | Residential dwellings on the southern side of Epping Road (Source: Department's photograph)



Figure 9 | Apartment buildings in Peach Tree Road adjacent to the north-eastern site boundary (Source: Department's photograph)

2. Project

2.1 Description of Concept Proposal

The concept proposal seeks approval for the redevelopment of the site into a mixed-use development comprising social, affordable, seniors and market housing, community and retail uses, a primary school and childcare centres, parks and landscaping, and a new road network.

The key components and features of the concept proposal, as revised throughout the assessment, are provided in **Table 1** below and are illustrated in **Figures 10 to 13**.

Table 1 | Key components of the concept proposal

Aspect	Description
New road network	<ul style="list-style-type: none"> • New internal road network comprising Main Street (connecting Herring Road and Lyonpark Road) and two neighbourhood streets • New road connection to Lyonpark Road through 2-4 Lyonpark Road, including new bridge over Shrimptons Creek • Intersection upgrades to Herring Road.
Proposed land uses	<ul style="list-style-type: none"> • Approximately 3,300 residential dwellings, including approximately 950 social and 128 affordable housing dwellings, and 273 seniors housing units (private and social independent living) • 120 bed residential aged care facility (RACF) • primary school (approximately 430 places) • Community centres, including community rooms, meeting rooms and fitness areas • 960 m² of retail tenancies intended for convenience retail and cafés • Office premises to accommodate Mission Australia • Two childcare centres (approximately 75 places each) • Roads, public and communal open space.
Future built form	<ul style="list-style-type: none"> • 15 development blocks comprising: <ul style="list-style-type: none"> ○ 12 residential apartment buildings (maximum heights ranging from 45 m to 75 m), including three mixed-use buildings containing retail, office, childcare and community uses ○ a residential aged care building (maximum height 45 m) ○ a primary school building (maximum height of 45 m) ○ a community centre building (maximum height of 12 m).
Landscaping and public domain	<ul style="list-style-type: none"> • Removal of 343 trees* • New public open space, including a central Village Green (minimum 3,300 m²), Forest Playground (1,009 m²) and Forest Threshold parks (6,507 m²) • Retention of an ecological corridor (8,376 m²) adjacent to Epping Road • New pedestrian pathways and connections to external pedestrian routes, including landscaped through-site connection from Epping Road to north-east boundary/Shrimptons Creek • Town plaza (566 m²) and retail strip within/adjacent to Building C3 • Landscaping, including the planting of 950 new trees • Rehabilitation and enhancement of the Shrimptons Creek riparian corridor, including new pedestrian bridge, amenities and skate park • Upgrade works to the Epping Road underpass.
Future Design Guidelines	<ul style="list-style-type: none"> • Provision of Design Guidelines, including DES, to guide the detailed design of future buildings.

Gross Floor Area (GFA)

- Proposed total GFA of 268,000 m² (Floor Space Ratio 3.4:1) comprising:
 - 253,789 m² residential
 - 6,500 m² RACF
 - 3,497 m² primary school and combined childcare centre
 - 2,011 m² community centres
 - 960 m² retail
 - 647 m² childcare centre
 - 596 m² Mission Australia offices.

Employment and Capital Investment Value (CIV)

- CIV of \$1,762,749,000
- 1,200 construction jobs.

* Note: Consent for demolition and associated removal of a further 510 trees was obtained by the Applicant under Part 5 of the EP&A Act. Works commenced in April 2018.

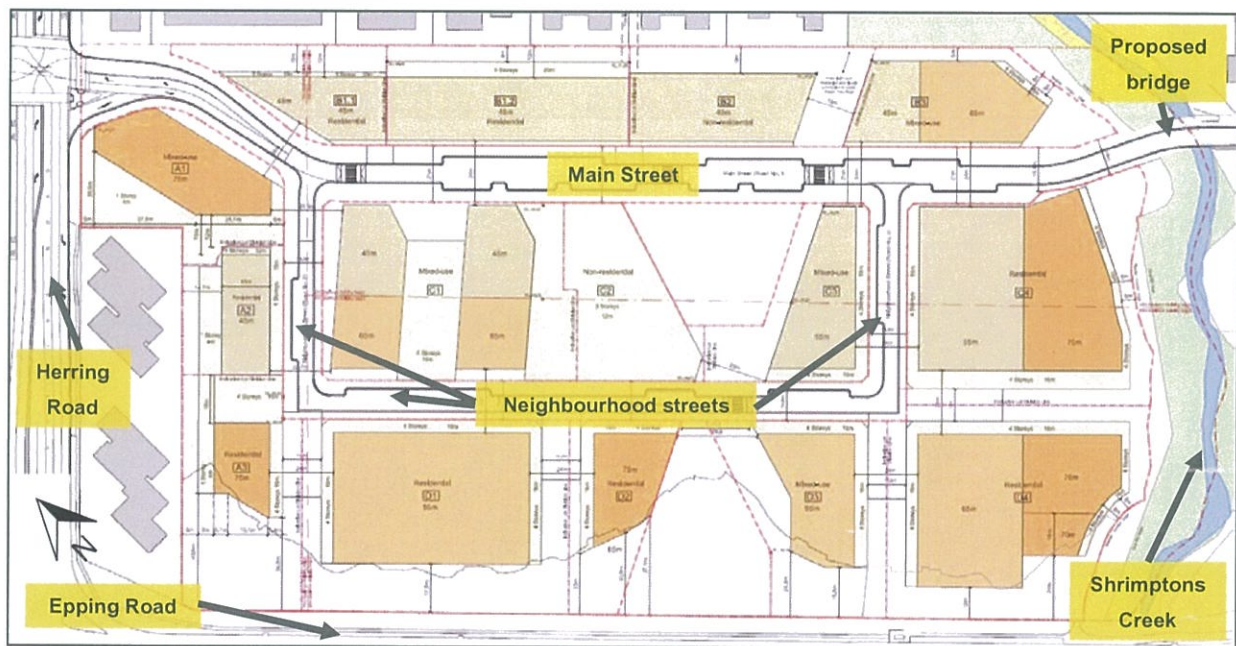


Figure 10 | Proposed Ivanhoe Estate Masterplan (Base source: Applicant's Concept RRTS)

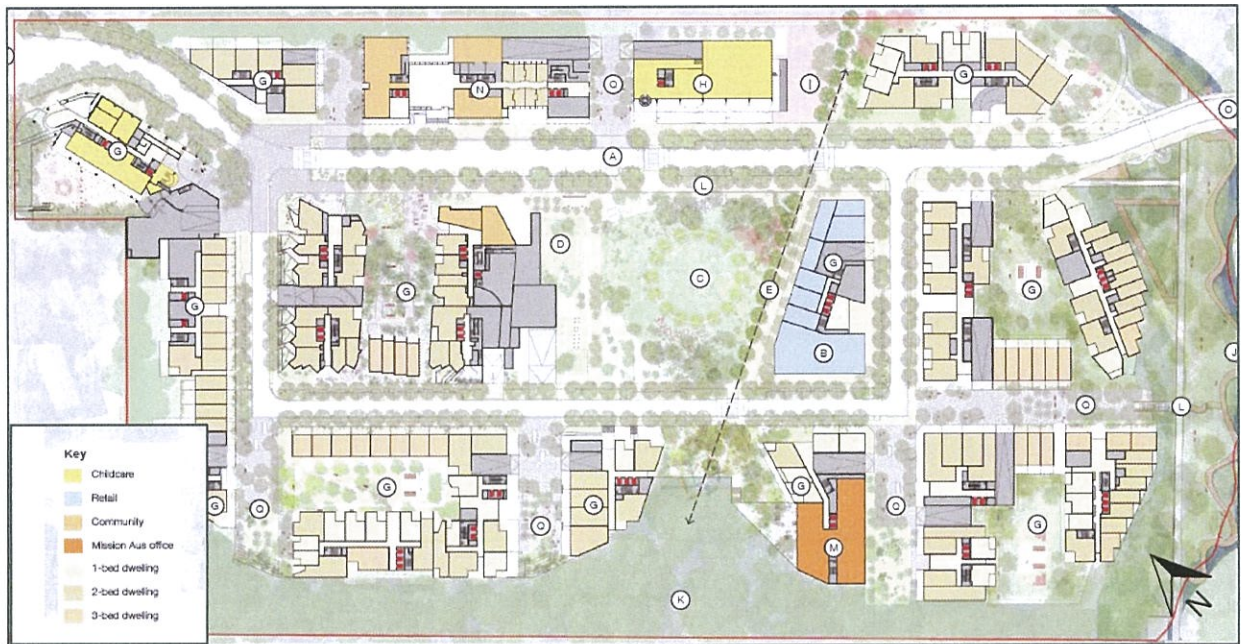


Figure 11 | Plan illustrating indicative Masterplan layout. Indicative building footprints shown coloured (Base source: Applicant's Concept RRTS)



Figure 12 | Photomontage of revised concept plan form of development looking south-west (Base source: Applicant's RRTS)



Figure 13 | Photomontage of development looking west along Main Street from the proposed Shrimptons Creek bridge (Source: Applicant's Stage 1 EIS)

2.2 Proposed Concept Layout

The concept proposal involves creating 15 separate development blocks within the site across four precincts (A to D), interspersed by the proposed new road network. **Figure 16** illustrates the proposed development blocks and road layout.

The proposed grid of residential buildings step down the sloping site from Herring Road towards Shrimptons Creek. The blocks are generally rectangular with angled building forms fronting key public spaces that extend south-west to north-east through the centre of the estate. Adjacent to the Shrimptons Creek, the proposed development blocks are intended to contain more fragmented building forms in order to provide a more variable built form interface between the site and the Shrimptons Creek riparian/open space corridor.

The concept proposal includes a number of indicative drawings to illustrate the envisaged built form outcome, consistent with the proposed envelope control plan. **Figures 14** illustrates the indicative estate layout while **Figure 15** illustrates maximum building heights and proposed public domain and landscaped areas.

Table 2 provides a breakdown of the proposed maximum GFA and building height for each proposed development block.

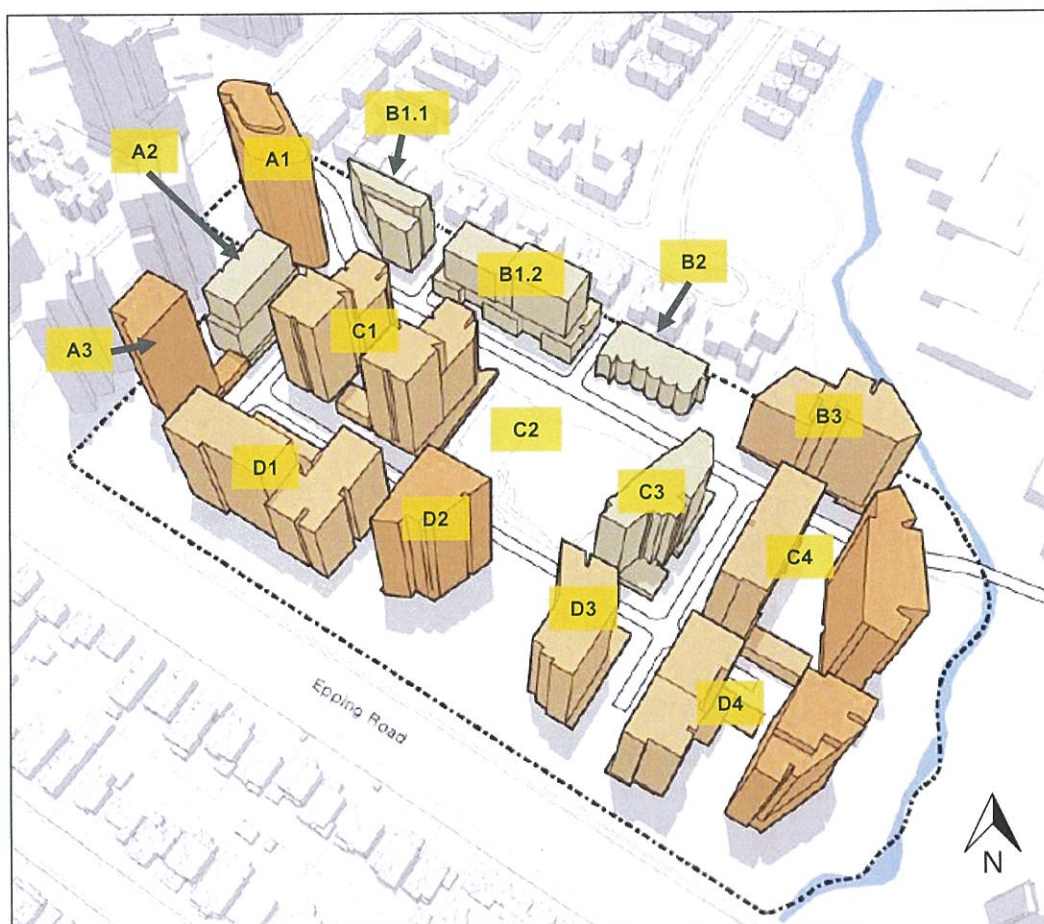


Figure 14 | Indicative illustration of future block layout (Source: Applicant's RRTS)

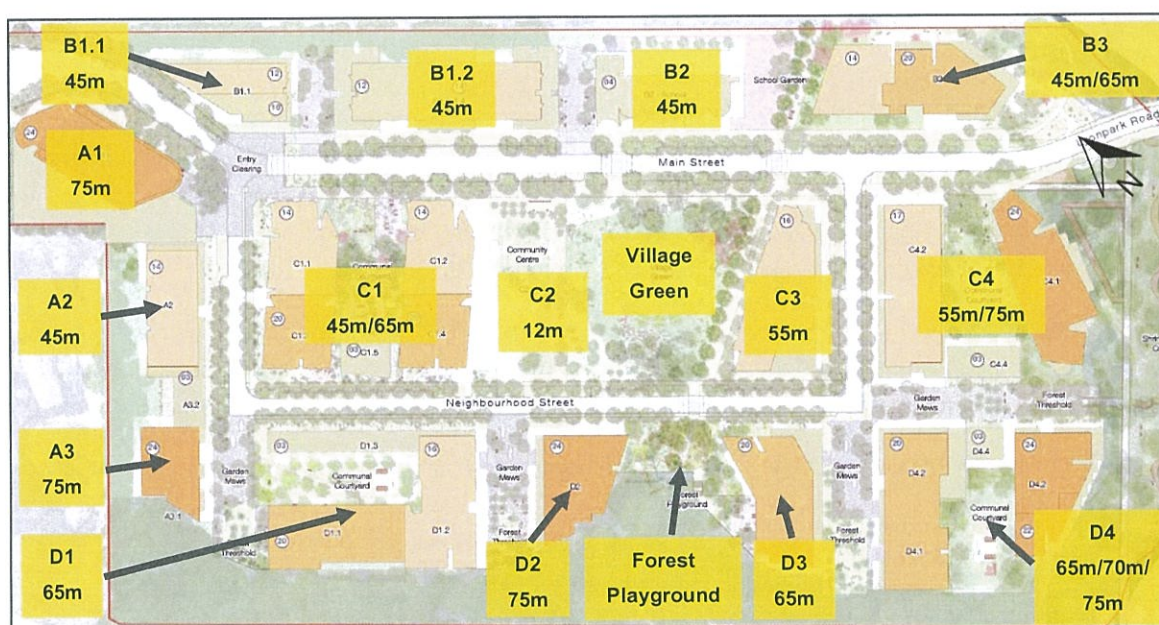


Figure 15 | Indicative block layout, proposed building heights and public domain/landscaped areas (Base source: Applicant's RRTS)

Table 2 | Maximum GFA and building height for each block

Development Block	Maximum GFA (m²)	Maximum building height (m)
A1	19,000 – 24,000	75
A2	8,000 – 10,000	45
A3	9,000 – 12,000	75
Precinct A Total	36,000 – 46,000	
B1.1	5,000 – 8,000	45
B1.2	13,000 – 17,000	45
B2	2,000 – 5,000	45
B3	17,000 – 21,000	Part 45/Part 65
Precinct B Total	37,000 – 51,000	
C1	30,000 – 37,000	Part 45/Part 65
C2	700 – 3,000	12 (3 storeys)
C3	11,000 – 15,000	55
C4	34,000 – 43,000	Part 55/Part 75
Precinct C Total	75,700 – 98,000	
D1	26,000 – 33,000	65
D2	14,000 – 18,000	75
D3	14,000 – 18,000	65
D4	31,000 – 39,000	Part 65/Part 70/Part 75
Precinct D Total	85,000 – 108,000	
Concept Plan Total	268,000	

2.3 Proposed Distribution of Uses

The proposed uses comprise residential apartment buildings, seniors housing, a school, childcare centres, Mission Australia offices, retail and community facilities. **Figure 16** illustrates the proposed distribution of uses across the proposed estate.



Figure 16 | Indicative distribution of uses. Residential shown grey. B2 includes the proposed primary school. A1 comprises ground level childcare with residential above (Base source: Applicant's Concept RRTS)

2.4 Proposed Staging

The Applicant proposes to redevelop the estate over 8 to 10 stages, with an estimated overall construction time of 10 to 15 years. The proposed indicative development stages comprise the following key elements:

- Stage 1: Site preparation, site facilities augmentation, construct new road network, construct Buildings A1 and C1
- Stage 2: Buildings C3, C4
- Stage 3: Buildings D1 and D2
- Stage 4: Building B3
- Stage 5: Buildings A2 and D3
- Stage 6: Building D4
- Stage 7: Building A3
- Stage 8: Building B1.1
- Stage A: Building B1.2 (RACF)
- Stage B: Building B2 (primary school).

The proposed staging plan has been arranged to maximise the amount of public domain that can be delivered as part of the first two stages of the development. The stages are also sequenced to maintain a consistent tenure split between social and market dwellings and to ensure the necessary infrastructure comes online to service the relevant stages. The timing of stages A and B (RACF and school) in relation to stages 1 to 8 would be determined by negotiations with independent operators.

2.5 Description of Stage 1 Proposal

The Stage 1 proposal seeks approval for site preparation works, construction of the estate road network and new intersections, and construction of Buildings A1 and C1. **Figures 12** and **14** identify the location of the proposed buildings and **Figure 10** illustrates the location of the proposed estate road network.

The key amendments to the Stage 1 proposal, as exhibited in the EIS, include:

- modifying Buildings A1 and C1, including the detailing of apartments to provide natural ventilation and increase the area of balconies
- clarifying site preparation works, including the extent and staging of bulk earthworks, tree removal and biodiversity offsets
- deletion of new left-in access road from Epping Road.

The key components and features of the Stage 1 proposal, as refined in the Response to Submissions (RTS), are provided in **Table 3** below and are shown in **Figures 17** and **18**.

Table 3 | Key components of the Stage 1 proposal

Aspect	Description
Site preparation	<ul style="list-style-type: none">• Removal of 343 trees• Demolition of the existing road network• Bulk earthworks across the estate to provide platforms for buildings and roads• Excavation of basements for Building A1 (four levels) and Building C1 (three levels)• Remediation works of soil within the vicinity of borehole 8 (to the eastern side of Building C1)• Provision and augmentation of utilities and service infrastructure across the Estate.
Road network	<ul style="list-style-type: none">• New internal road network consistent with the Concept Plan layout

	<ul style="list-style-type: none"> • New road connection to Lyonpark Road through 2-4 Lyonpark Road, including new bridge over Shrimptons Creek • Intersection upgrades to Herring Road.
Built form	<ul style="list-style-type: none"> • Building A1: <ul style="list-style-type: none"> ○ construction of a 25-storey residential apartment building with ground floor childcare centre ○ maximum height of 75 m (maximum RL 138.3). • Building C1: <ul style="list-style-type: none"> ○ construction of two 14 to 20-storey residential apartment towers with ground floor retail/community space and connecting 3-storey residential terrace ○ maximum height of 45 m (RL 100.7) and 65 m (RL 122.5).
Residential Mix	<ul style="list-style-type: none"> • Building A1: 269 apartments, comprising: <ul style="list-style-type: none"> ○ 7 x studios ○ 111 x 1 bedroom ○ 141 x 2 bedroom ○ 10 x 3 bedroom • Building C1: 471 apartments (including four terrace dwellings and 259 social housing apartments of which 43 would be occupied by seniors or people with a disability) comprising: <ul style="list-style-type: none"> ○ 56 x studios ○ 179 x 1 bedroom ○ 218 x 2 bedroom ○ 14 x 3 bedroom ○ 4 x 4 bedrooms (terrace dwellings).
Gross Floor Area (GFA)	<p>Total GFA of 55,325 m², comprising:</p> <ul style="list-style-type: none"> ○ Building A1: 21,580 m² (Floor Space Ratio 6.9:1): <ul style="list-style-type: none"> ▪ 20,933 m² residential ▪ 647 m² childcare centre. ○ Building C1: 33,596 m² (Floor Space Ratio 6:1): <ul style="list-style-type: none"> ▪ 33,352 m² residential ▪ 244 m² retail/community.
Communal open space	<ul style="list-style-type: none"> • Building A1: None • Building C1: 1,716 m² comprising: <ul style="list-style-type: none"> ○ 864 m² at ground level accessible only to residents ○ 852 m² ground level publicly accessible neighbourhood garden fronting Main Street.
Landscaping and public domain	<ul style="list-style-type: none"> • Landscaping, including the planting of 476 new trees comprising: <ul style="list-style-type: none"> ○ 47 trees within the Building A1 site ○ 48 trees within the Building C1 site ○ 381 trees adjacent to new streets. • Public domain works, including: <ul style="list-style-type: none"> ○ new streets and footpaths ○ paved and landscaped Town plaza to south-eastern side of Building A1 ○ landscaped Neighbourhood Garden on north-eastern side of Building C1 ○ works to the car park at 2-4 Lyonpark Road in association with the proposed new road/intersection.
Basement car parking	<ul style="list-style-type: none"> • Building A1: 233 car parking spaces, comprising: <ul style="list-style-type: none"> ○ 208 residential spaces (plus 4 motorcycle spaces) ○ 13 visitor spaces ○ 12 childcare spaces. • Building C1: 346 car parking spaces, comprising: <ul style="list-style-type: none"> ○ 328 residential spaces (plus 10 motorcycle spaces) ○ 15 visitor spaces ○ 3 staff spaces.

Bicycle parking	<ul style="list-style-type: none"> • Building A1: 269 bicycle parking spaces • Building C1: 471 bicycle parking spaces.
Childcare centre (Building A1)	<ul style="list-style-type: none"> • 75 places • 12 car parking spaces within the basement and 3 on-street spaces • Detailed design, fit-out and operation subject to future development application to Council.
Amalgamation and subdivision	<ul style="list-style-type: none"> • Amalgamation of existing 17 allotments across the Estate • Subdivision of the Estate to correspond with the Concept Plan pattern of roads and buildings • Stratum subdivision of proposed Lots 11 and 12 (Buildings A1 and C1) into Stratum Title Lots.
Employment and Capital Investment Value (CIV)	<ul style="list-style-type: none"> • CIV of \$303,169,200 • 342 construction jobs.



Figure 17 | Photomontage of Building C1 viewed from Main Street looking south (Source: Applicant's Stage 1 EIS)



Figure 18 | Photomontage of Building A1 viewed from Herring Road looking south (Source: Applicant's Stage 1 EIS)



3. Strategic Context

3.1 Greater Sydney Region Plan and North District Plan

The Greater Sydney Region Plan – A Metropolis of Three Cities (the Region Plan) sets out the NSW Government's 40-year vision and establishes a 20-year plan to manage growth and change for Greater Sydney. The Region Plan seeks to update directions and actions in A Plan for Growing Sydney and Towards our Greater Sydney 2056.

The proposed concept proposal and Stage 1 applications are consistent with the Region Plan, as they would increase the supply of social and affordable housing. They would also support productivity through the growth in jobs and housing within the Harbour City and support integrating land use and transport, contributing to a walkable '30-minute city'.

The Region Plan also sets the planning framework for the five districts and District Plans which make up the region. The District Plans inform local council and planning and influence the decisions of State agencies. The aim of the District Plans is to connect local planning with the longer-term metropolitan planning for Greater Sydney.

The proposed development is located within the North District Plan. The proposal is consistent with the objectives of the North District Plan, as it would:

- provide services and social infrastructure to meet people's changing needs
- foster healthy, creative, culturally rich and socially connected communities
- provide increased housing supply, choice and affordability, with access to jobs, services and public transport
- deliver integrated land use and transport planning and a 30-minute city
- deliver high quality open space.

The North District Plan also specifically identifies the Ivanhoe Estate Communities Plus Program as being a collaborative process in the North District, to be led by LAHC and will bring together State agencies to lead housing initiatives and provide an integrated community, including social housing. The proposed applications are consistent with the objectives of this collaborative process.

3.2 Future Transport Strategy 2056

The Future Transport Strategy 2056 is an update to the NSW Long Term Transport Master Plan 2012 and outlines a planned and coordinated set of actions to address challenges faced by the NSW transport system to support the State's economic and social performance over the next 40 years.

The proposed development is consistent with the six key outcomes of the Future Transport Strategy 2056 as it would encourage active travel as the site is located within walking distance to public transport services and improved connections to cycling and pedestrian networks and would contribute towards a '30-minute city'.

3.3 Future Directions for Social Housing in NSW and Communities Plus Program

Future Directions for Social Housing in NSW (Future Directions) sets out the NSW Government's vision for social housing over the next 10 years. Future Directions is underpinned by the three strategic priorities of:

- more social housing
- more opportunities, support and incentives to avoid and/or leave social housing
- a better social housing experience.

Communities Plus is a \$22 billion NSW Government program which will facilitate non-government and private sector partnerships to redevelop LAHC sites throughout Sydney and regional NSW. The program seeks to deliver social and affordable housing renewal through the delivery of new integrated communities where social housing

blends with private and affordable housing, improved community facilities and open space, and good access to transport and employment. On completion of a development, new social housing properties are handed over to LAHC as payment for the land, making the program entirely self-funding. One of the key goals of the program is to ensure large developments target a 70:30 ratio of private to social housing to enable more integrated communities.

The Communities Plus Program is expected to deliver up to 23,500 new and replacement social and affordable housings, combined with approximately 40,000 private dwellings, over the next 10 to 12 years. The proposed redevelopment of the Ivanhoe estate would be the first major project to be delivered under the program.

The Ivanhoe Estate currently contains 259 social housing dwellings. The proposed redevelopment would provide approximately 3,300 dwellings, including approximately 950 social dwellings and 128 affordable housing dwellings.

The proposed redevelopment would therefore provide a significant increase in the quantity of social and affordable housing on the site, commensurate with the aims of the Communities Plus Program. It would also contribute to meeting overall housing need and aligns with the objectives of the Region Plan and North District Plan in relation to increasing housing supply, choice and affordable housing in a highly accessible location.

In August 2017, LAHC awarded a tender to the Aspire Consortium, comprising Frasers Property Australia, Citta Property Group and Mission Australia Housing, to undertake the proposed redevelopment. The project is self-funding and would deliver an increase in social housing at no net cost to the State budget.

3.4 School Assets Strategic Plan

The School Assets Strategic Plan sets the direction and framework for the future of school infrastructure in NSW. The proposed concept proposal includes provision of a 430-place primary school. The proposed school is consistent with the key actions of the School Assets Strategic Plan as it would cater for growing numbers of students in NSW, would be sustainable, and would provide sporting facilities for use by the school and the community. A future detailed development application for the school will demonstrate consistency with the School Assets Strategic Plan.



4. Statutory Context

4.1 State Significant Development

The concept and Stage 1 proposals are SSD under section 4.36 (development declared SSD) of the *Environmental Planning and Assessment Act* (EP&A Act) as they comprise development of an identified LAHC site (Ivanhoe Estate), by or on behalf of LAHC, and each have a CIV in excess of \$30 million under clause 10 of Schedule 2 of State Environmental Planning Policy (State and Regional Development) 2011.

Consequently, the Minister for Planning and Public Spaces is the consent authority for both applications. As the applications have been lodged by a public authority and more than 50 public objections have been received for the concept proposal, the application is unable to be determined under delegation. The application can therefore be determined by the Minister.

Although the Stage 1 application received less than 50 objections, as the application is being assessed concurrently with the concept proposal, it is also being referred to the Minister for determination.

4.2 Permissibility

The concept and Stage 1 sites are identified as being within the B4 Mixed Use and RE1 Public Recreation zones by the RLEP 2014 (**Figure 19**). Road works are also proposed within the B7 Business Park zone (2-4 Lyonpark Road).

Under the provisions of RLEP 2014, the proposed mixed-use concept proposal and Stage 1 Works are all permissible with consent within the relevant zones.

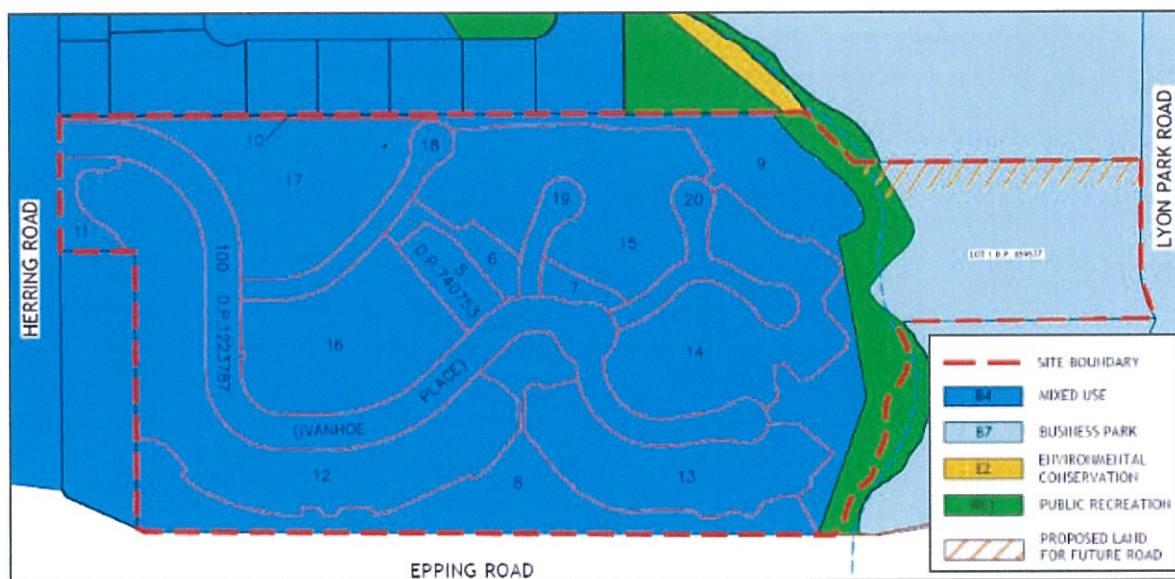


Figure 19 | Subject site and zoning (Source: Applicant's EIS)

4.3 Secretary's Environmental Assessment Requirements

On 25 September 2017, the Department notified the Applicant of the Secretary's Environmental Assessment Requirements (SEARs) for the concept SSD application. The Department is satisfied the EIS adequately addressed compliance with the SEARs to enable the assessment and determination of the application.

On 12 December 2017, the Department notified the Applicant of the SEARs for the Stage 1 SSD application. The Department is satisfied the EIS adequately addressed compliance with the SEARs to enable the assessment and determination of the application.

4.4 Mandatory Matters for Consideration

Section 4.15 of the EP&A Act outlines the matters that a consent authority must take into consideration when determining development applications. These matters could be summarised as:

- the provisions of environmental planning instruments (including draft instruments), development controls plans, planning agreements, and the *Environmental Planning and Assessment Regulation 2000*
- the environmental, social and economic impacts of the development
- the suitability of the site
- any submissions, and
- the public interest, including the objects in the EP&A Act and the encouragement of ecologically sustainable development (ESD).

The Department has considered all of these matters in its assessment of the applications, as well as the Applicant's consideration of environmental planning instruments in its EIS for each application, as summarised in **Section 7** of this report. The Department has also given consideration to the relevant provisions of the EP&A Act, including environmental planning instruments, in **Appendix E**.

4.5 Future Approvals Framework

Future detailed stages of development will be subject to separate planning approvals. Under section 4.22 of the EP&A Act, development subsequent to a concept development application must be subject to a subsequent development application. Future applications will be required to demonstrate consistency with the approved concept development application in accordance with Part 4 of the EP&A Act. The current Stage 1 application has been assessed and is considered consistent with the proposed concept development application (**Section 7**).

5. Engagement (Concept)

5.1 Department's Engagement (Concept)

In accordance with Schedule 1 of the EP&A Act, the Department publicly exhibited the concept development application from 12 April 2018 to 9 May 2018 (28 days). The application was exhibited on the Department's website, at the Department's information centre, at Service NSW Centres and at Council's offices.

The Department placed a public exhibition notice in the Northern District Times on 11 April 2018 and provided written notification to adjacent landholders and relevant State and local government agencies.

The Department has considered the comments raised in the Council, government agencies and public submissions during the assessment of the application (**Section 7** and **Appendix F**) and by recommended conditions in the consent at **Appendix I**.

5.2 Summary of EIS Submissions

The Department received a total of 46 submissions, comprising 10 submissions from government agencies, one submission from Council, two from special interest groups and 33 from the public (32 objections). A link to all submissions is provided at **Appendix B**.

The Applicant provided a response to all matters raised in submissions on the application (**Appendix B**).

5.3 Summary of Response to Submissions

Following exhibition of the application, the Department placed copies of all submissions received on its website and requested the Applicant provide a response to the issues raised in the submissions.

On 30 April 2019, the Applicant lodged a Response to Submissions (RTS) to issues raised during the exhibition of the EIS. The RTS responded to the issues raised and included:

- an amended concept envelope control plan and deep soil plan
- revised indicative design drawings and supplementary design report
- revised Design Guidelines and a proposed DES
- updated shadow diagrams and Visual Impact Assessment (VIA)
- a revised BAR, transport assessment and Arboricultural Impact Assessment (AIA)
- a revised clause 4.6 variation request for FSR and a new clause 4.6 variation request for building height.

The RTS was publicly exhibited the application from 23 May to 19 June 2019 (28 days). The application was exhibited on the Department's website, at NSW Service Centres and at Council's offices. The Department placed a public exhibition notice in the Northern District Times on 22 May 2019 and provided written notification to adjacent landholders and relevant State and local government agencies.

The Department received a total of 65 submissions, comprising six submissions from government agencies, one submission from Council, seven from special interest groups and 51 from the public (49 objections). A link to all submissions is provided at **Appendix B**.

The Applicant provided a response to all matters raised in RTS submissions on the application (**Appendix B**).

5.4 Amended Proposal (Revised Response to Submissions)

Following exhibition of the RTS, the Department placed copies of all submissions received on its website and requested the Applicant provide a response to the issues raised in the submissions.

On 4 November 2019, the Applicant lodged a Revised Response to Submissions (RRTS) to the issues raised during the exhibition of the RTS. The RRTS responded to the issues raised and included:

- an amended concept envelope control plan and deep soil plan
- revised indicative design drawings, supplementary design report and Design Guidelines
- updated shadow diagrams and VIA
- a revised BAR, transport assessment and AIA
- revised clause 4.6 variation requests for FSR and building height.

The Applicant has made a number of changes to the concept proposal as exhibited in the EIS. The key amendments included:

- deletion of Building C2 (maximum height of 65 m) and partial replacement with a community building (up to a height of 12 m)
- increased height to Building B3 (partial increase of 20 m from 45 m to 65 m), Building C3 (partial increase of 10 m from 45 m to 55 m), Building C4 (partial increase of 10 m/30 m from 45 m/65 m to 55 m/75 m), Building D2 (increase of 10 m from 65 m to 75 m) and Building D4 (partial increase of 5m/10 m from 65 m to 70 m /75 m)
- reduced height to Building A2 (decreased 30 m from 75 m to 45 m), Building B1.1 (partial decrease of 30 m from 75 m to 45 m) and Building C3 (partial decrease of 10 m from 65 m to 55 m)
- total gross floor area (GFA) reduced by 15,500 m² from 283,500 m² to 268,000 m²
- number of residential apartments reduced from approximately 3,700 to 3,300
- retention of 222 additional trees (total trees retained increased from 231 to 453) and area of STIF impacted reduced from 0.45 hectares to 0.02 hectares (with a further 0.03 hectares to be removed as part of the Part 5 demolition approval)
- revised massing of Buildings A2 and A3, including increased setbacks to 137-143 Herring Road and Epping Road
- minimum setbacks to Epping Road increased from 10 m to between 17.8 m and 43.6 m
- minimum residential tower setbacks to properties in Peach Tree Road increased from 10 m to 12 m
- minimum setbacks to Shrimptons Creek increased to 25 m, including increased buffer zone/revised interface between Buildings B3, C4 and D4 to Shrimptons Creek
- revised minimum building setbacks between future buildings within the estate and increased deep soil planting area
- deletion of new left-in access road from Epping Road
- expansion of the Village Green community open space
- revised retail/mixed-use centre, predominantly located within Building C3, adjacent to the Village Green
- reduction in size of proposed school and change from high school to primary school
- revised car parking rates and confirmation of timing of future road infrastructure works to support the development and future road widths
- revised Ivanhoe Estate Design Guidelines (the Design Guidelines) and provision of a Design Excellence Strategy (DES) for future stages.

Figures 20 and 21 illustrate the key amendments to the concept proposal. The revised maximum building heights of Buildings B3, C3, C4, D2 and D4 exceed the respective maximum building height controls for the site under clause 4.3 of Ryde Local Environment Plan 2014 (RLEP 2014). The RRTS therefore included a clause 4.6 request to vary the maximum height control in relation to these buildings (**Appendix C**).

Table 4 identifies the key changes between the original EIS proposal and the current revised proposal.



Figure 20 | Photomontage of original concept plan form of development looking south-west (Base source: Applicant's Concept EIS)

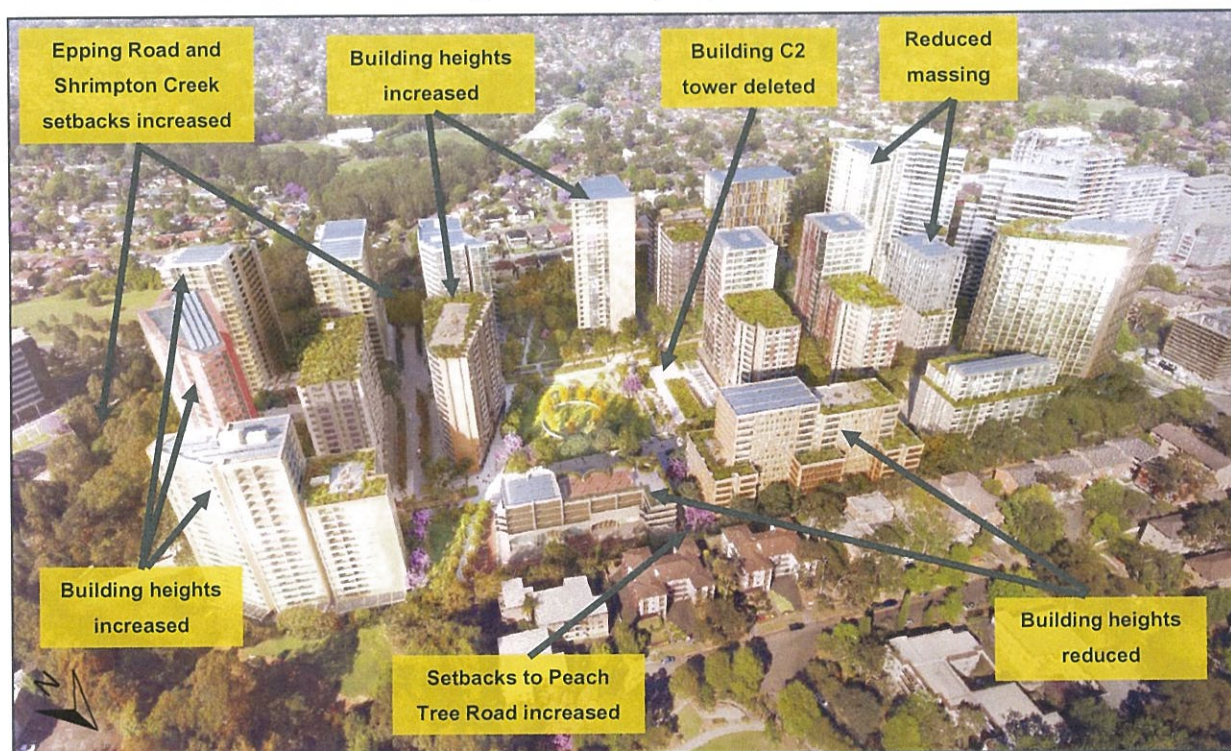


Figure 21 | Photomontage of revised concept plan form of development looking south-west (Base source: Applicant's RRTS)

Table 4 | Comparison between original concept proposal and current revised concept proposal

	Original Proposal	Current Proposal
GFA	283,500 m ²	268,000 m ²
FSR	3.6:1	3.4:1
Number of apartments	3,700	3,300

Trees retained	231	453
Building heights	Complied	Five buildings exceed the height control

5.5 Summary of RRTS submissions

The RRTS was notified to adjacent landholders and previous submitters and a public exhibition notice was placed in the Northern District Times with an exhibition period from 21 November 2019 to 11 December 2019 (21 days). The RRTS was also exhibited on the Department's website, at NSW Service Centres and at Council's offices. Written notification was also provided to relevant State and local government agencies.

The Department received a total of 23 submissions, comprising three submissions from government agencies, a submission from Council, two from special interest groups and 17 from the public (14 objections). A link to all submissions is provided at **Appendix B**.

The Applicant provided a response to all matters raised in RRTS submissions on the application (**Appendix B**).

On 19 March 2020, the Applicant submitted further information in response to submissions received (**Appendix B**). The additional information included an updated AIA and refined envelope control plan.

5.6 Key Issues – Government Agencies

All key issues raised by government agencies have been addressed through the provision of further additional information and/or through the recommended conditions of consent. Details of the issues raised by each agency are provided below and a link to all submissions is provided at **Appendix B**.

Transport for NSW (TfNSW) recommended:

- conditions are imposed requiring the Applicant pay full contributions for the signalisation of the Herring Road/Ivanhoe Place intersection
- the inclusion of cul-de-sacs in the Stage 1 road network to facilitate publicly accessible turnaround
- the construction of Main Street includes 3.5 m wide travel lanes for buses
- a detailed Green Travel Plan be provided for subsequent stages
- future development applications should include traffic and transport reports for each respective stage
- all future residential dwellings must be provided with one bicycle space each.

TfNSW (RMS) recommended:

- a suitable funding mechanism should be entered into by the Applicant and TfNSW (RMS) for contribution towards required road upgrades to support the development
- the provision and retention of a U-turn facility following the signalisation of the Herring Road/Ivanhoe Place intersection and associated removal of the existing roundabout
- if the Herring Road/Ivanhoe Place intersection is signalised prior to the completion of the Stage 1 works, the Applicant must provide a U-turn facility within the site
- the Applicant is to enter into a Transport Infrastructure Contribution Deed with TfNSW to ensure the full costs associated with the upgrade/signalisation of the Herring Road/Ivanhoe Place intersection and a partial contribution for the upgrade of the Epping Road/Herring Road intersection is paid by the Applicant.

Department of Industry provided comments regarding works on waterfront land and the tenure of Shrimptons Creek.

Heritage Division of the Department of Premier and Cabinet (Heritage Division) provided no comments or recommendations.

Environment, Energy and Science Group of the Department of Planning, Industry and Environment (EESG) initially recommended:

- the retention of the existing threatened ecological community and adjoining vegetation along Epping Road
- the connectivity of vegetation along Epping Road is retained by removing the proposed new access road from Epping Road
- deficiencies identified in the Biodiversity Assessment Report (BAR) are addressed
- an appropriate buffer zone is provided between the proposed development and Shrimptons Creek
- a Vegetation Management Plan is prepared
- an Aboriginal Archaeological Cultural and Heritage Assessment (ACHAR) should be provided.

Following the submission information as part of the RTS and RRTS, including a revised BAR, AIA and concept envelope control plan, EESG raised no further concerns and recommended a Vegetation Management Plan form part of the Stage 1 approval.

Environment Protection Authority (EPA) provided comments and recommended conditions regarding site contamination, noise and vibration, construction hours, and waste control and management.

Department of Education noted the proposed number of dwellings would result in an increase in Government primary and secondary school enrolment demand and suggested a development contribution for education infrastructure be provided. Following the provision of additional information from the Applicant, no further submissions were received from the Department of Education.

Sydney Water provided comments in relation to existing assets, water supply and wastewater capacity. These included a request for detailed planning studies in relation to water and wastewater servicing.

Fire and Rescue NSW provided comments/conditions in relation to ensuring compliant emergency vehicle access throughout the proposed development.

Ausgrid advised the Applicant will need to identify a methodology for removal of existing Ausgrid assets.

Northern Sydney Local Health District recommended measures to increase the activity of the future estate population, including dedicated walking routes around the site, adequate bicycle parking and development of a School Travel Plan to encourage use of active transport by staff and students. It was also recommended to increase opportunities for incidental neighbourhood interaction and consider placing social housing apartments on lower floors and their access close to amenities.

5.7 Key Issues - Council

Council provided three submissions regarding the concept proposal in response to each exhibition. The first two submissions (dated May 2018 and June 2019) included the following key issues:

- exceedance of the floor space ratio (FSR) control and overdevelopment of the site
- loss of trees, including STIF, and associated biodiversity impacts
- inadequate building separation and insufficient street setbacks
- insufficient buffer zone provided to Shrimptons Creek
- inadequate solar access to public and communal open space
- insufficient active recreation open space
- non-compliant road and bridge width.

Council's submission of December 2019, in response to the RRTS acknowledged the increased setbacks provided along Epping Road but noted not all previous key concerns had been adequately addressed. Council's remaining key issues (considered in **Section 7**) included:

- issues regarding tree loss are still unclear
- capacity of the Herring Road right turn bay into Main Street

- inadequate building setbacks and insufficient buffer zone to Shrimptons Creek
- insufficient open space given the scale of the development
- the bridge should be widened to 14 m.

On 17 January 2020, Council advised the Department it is not agreeable to any condition requiring Council to enter into a Voluntary Planning Agreement (VPA) or for any infrastructure dedications via conditions of consent. Instead, Council seeks payment of full Section 7.11 development contributions for the development. The issue of contributions is considered in **Section 7.8**.

5.8 Key Issues - Community

The Department received a total of 95 public submissions across the three exhibition periods for the proposal. This comprised:

- A total of 33 public submissions were received in response to the EIS comprising, 32 objections and 1 provided comments. People located within 1 km of the site submitted 25 of the submissions.
- A total of 51 public submissions were received in response to the exhibition of the RTS, 49 objections and two provided comments. This included a petition containing 36 signatures of local residents located on the southern side of Epping Road (counted as one submission). People located within 1 km from the site submitted six of the submissions.
- A total of 17 public submissions were received in response to the exhibition of the RRTS, 14 objections and two provided comments. People located within 1 km from the site submitted seven of the submissions.

The key issues raised in public submissions (objections) received throughout the three exhibitions are summarised in **Table 5**.

Table 5 | Summary of key issues raised in all public submissions (objections)

Issue	% of objections
Loss of trees/removal of critically endangered ecological community	57%
Biodiversity impacts	37%
Excessive size/height/scale of development	30%
Insufficient setbacks	26%
Floor space ratio control exceeded	13%
Increased traffic	11%

5.9 Key Issues – Special Interest Groups

The Department received a total of 11 submissions from special interest groups across the three exhibition periods. The key issues raised in the submissions are summarised below:

Shelter NSW:

- It is critical the redevelopment and densification of the Ivanhoe Estate does not produce adverse consequences for its future social and affordable housing residents.
- Insufficient information has been provided regarding social housing outcomes and there is no clear indication how the estate will deliver 'social mix'.
- Although 128 affordable housing dwellings are proposed, more could be provided which would provide a better bridge between the social and market housing dwellings.

The International Environmental Weed Foundation:

- The bushland areas along Epping Road and Shrimptons Creek should be protected and conserved.

- All trees and understory vegetation should be retained and the Epping Road slip road should be deleted to avoid fragmentation of the threatened ecological community.
- All habitat used by small birds should be protected and the native habitat along the creek line augmented.
- Utilisation of the Biodiversity Offset program will not protect or enhance the bushland and habitat values along Shrimptons Creek.
- Overshadowing of the remnant vegetation should be reduced.
- Plant corridors, preferably native, should be provided through the site.
- It is important to undertake sympathetic works along the creek line.

Ryde Gladesville Climate Change Action Group:

- Loss of excessive number of trees, including STIF, and loss of habitat and biodiversity.
- Increased setbacks and buffers are required to protect the STIF.
- Biodiversity offsets must not be an option.
- It will be decades before the replacement trees create a viable habitat.

Total Environment Centre:

- The spread and number of trees to be removed is too high, especially along the site boundaries and the Shrimptons Creek ecological corridor. All mature trees within 15 m of the boundary need to be protected to allow biodiversity corridors around the site.
- Loss of STIF bushland.
- All habitat used by small birds should be protected and the native habitat along the creek line be augmented.
- Utilisation of the Biodiversity Offset program will not protect or enhance the bushland and habitat values along Shrimptons Creek.

Saving Sydney's Trees:

- The NSW 2020 Vision directives are not met by this proposal, nor the Greening Sydney initiative or targets.
- Loss of more tree canopy, including a significant critically endangered ecological community.
- Offset requirements are inadequate to compensate for tree loss and reduced canopy.

Inner West Environment Centre:

- More than 850 trees will be removed, including STIF.
- Loss of a wildlife corridor used by endangered species.
- Sydney requires trees to provide shade and reduce soaring temperatures.

Epping Civic Trust:

- The development fails to avoid direct impacts on the STIF, including from the proposed Epping Road slip road.
- The application does not assess impacts on the remaining vegetation for overshadowing.
- The BAR contains no detailed habitat assessment.
- A buffer to Shrimptons Creek is required. No pathway should be included in the 20 m riparian corridor.
- The RE2 zone should be extended into the site to protect the riparian corridor.

Byles Creek Valley Union Inc:

- The proposal does not consider the environmental sensitivity of the site and does not avoid impacts to the STIF.
- The proposal does not retain natural features and does not protect the riparian corridor.
- The RE2 zoning should be extended into the site to protect the riparian corridor.



6. Engagement (Stage 1)

6.1 Department's Engagement (Stage 1)

In accordance with Schedule 1 of the EP&A Act, the Department publicly exhibited the Stage 1 application from 23 May to 19 June 2019 (28 days). The application was exhibited on the Department's website, at the Department's information centre, at Service NSW Centres and at Council's offices.

The Department placed a public exhibition notice in the Northern District Times on 22 May 2019 and provided written notification to adjacent landholders and relevant State and local government agencies.

The Department has considered the comments raised in the Council, government agencies and public submissions during the assessment of the application (**Section 7** and **Appendix F**) and by recommended conditions in the consent at **Appendix I**.

6.2 Summary of EIS Submissions

The Department received a total of 30 submissions, comprising six submissions from Government agencies, one submission from a special interest group and 23 submissions from the public (all objections). A link to all submissions is provided at **Appendix B**.

The Applicant provided a response to all matters raised in submissions on the application (**Appendix B**).

6.3 Summary of RTS Submissions

Following exhibition of the application, the Department placed copies of all submissions received on its website and requested the Applicant provide a response to the issues raised in the submissions.

On 7 November 2019, the Applicant lodged an RTS to the issues raised during the exhibition of the EIS. The RTS responded to the issues raised and included:

- revised architectural and subdivision plans
- updated design reports for each building
- updated technical reports, including trees, noise, wind, water and geotechnical.

A list of the key amendments made to the concept and Stage 1 proposal is provided in **Section 5.6**.

The RTS was made publicly available on the Department's website and referred to relevant government agencies and Council. Public submitters and special interest groups were also advised of the lodgement of the RTS and offered the opportunity to provide a further submission.

One public submission was received on behalf of the owners of 6-8 Lyonpark Road which included concerns about potential construction impacts on their tenant. An additional four submissions were received from Government agencies. A link to all submissions is provided at **Appendix B**.

The Applicant provided a response to all matters raised in RTS submissions on the application (**Appendix B**).

6.4 Further Information

In March 2020, the Applicant submitted further information, including the updated AIA, updated subdivision plan and refined architectural floorplans for Building A1.

6.5 Key Issues – Government agencies

All key issues raised by government agencies have been addressed through the provision of further additional information or through the recommended conditions of consent. Details of the issues raised by each agency are provided below and a link to all submissions is provided at **Appendix B**.

TfNSW (RMS) recommended permanent U-turn facilities for local access for developments on the western side of Herring Road is to be provided within a suitable location within the estate due to removal of the Herring Road/Ivanhoe Place roundabout.

EESG recommended:

- all measures recommended in the revised BAR be included in a Biodiversity Management Plan and Construction Environment Management Plan
- all removed hollows are replaced with artificial nest boxes at a ratio of 1:4
- a Vegetation Management Plan and Weed Management Plan be prepared.

EPA provided comments regarding site contamination, construction noise, vibration and dust impacts and construction erosion and sediment control management opportunities.

Lands, Water and DPI provided comments regarding works on waterfront land, groundwater investigations and requirement for a Vegetation Management Plan/Rehabilitation Management Plan for the riparian zones around Shrimptons Creek.

Heritage Division provided no comments or recommendations.

Sydney Water provided comments in relation to existing drinking water and wastewater servicing and wastewater capacity. The comments also noted Sydney Water is currently undertaking planning for new water infrastructure in this area.

6.6 Key Issues – Council

Although Council did not make a specific submission in relation to Stage 1, Council commented in their concept proposal submission that they consider the Stage 1 application to be premature due to the various concerns raised regarding the concept application.

6.7 Key Issues – Community

A total of 23 public submissions were received, 22 of which were objections. Six of the submissions were received from people located within 1 km of the site and seven were received from people located more than 5 km from the site. A further submission from an adjacent landowner was received in response to the RTS which raised concerns primarily about potential construction impacts from the adjacent road. The key issues raised in the public submissions are summarised in **Table 6**.

Table 6 | Summary of key issues raised in public submissions (objections)

Issue	Percentage of objections
Loss of trees/removal of critically endangered ecological community	64%
Biodiversity impacts	46%
Excessive size/height/scale of development	46%
Increased traffic	28%
Fragmentation of ecological corridor from new Epping Road slip road	18%

Increased noise and pollution	14%
Insufficient setbacks	14%
Insufficient car parking	14%
Lack of sunlight within the estate	14%

6.8 Key Issues – Special Interest Groups

One submission was received from a special interest group (Total Environment Centre). The submission was identical to the submission made regarding the concept proposal (**Section 5.10**).



7. Assessment

7.1 Key Assessment Issues

The Department has considered the concept proposal and Stage 1 proposal, the issues raised in submissions and the Applicant's RTS, RRTS and further information in its assessment of the applications. The Department considers the key issues associated with the concept and Stage 1 proposals are:

- built form (concept and Stage 1)
- impacts on neighbouring developments
- future residential amenity
- public domain
- traffic/proposed road network and parking
- trees and ecological impacts
- public benefits.

Each of these issues are discussed in the following sections of this report. Other issues considered during the assessment of the applications are addressed in **Section 7.9**.

7.2 Built Form (Concept and Stage 1)

7.2.1 Introduction

The concept proposal seeks approval of an envelope control plan (**Figure 10**) that includes the overall potential buildable area within each of the proposed 15 development blocks and includes maximum building heights, minimum building setbacks to each site boundary and the minimum setback between buildings within the estate. The concept proposal does not include building layouts within the proposed buildable area, the design of any building, specific setbacks, or the specific GFA of any building within the proposed development blocks.

The Department considers the key built form issues for the concept proposal and the Stage 1 applications are building height, FSR, setbacks (to the site boundaries), open space/deep soil areas, visual impacts and design. These issues are considered below.

7.2.2 Building height

Concept

Under clause 4.3 of RLEP 2014, three maximum building heights apply to the site (**Figure 22**). These are:

- 75 m over the north-western portion adjacent to Herring Road and a small section of Epping Road
- 65 m over the south-western portion adjacent to Epping Road and part of Shrimptons Creek
- 45 m over the remainder of the site.

As proposed in the EIS, the future building envelopes complied with the maximum building height controls. However, the RTS and RRTS increased the height of five buildings (B4, C3, C4, D2 and D4) above the respective height controls. Conversely, Buildings A2 and C2 are proposed with maximum heights significantly below the respective height controls while all other building envelopes comply with the height controls. **Table 7** outlines the proposed building height envelope variations in relation to the height control limit. **Figure 23** illustrates the proposed building envelopes in relation to the height controls.

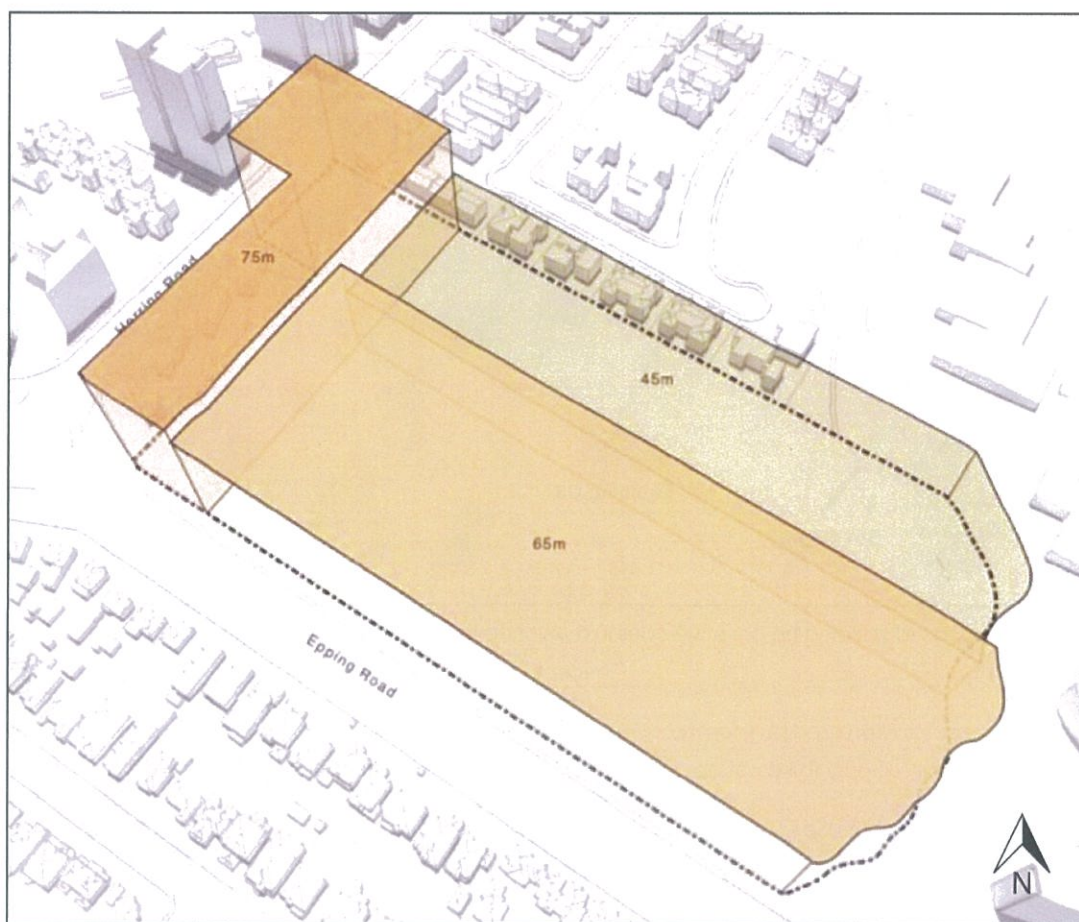


Figure 22 | Illustration of the RLEP 2014 building height controls over the site (Source: Applicant's Concept EIS)

Table 7 | Height of building variation

Location	Permissible building height	Proposed max. building height	Proposed variation	% non-compliance
Building B3	45 m	65 m	20 m	44%
Building C3	Part 45 m	55m	10 m	22%
	Part 65 m	55 m	None	-
Building C4	Part 45 m	55m/75 m	10 m/30 m	22%/67%
	Part 65 m	55m/75 m	10 m	15%
Building D2	65 m	75 m	10 m	15%
Building D4	65 m	65 m/70 m/75 m	10 m	15%

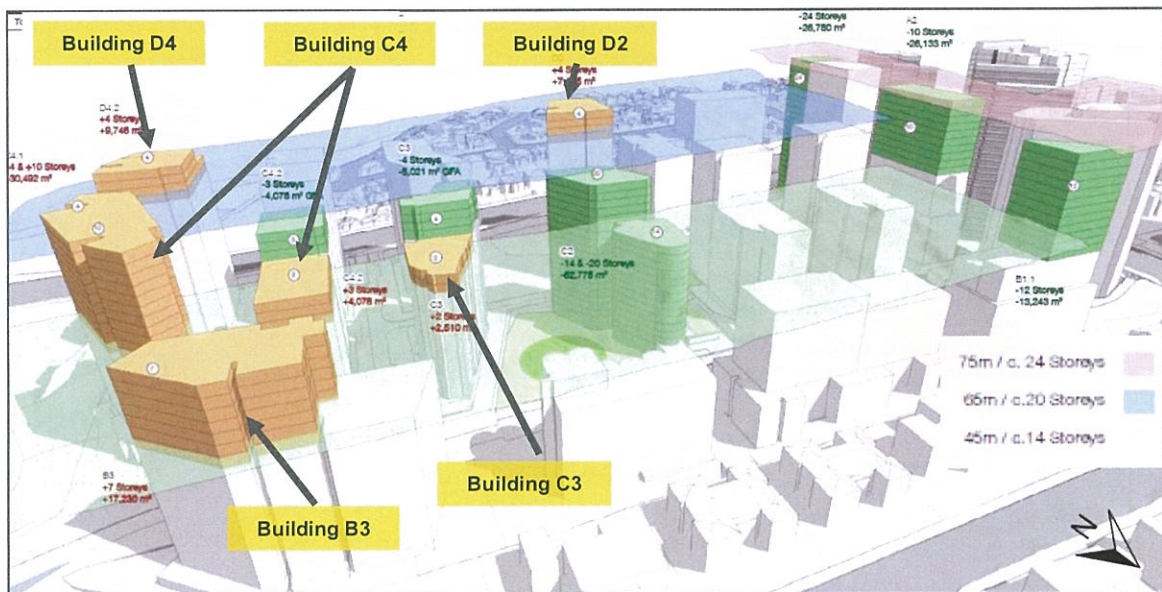


Figure 23 | Proposed building height envelopes in relation to the height control limit (Base source: Applicant's Concept RTS)

Council's submissions expressed built form concerns, primarily about setbacks, building separation and the length of buildings. However, Council did not object to the proposed variations to the RLEP 2014 height controls.

With regard to public submissions, six (19%) raised concerns with the proposed scale and height of development during the EIS exhibition of the concept proposal. During the RTS exhibition, seven submissions (50%) raised concerns.

The Applicant has submitted a clause 4.6 variation request to justify the proposed variation to the height of building development standard (**Appendix B**). The Applicant contended that the proposed variations are justified because:

- noting the original exhibited concept proposal fully complied with the height controls, the proposed variations are a direct response to submissions made during exhibition to minimise the impact of the development on the amenity of surrounding properties and to enhance amenity within the site
- the total additional volume created by the additional building height is 64,573 m³. However, the volume removed by not extending Buildings A2, A3, B1.1, C2 and C3 to their full permissible height envelope is 131,441 m³, a net volume reduction of 66,868 m³
- at the interface of 137-143 Herring Road, the building height of Building A2 extends to only 45 m. Given this building is subject to the maximum 75 m height control, it is appropriate that the height be relocated to a less sensitive location within the site to protect the amenity of future residents within the proposed buildings and at 137-143 Herring Road
- repositioning of height towards Shrimptons Creek where the additional height will not result in undue environmental impacts to nearby residential properties represents a better environmental planning outcome
- the building footprint of the building envelopes and indicative design scheme have been substantially reduced in order to promote enhanced open space, tree retention, building separation and solar access
- given the topography of the land which falls towards Shrimptons Creek, Buildings D2 and D4 will be materially lower than Buildings A1 and A3, and the approved towers at 137-143 Herring Road, which are located at the top of the slope and comply with the height controls.

The Department has considered the clause 4.6 variation request in detail below and in **Appendix C**.

The Department notes that rather than comply with the building height limit at all locations, the revised concept proposal has redistributed the GFA from some blocks to allow lower buildings in some locations, and the addition

of GFA to other blocks resulting in some breaches of the height control. The Department is however satisfied that the proposed development is consistent with the objectives of the height of buildings standard of the RLEP 2014 because:

- the proposed variations are not significant within the context of the site and are consistent with the built form outcome envisaged for the site as part of the Herring Road Priority Precinct
- the proposed maximum building heights have been adjusted above and below the height limits across the site to optimise solar access to the public domain and other buildings, resulting in a more desirable planning outcome compared to a fully complying development
- the height exceedances will not cause additional shadowing to be cast over Shrimptons Creek or any nearby residential properties when compared to a compliant development (**Section 7.3.1**)
- the elements of Buildings D2 and D4 that exceed the height control by 10 m would not result in any significant visual impacts compared to a compliant scheme as the buildings would be setback between 12 m and 37 m from Epping Road and would be screened by the retained vegetation corridor running along Epping Road
- the elements of Buildings B3, C4 and D4 that exceed the height control by between 10 m and 30 m would not result in any significant visual impacts compared to a compliant scheme due to the proposed setbacks and screening from vegetation adjacent to Shrimptons Creek
- Building C3 and part of Building C4 that exceed the height control by 10 m are located away from the estate boundary, with taller buildings notably located between these buildings and Epping Road and Shrimptons Creek
- the proposed concept building heights appropriately emphasise the Herring Road and Epping Road frontages whilst incorporating appropriate setbacks (**Section 7.2.4**).

The Department considers the proposed redistribution of height combined with the 15,500 m² (5.5%) reduction in GFA compared to the exhibited EIS proposal, provides an improved urban design outcome as it allows for increased building heights where impacts are limited, and lower heights where benefits such as solar access to public open space are maximised. In addition, the variation of the building height control is partly offset by a lower built form in other locations within the site, which would otherwise be able to be built to 45 m, 65 m and 75 m in line with the RLEP 2014 maximum height limits.

The Department further notes the proposed redistribution in height results in an overall reduction in building volume compared to a complying development with all buildings extended to their maximum permissible height envelope. The concept proposal has also demonstrated it is consistent with the built form objectives for the site and would not have any significant additional impacts in terms of overshadowing, views or visual privacy impacts to neighbouring properties.

The Department is satisfied the proposed concept proposal is consistent with the objectives of the development standard and the B4 zone and enables appropriate building envelopes to facilitate the future high-density redevelopment of the estate, consistent with the objectives of the Herring Road Priority Precinct.

The Department's assessment therefore concludes it is unnecessary for the concept proposal to fully comply with the maximum height controls. For the reasons outlined above, the Department supports the proposed building height variations.

Stage 1

Both Building A1 and Building C2 comply with the RLEP 2014 height controls. Notably, the transition between the 65 m and the 45 m height control extends through the centre of Building C2 which has been reflected in the design of the building which steps down from the south-west to the north-east (**Figure 17**).

The Department considers the proposed building heights to be consistent with the desired character of the area. In particular, Building A1 would be consistent with the height and scale of other recent developments on Herring Road, including the approved development at 137-143 Herring Road.

7.2.3 Floor space ratio (FSR)

Concept

For the purposes of FSR, the site area is calculated as 78,680 m² which is the B4 portion of the site (**Figure 19**). Under clause 4.4 of the RLEP 2014, an FSR of 2.9:1 applies to the B4 zone (**Figure 24**). This equates to a maximum GFA of 228,172 m².

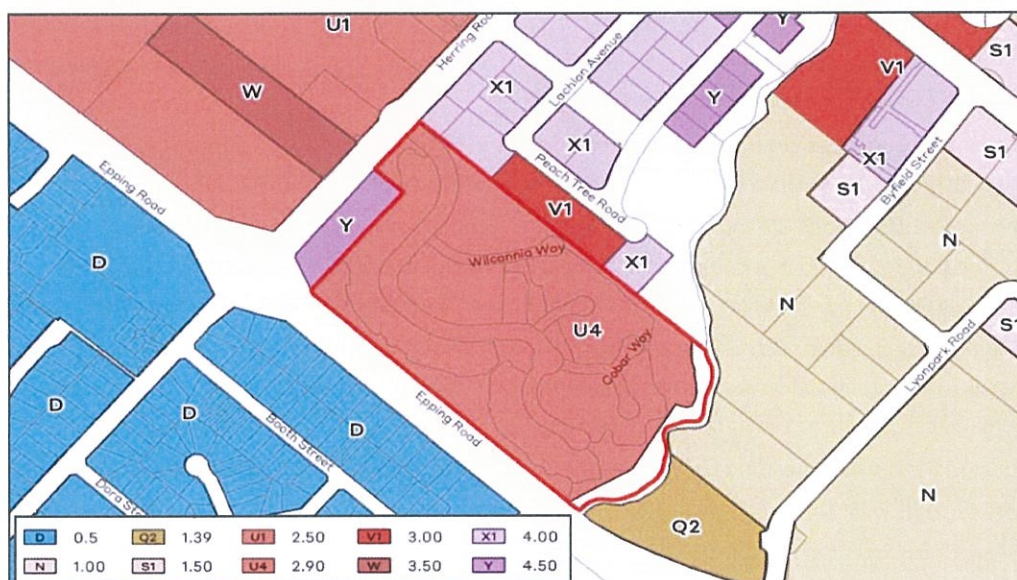


Figure 24 | Floor space ratio extracted from the RLEP 2014. Site shown outlined in red (Source: Applicant's EIS)

The concept proposal however benefits from an FSR bonus under the Affordable Rental Housing SEPP (ARH SEPP) as the proposal includes 72,999 m² of affordable housing. Based on the formula contained in the ARH SEPP, this generates an FSR bonus of 0.38:1, equating to an additional GFA of 29,898 m². The applicable FSR for the site is therefore 3.28:1 (GFA of 258,070 m²)

The Applicant seeks approval for a total of 268,000 m² which equates to an FSR of 3.4:1 or a 3.3% exceedance of the control. A breakdown of the proposed GFA is provided in **Table 5** in **Section 2.4**.

Council's RRTS submission noted the FSR is over the maximum but raised no objection. Four public submissions raised concern about the proposed exceedance of the FSR control.

The Applicant has submitted a clause 4.6 variation request to justify the proposed additional GFA (**Appendix B**). The Applicant contended the proposed variations are justified because:

- the concept proposal contains 5,458 m² of community benefit land uses, including a new school, childcare centres, Mission Australia offices and community facilities. These uses generate no revenue and are proposed to enrich the site and the broader Macquarie Park population
- the concept proposal includes seniors housing and the Housing for Seniors or People with a Disability SEPP (Seniors SEPP) allows seniors housing proposals to exceed the applicable FSR of a site by 0.5:1 (plus a further 1,200 m² of GFA can be excluded from the calculation of GFA for support services). Although the bonus does not technically apply as the concept proposal includes other uses in addition to seniors housing, 9,785 m² of seniors housing is nevertheless proposed within Buildings B1.1 and B1.2 (50% equals 4,892 m²)
- the concept proposal includes rehabilitation of the Shrimptons Creek riparian corridor, a 4,150 m² area of RE1 Public recreation zoned land (adjacent to Shrimptons Creek) and a 99 m² area of B7 zoned land (**Figure 19**). Although RLEP 2014 applies no FSR to the RE1 land (an FSR of 1:1 applies to the B7 land), the RE1 land would be rehabilitated and embellished and a 20 m wide riparian corridor established, new recreation facilities would be provided and the Epping Road underpass would be improved. Given the proposed works to enhance the creek are within the site boundary and it is intended the land be dedicated to Council, the Applicant contended it is reasonable that an FSR of 1:1 be drawn from it

- were the concept proposal to fully comply with the FSR control, it would reduce the diverse range of community benefit land uses which enrich the site and contribute to a wide range of social outcomes or if still provided, would alternatively reduce the proposed number of social and affordable housing dwellings.

The Department has considered the clause 4.6 variation request in detail below and in **Appendix D**.

The Department is satisfied that the proposed development is consistent with the objectives of the FSR standard of the RLEP 2014 because:

- the proposed master plan building envelopes and Design Guidelines would ensure the development of the Ivanhoe Estate would reflect the desired and future built form character envisaged as part of the Herring Road Priority Precinct
- the proposed FSR is less than the maximum FSR controls that apply to adjoining sites, which include 4:1 and 4.5:1 and therefore would not produce a built form that is out of character with surrounding development
- the proposed FSR variation would still allow appropriate levels of solar access to future dwellings to be achieved and would not result in greater overshadowing of nearby residential properties compared to a compliant development, and would have acceptable visual impacts
- the proposal would not result in any unacceptable traffic impacts (**Section 7.6**)
- the proposed mixed-use estate is appropriately located within the centre of the Macquarie Park corridor, close to key public transport infrastructure and employment and education opportunities.

The Department considers the appropriateness of the proposed FSR/GFA to be closely linked with how the concept proposal addresses a range of issues, including future built form, setbacks, open space/deep soil planting, biodiversity/tree removal, visual impact, overshadowing/solar access and traffic generation. All of these matters are considered in **Sections 7.2 to 7.9** and in the Department's consideration of the clause 4.6 variation in **Appendix D**. Overall, the Department considers the concept proposal is acceptable in relation to these key issues.

The Department also considers the numerical justification provided by the Applicant to be well founded, noting the concept proposal includes:

- 9,785 m² area of desirable seniors housing which would benefit from a 0.5:1 FSR bonus (plus 1,200 m² of GFA for on-site support services) if proposed as part of a standalone development application
- significant rehabilitation works to the 4,150 m² area of RE1 Public recreation zoned land adjacent to Shrimptons Creek which will be dedicated to Council
- 6,796 m² of community benefit land uses.

The Department is satisfied the proposed development is consistent with the objectives of the development standard and zone, and the proposed density provides a future built form that responds to the existing and desired future character of the area and would provide a high level of amenity for future residents without unreasonably compromising the amenity of neighbouring sites.

The Department is therefore of the view that it is unnecessary for the concept proposal to comply fully with the maximum FSR development standard. For these reasons, the Department supports the proposed FSR.

Stage 1

Building A1 has a proposed GFA of 21,729 m² (21,027 m² residential and 702 m² childcare) and Building C1 has a proposed GFA of 33,596 m² (33,352 m² residential and 244 m² community/retail). This is consistent with the concept GFA for each development block (**Table 4**). The total Stage 1 GFA of 54,379 m² represents 20.3% of the proposed concept proposal GFA of 268,000 m².

7.2.4 Setbacks

Concept

The concept proposal includes minimum building setbacks to each site boundary. These are considered below.

Peach Tree Road (north-east)

As originally exhibited, 21 public submissions were received objecting to the proposed concept proposal setbacks. Of these, 20 related to the north-eastern boundary and the proposed setback to existing and potential future apartment buildings in Peach Tree Road. Following exhibition of the RRTS, no submissions raised concern with the proposed setbacks to Peach Tree Road.

The Department notes properties in Peach Tree Road, which forms part of the Cottonwood Estate, are likely to undergo redevelopment in the future, consistent with the Herring Road Priority Precinct rezoning and associated uplifted height and FSR controls (**Section 2.6.3**). The location of the proposed setbacks referred to below are shown circled in **Figure 25**.

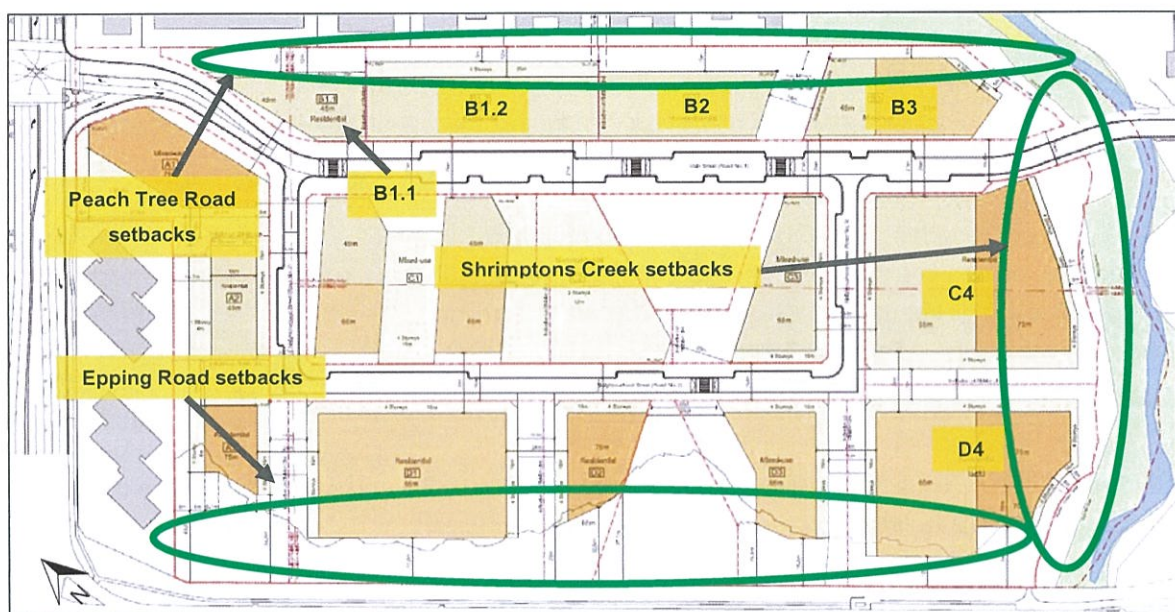


Figure 25 | Plan identifying proposed setback locations (Base source: Concept Envelope Control Plan)

The residential apartment building forming Building B1.1 would be setback between 10 m (up to five storeys) and 12 m (above five storeys). The Department considers this minimum setback is acceptable as it is consistent with minimum ADG building separation recommendations.

The Department notes Council recommended approval of the redevelopment of 9 Peach Tree Road with a setback of 10 m for levels 9 to 13 to Building B2, not the minimum 12 m recommended by the ADG.

The RACF forming Building B1.2 would be setback between 6 m (up to five storeys) and 12 m (above five storeys). The proposed primary school forming Building B2 would be setback a minimum of 10 m from the north-eastern boundary. The RACF and the school are not subject to the ADG recommendations.

The Applicant has confirmed the RACF would incorporate screening where windows are proposed within 7 m of the site boundary to mitigate any overlooking of neighbouring sites.

The Department considers the proposed setbacks for the Buildings B1.2 and B2 are acceptable as they are sufficient to provide deep soil planting and would provide appropriate visual separation between buildings. The Department further notes future detailed development applications would need to consider potential visual and acoustic privacy impacts and include design features, where necessary, to ensure reasonable privacy is maintained between facing buildings.

The residential apartment building forming Building B3 would be setback a minimum of 5 m from the north-eastern boundary which is adjacent to parkland between Peach Tree Road and Shrimptons Creek. Given this building would adjoin public open space and the visual impact is reasonable (**Section 7.2.6**), the Department considers the proposed setback acceptable.

Shrimptons Creek (south-east)

The proposed minimum setbacks of the proposed building envelopes to the edge of the 20 m wide Shrimptons Creek riparian corridor would be 5 m (up to four storeys) and 8 m (above four storeys) for Buildings B3, C4 and D4. The location of the proposed setbacks are shown circled in **Figure 25**.

This would provide a minimum 25 m setback between the buildings and Shrimptons Creek. Given the setback area directly abuts the riparian corridor, it allows for additional green space and deep soil planting adjacent to the creek, providing an enhanced buffer zone.

Although Council's DCP 2014 specifies a 5 m setback to all parks, Council requested a 10 m setback be provided between any future development and the Shrimptons Creek riparian corridor. The Applicant contended the proposed setbacks, which include setback distances up to 32 m, would provide a larger overall buffer area compared to a uniform 10 m setback (2,470 m² compared to 2,351 m²) and would allow more trees to be retained.

The proposed Design Guidelines also include requirements for all buildings fronting Shrimptons Creek to express a two to four storey scale at the lowest levels and to be articulated into multiple parts so that unbroken facades are no longer than 30 m. Apartments, balconies and courtyards are also required to be provided with a landscaped buffer to separately define public and private open space.

The Department considers the proposed setbacks to the Shrimptons Creek are acceptable, noting they exceed Council's 5 m control in numerous locations and would provide an appropriate buffer between the future built form and the riparian corridor.

The proposed setbacks would also minimise visual impacts of the concept proposal (**Section 7.2.6**) and overshadowing impacts to residential properties on the opposite side of Epping Road (**Section 7.3.1**). Issues related to tree retention and biodiversity are considered in **Section 7.7**.

Epping Road (south-west)

The proposed minimum setbacks to Epping Road range from 12 m to 44 m. These setbacks largely result from the need to retain as many trees, including STIF, as possible along the corridor between the proposed buildings and Epping Road. The location of the proposed setbacks are shown circled in **Figure 25**.

The Department considers the proposed setbacks to Epping Road are substantial and assist in minimising visual impacts (**Section 7.2.6**) and overshadowing impacts to residential properties on the opposite side of Epping Road (**Section 7.3.1**). Issues related to tree retention and biodiversity are considered in **Section 7.7**.

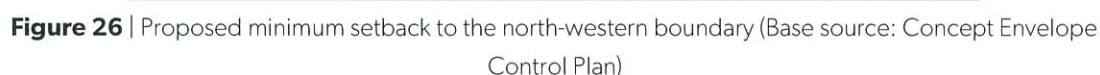
137-143 Herring Road (north-west)

The proposed minimum setbacks to the north-western boundary facing the two approved residential apartment buildings at 137-143 Herring Road, would be 14.7 m to Building A2 and 12 m to Building A3 (**Figure 26**). The proposed one storey elements would extend closer to the boundary, providing a minimum 6 m setback. This would enable the retention of existing trees located on this boundary (**Section 7.7**).

The Department considers these building setbacks acceptable as they are consistent with minimum ADG boundary setback recommendations.

Council has however raised concern that the proposed 6 m setback is insufficient. The Department notes that the adjacent development at 137-143 Herring Road was approved with setbacks inconsistent with minimum ADG

The Department considers this outcome reasonable and notes future detailed development applications for Buildings A2 and A3 would also consider potential privacy impacts and include design features and conditions, where necessary, to ensure reasonable privacy is maintained between facing buildings.



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Building A1 is proposed adjacent to Herring Road and also shares a common boundary with 137-143 Herring Road. As Building C1 is located more centrally within the site and does not share an external boundary, its setbacks to other future buildings within the estate and residential amenity are considered in **Section 7.4**.

Building A1 would be setback a minimum of 5.9 m from the boundary with Herring Road, exceeding the minimum proposed concept proposal setback of 5 m. The building presents a relatively narrow, 10 m wide face to Herring Road with the building then angling away from Herring Road to its south-western corner (**Figure 27**).

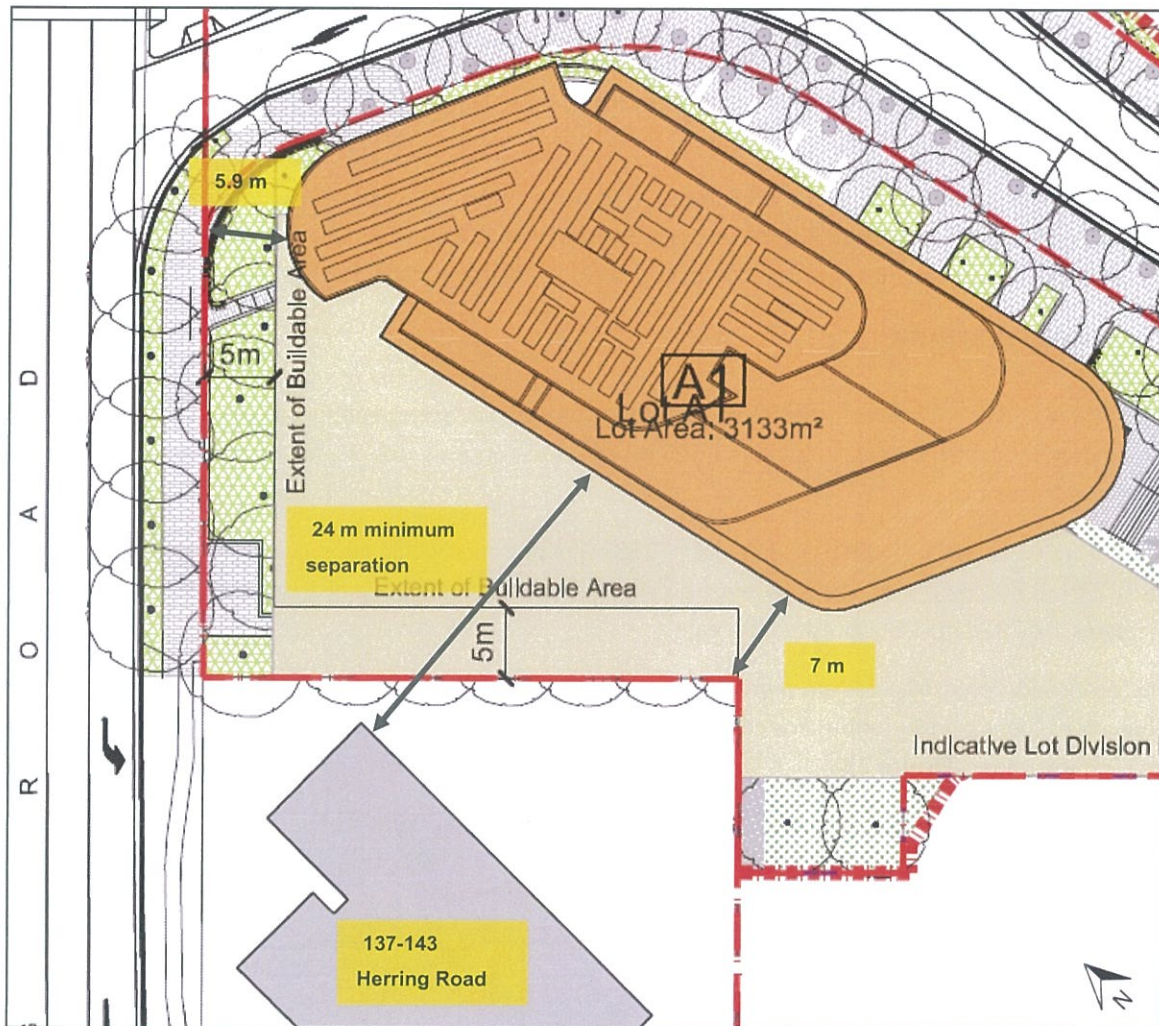


Figure 27 | Building A1 separation to approved development at 137-143 Herring Road (Base source: Stage 1 Architectural Plans)

The south-western corner of Building A1 would be located 7 m from the boundary with 137-143 Herring Road compared to the minimum ADG recommendation of 12 m. However, the orientation of the proposed building matches that of the approved towers at 137-143 Herring Road, the closest of which is located 3.8 m from Building A1 at its north-eastern end but over 21 m towards its south-western end. A minimum building separation of 24 m would therefore be provided between the two building elevations, consistent with the recommendations of the ADG (**Figure 27**). The Department considers this would result in an acceptable building separation and visual privacy outcome.

Council has raised concern that the proposed Building A1 basement would extend to the site boundary with 137-143 Herring Road.

Although the proposed basement car park would extend to the site boundary, the Department notes the ground level of Building A1 is located substantially below the ground level of Herring Road. This allows 5 m deep planter areas to be located above the basement along the Herring Road boundary.

This would be capable of sustaining large trees with five Sydney Blue Gums (mature height of 30 m) proposed to be planted along this boundary with a further six to be planted within the adjacent road reserve. Given these trees would replace six trees, of which four are of low to medium retention value, the Department considers this to be an acceptable outcome.

Planters (minimum soil depth of 1,200 mm) are also proposed above the basement adjacent to the 137-143 Herring Road boundary and would contain new tree planting which would further improve the visual relationship between the two developments.

The Department is satisfied the proposed Building A1 setbacks are acceptable in relation to visual impact (**Section 7.2.6**), overshadowing (**Section 7.3.1**) and views (**Section 7.3.2**). The Department also considers the proposal provides for appropriate setbacks to enable appropriate boundary landscaping.

7.2.5 Deep soil zones

Concept

The ADG recommends a minimum of 7% of a site area is provided as a deep soil zone to provide areas of healthy tree and plant growth. On sites larger than 1,500 m², the ADG suggests 15% of a site be provided as a deep soil zone where possible.

The concept proposal includes a minimum of 18,338 m² of deep soil within the estate (22.2% of the overall site area). If the 3,800 m² deep soil area within the RE1 zoned portion of the site is also included, the deep soil area increases to 22,138 m² (26.7% of the site area).

The proposed deep soil areas are primarily concentrated within the proposed setbacks to Epping Road and Shrimptons Creek, and through a large central corridor containing the proposed Village Green, Forest Playground and School Garden (**Figure 28**).

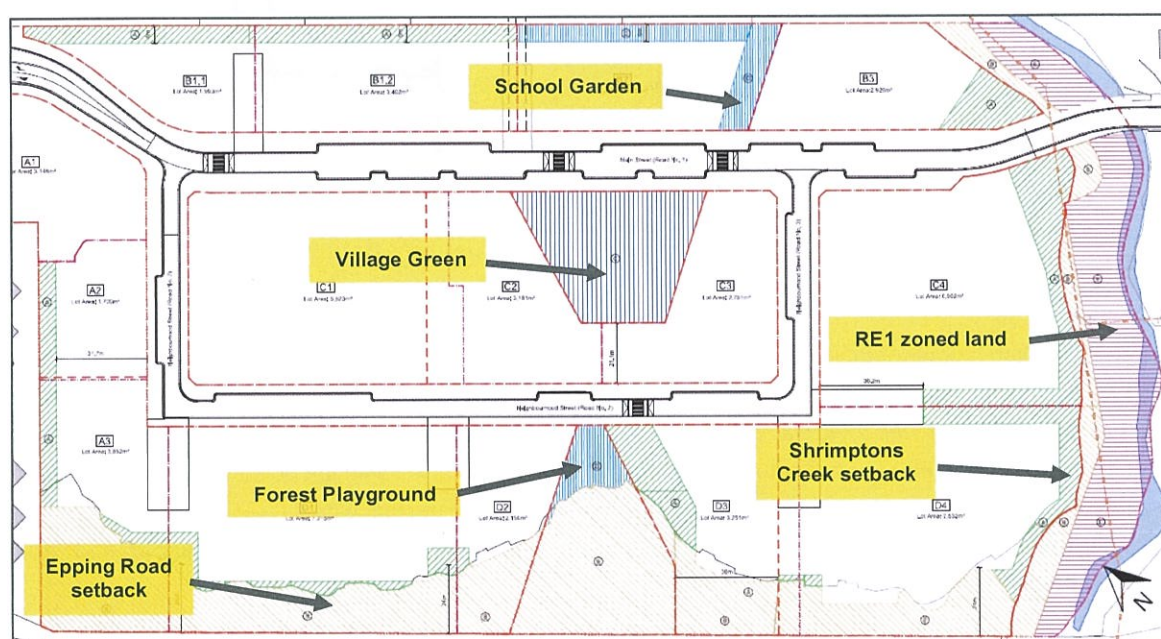


Figure 28 | Plan illustrating proposed deep soil areas (shown coloured). Different colours identify different deep soil zone calculation areas (Base source: Concept Deep Soil Plan)

The proposed total area of deep soil significantly exceeds the ADG minimum recommendation of 7% of the site area. However, the consolidation of deep soil areas within particular areas of the site and the indicative basement

arrangement means three of the proposed development blocks, Buildings A1, C1 and C3, would not contain any deep soil areas.

Council raised concern that additional deep soil zones should be provided along all boundaries of the site to support tree retention and new tree plantings.

The Applicant contended the proposed deep soil arrangement maximises opportunities to retain existing trees and provides significant areas of public domain. In addition, this allows efficient layouts for future basements that would minimise excavation.

The Department considers the provision of larger areas of deep soil planting areas an acceptable outcome compared to the provision of smaller, individual areas within each development block. This is because it allows significant deep soil areas around the boundary of the overall site plus larger, high quality open space areas within the public domain for the overall benefit of the community, visitors and workers, and includes provision of a wide green link through the site (**Section 7.5**).

The Department notes this is consistent with the ADG which states that for precinct developments, some design criteria such as deep soil and communal open space, may be best applied to the entire precinct area where these areas can be consolidated and accessed by a number of buildings.

The Department also considers that although the areas above the future basement car parks would not constitute deep soil areas, they would satisfy minimum ADG soil depths for planting on structures. These areas would also significantly contribute to the open space and landscaped character of the future estate (**Figure 11**).

The Department concludes the proposed size and location of deep soil zones within the future estate are acceptable and would satisfy the ADG objectives of providing for plant and tree growth, improving residential amenity and promoting management of water and air quality. In addition, the overall quantum of open space is significant and would provide for a high-quality landscaped environment within the estate (**Section 7.5**).

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No deep soil planting is provided as part of Building A1 or Building C1. This is consistent with the concept proposal and is supported by the Department for the reasons outlined above.

7.2.6 Visual impact

Concept

The proposed concept development would be visible from various public locations, including Epping Road, Herring Road, Peach Tree Road and Shrimptons Creek. Given the height of some buildings would extend up to 65 m and 75 m, the upper levels of some buildings would also be visible for significant distances, similar to existing tower developments located on the western side of Herring Road.

Public submissions raised concerns regarding the overall size, height and scale of the concept development (**Section 7.2.2**). The Department considers these concerns include the visual impact of the proposal.

A Visual Impact Assessment (VIA) was submitted with the EIS that considers the potential view impacts from eleven public locations around the site (**Figure 29**). Updated images were provided with the RRTS. Private view impacts are considered in **Section 7.3.2**.

The VIA concluded the visual impact would be high from four locations being the intersection of Epping Road and Herring Road (viewpoint 1), Shrimptons Creek north-east of Cobar Way (viewpoint 3), Epping Road near the Booth Reserve bus stop (viewpoint 10) and residential properties further north-west on Epping Road (viewpoint 11). These locations are shown circled red in **Figure 29**. Existing and proposed views from these four locations are provided in **Appendix G**.

The Applicant contended the proposed visual impacts are acceptable because although the proposal introduces new features in the form of new, tall buildings, this is consistent with the planning controls and the effect of the contrast is mitigated by the presence of existing tall buildings on Herring Road and further south along Epping Road at Lachlans Line. Views from Herring Road in particular would be largely impacted by the intervening built form at 137-143 Herring Road. In addition, substantial separation distances would be provided between buildings and buildings would be orientated to provide narrow elevations to Epping Road.



Figure 29 | Viewpoint location map. High visual impact locations shown circled red. (Base source: Applicant's RTS)

The Department has reviewed the VIA and viewed the site from various locations. Although there would be some visual impacts to existing viewpoints, a degree of impact is inevitable when transitioning from a low-density residential estate to a high-density mixed-use estate.

The Department considers the proposed visual impact of the future building forms would be acceptable for the following key reasons:

- the concept proposal is consistent with the strategic planning objectives for the site and the desired future character of the area. In particular, the concept proposal is compatible with the preferred visual character of the Herring Road Priority Precinct and the designation of the site and broader surrounding area to the north-east as an area that is to undergo significant change as it transitions to a more urban, high-density place
- the proposed variations to the RLEP 2014 height controls are limited in the context of the overall scale of development and would not result in a greater visual impact compared to a fully complying scheme
- the concept proposal relates to maximum building envelopes. The actual bulk and scale of the individual buildings would be smaller than the envelopes depicted in the VIA and would adhere to the proposed Design Guidelines to achieve acceptable design outcomes

- significant vegetation buffers would mitigate the visual impact of the development when viewed from Epping Road and Shrimptons Creek
- a fragmented built form would be provided along Shrimptons Creek
- lower building heights are proposed adjacent to the closest residential properties in Peach Tree Road which would reduce visual impact and improve visual compatibility.

Stage 1

Building A1 would be clearly visible from Herring Road and Epping Road given its height and location at the entrance to the estate from Herring Road.

A VIA was submitted with the Stage 1 EIS. The VIA updated the viewpoint locations utilised in the concept plan VIA with the detailed built form of the proposed buildings. **Figure 30** illustrates Building A1 viewed from the intersection of Epping Road and Herring Road (existing viewpoint shown in **Appendix G**). **Figure 31** illustrates the proposed view from the intersection of Herring Road and Ivanhoe Place.

The Department considers the visual impact of Building A1 as viewed from the intersection of Epping Road and Herring Road acceptable, consistent with the consideration of the visual impact of the concept proposal.

With regard to the visual impact from the Herring Road/Ivanhoe Place intersection, the VIA concluded the visual impact would be medium because, although prominent, the impact is decreased by the presence of similar development on the north side of Herring Road, the visibility of only two buildings (Building A1 and upper levels of Building A3) within the estate, and the presence of screening vegetation.

The Applicant contended the proposed buildings would sit comfortably within the concept plan envelopes and that the impact of Building A1 is significantly reduced through use of two interlocking curved facades which enable the building to recede into the skyline when viewed from surrounding roads. Additionally, Building A1 would be partially obscured when the approved towers at 137-143 Herring Road are constructed.

The Department notes Building A1 is fully consistent with the concept proposal envelope, complies with the RLEP 2014 height control and incorporates a suitable setback to Herring Road that can sustain deep soil landscape planting (**Section 7.2.4**). The Department considers Building A1 is appropriately designed (**Section 7.2.7**) and would result in a visual outcome consistent with the evolving character of the area as envisaged by the strategic planning objectives and controls for the site.

As Building C1 is located towards the centre of the estate and would be surrounded by other buildings within the estate, the Department considers it would have minimal visual impact from external locations around the site.



Figure 30 | Proposed view of Building A1 at the Herring Road and Epping Road intersection. Dotted red line indicates concept plan envelope. Note: Image does not include approved towers at 137-143 Herring Road (Base source: Applicant's Stage 1 VIA)



Figure 31 | Proposed view from intersection of Herring Road and Ivanhoe Place. Dotted red line indicates concept plan envelope. Note: Image does not include the approved towers at 137-143 Herring Road (Base source: Applicant's Stage 1 VIA)

7.2.7 Design

Concept

The Concept proposal includes an Ivanhoe Estate DES and Design Guidelines (**Appendix B**). The DES outlines the approach to design excellence for the concept proposal which revolves around the following key elements:

- engagement of an expert and varied design team
- use of an expert Design Review Panel (DRP) for Stage 1 and the SDRP thereafter
- the adoption of Design Guidelines to guide the future development of the estate
- the implementation of reporting and review processes to safeguard design excellence and design integrity.

The DES also includes a requirement for a minimum of two development blocks to be subject to an invited architectural design competition. All future detailed applications will also need to include a Design Statement as part of the EIS demonstrating how the proposed development has achieved the Design Guidelines and incorporated the advice of the DRP/SDRP process.

The Stage 1 EIS accordingly included a DES that outlines the principles and procedures that have been followed in the design of Stage 1, including being subject to an independent DRP process. The Department notes Stage 1 was not considered by the SDRP as its design was significantly progressed prior to formulation of the SDRP.

The Design Guidelines would work with the proposed building envelopes to ensure future detailed development stages achieve an optimal design and amenity outcome. The Design Guidelines contain specific controls and provisions relating to matters including public and communal open space, deep soil zones, street wall height, ground and upper level setbacks, facades and design excellence. Key requirements include:

- development blocks B1/B2 to be separated into three discrete buildings (**Section 2.2**)
- the Shrimptons Creek corridor to be embellished and dedicated to Council as public open space (**Section 7.5**)
- the Village Green to be a minimum of 3,300 m² useable area and the Forest Playground to be a minimum 1,000 m² useable area (**Section 7.5**)
- two to four storey street wall heights and residential typologies should be considered on street frontages of apartment buildings fronting neighbourhood streets (**Section 7.5**)
- lower levels of buildings to be setback an average of 2 m from Main Street and a minimum of 2 m on neighbourhood streets (**Section 7.5**)
- upper floors of buildings to be setback of 4.75 m from the lot boundary on neighbourhood streets with upper levels on Main Street to satisfy SEPP 65 building separation requirements (**Section 7.5**)
- buildings fronting Shrimptons Creek to be setback a minimum of 5 m from the Riparian Corridor, should express two to four storey scale on the lower levels, and unbroken facades are to be no longer than 30 m (**Section 7.2.4**)
- the area of deep soil, excluding RE1 land, to be no less than 20% of the site (**Section 7.2.5**)
- each building is to provide a mix of public and communal open space with a combined minimum area equal to 25% of the lot area, except Building A1 (**Section 7.2.5**)
- where windows are proposed within 7 m of the boundary, provide screening to mitigate overlooking (**Section 7.4.2**).

The Department considers the proposed concept and Stage 1 DES and the Design Guidelines incorporate sufficient provisions to achieve a high-quality architectural and amenity outcome on the site.

Stage 1

Building A1 is located at the intersection of Herring Road and Ivanhoe Place and marks a gateway to the estate. The building has been designed around two interlocking curved facades that respond to the irregular shaped block and enable it to address the three road frontages of the site (**Figure 18**).

Due to the gradient of the site, the base of Building A1 has been lifted 9 m to present a two-storey scale to Main Street and the future neighbourhood street. A public plaza is proposed at street level. The northern portion of the building is also lifted to present a two-storey scale and lobby to Main Street (**Figure 32**).

Building C1 is located more centrally within the estate and primarily comprises two, high density towers (**Figure 17**). The base of the building incorporates a two storey podium expression around the base and fronting the public domain. The elevation to Main Street has been designed in accordance with the Design Guidelines with the street wall recessed and the building façade protruding above level 1. The street wall height has been replicated on the western and southern elevations in the form of maisonette and terrace style apartments comprising a two to three storey form.

The proposed façade designs of both proposed buildings are consistent with the Design Guidelines with the use of masonry as the prominent façade material and a colour palette of warm, naturally occurring hues.

The Department considers Buildings A1 and C1 to be consistent with the Design Guidelines and would result in an acceptable visual outcome and would contribute positively to the desired character of the area.



Figure 32 | View of Building A1 from Main Street (Source: Applicant's Stage 1 EIS)

7.2.8 Design Advice

The Department engaged Noni Ruker to provide independent, expert urban design advice on the proposed concept plan (**Appendix B**). Ms Ruker's advice in respect to the original EIS proposal concluded:

- the proposed envelope control plan does not contain sufficient information to ensure a quality design outcome
- the proposed building heights do not include slender tower forms resulting in increased bulk and lack of sunlight to streets and public open spaces

- the proposed FSR results in large residential floorplates, overshadowing and minimal setbacks to important communal areas such as Shrimptons Creek
- the large basement areas provide no opportunity for deep soil
- the Apartment Design Guide (ADG) should be applied to each site within the concept plan
- the proposed location of retail is off a side street and would be overshadowed
- view sharing to the approved towers at 137-143 Herring Road has not been demonstrated
- height increases should be considered accompanied by a decrease in FSR, if accompanied by slender tower controls.

In response to the concerns, the Applicant submitted a revised envelope control plan. Key changes included:

- deletion of one 14 to 20 storey tower (Building C2)
- revised building heights and building massing
- revised development block buildable areas to more closely reflect the indicative design plans, including increased minimum setbacks to Epping Road and Shrimptons Creek and the provision of minimum setbacks between development blocks to ensure compliance with ADG building separation recommendations.

Other associated changes to the proposed redevelopment included increased deep soil planting, increased solar access to streets and public open spaces, increased areas of public space, relocation of retail, and revised siting and massing of Buildings A2 and A3 to provide enhanced view sharing with the approved towers at 137-143 Herring Road.

The concept proposal also includes revised Design Guidelines which would ensure the provision of a minimum 20% of the total estate site area as deep soil zones, unbroken facades no longer than 30 m in length for buildings fronting Shrimptons Creek, two to four storey street wall heights on neighbourhood streets, basement car parks not to be visible above ground level and minimum lower and upper level setbacks.

The proposed DES for future stages would include consideration of each stage by the State Design Review Panel (SDRP) with a minimum of two development blocks being subject to an architectural design competition. As the design of Stage 1 preceded the creation of the SDRP, a project specific design review panel was formed to ensure design excellence is achieved for this stage.

The Department has carefully considered the findings of Ms Ruker's independent review as part of the assessment and considers the revised concept proposal has suitably responded to the key issues raised by Ms Ruker. In particular, the Department considers:

- a sufficiently detailed envelope control plan has now been submitted which would ensure a quality design outcome is achieved
- the proposed building heights, layout and design guidelines have been revised to ensure the proposal result in an appropriate built form outcome and to maximise sunlight to streets and public open spaces
- the concept proposal includes a reduced FSR and increased minimum setbacks, particularly to Shrimptons Creek and Epping Road
- indicative basement areas have been reduced and are predominantly under the building envelopes
- appropriate building separation is proposed consistent with the objectives of the ADG
- a relocated retail area within Building C3 is proposed adjacent to the Village Green and would receive a high level of solar access
- view sharing to the approved towers at 137-143 Herring Road has been demonstrated (**Section 7.3.2**).

7.2.9 Conclusion

The Department concludes the future built form of the concept proposal would be compatible with the evolving and desired future character of the area and the strategic planning controls for the site.

The concept proposal incorporates appropriate building heights and setbacks and, combined with the proposed Design Guidelines, would result in an acceptable visual outcome. The concept proposal has also been designed to minimise impacts on surrounding land-uses and would have minimal impact on low density residential dwellings on the south-western side of Epping Road. It also includes sufficient open space and deep soil areas to provide a high level of residential amenity and a high-quality landscaped environment. The Departments therefore considers the proposed FSR is reasonable and acceptable.

The Department also concludes the built form of Buildings A1 and C1 contained in the Stage 1 application is acceptable and consistent with the concept proposal.

7.3 Impacts on Neighbouring Development

7.3.1 Overshadowing

Concept

Concerns were raised in public submissions about the height of the proposed development, including potential overshadowing impacts of the proposal on residential properties on the opposite side of Epping Road, during the exhibition of the EIS.

To assess the overshadowing impacts associated with the proposal, the Applicant submitted shadow diagrams to compare the shadow generated by the concept plan envelope and the indicative design scheme against the extent of the shadow cast by the RLEP 2014 height control (**Figures 33 to 35**).

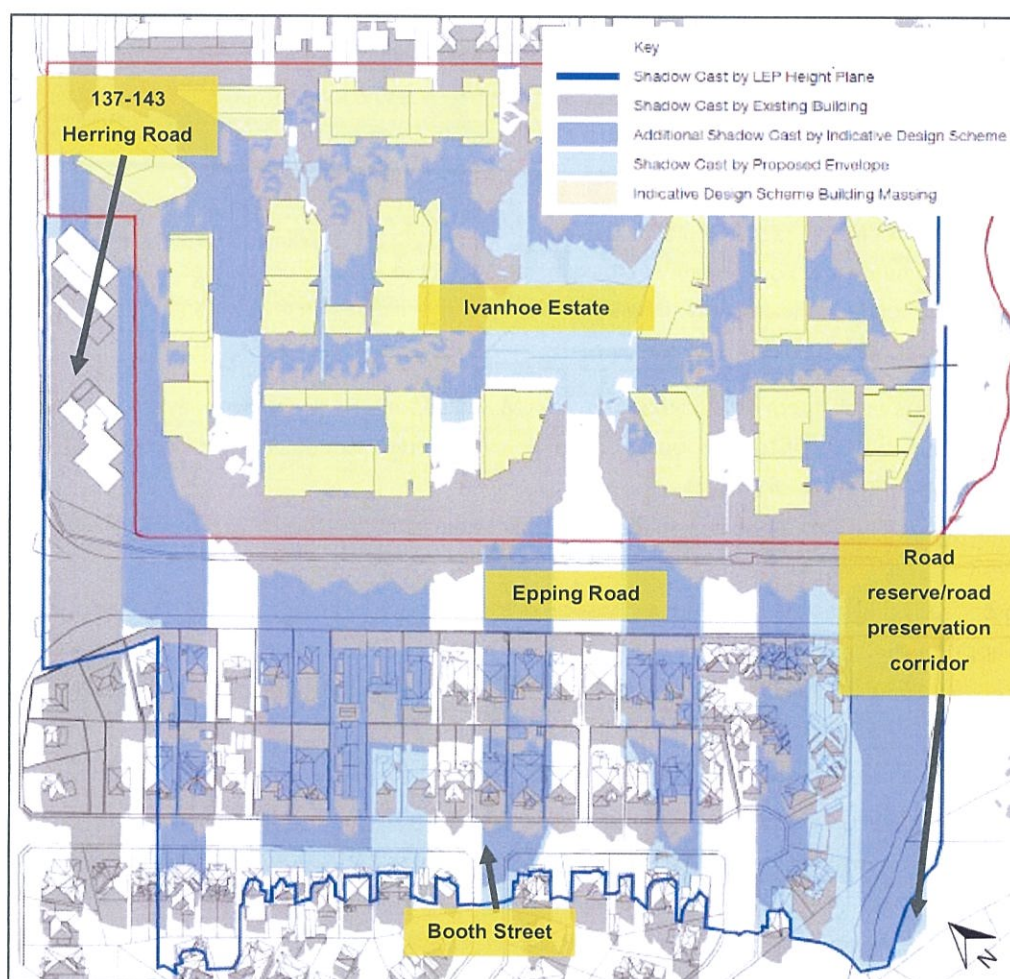


Figure 33 | Shadow diagram 9 am midwinter (Source: Applicant's RRTS)

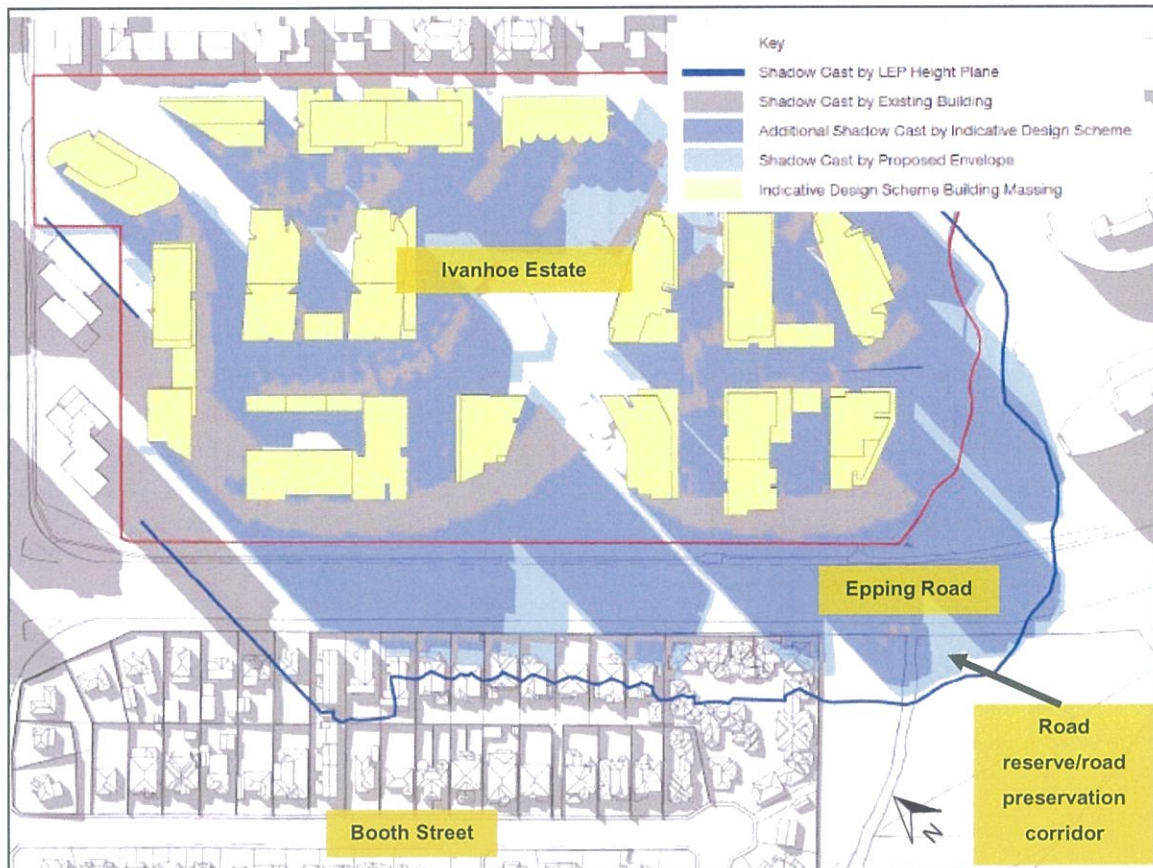


Figure 34 | Shadow diagram 12 pm midwinter (Source: Applicant's RRTS)



Figure 35 | Shadow diagram 1 pm midwinter (Source: Applicant's RRTS)

Stage 1

One public submission objected to overshadowing impacts of the proposed buildings on the amenity of the proposed estate.

Building A1 would overshadow the eastern elevation of the approved northern tower at 137-143 Herring Road between 9 am and 10 am in midwinter. Shadows from Building A1 would also impact other future buildings within the estate, predominantly Buildings A2 and A3 directly to the south-west. Due to its central more location, Building C1 would not cast any shadow outside of the estate.

Given Buildings A1 and C1 comply with the building height controls and minimum ADG building separation recommendations (**Sections 7.2.4 and 7.4.2**), the Department considers their potential shadow impact of future buildings within the estate to be reasonable and notes the amenity of future buildings would be addressed at each future detailed design stage. The Department however notes that due to their location, orientation and proximity to Building A1 and the approved towers at 137-143 Herring Road, Buildings A2 and A3 would not be able to comply with the minimum solar access recommendations of the ADG (**Section 7.4**).

7.3.2 Views

Concept

The proposed concept building envelopes would result in view impacts from nearby apartment buildings in Herring Road, including the towers currently under construction at 137-143 Herring Road. This may include long range views to the Sydney CBD and Harbour Bridge. Although a number of residential properties in Peach Tree Road and Epping Road also have views of the site, due to their close location these are substantially screened by vegetation.

Although public submissions raised concern regarding the overall size, height and scale of development, view loss was not specifically raised as a key issue. Council also did not raise view impacts in its submissions.

The Applicant contended the view impacts are acceptable because the site is within a Priority Precinct, where increased density is appropriate and the proposed building envelopes that would cause view impacts are within the permissible RLEP 2014 height limit.

The Department has considered potential view impacts and notes there have been no objections to view loss. The Department also notes that views across the site currently available from residential apartment buildings in Herring Road (and future buildings, including in Peach Tree Road/the Cottonwood Estate) are the result of the amenity afforded by the current site containing low-rise buildings.

The Department acknowledges the adverse impact on some views from neighbouring buildings, particularly long-range views of the Sydney CBD from upper floors of newer apartment buildings in Herring Road. However, the proposed development would comply with the applicable RLEP 2014 height controls, notably the 75 m control that extends along the north-western side of the site (**Figure 22**). Although five building envelopes exceed the applicable height control (**Section 7.2.2**), these building are predominantly located towards the lower, south-eastern side of the site and would result in minimal, if any, additional view impacts.

With regard to the principle of view sharing, the Department notes that although the RLEP 2014 height controls allow for Buildings A2 and A3 to extend up to 75 m in height, as proposed, Building A2 would extend to a maximum height of 45 m. Consistent with ADG recommendations, both towers would be setback a minimum of 12 m from the north-western boundary. This would allow views from future apartments within 137-143 Herring Road over Building A2 (for levels above 45 m) and to the south-western side of Building A3 (**Figure 36**).

The Department further considers:

- the proposed reduced building height envelopes around the Peach Tree boundary improves visual compatibility

- the arrangement of the building envelopes within the site promote the principle of view sharing
- views from residential properties on the western side of Herring Road would be largely impacted by the intervening built form at 137-143 Herring Road
- views to lower levels of buildings from residential properties in Peach Tree Road and Epping Road would be mitigated by vegetation
- the proposal satisfies the principles for considering view impacts contained in *Tenacity Vs Warringah [2004]* NSWLEC 140.

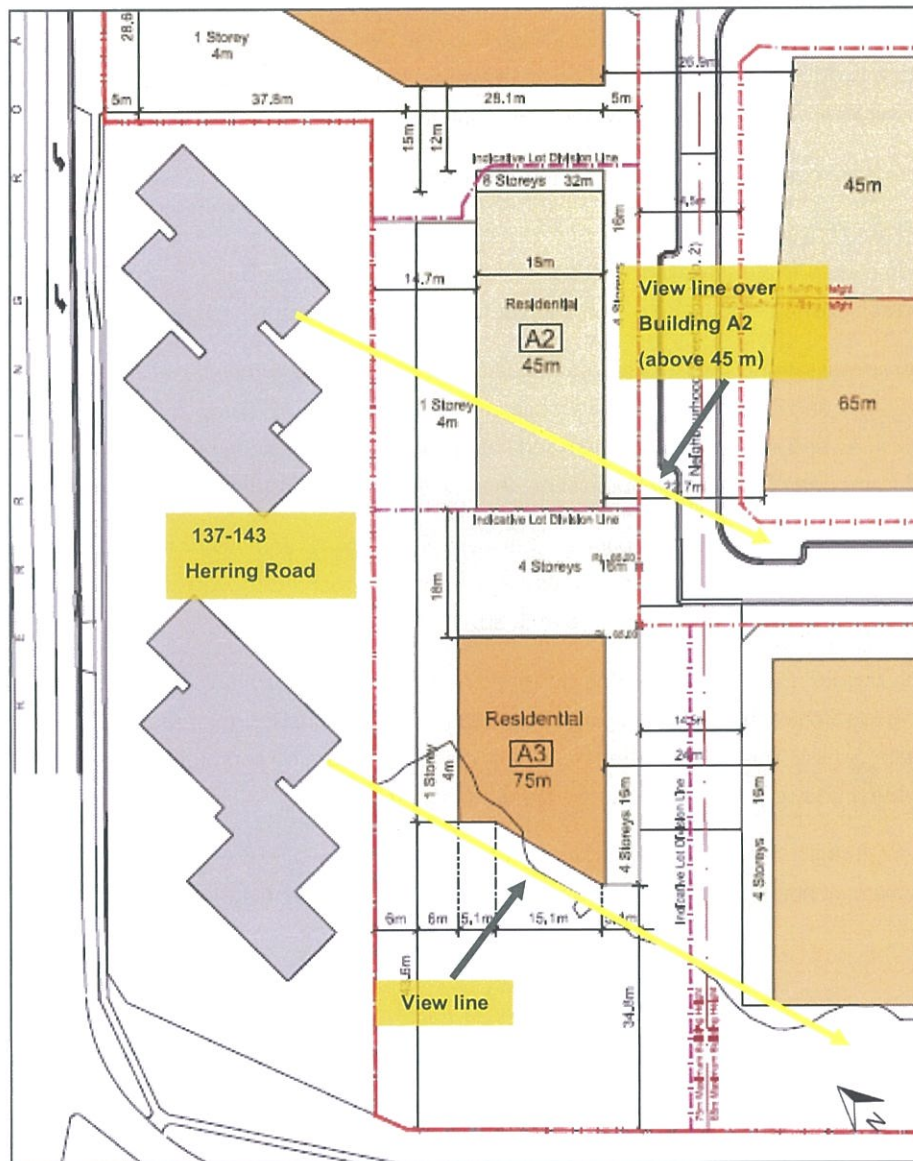


Figure 36 | Proposed view corridors (Base source: Concept Envelope Control Plan)

Noting the proposed concept building envelopes are consistent with the strategic planning framework adopted for the site and with the scale and density of development occurring within the Herring Road Priority Precinct, the Department concludes the overall view impacts from the concept proposal are acceptable and would provide reasonable view sharing for apartments within 137-143 Herring Road.

Stage 1

Although Building A1 would be adjacent to the Herring Road boundary, its built form is consistent with the planning controls, including the 75 m RLEP 2014 height control. It would also be consistent with the height and character of existing buildings in Herring Road, including the towers under construction at 137-143 Herring Road.

Building C1 is located on a lower, more central portion of the site and complies with the applicable 65 m and 45 m height controls.

The Department considers the proposed Stage 1 buildings are consistent with the concept plan envelopes and the resultant view impacts are acceptable in this context.

7.4 Residential Amenity

7.4.1 Future residential amenity (concept)

Although the concept proposal involves no physical works and each residential building would be subject to a detailed application and assessment of residential amenity, the Department has considered the proposed estate layout and future building envelopes in relation to key aspects of SEPP65/ADG to ensure a high level of future residential amenity is likely to be achieved within these buildings.

These key aspects are considered below and in **Appendix E**.

Building separation/privacy

The ADG recommends minimum building separation distances, including 18 m between habitable rooms and balconies between five and eight storeys, and 24 m between habitable rooms and balconies above eight storeys.

The concept proposal satisfies the ADG recommendations in all locations within the estate with the exception of between Building A1 and Building A2 where a minimum separation of 15 m is proposed above eight storeys and between Building A2 and A3 where a minimum separation of 18 m is proposed above eight storeys (**Figure 37**). As Building A1 forms part of the Stage 1 application, these setbacks are considered in **Section 7.4.2**.

With regard to the proposed 18 m separation between Building A2 and A3, indicative floorplans indicate apartments within both buildings would face towards the front and rear (north-west and south-east). In addition, the building envelope for Building A2 is only 18 m deep.

As one or both buildings could therefore be designed to avoid primary habitable room windows and balcony frontages facing towards each other, the Department is satisfied the future design of each building would be able to accommodate suitable privacy mitigation measures, including screening and high-level windows if necessary to ensure suitable privacy is provided to future residents where required.

The Department further considers appropriate building separation would be provided, noting Building A2 extends to a maximum height of 45 m, 30 m lower than the 75 m maximum height of Building A3.

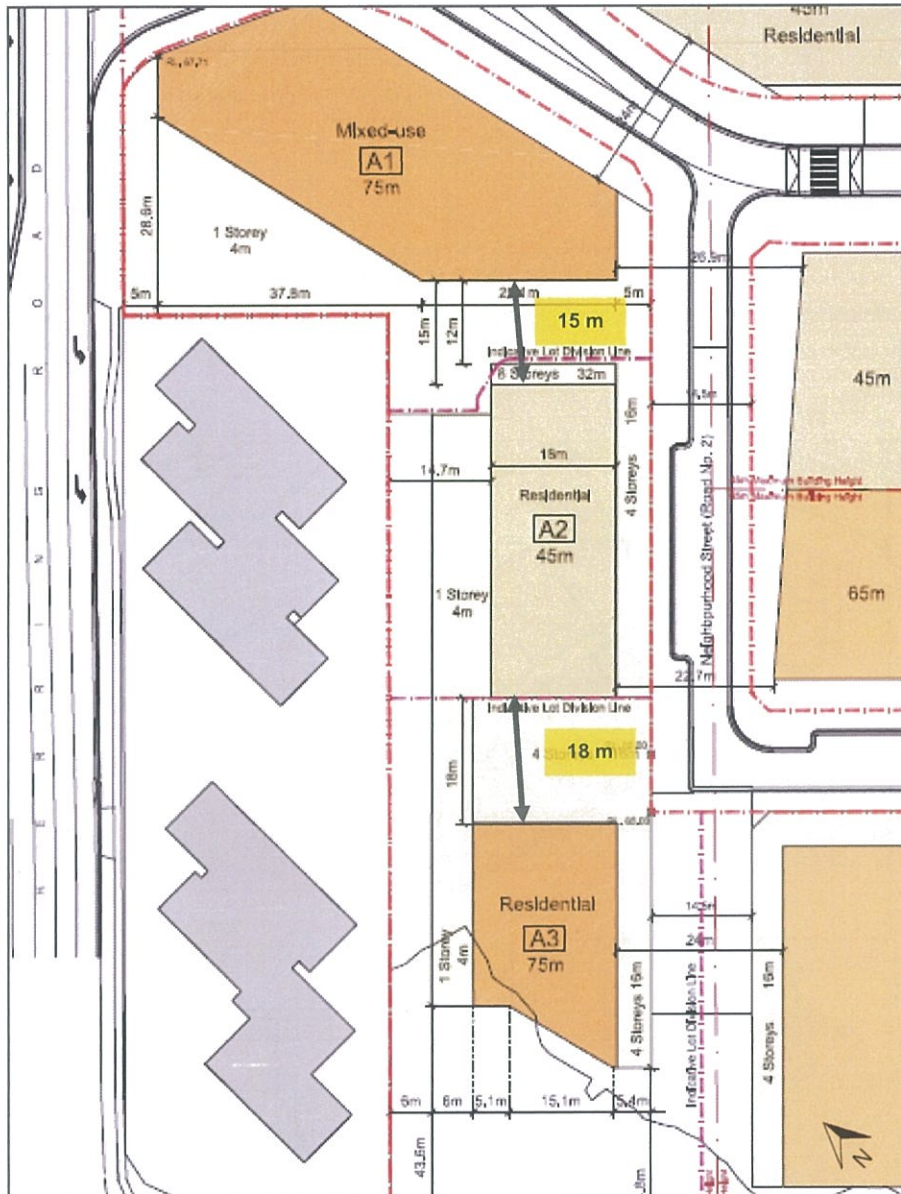


Figure 37 | Proposed building separations (Base source: Concept Envelope Control Plan)

Solar access

Indicative drawings illustrate a minimum of 70% of future apartments' living areas and private open spaces across the estate would be capable of achieving a minimum of two hours direct sunlight between 9 am and 3 pm in mid-winter. In addition, a maximum of 15% of future apartments would likely receive no solar access between 9 am and 3 pm.

The level of solar access for each building would be considered as part of the assessment of future detailed applications. The Department however notes that buildings A2 and A3 would unlikely be capable of achieving a minimum of 70% solar access to future apartments due to their orientation and relationship to Building A1 and the approved towers at 137-143 Herring Road. The Department considers the future design of these buildings would therefore need to consider maximising solar access as much as possible and compensate apartments that would receive less than two hours solar access in midwinter, for example through larger apartment and balcony sizes, and larger areas of communal open space.

Natural ventilation

Indicative drawings illustrate a minimum of 60% of future apartments in the first nine storeys of each building would be capable of being cross ventilated. The level of cross ventilation for each building would be considered as part of the ADG assessment of future detailed applications.

7.4.2 Residential amenity (Stage 1)

Building separation/privacy

The Stage 1 application for Building A1 demonstrates the minimum distance from habitable room windows/balconies to the Building A2 boundary would vary between 14 m and 19 m which exceeds the ADG minimum recommended setback of 12 m to the boundary (50% of the total recommended separation of 24 m) (**Figure 38**).

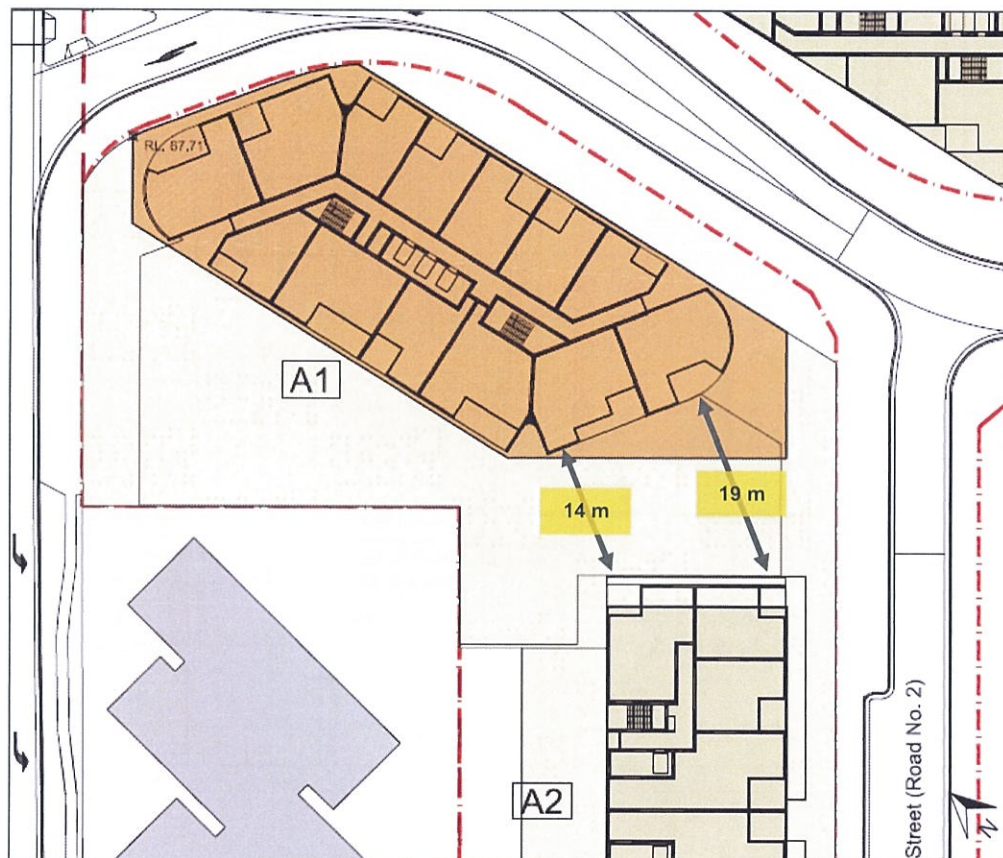


Figure 38 | Indicative proposed separation between Buildings A1 and A2 (Base source: Applicant's RRTS)

While the Department notes the proposed minimum concept setback of 12 m/15 m between Buildings A1 and A2 would not satisfy the recommended ADG separation of 24 m at the closest point between the buildings (**Figure 38**), indicative plans illustrate the main habitable rooms and balconies in Building A2 would face towards the front and rear (north-west and south-east), not north-east towards Building A1. Noting this orientation and given the north-eastern elevation would be largely overshadowed by Building A1, the Department considers the design of Building A2 could reasonably minimise habitable room openings in the north-eastern elevation and privacy mitigation measures such as privacy screen and louvres could be utilised where required.

The Department further notes that in approving the two towers at 137-143 Herring Road, the Sydney North Planning Panel approved separation distances between the towers and the boundary with the Ivanhoe Estate, up to 6.9 m less than the minimum recommended by the ADG. As is also recommended for Building A1, this was based on the specific factors of the site and proposed privacy mitigation measures.