

The Department concludes the proposed building separation distances are acceptable and where a variation may occur between Buildings A1 and A2, the variation would not be significant and would still result in reasonable visual separation compatible with the character of the area. In addition, the detailed design of Building A2 would ensure satisfactory visual privacy would be achieved.

#### Open Space

Due to the provision of a childcare centre and associated landscaped external terraces within Building A1, with the exception of the front forecourt, the site does not include any external communal or public open space. The Applicant contended the benefits of the child care centre outweigh the provision of open space as part of Building A1 and that the trade-off is supported in the concept plan that provides 34.6% of the overall estate as public open space (43.7% including communal areas of open space), despite some discrepancies within some individual buildings.

Building C1 provides 864 m<sup>2</sup> as ground level communal open space above the proposed basement with a further 852 m<sup>2</sup> of public open space located on the northern side of the communal open space, adjacent to Main Street. More than 50% of this area would receive at least two hours of solar access in midwinter, consistent with the recommendations of the ADG. These areas would satisfy minimum ADG soil depths for planting on structures.

The Department considers the proposed Stage 1 buildings acceptable with regard to open space, noting this is consistent with the ADG regarding precinct developments and that the provision of a childcare centre within Building A1 provides community benefit. Furthermore, residents of Building A1 would be located only 48 m from the public open space at Building C1 and 130 m from the Village Green. A significant area of landscaped open space, representing 31% of the site area, would also be provided at Building C1.

#### Solar access

As recommended by the ADG, both buildings achieve a minimum of 70% of apartments' living areas and private open spaces receiving a minimum of two hours direct sunlight between 9am and 3pm in mid-winter.

The ADG recommends a maximum of 15% of apartments receive no solar access in midwinter. In Building A1, 22 (8%) apartments would receive no solar access between 9 am and 3 pm. In Building C1, 99 (21%) apartments would receive no solar access between 9 am and 3 pm representing a shortfall of 18 apartments.

The Applicant contended the building orientation and design was prioritised to maximise the number of apartments receiving a minimum of two hours of sunlight in midwinter. Furthermore, midwinter represents the worst-case scenario with the solar performance of the building improving significantly for the remainder of the year.

The Department notes the ADG recognises achieving the design criteria may not be possible on some sites and is satisfied the design of Building C1 has achieved an appropriate balance with regard to solar access through appropriate siting, orientation and scale. The Department further acknowledges that all apartments within Building C1 would otherwise achieve good levels of amenity through satisfying or exceeding minimum apartment size, private open space, cross ventilation and storage ADG recommendations.

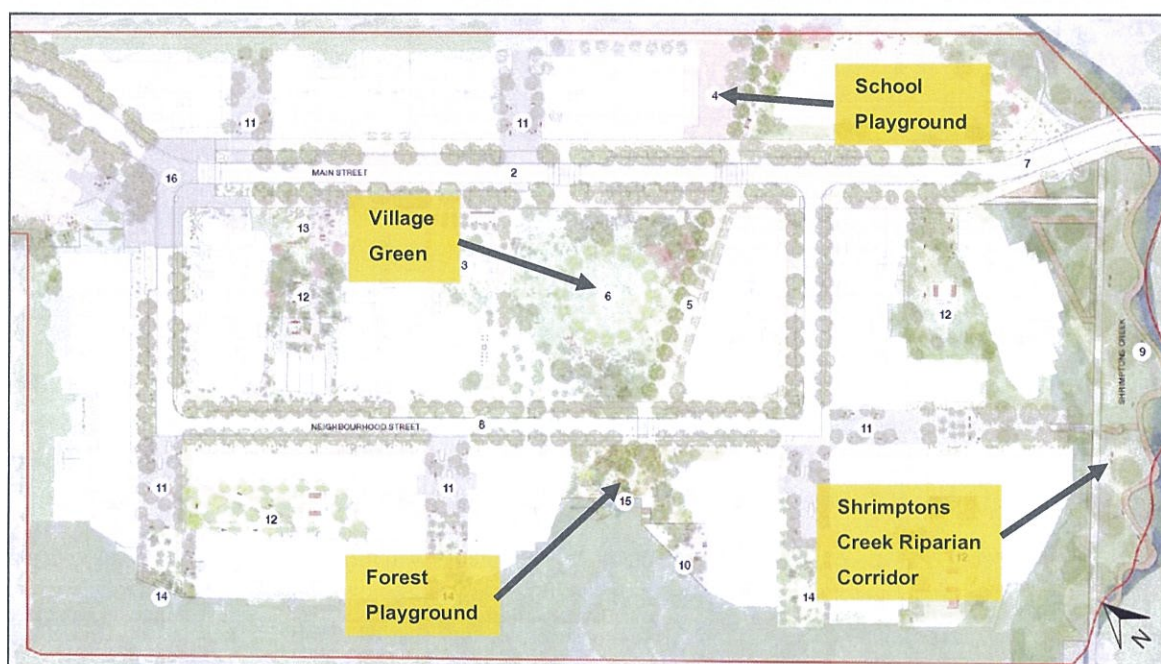
## **7.5 Public Domain**

### **7.5.1 Concept plan public domain**

The concept proposal includes a public domain masterplan intended to inform the detailed design of the future public domain within the site, including the size and location of open spaces (**Figure 39**).

Overall, approximately 27,600 m<sup>2</sup> of open space is proposed, representing 33.4% of the site (**Table 8**). A hierarchy of diverse, publicly accessible open spaces are proposed across the estate, linked by pedestrian connections. These include a minimum 3,300 m<sup>2</sup> central Village Green/Town Square, a 1,009 m<sup>2</sup> Forest

Playground, secondary open spaces and playgrounds, the Epping Road ecological corridor and an upgraded Shrimptons Creek riparian corridor (**Section 2.1**).



**Figure 39** | Public domain Masterplan (Base source: Applicant's RRTS)

**Table 8** | Schedule of Proposed Areas of Open Space

Location	Measured Area (m <sup>2</sup> )	% of Site Area
<b>Site</b>	<b>82,794</b>	<b>-</b>
Village Green	3,300	3.8%
Forest Playground	1,009	1.2%
Shrimptons Creek riparian corridor	5,111	6.2%
School Garden	365	0.4%
Forest Thresholds	6,507	7.9%
Epping Road ecological corridor	8,376	10.1%
Town Square	566	0.7%
Village Green formal and informal gathering spaces	2,393	2.9%
<b>Total</b>	<b>27,626*</b>	<b>33.4%</b>

\* a 1,044 m<sup>2</sup> school playground would also be made available for public use outside school hours.

The Village Green is intended for use by all residents and has been designed to accommodate organised events, casual gatherings, sports and casual play and a playground. The Forest Playground would be provided within the setting of the existing trees and comprises a large, nature-based playground. A minimum of 85% of the Village Green and 66% of the Forest Playground areas would receive at least two hours of solar access in midwinter.



### Open space

The EIS included a Community Infrastructure and Recreation Demand Study (CIRDS) to assess the adequacy of existing open space provided in the local area and how the concept proposal would contribute to this demand. The CIRDS particularly identified that the most participated in outdoor activities are informal and unstructured activities, indicating a potential demand for open space that is flexible and multi-purpose.

Council raised concerns the concept proposal provides a lack of adequate open space for active and passive recreation.

The Applicant contended that based on an estimated future population of 6,000 residents, the proposed 2.76 hectares of public open space equates to 0.46 hectares of open space per 1,000 people. This significantly exceeds comparable urban renewal sites, including North Eveleigh (0.15 hectares per 1,000 people), Green Park (0.11 hectares per 1,000 people) and Barangaroo South (0.11 hectares per 1,000 people).

The Applicant also contended the proposed design and location of the open space areas are compliant with the standard contained in Council's Integrated Open Space Plan and that, given the future demographics of the estate, the greatest demand for open space will be for passive, unstructured open spaces. Furthermore, the proposed multi-purpose hall and playground within the future school would also allow for joint community-school use outside school hours.

The Department notes the proposed amount of open space in the concept proposal equates the 33.4% of the site and significantly exceeds the amount provided in comparable urban renewal projects in Sydney. The Department further considers the proposed types of open space would satisfactorily cater for the various open space demands of future residents and would receive acceptable levels of solar access. The proposed joint school-community facilities would further contribute to satisfying future demand for open space and recreation areas.

The Department concludes the proposed quantum, location and types of open space are acceptable and would result in a desirable outcome for future residents, workers and visitors.

### Shrimptons Creek

The interface between the site and the Shrimptons Creek riparian corridor has been expanded as part of the revised proposal and would comprise additional areas of green space for riparian planting and recreation space. This area would contain a new path system, connecting the site to the Macquarie Shopping Centre and Wilga Park to the north-east, and ELS Hall Park to the south-west, via an upgraded Epping Road underpass.

The rehabilitation of the Shrimptons Creek corridor and upgrades to the Epping Road underpass form part of the proposed works. The Department supports the proposed works and considers they would result in a desirable outcome for future residents, workers and visitors.

### Streets

The proposed street network is designed according to the hierarchy of Main Street and neighbourhood streets to create a legible streetscape. Main Street has been designed to be the primary public street in the estate, lined with residential and non-residential uses, including the new school and the Village Green. The neighbourhood streets are designed to be predominantly residential in nature.

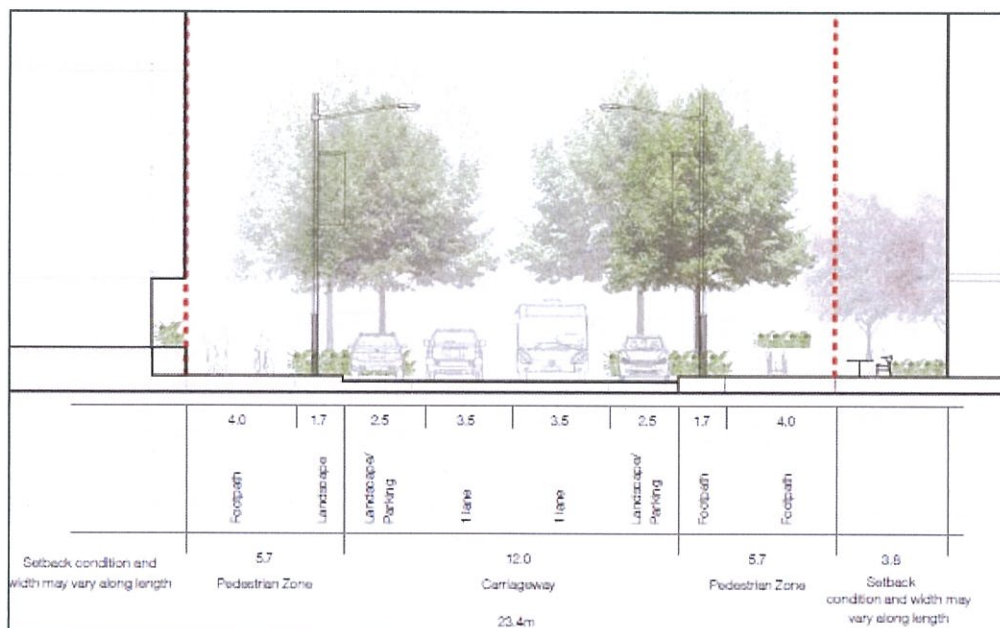
The streetscape has been designed with wide circulation zones to encourage pedestrian connectivity throughout the site and to allow for incidental meeting spaces. Primary connections through the site are along Main Street and the central green link. Main Street allows for vehicle, pedestrian and cycle movement through the site and connects to the wider Macquarie Park area, whilst the green link would form a dedicated open space corridor connecting open spaces within the site and to Epping Road and Shrimptons Creek.

Council considers the proposed residential building setbacks to the public domain to be insufficient and a minimum 5 m landscaped setback should be provided between residential buildings and adjacent street footpaths to provide an improved public domain interface and privacy outcome for future ground floor residents. Alternatively, Council recommend a setback of 3 m provided ground floor apartments are raised up to 1 m above footpath level to provide increased privacy.

The Applicant contended the Design Guidelines require future building setbacks for the neighbourhood streets with minimum setbacks of 2 m for lower floors and 4.75 m above two to four storeys and these would reflect the predominant resident character. **Figures 40** and **41** illustrate the envisaged streetscape outcomes based on the proposed Design Guidelines.

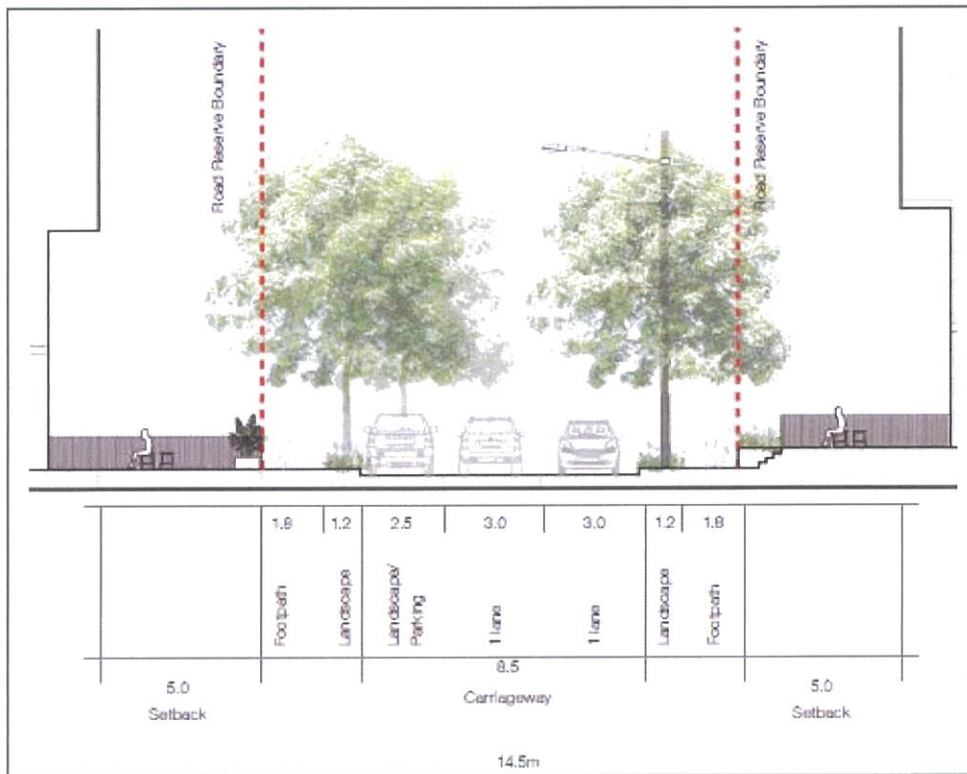
The Department considers the proposed building setbacks to the public domain would achieve a desirable visual outcome and are considered acceptable. As a future assessment requirement, future detailed applications would be required to consider residential privacy of ground floor apartments whilst ensuring an acceptable visual outcome. This would likely include the use of higher floor levels, landscaping and low scale screening.

Overall the Department considers the proposed public domain concept would facilitate a high degree of accessibility, promoting an active lifestyle for future residents and creating a permeable public domain that transitions appropriately to the surrounding area.



**Figure 40** | Illustration of proposed setback Design Guidelines to Main Street (Source: Applicant's RRTS)





**Figure 41** | Proposed setback Design Guidelines to Neighbourhood Streets (Source: Applicant's RRTS)

### 7.5.2 Stage 1 public domain

The Stage 1 physical works include sections of the concept plan public domain areas and access routes. This primarily includes the establishment of mature vegetation in the streetscape and around Buildings A1 and C1.

The Applicant has confirmed the proposed street tree planting would progressively take place following the construction of each stage.

The Department is satisfied the proposed Stage 1 public domain works are consistent with the proposed concept proposal and would provide a satisfactory public domain outcome.

## 7.6 Traffic/Proposed Road Network and Parking

### 7.6.1 Traffic/proposed road network

#### Concept

The concept proposal envisages a future residential population of approximately 6,000 people within the estate, plus a 430-place primary school, childcare centres and a 120 bed RACF. The Macquarie Park road network currently experiences high volumes of traffic and the impact of additional traffic generated by the concept proposal on the surrounding road network is a key issue.

The Applicant submitted a Traffic Impact Assessment (TIA) with the concept proposal EIS which assessed the potential traffic impacts of the proposed development. Addendums to the TIA were provided with the RTS and RRTS.

In accordance with the recommendations of the TIA, the concept proposal includes a number of road and intersection upgrades to ensure the site is accessible and to minimise traffic impacts on the surrounding road network. These include:

- replacing the existing roundabout at the intersection of Herring Road and Ivanhoe Place with a new signalised intersection. This upgrade would be undertaken by TfNSW(RMS) as part of its Macquarie Park Bus Priority and Capacity Improvements Program but would be funded by the Applicant

- constructing a new 14 m wide bridge over Shrimptons Creek to enable a new vehicle and pedestrian connection to Lyonpark Road from Main Street.

The Department also notes road upgrades are currently identified for Macquarie Park by TfNSW(RMS) and Council to improve permeability throughout the precinct and provide additional capacity at key intersections. These works include upgrades to the intersection of Epping Road and Herring Road and the intersection of Herring Road and Waterloo Road.

In addition to the Applicant's proposed upgrade works, the concept proposal also includes the following traffic mitigation measures:

- sustainable travel strategies, including provision of marketing of public transport options and a free \$20 pre-loaded travel pass (for initial dwellings within each development stage)
- infrastructure improvements to provide easy pedestrian and cyclist access via a shared path and footpath network and an internal road network with low traffic environment
- public transport infrastructure to provide safe and convenient means for the future residents to use public transport services
- transport service improvements, including the implementation of a new developer funded community bus connecting the development with Macquarie Shopping Centre and other local services.

During exhibition of the concept proposal RRTS, one public submission raised concerns regarding increased traffic. Council raised concerns regarding lack of roundabouts within the estate to provide U-turn facilities following removal of the existing roundabout at the Herring Road/Ivanhoe Place intersection, school parking/pick-up and drop-off zone, and visitor and car share parking rates.

The RTS TIA addendum found the concept proposal would generate approximately 537 vehicle trips per hour in the AM peak and 434 vehicle trips per hour in the PM peak, resulting in generally unchanged traffic conditions at the majority of key intersections in the surrounding area. Noting the RRTS reduced the proposed maximum GFA by a further 10,000 m<sup>2</sup>, including 100 less dwellings, these figures are considered to represent a worst-case scenario.

Where traffic conditions at key intersections would be affected by the proposed development, the TIA found the increased delay would be within the range of 10 – 15 seconds and would be improved by road upgrades that are planned for Macquarie Park. In particular, the TIA found:

- proposed upgrades to the intersection of Epping Road and Herring Road would result in a significant improvement in the operation of the intersection
- the proposed bridge would provide an alternate east-west route through Macquarie Park and would result in substantial redistribution of traffic throughout the precinct
- the proposal has minimal impact on the operation of the Waterloo Road and Herring Road intersection with the level of service remaining the same during morning and evening peak periods
- there would be minimal increase in delays at the intersection of Epping Road and Herring Road with any additional delays being offset by the proposed bridge to access Lyonpark Road.

A Green Travel Plan is also proposed to encourage sustainable travel, primarily through restraining car parking and promotion of public transport, cycling and walking.

The Department engaged Arup to provide independent, expert traffic and parking advice on the EIS TIA and subsequent TIA addendums (**Appendix B**). Arup's advice on the revised concept proposal concludes that subject to the implementation of a suite of measures such as new road connections, improved walking paths through the site and to public transport nodes, maximum car parking rates and travel demand management measures, the traffic impacts of the proposal can be appropriately managed.



The Department notes TfNSW and TfNSW(RMS) raised no objections to the concept proposal in relation to traffic generation subject to conditions, including requiring the Applicant to pay contributions for the signalisation of the Herring Road/Ivanhoe Place intersection.

The Department considers the potential traffic generation of the concept proposal is acceptable, noting the conclusions of the Arup report and no objection being raised by TfNSW or TfNSW(RMS). Conditions for the concept approval are recommended regarding payment for the full cost of the Herring Road and Main Street intersection upgrade and partial payment for the Herring Road and Epping Road upgrade, infrastructure improvements for pedestrians and cyclists to be incorporated into the development, a free \$20 pre-loaded travel pass for all initial dwellings within the development, and provision of a new community bus service. In addition, recommended conditions for the Stage 1 approval include the implementation of the Green Travel Plan and a Travel Access Guide.

#### U-turn facility

As signalisation of the Herring Road/Ivanhoe Place intersection would mean residents located on the eastern and western side of Herring Road would not be able to utilise the existing roundabout at this intersection, provision of a U-turn facility within the site was recommended by TfNSW(RMS). This would allow vehicles heading south-west on Herring Road to turn around within the site and return north-east along Herring Road to enter their properties. Similarly, residents of 137-143 Herring Road would be able to turn within the estate, given there is no right turn into that site from Herring Road.

Council also recommended roundabouts be constructed at the intersection of Main Street and each of the two neighbourhood streets to improve traffic circulation within the estate.

The Applicant contended the provision of a roundabout within the estate is not required because the proposed connected road network within the estate allows vehicles to travel through the estate, effectively providing the ability for vehicles travelling on Herring Road to enter the estate, travel through internal road network and then exit back onto Herring Road in the opposite direction via the new signalised intersection. Alternatively, drivers may choose to approach Herring Road via the connection of Main Street with Lyonpark Road, allowing them to turn left or right at Herring Road.

The Applicant further contended travel times for vehicles accessing the western side of Herring Road from the intersection of Talavera Road and Waterloo Road is currently between three and seven minutes. Modelling demonstrates the predicted travel times for the alternative routes would take between four and six minutes. In addition, roundabouts within the estate at the two neighbourhood road intersections with Main Street are not required as these intersections would operate with very good levels of service.

Arup has advised that the arrangement for cars utilising the street network to return north-east along Herring Road would be acceptable given the relatively small number of vehicle movements involved (approximately 40 per hour at peak times). In addition, Arup considered the increase in travel times for vehicles utilising the estate street network as opposed to a U-turn facility would be minor. Given the relatively small number of vehicles expected to undertake this movement, there would also be no material impacts to vehicle or pedestrian safety.

Arup also recommended the operation of the intersection of Main Street and Lyonpark Road be reviewed prior to the occupation of 2,500 dwellings within the estate and appropriate upgrades be provided, in consultation with Council, should the operation of the intersection be concluded as unacceptable.

The Department considers the proposed connected estate road network would ensure that existing and future residents of developments on the western and eastern sides of Herring Road would not be adversely affected by the development. In addition, the Department considers the provision of a specific U-turn facility within the estate is not required for traffic circulation benefits within the estate and the provision of roundabouts at the intersection of Main Street and the neighbourhood streets are not required and any minor benefits in traffic circulation would not be proportional to the impacts of the additional space required on the development yield of the estate.

Given an anticipated construction period of 10 to 15 years and the associated uncertainty regarding precise traffic volumes at the completion of the construction period, the Department recommends a condition be imposed regarding the review of the operation of the intersection of Main Street and Lyonpark Road following the occupation of 2,400 dwellings but prior to the occupation of 2,500 dwellings with appropriate upgrades to be provided in consultation with Council if works to improve the operation of the intersection are considered necessary.

#### Stage 1

The Stage 1 application includes construction of the proposed road network within the estate, construction of the new road bridge over Shrimptons Creek and creation of the new intersection between Main Street and Lyonpark Road. As the Stage 1 application includes the physical construction of the proposed concept proposal road network, the Department considers these works acceptable for the reasons outlined above. A recommended concept condition requires construction of the bridge and operation of the new road link between Herring Road and Lyonpark Road prior to the occupation of any further stages of the development.

#### Staging of road works

Construction of the proposed road network would be delivered over two stages (north-western portion first adjacent to Buildings A1 and C1), to correspond with the proposed staged construction of buildings (**Section 2.4**).

As vehicles would not be able to circulate through the estate until the second stage of road works are completed, turning heads would be provided within the site as part of the first stage road works. The Department considers the provision of turning heads would be acceptable as they would be temporary and would adequately manage traffic numbers associated with the first stage of the development. A recommended condition requires the turning heads to remain accessible to all road users until the new estate road network is completed and operational.

### **7.6.2 Car parking**

#### Concept

The concept proposal seeks approval for maximum car parking rates for the future detailed development stages. The proposed rates are in accordance with the rates contained in RDCP 2014, the ARH SEPP, the Seniors Housing SEPP and with other relevant guidelines where the RDCP 2014 does not set rates for specific land uses i.e. school and community facilities. An exception however is proposed to the RDCP 2014 residential visitor parking rate of 1 space per 10 apartments, with a rate of 1 space per 20 apartments sought.

Council raised concerns regarding:

- insufficient visitor car parking as the RDCP 2014 visitor parking rate is being varied by 50%
- no on-site drop-off/pick-up zone has been provided for the school which will increase traffic congestion and reduce road safety
- parking spaces for childcare centres should be provided within the site, not on-street.

The Applicant contended the provision of car parking spaces have been minimised where possible and the proposed visitor car parking rate is appropriate and sustainable given the site's excellent level of accessibility, future trends in mobility and the need to reduce vehicle trips.

Arup provided the following car parking comments:

- the adopted visitor parking rate would provide an appropriate balance between meeting the parking demands of visitors and mitigating traffic impacts on the surrounding road network, noting the high accessibility of the site to public transport
- it is accepted an on-site drop-off facility would compromise the proposed school. Approximately 25 spaces would be required for school pick-up/drop-off purposes and the future development application for the school will need to detail how these spaces would be provided and operate



- drop-off spaces for childcare centres should be provided in the basement of the building.

Based on the Arup advice, the Department is satisfied the proposed car parking rates are acceptable. A condition is recommended requiring the provision of a minimum 25 pick-up/drop-off spaces for the future primary school and childcare centre.

#### Stage 1

The proposed basement car parking for Building A1 (233 spaces) and Building C1 (346 spaces) comply with the concept proposal car parking rates and are acceptable.

Council has raised concern the proposed car parking provision for the childcare centre in Building A1 includes three on-street pick-up/drop-off spaces.

Although the Applicant contended the proposed on-street spaces would improve accessibility to the centre and are located in a neighbourhood street, the Department notes RDCP 2014 states childcare centre parking should be provided off-street as on-street parking may be detrimental to road safety.

Noting the likely high turnover of parking movements at peak times, the Department considers the location of on-street pick-up/drop-off parking spaces would potentially hinder traffic flow and adversely affect road safety. A condition is therefore recommended requiring all car parking spaces for the childcare centre to be located within the basement car park.

### **7.6.3 Bicycle Parking**

The Applicant has confirmed bicycle parking for future detailed stages would comply with required residential and non-residential rates. In particular, all residential apartments would be provided either with a dedicated parking space or basement storage space sufficient to accommodate a bicycle. A total of 200 visitor bicycle parking spaces would also be provided as part of the redevelopment with a minimum of 100 spaces to be provided within the public domain for recreation and leisure use.

The Department considers the proposed visitor bicycle parking provision acceptable and this is included as recommended conditions of consent for the concept proposal. The provision of bicycle parking would also form part of the assessment for each individual building.

For Stage 1, a bicycle parking space would be provided for all residential apartments with non-residential uses provided with bicycle parking in accordance with RCP 2014 minimum rates. A total of 14 visitor bicycle parking spaces would be provided within Building A1 with a further 19 spaces provided within Building C1. The Department is satisfied the proposed bicycle parking for stage 1 is acceptable as it complies with the concept requirements.

## **7.7 Trees and Ecological Impacts**

### **7.7.1 Tree removal**

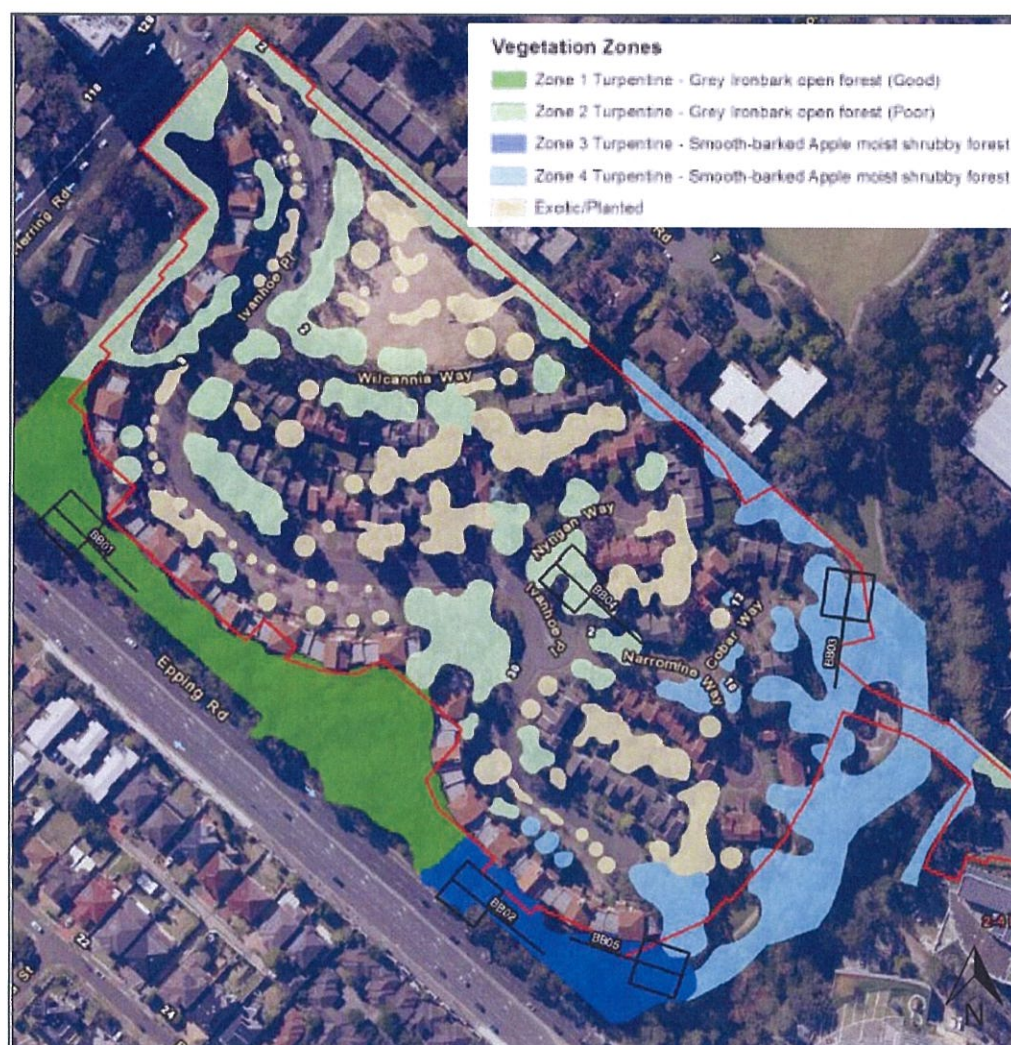
The concept application seeks to identify the number and location of trees to be removed as part of the overall redevelopment while the Stage 1 application includes the physical removal of trees across the estate.

The site currently contains 3.4 hectares of vegetation, including over 1,000 trees. The trees comprise a mix of native and exotic species and includes dense concentrations along the Shrimptons Creek and Epping Road frontages. Two major plant communities exist on the site, which are the STIF and the Smooth-barked Apple-Turpentine-Blackbutt open forest, both located adjacent to Epping Road. **Figure 42** identifies the existing vegetation zones within the site. The 1.64 hectares of STIF (zone 1 in **Figure 42**) is a CEEC under the BC Act and EPBC Act.

However, as substantial and detailed environmental assessment had been undertaken prior to commencement of the BC Act in August 2017, the concept proposal constitutes an interim planning application under the *Biodiversity*



Conservation (Savings and Transitional) Regulation 2017. The application is therefore subject to consideration under the *Threatened Species Conservation Act 1995* and associated NSW Biodiversity Offsets Policy for Major Projects and the Framework for Biodiversity Assessment.



**Figure 42** | Existing vegetation zones (Source: Applicant's EIS)

A Biodiversity Assessment Report (BAR) included with the EIS found that while the vegetation along Epping Road is in a reasonable condition, the majority of vegetation throughout the existing estate is in a moderate condition as most trees have had the understorey and mid-storey entirely removed.

The Department also notes 547 trees within the site have previously been approved to be removed as part of a separate approval for demolition works issued under Part 5 of the EP&A Act. This is a process that allows public authorities to self-assess and undertake certain works without requiring a development application. However, following the initial stage of demolition works (**Section 1.2**), 37 trees that had been approved to be removed under Part 5 were retained. The revised proposal has therefore reduced the number of trees to be removed under Part 5 from 547 to 510.

The potential impact of the redevelopment of the estate on the existing trees, particularly the STIF, and the overall biodiversity of the site, was the predominant issue raised in public submissions and was also a key issue raised in submissions from Council and the EESG.

In response to the concerns raised during the exhibition of the EIS and RTS, the Applicant amended the proposal to retain more trees and reduce the impact on the STIF. These changes included:

- deletion of the new road connection to Epping Road and associated deceleration lane



- redesign of the proposed building envelopes so development only occurs in areas of existing developed land, including increased building setbacks to Epping Road
- increased buffer zone to Shrimptons Creek riparian corridor
- increased basement setbacks to boundary with 137-143 Herring Road
- retention of a retaining wall and some existing concrete alcoves along the south-western development boundary to minimise impacts to the STIF/CEEC. Removal of these structures as originally proposed, constituted an impact to the CEEC. The ground levels within and around the structures to be retained would be repurposed or built up with soil and landscaped to match the surroundings.

Combined with the reduced number of trees to be removed under Part 5, these changes have increased the total number of trees to be retained from 231 (21%) to 453 (35%) and reduced the impact on the STIF from 0.45 hectares to 0.02 hectares. A comparison between the original EIS and current modified concept proposal is provided in **Table 9**.

**Table 9** | Changes to proposed number of trees to be removed/retained and area of STIF impacted

Stage	Total trees on site	Trees to be removed as part of separate Part 5 demolition approval	Trees removed (figure in brackets includes trees to be removed under separate Part 5 approval)	Trees retained	Area of existing 1.64 hectares of STIF impacted (hectares)
EIS	1,089	547	311 (858)	231 (21%)	0.45
Additional information	1,306*	510	343 (853)	453 (35%)	0.02**
Difference	+217	-37	+32 (-5)	+222	-0.43

\* Additional information (February 2020 AIA) is a different figure to the EIS because additional trees were identified from an additional survey where access was not previously available and all trees have now been counted individually whereas the EIS calculated different trees in close proximity to each other as a single tree/group

\*\* A further 0.03 hectares would be removed as part of the Part 5 demolition approval.

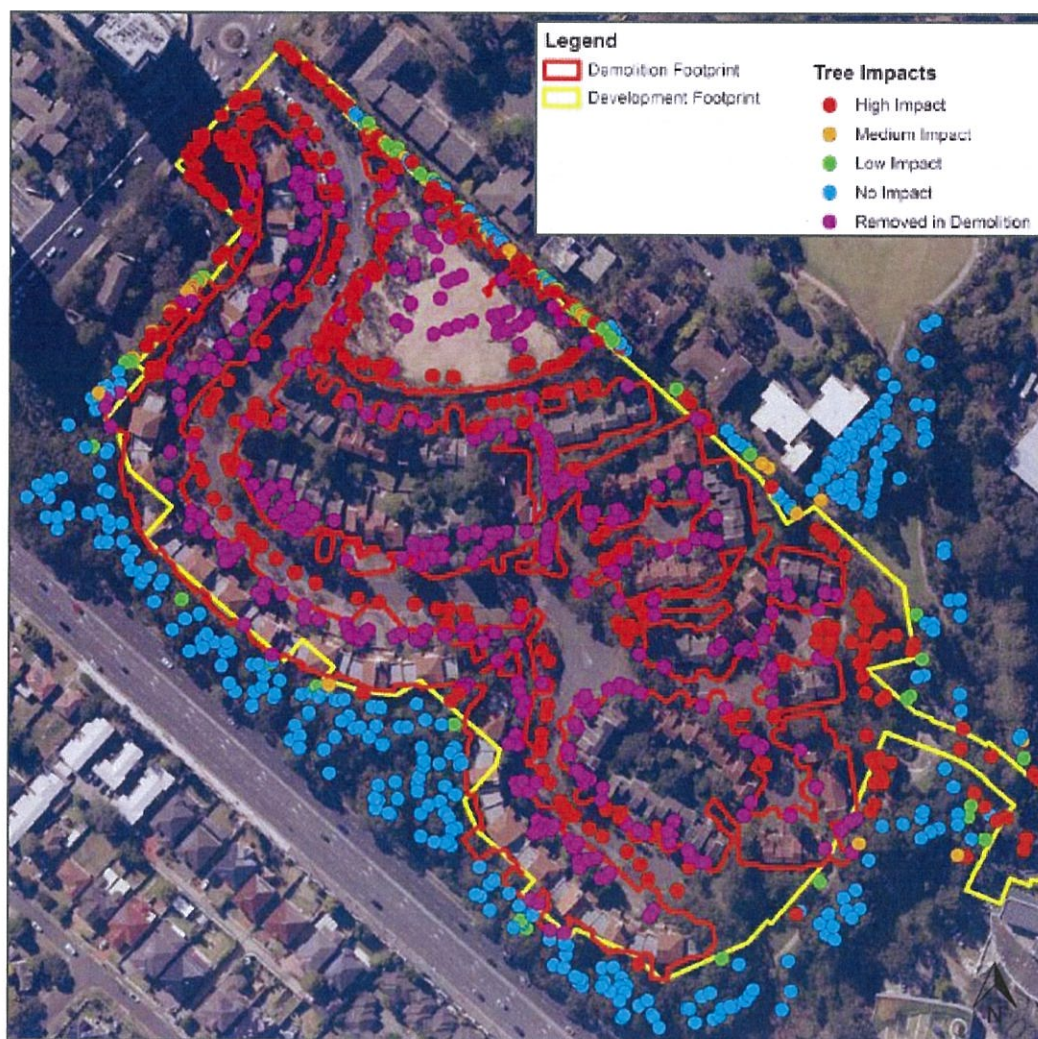
**Figure 43** illustrates the proposed development footprint and the location of trees subject to high impact/to be removed and the location of trees to be removed as part of the demolition.

Although three trees within the CEEC would be removed as part of the approved demolition, only one would be removed as part of the proposed development and this may actually be able to be retained due to its location on top of a retaining wall which will not be impacted by the works.

The Applicant contended the revised concept proposal would have an acceptable arboricultural and biodiversity impact because:

- although the revised concept proposal seeks to maximise the retention of existing vegetation on the site, where STIF is to be removed, the long-term survival of these plants is considered unviable in the long term due to their location either within the existing residential development or adjacent to a major roadway
- any fauna habitat within the site is highly modified due to existing development and proximity to Epping Road
- no threatened fauna species have been identified on the site and a habitat and fauna assessment found that the only fauna habitat within the site are hollow-bearing trees along Epping Road
- a minimum of 950 replacement trees would be planted.





**Figure 43** | Plan illustrating development footprint and tree impacts (Source: Applicant's RRTS)

The Department notes although the total number of trees to be removed on the site (including from demolition) has only decreased from 858 to 853, this was due to additional low-quality trees on the site being identified as removed throughout the assessment. Significantly, the overall number of trees being retained has increased by 222 from 231 to 453 and critically, the area of STIF to be impacted has been significantly reduced from the original exhibited concept plan (0.45 hectares) to the current concept plan (0.02 hectares) and, in total, 94% of the CEEC would be retained. The Department further notes the EESG have raised no objection to the revised proposal.

The Department considers the redevelopment of the site, consistent with the planning controls for the site, would unavoidably result in the loss of 853 trees. However, the Department considers the revised concept proposal has suitably sought to minimise tree loss and biodiversity impacts and is satisfied the potential impact to the STIF/CEEC has been minimised and trees around the Epping Road, Shrimptons Creek and Herring Road boundaries have been retained, where viable. Where impacts on the STIF are unavoidable, biodiversity offsets in accordance with the NSW Biodiversity Offsets Policy for Major Projects will be acquired and retired (**Section 7.7.2**).

Combined with the proposed planting of 950 replacement trees across the site, the Department considers the longer-term impact of the proposed tree removal would be suitably mitigated. Recommended conditions include a minimum of 950 trees are replanted on the site, including 476 trees as part of Stage 1. In addition, conditions require various measures to be implemented to avoid and minimise impacts, including implementation of a Biodiversity Management Plan and a Construction Environment Management Plan.



### 7.7.2 Offsets

In accordance with the NSW Biodiversity Offsets Policy for Major Projects and the Commonwealth *Environmental Protection and Biodiversity Conservation Act 1999* Environmental Offsets Policy, a total of 16 ecosystem credits are required to offset the 1.68 hectares of unavoidable impacts of the project. It is proposed to retire all of the credits prior to the commencement of construction.

Noting the EESG have raised no objection, the Department is satisfied the proposed development has suitably sought to avoid impacts to native vegetation and the proposed purchase and retiring of 16 ecosystem credits is in accordance with the applicable environmental offsets policy. A condition requiring the purchase and retiring of 16 ecosystem offsets is therefore recommended.

### 7.7.3 Overshadowing of vegetation from the proposed development

The CEEC tree corridor located adjacent to Epping Road is currently partially overshadowed in the mornings by existing buildings within the site. The proposed building envelopes would result in:

- up to two hours partial additional overshadowing of the retained native vegetation in spring and summer
- over two hours (until 2 pm) partial additional overshadowing of the retained native vegetation in winter (**Figures 33 to 35 in Section 7.3.1**).

The BAR has considered the impact of additional shading and concluded it is unlikely the additional shadow would impact the integrity of the native vegetation to an extent that any impact would be evident. The Applicant contended that given the proximity of the trees to the site, the overshadowing of the trees would be the same even if all buildings complied with the RLEP 2014 height controls (**Section 7.3.1**).

The Department considers the extent of overshadowing of the vegetation to be retained is consistent with the level of overshadowing envisaged by the planning controls and that gaps between the future buildings would provide sunlight to a portion of the CEEC during all seasons. Noting the conclusions of the BAR and no concerns to the revised proposal from the EESG, the Department concludes the extent of shadow impact would not significantly impact the CEEC tree corridor and is acceptable.

## 7.8 Public Benefits

The Applicant originally intended on entering into a VPA with Council to establish a framework for development contributions and the delivery of both on-site and off-site public benefits in the form of works-in-kind.

However, following Council's decision not to enter into a VPA, the Applicant instead intends to either pay the required section 7.11 developer contributions or alternatively elect to provide a combination of contributions and material public benefits, through the delivery of works-in-kind, that meet or exceed the total value of the contributions payable.

The proposed material public benefits/works-in-kind to be delivered by the Applicant will importantly provide benefits to the broader community and comprise:

- rehabilitation, embellishment and dedication of the Shrimptons Creek open space corridor
- construction and dedication of new public roads and new bridge over Shrimptons Creek
- construction and rights of public access to the Village Green and Forest Playground
- construction of a public community centre and skate park
- upgrades to the Shrimptons Creek Epping Road underpass.

The proposal also includes other public benefits that are not included as works-in-kind, including the provision of 950 social and 128 affordable dwellings, a 430-place primary school and two childcare centres. Public use of the multi-purpose hall and playground within the proposed primary school is also proposed (outside school hours).

The Applicant will also enter into an agreement with TfNSW for payment of the full costs to upgrades to the Herring Road/Main Street intersection and partial payment for upgrade works to the Herring Road/Epping Road intersection.

The Applicant originally estimated the value of the proposed works-in-kind to be approximately \$53.2 m which exceeded the monetary contributions that would otherwise have been payable by \$2.39 m (inclusive of credits for existing dwellings on the site). Following the Department's detailed review of the proposal, including the value of the maintenance works to Shrimptons Creek, the benefit of the new roads to the broader community and the percentage of ongoing costs, the value of the proposed works-in-kind has been reduced to \$41.7 m which is \$3.8 m less than the value of the revised calculation of \$45.5 m contributions otherwise payable (which includes some exemptions for the provision of social and affordable housing under Department Circular D6). The \$3.8 m difference will be offset by a monetary contribution to Council. As such, the combined total value of works-in-kind and monetary contributions is \$45.5 m.

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

## 7.9 Other Issues

Other relevant issues for consideration are addressed in **Table 11**.

**Table 11** | Summary of other issues

Issue	Findings	Recommendation
Wind	<p><u>Concept</u></p> <ul style="list-style-type: none"> <li>The concept proposal RRTS included an updated Wind Assessment which concluded wind conditions around the proposed estate are expected to be suitable for pedestrian walking from a comfort perspective and pass the safety criterion.</li> <li>The Wind Assessment notes that any areas intended for outdoor seating will likely require local wind mitigation measures which will be developed as part of the design of individual buildings within the estate.</li> <li>All future development stages will be required to include a Wind Assessment demonstrating acceptable wind conditions for pedestrians, outdoor seating and users of communal and public open space areas.</li> <li>The Department is satisfied that the proposed estate is capable of achieving wind conditions that satisfy relevant criteria subject to wind mitigation treatments for particular buildings.</li> </ul> <p><u>Stage 1</u></p> <ul style="list-style-type: none"> <li>The Stage 1 EIS included a Wind Assessment for Buildings A1 and C1. The Wind Assessment recommended various treatments to reduce the wind impacts and these have been incorporated into the proposed plans.</li> </ul>	<ul style="list-style-type: none"> <li>Future development applications must include a Wind Assessment.</li> <li>Implement recommendations of the Stage 1 Wind Assessment.</li> </ul>



	<ul style="list-style-type: none"> <li>The Department is satisfied the proposal would not result in any unacceptable wind impacts for pedestrians, residents and visitors to the proposed buildings and all outdoor trafficable areas within and around the development would be suitable for their intended use.</li> </ul>	
Social impact	<ul style="list-style-type: none"> <li>The concept EIS included a Social Impact Assessment (SIA) to consider the social impacts of the proposed redevelopment.</li> <li>A submission from Shelter NSW in response to the original EIS exhibition raised concerns that insufficient information had been provided regarding social housing outcomes. Following the submission of additional information via the RTS and RRTS, no further submissions were received.</li> <li>The Department has reviewed the SIA and associated additional information and is satisfied the proposal would result in the following positive social impacts: <ul style="list-style-type: none"> <li>the provision of 950 social and 128 affordable housing dwellings</li> <li>opportunities for social mix through distribution of social and affordable housing throughout the site to achieve 'tenure blindness'</li> <li>the provision of support services.</li> </ul> </li> <li>The Department further notes social housing residents would either be former residents of the estate or applicants on the Department of Families and Community Services Housing Pathways register.</li> <li>Mission Australia would have an on-site office and would utilise partnerships with other organisations to link residents to education, employment, training, support and the wider community.</li> <li>The Applicant has also committed to monitoring and reporting the social impacts of the development in accordance with the Future Directions for Social Housing in NSW Evaluation Framework (October 2018).</li> <li>The Department's SIA Specialist has reviewed the proposal and following the submission of additional information, raised no concerns.</li> <li>The Department is therefore satisfied the concept proposal would create a successful integrated community providing social and economic benefits to future residents and would be consistent with best practice for mixed-tenure estate renewal and would create a benchmark for future Communities Plus projects.</li> </ul>	<ul style="list-style-type: none"> <li>No conditions required.</li> </ul>
Heritage	<ul style="list-style-type: none"> <li>The site does not contain, and is not located within the vicinity of, any State or local heritage item.</li> </ul>	<ul style="list-style-type: none"> <li>Include conditions in relation to unexpected</li> </ul>

- The concept and Stage 1 EIS' were accompanied by an Aboriginal and Historical Assessment (AHA) which concluded the site has no European heritage significance. The Heritage Division also did not raise any concerns with the proposed redevelopment of the site.
- EESG, Council and some public submissions initially requested an Aboriginal Cultural Heritage Assessment Report (ACHAR) be provided.
- The AHA concluded the Aboriginal archaeological potential of the site is low to nil given the vast majority of the site is covered in buildings, roads, paving and open areas, constructed in the 1980s and 1990s. Furthermore, prior to the construction of the existing estate, the southern part of the site was partially cleared scrub while the northern part was used as an orchard and market garden.
- The AHA satisfied the SEARs requirements and the EESG guidelines that applied at the time both applications were lodged. Given the conclusions of the AHA and noting the extensive disturbance of the site, the Department is satisfied the proposed development is unlikely to disturb any areas of Aboriginal archaeological potential. An ACHAR is therefore not required for the concept or Stage 1 applications and a condition is recommended regarding an unexpected archeological finds protocol.
- Given the EESG guidelines now require all SSD applications to include an ACHAR, all future detailed SSD applications on the site would require inclusion of an ACHAR.

archaeological finds.

#### Future school

- The concept proposal includes a vertical primary school within Building B2. The school will cover years K to 6 and accommodate approximately 430 students. The school will include a multi-purpose hall and a playground that will be available for use by the wider community outside of school hours.
- The school would contribute to managing the increasing demand for school places in the Ryde LGA resulting from an increasing residential population, including from the proposed redevelopment.
- The Department is satisfied the proposed school is a desirable use within the estate and would have significant public benefit.
- The Department considers the proposed school to be capable of satisfying all relevant matters, including parking,
- The multi-purpose hall and playground within the primary school are to be available for public use outside school hours.



acoustic impacts and privacy subject to detailed assessment at the future development application stage.

Retail and office	<ul style="list-style-type: none"> <li>The concept proposal includes minor retail tenancies located on the ground floor of Building C3 fronting the Village Green and Main Street with a further potential minor retail area located on the ground floor of Building C1. The retail tenancies are intended to accommodate convenience retail for the future Ivanhoe community and may include cafes, shops and a mini-major/ supermarket.</li> <li>The Department considers the proposed retail area is appropriately located centrally within the estate and is of a commensurate scale to provide for day to day needs of future residents, noting the Macquarie Shopping Centre is located 500 m to the north of the site (<b>Section 1.3</b>). All future retail uses, including hours of operation, would be subject to future detailed development applications.</li> <li>Office premises to accommodate Mission Australia Housing would be provided at ground level in Building D3. The office use relates to the operation of the proposed social and affordable housing within the estate and is appropriately located. The proposed office use would be subject to a future detailed development application.</li> </ul>	<ul style="list-style-type: none"> <li>No conditions required.</li> </ul>
Community centres	<ul style="list-style-type: none"> <li>A minimum 700 m<sup>2</sup> public community centre would be provided in Building C2 fronting the Village Green for use by future residents of the Ivanhoe Estate and broader Macquarie Park Community. It is envisioned that the community centre will be utilised to run programs by Mission Australia Housing, the residents' corporation, Council programs and other community initiatives.</li> <li>A separate minimum 1,311 m<sup>2</sup> community centre for specific use by residents of the estate would also be provided in Building C2 and would include a swimming pool and recreational space.</li> <li>The fitout and operational details of the community centres would be subject to a future detailed development application.</li> <li>The Department is satisfied the proposed community centres are appropriately located and of sufficient size to provide significant community benefit.</li> </ul>	<ul style="list-style-type: none"> <li>A minimum 700 m<sup>2</sup> public community centre be provided.</li> <li>A minimum 1,311 m<sup>2</sup> community centre for residents of the estate be provided.</li> </ul>
Residential aged care facility (RACF)	<ul style="list-style-type: none"> <li>A 120-bed RACF is proposed within Building B1.2. The facility would be operated by an independent third-party operator. It would provide on-site support services and a range of communal facilities for residents.</li> </ul>	<ul style="list-style-type: none"> <li>No conditions required.</li> </ul>

- Issues regarding the relationship of the proposed facility to neighbouring properties to the north-east in Peach Tree Road are considered in **Section 7.2.4**. 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.
- Car parking for the proposed aged care facility would comply with the Seniors Housing SEPP (**Section 7.6**).
- The Department is satisfied the proposed RACF is of an appropriate scale and represents an acceptable use within the estate. The proposed facility would be subject to a future detailed development application.

#### Geotechnical

- The concept EIS included a Geotechnical Assessment (GA) to assess existing subsurface and groundwater conditions on the site. The assessment includes a number of recommendations in relation to excavation, excavation support, dewatering, foundations, earthworks
- The Department is satisfied there are no apparent geotechnical limitations to the proposed concept development.
- Due to existing buildings preventing detailed site investigations and noting the concept GA raised no concerns, the Department is satisfied a Stage 1 GA should be prepared prior to issue of any Crown Building Works Certificate.
- Site specific GAs would be required for future detailed development applications.
- Prepare a site-specific GA prior to issue of any Construction Certificate for Stage 1.
- Future detailed development applications to include a site-specific GA.

#### Contamination

- The concept RTS included a Detailed Site Investigation (DSI) Report and Supplementary Site Investigation. These investigations found limited evidence of historical contaminating activities on the site. Soil samples from one borehole towards the centre of the site (borehole 8 located close to the eastern boundary of Building C1) contained levels of recoverable hydrocarbons above the Health Screening Level and was likely the result of a localised spillage of petrol. No source of the contamination was observed during fieldwork and all other areas of the site were found to be acceptable in relation to contamination and would not preclude the proposed redevelopment of the site.
- The EIS for Stage 1 included a Remediation Action Plan (RAP) that confirmed the preferred option of remediating the site would include removing the contaminated material around
- Obtain a Section A Site Audit Statement at the completion of the remediation works, certifying the works have been undertaken consistent with the RAP and that the site is suitable for the development.
- Waste classification assessment to ascertain the contamination



	<p>borehole 8 to an appropriate facility off-site and reinstatement of clean material as required. This would be coordinated to occur as part of the bulk earthworks across the estate.</p> <ul style="list-style-type: none"> <li>• A Section B Site Audit Statement was also submitted and confirmed the site can be made suitable for the proposed residential use subject to the implementation of the recommended measures contained in the RAP.</li> <li>• The EPA and Council have raised no contamination concerns for the concept proposal subject to the provision of a DSI with all future detailed applications demonstrating the site is suitable for the proposed use, or that the site can be remediated to the extent necessary for the proposed use.</li> <li>• The EPA have also recommended specific conditions in relation to the Stage 1 application, including provision of a Section A Site Audit Statement following completion of remediation and validation work, certifying suitability of the site for the proposed use.</li> <li>• The Department is satisfied the site can be made suitable for the proposed use and Stage 1 development and is satisfied that the land will be remediated before the land is used for its proposed residential use, subject to recommended conditions.</li> </ul>	<p>status of the soil and ensure the proper waste classification for disposal.</p> <ul style="list-style-type: none"> <li>• An unexpected finds procedure to enable management of any unexpected contamination finds.</li> </ul>
Flooding/ stormwater	<ul style="list-style-type: none"> <li>• The concept EIS included a Flood Impact Assessment (FIA). The FIA notes the site is partially affected by flooding during the 100-year ARI and Probable Maximum Flood (PMF) events and is largely confined to the banks of Shrimptons Creek as well as small amounts of localised flooding throughout the site.</li> <li>• The FIA finds the proposed concept development would result in minimal impacts in relation to the 20 and 100-year ARI flood events. During the PMF event, all proposed building floor levels are above the PMF level providing floor free refuge for all events up to the PMF.</li> <li>• During the PMF event, increased peak water levels would occur upstream (to the south) and significant decreased peak water levels would occur downstream (to the north) due to the proposed bridge over Shrimptons Creek obstructing the flow path.</li> <li>• The FIA does not identify any increased flood impacts on sites outside the subject site during all modelled flood events and concludes there is no potential for the concept</li> </ul>	<ul style="list-style-type: none"> <li>• Flooding/ stormwater conditions included in accordance with Council's recommended conditions of consent.</li> </ul>

development to cause an increase in flood frequency or flood inundation elsewhere.

- The FIA concludes the proposed concept development would result in negligible differences in design flood conditions and there would be no risk to life due the availability of rising road access to Herring Road in the event of flood above the PMF level.
- The EIS included a concept stormwater drainage plan which comprises a combination of rainwater tanks, on-site detention, surface drainage, pits, pipes and overland flow paths. The plan has been designed to convey stormwater flows to the levels required by Council.
- The Department is satisfied the proposed development, including the Stage 1 development, would not be adversely impacted by flooding and would not result in adverse flood outcomes within the surrounding area, subject to recommended conditions.

#### Bridge over Shrimptons Creek

- The concept and Stage 1 proposal includes the construction of a new 51 m long bridge over Shrimptons Creek (**Figure 10**). The bridge would be 14 m wide and include two 3.5 m wide vehicle lanes and a footpath connection to Lyonpark Road.
- The bridge would also include a pedestrian only walkway beneath the roadway, directly accessible from the Shrimptons Creek open space.
- The EPA and DPI have raised no concerns regarding the proposed bridge.
- The Department considers the proposed bridge to be an essential element of the concept proposal as it would provide an important road/cycle/pedestrian connection between the Herring Road and Lyonpark Road (**Section 7.6**).
- Council have raised concerns regarding potential additional flood impacts from the proposed pedestrian bridge and also safety issues for users of the walkway during flood events.
- The Applicant contends further modelling of the flood impacts of the bridge will be undertaken when the detailed bridge design is developed. In addition, the bridge is not an emergency access or evacuation route and appropriate signage warning of potential flood hazard would be installed.
- Conditions are recommended in relation to the proposed pedestrian bridge to ensure flood issues are resolved. Given
- Independent review of the detailed road bridge design.
- Detailed pedestrian bridge design and flood modelling to be prepared.
- Appropriate flood warning signage to be installed for the pedestrian bridge.



the bridge is not an essential element of the proposed development, should modelling of the final design demonstrate unacceptable flood impacts, the Department would require deletion of the bridge.

Utilities	<ul style="list-style-type: none"> <li>• The concept EIS included a Utility Services Report to assess the capacity of the estate to be serviced. The report confirms the estate can be serviced by all relevant utility providers, subject to the proposed infrastructure upgrades, including new water and gas mains connecting to the existing mains on Herring Road, new sewerage mains connecting to the existing main adjacent to Shrimptons Creek, and installation of mini chamber substations throughout the estate.</li> <li>• The staging of the augmentation of the utilities would be undertaken in order to ensure sufficient capacity is provided at each stage of the project.</li> <li>• Sydney Water and Ausgrid have raised no concerns with the concept or Stage 1 applications subject to recommended conditions, including a methodology for the removal of Ausgrid assets.</li> <li>• The Department is satisfied the proposed concept and Stage 1 developments can be suitably serviced by required utilities.</li> </ul>	<ul style="list-style-type: none"> <li>• Prepare a methodology for the removal of Ausgrid assets.</li> <li>• Apply for a Section 73 Compliance Certificate.</li> <li>• Each building is to be connected to all available utility services at full cost to the Applicant.</li> </ul>
Works to 2-4 Lyonpark Road	<ul style="list-style-type: none"> <li>• As part of the Stage 1 road construction works, the at-grade car parking at 2-4 Lyonpark Road would be partly reconfigured to include new access points, delivery and parking areas, and landscaping. The Department is satisfied these works are relatively minor and would not result in any adverse impacts.</li> <li>• Submissions were received from the owners of 6-8 Lyonspark Road regarding potential disturbance during construction and tree removal from their site.</li> <li>• The Applicant has confirmed no works or tree removal are proposed to 6-8 Lyonpark Road and standard conditions are recommended in relation to impacts during construction.</li> </ul>	<ul style="list-style-type: none"> <li>• No works or tree removal to occur at 6-8 Lyonpark Road.</li> <li>• Standard construction conditions, including construction hours, noise and vibration and air quality (see also consideration of construction impacts below).</li> </ul>
Childcare centres	<ul style="list-style-type: none"> <li>• Consistent with the commitment to provide essential non-residential uses within the estate, the concept includes two childcare centres (75 places each) within Buildings A1 and B2. The centres are to be independently operated.</li> <li>• The Stage 1 application includes a proposed 75 place childcare centre within the ground floor of Building A1. The</li> </ul>	<ul style="list-style-type: none"> <li>• All childcare centre car parking to be located within the basement of Building A1.</li> </ul>

	<p>application however seeks only approval for the proposed use. A separate development application for the fitout and operation of the centre would be separately submitted to Council.</p> <ul style="list-style-type: none"> <li>• The shell of the centre and size of internal and external play areas have been designed in consideration of State Environmental Planning Policy (Educational Establishments and Child Care Centres) 2017 (Education SEPP). An assessment against the relevant Education SEPP provisions is provided in <b>Appendix E</b>.</li> <li>• Issues regarding car parking are considered in <b>Section 7.6</b>. Issues regarding noise impacts and air quality are considered below.</li> <li>• The Department considers the proposed childcare centre to be appropriately located within Building A1 and issues related to car parking management and acoustic management are capable of being resolved at the development application stage.</li> <li>• The Department further considers the childcare centre is appropriately located close to the Herring Road/Main Street intersection and would provide easy access for the broader community to utilize the centre.</li> </ul>	<ul style="list-style-type: none"> <li>• Childcare centre fitout and operation to be subject to future development application(s).</li> </ul>
Noise	<ul style="list-style-type: none"> <li>• The concept EIS included an Acoustic Assessment which confirmed the following: <ul style="list-style-type: none"> <li>- the proposed development is capable of complying with the Development Near Rail Corridors and Busy Roads Interim Guideline</li> <li>- future detailed applications will demonstrate traffic noise impacts can be appropriately mitigated through various measures, including acoustic seals and glazing</li> <li>- recommended criteria for school noise emissions are determined by RDCP 2014 and the EPA Industrial Noise Policy and appropriate acoustic controls can be determined prior to construction</li> <li>- recommended criteria for childcare noise emissions are determined by the Association of Australian Acoustical Consultants 'Technical Guideline for Child Care Centre Noise Assessment' and appropriate acoustic controls can be determined prior to construction.</li> </ul> </li> <li>• The Stage 1 EIS included an Acoustic Assessment which concluded the proposed A1 and C1 buildings would be capable of achieving a satisfactory residential environment</li> </ul>	<ul style="list-style-type: none"> <li>• Comply with recommendations of the concept and Stage 1 Acoustic Assessments.</li> </ul>



subject to recommended acoustic glazing and acoustic seals.

- Where the Acoustic Assessment identifies apartments on the northern and western façade of Building A1 as being potentially impacted by road noise from Herring Road, acoustic trickle ventilators are proposed to provide acoustic protection to these apartments, as well as enabling natural air flow when doors and windows are closed.
- The Acoustic Assessment recommends the Building A1 childcare centre outdoor play area be used for no more than two hours per childcare age group per day, external windows and doors remain closed, and installation of an acoustic cover of the outdoor play area be considered.
- It also recommends the maximum number of children outside at one time is restricted to 20 in the morning play space (located on the northern side) and 40 in the afternoon play space (located on the southern side). The future childcare centre fitout and operation development application would include a further detailed acoustic assessment and any operational and acoustic treatment conditions and would be imposed at that stage.
- The Department is satisfied the concept and Stage 1 proposals are capable of satisfying relevant noise criteria subject to conditions.

#### Operational Air Quality

- The Stage 1 EIS included an Air Quality Assessment which concludes the proposed childcare centre and apartments in Building A1 would be sufficiently separated and screened from Epping Road and Herring Road to allow over 90% of particulate concentrations to be reduced from kerbside levels resulting in low risk of air quality impacts.
- The Building A1 car park exhaust is also of a sufficient height and distance from the proposed childcare centre play area to ensure car park fumes would not impact use of the play area.
- The Department notes the proposed primary school is located a significant distance from Epping Road and Herring Road and considers it would not be adversely impacted by air pollution.
- Implement recommendations of the Stage 1 Air Quality Assessment.

#### Crime Prevention Through Environmental Design (CPTED)

- The concept EIS included a CPTED assessment report and advised:
  - design to the casual observer cannot distinguish between social, affordable and market housing
- Implement recommendations of the concept and Stage 1 CPTED

	<ul style="list-style-type: none"> <li>○ activation of the street through non-residential uses and individual residential entries at ground floor</li> <li>○ delineating between public, communal and private land through fencing, landscaping and signage</li> <li>○ providing consistent and uniform outdoor lighting, pathways and CCTV</li> <li>○ design consideration of sight lines, concealment opportunities and pedestrian entry/egress points.</li> </ul> <ul style="list-style-type: none"> <li>• The Stage 1 application EIS included a CPTED Assessment Report and includes a number of recommendations relating to surveillance, lighting, territorial reinforcement, environmental maintenance, space management and access.</li> <li>• The Department is satisfied the concept and Stage 1 proposals suitably incorporate necessary CPTED measures subject to conditions requiring compliance with the concept and Stage 1 CPTED assessment reports.</li> </ul>	assessments reports.
Subdivision	<ul style="list-style-type: none"> <li>• The Stage 1 application includes amalgamation of the existing 17 allotments across the estate. It also includes subdividing the estate to align with the proposed concept plan development blocks. A plan of the proposed subdivision and a table listing the proposed lots, lot sizes and purpose are provided in <b>Appendix H</b>.</li> <li>• It is also proposed to subdivide Lots 11 and 12 (Buildings A1 and C1) into Stratum Title Lots corresponding to the mixed uses of the buildings (residential, childcare, retail/community spaces, market and social housing, building services and dedicated basement car parking.</li> <li>• The Department considers the proposed pattern of subdivision to be logical and acceptable.</li> </ul>	<ul style="list-style-type: none"> <li>• Standard subdivision conditions recommended.</li> </ul>
Construction impacts	<ul style="list-style-type: none"> <li>• Public submissions raised concerns with potential construction impacts from the proposed estate redevelopment, including the Stage 1 proposal.</li> <li>• A Preliminary Construction Management Plan concludes construction traffic impacts are likely to be minor and measures can be implemented to minimise any potential impacts. Measures include limiting construction vehicles to Epping Road, the M2 and necessary local roads where necessary outside of peak periods, scheduling intensive delivery activities outside of peak periods and implementing traffic control to regulate movements into and out of the site.</li> <li>• All future construction works would be required to comply with:</li> </ul>	<ul style="list-style-type: none"> <li>• Prepare a Construction Environmental Management Plan, Noise and Vibration Management Plan and Air Quality and Odour Management Plan.</li> <li>• Construction restricted to</li> </ul>



	<ul style="list-style-type: none"> <li>- the DECCW Interim Construction Noise Guidelines (DECCW Guidelines)</li> <li>- Council's standard construction hours of: <ul style="list-style-type: none"> <li>- 7.00 am to 7.00 pm Monday to Friday</li> <li>- 8.00 am to 4.00 pm Saturdays</li> <li>- No work on Sundays or Public Holidays.</li> </ul> </li> </ul>	Councils standard hours.
	<ul style="list-style-type: none"> <li>• The Stage 1 EIS included an Acoustic Report and Air Quality Assessment, which provide a detailed assessment and recommendations for managing/mitigating noise, vibration and dust impacts during construction.</li> <li>• The predicted noise levels for neighbouring residential properties would also comply with the DECCW Guidelines, subject to appropriate noise mitigation measures. These measures would be determined at the construction certificate stage and generally include measures such as acoustic enclosures and silences on machinery.</li> <li>• The Department is satisfied potential air quality and odour issues can also be suitably managed during development.</li> <li>• The Department acknowledges the future construction works would be temporary and potential impacts can be reasonably mitigated through recommended conditions for each future stage of development.</li> </ul>	
Waste management	<ul style="list-style-type: none"> <li>• The Stage 1 EIS includes a Waste Management Plan (WMP) for the waste generated by the proposed construction works and operation of Buildings A1 and C1.</li> <li>• Each building would contain garbage chutes, spaces for separating and storing waste within a main waste area, and a room for the temporary storage of bulky waste. All residential waste would be serviced by Council contractors within the basement waste collection area. Retail and other non-residential waste will be collected by a private waste contractor.</li> <li>• The Department is satisfied operational waste would be appropriately managed subject to conditions.</li> </ul>	<ul style="list-style-type: none"> <li>• Standard waste management conditions recommended.</li> </ul>
Fire safety/BCA	<ul style="list-style-type: none"> <li>• A BCA report for Building A1 and Building C1 confirms there are a number of elements that would need to be assessed against the relevant performance requirements of the BCA which would occur at the construction certificate stage.</li> <li>• The Department considers the proposed buildings are capable of complying with the BCA and conditions are recommended to ensure compliance.</li> </ul>	<ul style="list-style-type: none"> <li>• Comply with the BCA.</li> <li>• Non-combustible cladding to be used.</li> </ul>



## 8. Evaluation

The Department has assessed the merits of the concept and Stage 1 applications and has carefully considered all issues raised in Council, agency and public submissions.

The Department has considered all relevant matters under section 4.15 of the EP&A Act, the objects of the EP&A Act and the principles of ESD.

The Department has carefully considered the impacts associated with the concept and Stage 1 proposals, and considers they should be approved for following reasons:

- the concept proposal is consistent with the strategic objectives for the area, as outlined in NSW 2021, the Region Plan and the North District Plan. The concept proposal is consistent with the strategic future direction of the Herring Road Priority Precinct and would result in a wide range of positive social and economic impacts, primarily the provision of a new master planned estate with significantly increased social and affordable housing availability and choice near public transport, employment opportunities and services
- the future design and built form would be compatible with the broader Herring Road Priority Precinct which is transitioning to high density, tower development, consistent with the strategic objectives for the area
- the proposed concept layout provides an appropriate framework of development blocks, roads and mix of uses and residential tenures that would allow for the development of a vibrant and inclusive estate
- the layout and design would allow residents to enjoy a high level of amenity with appropriate levels of solar access, cross ventilation, private open space and privacy
- the potential impact to the STIF/CEEC has been minimised and trees around the Epping Road, Shrimptons Creek and Herring Road boundaries have been retained where viable. The proposal also includes planting 950 replacement trees across the site (an increase of 97 trees on the existing site).
- it would not result in any unacceptable traffic impacts as the proposal includes appropriate upgrades of the Herring Road/Ivanhoe Place intersection and would provide a new road link between Herring Road and Lyonpark Road
- the proposed amount of open space in the concept proposal equates to 33.4% of the site and exceeds the amount provided in comparable urban renewal projects in Sydney
- the concept proposal would result in a number of significant public benefits, including the provision of 950 social and 128 affordable dwellings, a new road link between Herring Road and Lyonpark Road, various areas of public open space, a new skate park, a primary school and two childcare centres with total monetary contributions and works-in-kind in the order of \$45.5 m
- all other issues associated with the proposal have been assessed, and appropriate conditions recommended, where necessary, to ensure the impacts of the redevelopment are appropriately mitigated and/or managed.

In respect of the clause 4.6 variations for building height and FSR provided by the Applicant, these are considered well founded on the basis that strict application would hinder the attainment of the objectives of the EP&A Act and the proposed development achieves the objectives of the standards, notwithstanding the non-compliance.

The Department is satisfied the recommended conditions and implementation of measures detailed in the Applicant's concept and Stage 1 EIS, RTS and RRTS report and as recommended by agencies would adequately mitigate the residual environmental impacts of the proposed development.

The Department's assessment therefore concludes the proposed concept and Stage 1 proposals are in the public interest and recommends the applications be approved, subject to the recommended conditions.





## 9. Recommendation

It is recommended that the Minister for Planning and Public Spaces:

- **considers** the findings and recommendations of this report;
- **accepts and adopts** all of the findings and recommendations in this report as the reasons for making the decision to grant consent to the applications;
- **agrees** with the key reasons for approval listed in the notice of decisions;
- **grants** consent for the applications in respect of SSD 8707 and SSD 8903; and
- **signs** the attached development consents and recommended conditions of consent (**Appendix I**).

Recommended by:

**Andy Nixey**  
Principal Planning Officer  
Key Sites Assessments

Recommended by:

**Cameron Sargent**  
Team Leader  
Key Sites Assessments

Recommended by:

**Anthony Witherdin**  
Director  
Key Sites Assessments

Recommended by:

**Anthea Sargeant**  
Executive Director  
Regions, Industry and Key Sites



## 10. **Determination**

The recommendation is: **Adopted** / ~~Not Adopted~~ by:

**The Hon Rob Stokes MP**

Minister for Planning and Public Spaces





# ***Appendices***

Appendix A – List of Documents

Appendix B – Relevant Supporting Information

Appendix C – Clause 4.6 Variation: Height

Appendix D – Clause 4.6 Variation: Floor Space Ratio

Appendix E – Statutory Considerations

Appendix F – Consideration of Community Views

Appendix G – Visual Impact Images

Appendix H – Subdivision Details

Appendix I – Recommended Conditions of Consent

## Appendix A – List of Documents

List of key documents relied on by the Department in its assessment:

### Concept

- Ivanhoe Estate Masterplan – Environmental Impact Statement – State Significant Development Application, prepared by Ethos Urban Pty Ltd, dated April 2018
- Response to Submissions, SSD 8707, prepared by Ethos Urban Pty Ltd, dated September 2018
- Response to Submissions No.2, SSD 8707, prepared by Ethos Urban Pty Ltd, dated October 2019
- Response to the Department’s Request for Additional Information, SSD 8707 & SSD 8903, prepared by Ethos Urban Pty Ltd, dated February 2020.

### Stage 1

- Ivanhoe Estate Stage 1 – Environmental Impact Statement – State Significant Development Application, prepared by Ethos Urban Pty Ltd, dated April 2019
- Response to Submissions and Amended Proposal, prepared by Ethos Urban Pty Ltd, dated July 2019
- Response to the Department’s Request for Additional Information, SSD 8707 & SSD 8903, prepared by Ethos Urban Pty Ltd, dated February 2020.



## Appendix B – Relevant Supporting Information

The following supporting documents and supporting information to this assessment report can be found on the Department's website as follows:

### Concept

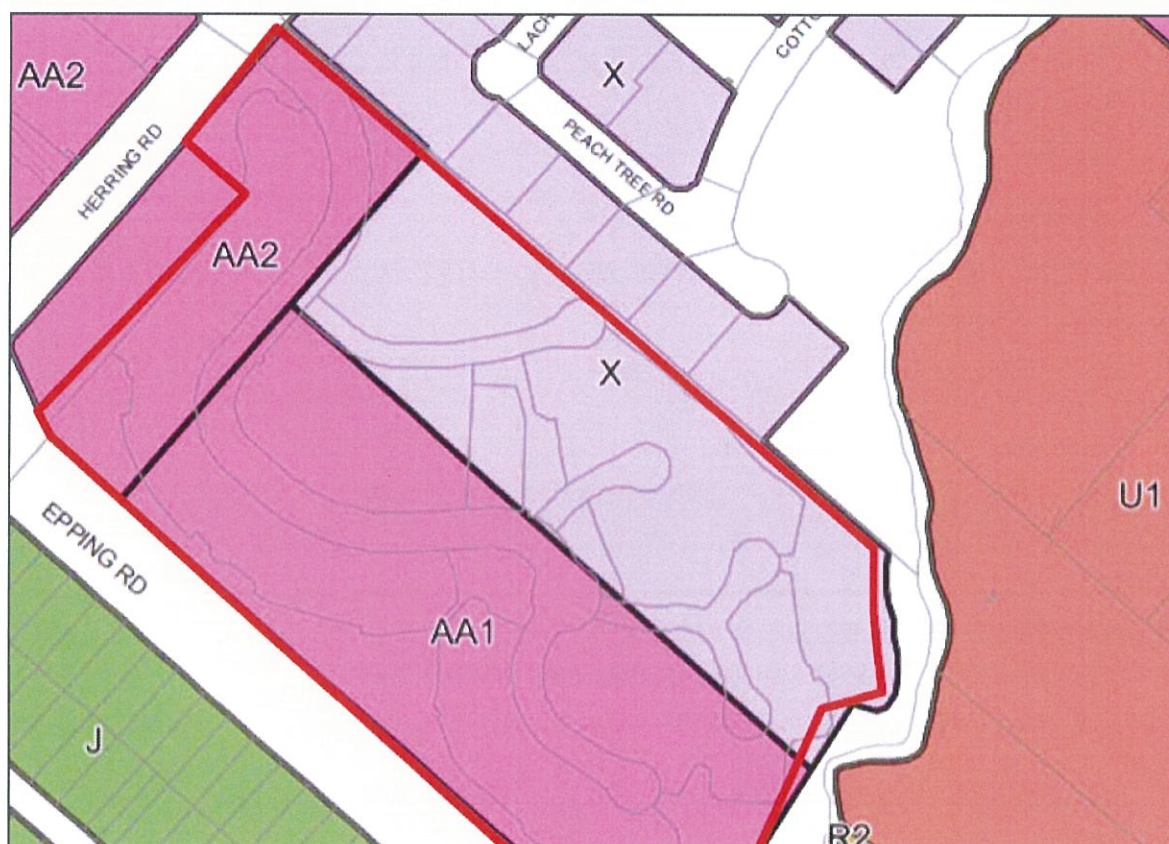
1. Environmental Impact Statement  
<https://www.planningportal.nsw.gov.au/major-projects/project/10141>
2. Submissions  
<https://www.planningportal.nsw.gov.au/major-projects/project/10141>
3. Response to Submissions  
<https://www.planningportal.nsw.gov.au/major-projects/project/10141>
4. Revised Response to Submissions  
<https://www.planningportal.nsw.gov.au/major-projects/project/10141>
5. Additional Information  
<https://www.planningportal.nsw.gov.au/major-projects/project/10141>
6. Independent Design and Traffic Advice  
<https://www.planningportal.nsw.gov.au/major-projects/project/10141>

### Stage 1

1. Environmental Impact Statement  
<https://www.planningportal.nsw.gov.au/major-projects/project/10146>
2. Submissions  
<https://www.planningportal.nsw.gov.au/major-projects/project/10146>
3. Response to Submissions  
<https://www.planningportal.nsw.gov.au/major-projects/project/10146>
4. Additional Information  
<https://www.planningportal.nsw.gov.au/major-projects/project/10146>

## Appendix C – Clause 4.6 Variation: Building Height

The concept proposal seeks a variation to the maximum building height as prescribed by clause 4.3 of the Ryde Local Environmental Plan 2014 (RLEP 2014). Clause 4.3 of the RLEP 2014 requires the height of a building on any land is not to exceed the maximum height shown for the land on the Height of Buildings Map. 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, and 45 m over the remainder of the site (**Figure 1**).



**Figure 1** | Height of Building map extracted from RLEP 2014. Site shown outlined in red. X = 45 m; AA1 = 65 m; AA2 = 75 m (Source: Applicant's EIS)

The proposed development seeks a variation to the maximum building height (**Table 1**) relating to proposed Buildings B3, C3, C4, D2 and D4 (**Figure 23** in **Section 7.2.2**).

**Table 1** | Height of building variation

Location	Permissible building height	Proposed max. building height	Max. 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%



Clause 4.6(2) of the RLEP 2014 permits the consent authority to consider a variation to a development standard imposed by an environmental planning instrument. The aim of clause 4.6 is to provide an appropriate degree of flexibility in applying development standards to achieve better development outcomes. In consideration of the proposed variation, clause 4.6 requires the following:

- (3) *Development consent must not be granted for development that contravenes a development standard unless the consent authority has considered a written request from the applicant that seeks to justify the contravention of the development standard by demonstrating:*
- (a) *that compliance with the development standard is unreasonable or unnecessary in the circumstances of the case, and*
  - (b) *that there are sufficient environmental planning grounds to justify contravening the development standard.*

In accordance with clause 4.6(3), the Applicant has prepared a written request to vary the height of buildings (**Appendix B**).

Clause 4.6(4)(a) requires the consent authority to be satisfied that:

- (i) *the applicant's written request has adequately addressed the matters required to be demonstrated by subclause (3), and*
- (ii) *the proposed development will be in the public interest because it is consistent with the objectives of the particular standard and the objectives for development within the zone in which the development is proposed to be carried out, and*

The Department has considered the proposed exception to the height of buildings development standard under clause 4.6, applying the tests arising from *Randwick City Council v Micaul Holdings Pty Ltd* [2016] NSWLEC 7 (as summarised by *Gabriel Stefanidis v Randwick City Council* [2017] NSWLEC 1307) and *Initial Action Pty Ltd v Woollahra Municipal Council* [2018] NSWLEC 118.

#### 1. Is the consent authority satisfied that the proposed development will be consistent with the objectives of the zone,

The objectives of the B4 Mixed Use zone are as follows:

- to provide a mixture of compatible land uses
- to integrate suitable business, office, residential, retail and other development in accessible locations so as to maximise public transport patronage and encourage walking and cycling
- to ensure employment and educational activities within the Macquarie University campus are integrated with other business and activities
- to promote strong links between Macquarie University and research institutions and businesses within the Macquarie Park corridor.

The Department is satisfied that the proposed development is consistent with the relevant objectives of the B4 Mixed Use zone in RLEP 2014, as:

- the proposed concept development includes a mixture of compatible land uses comprising residential, education, community and retail
- the site is well located in close proximity to existing pedestrian and cycle links, bus stops and Macquarie University Railway Station.

2. Is the consent authority satisfied the proposed development will be consistent with the objectives of the standard,

The objectives of the height of buildings standard are:

- (a) to ensure that street frontages of development are in proportion with and in keeping with the character of nearby development,
- (b) to minimise overshadowing and to ensure that development is generally compatible with or improves the appearance of the area,
- (c) to encourage a consolidation pattern and sustainable integrated land use and transport development around key public transport infrastructure,
- (d) to minimise the impact of development on the amenity of surrounding properties,
- (e) to emphasise road frontages along road corridors.

The Department is satisfied that the proposed development is consistent with the objectives of the height of buildings standard of the RLEP 2014, as:

- 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 vary across the estate and where appropriate would be higher or lower than the height limit to optimise solar access to the public domain and other buildings (**Section 7.2.2**)
  - the elements of Buildings D2 and D4 that exceed the height control by 10 m would be setback between 12 m and 37 m from of Epping Road. In combination with the retained vegetation corridor adjacent to Epping Road, the proposed varied building heights to Buildings D2 and D4 would be visually insignificant (**Section 7.2.6**)
  - the elements of Buildings B3, C4 and D4 that exceed the height control by between 10 m and 30 m would be setback between 5 m and 32 m from the Shrimptons Creek riparian corridor. In combination with the retained vegetation corridor within the riparian corridor, the proposed varied building heights to Buildings B3, C4 and D4 would be visually insignificant (**Section 7.2.6**)
  - Building C3 and the part of Building C4 that exceed the height control by 10 m are located away from the estate boundaries, with taller buildings notably located between these buildings and Epping Road and Shrimptons Creek. The visual impact of these proposed varied building heights would therefore be negligible (**Section 7.2.6**)
  - overshadowing would not adversely impact the surrounding area or neighbouring residential properties (**Section 7.3.1**)
  - the Ivanhoe Estate is appropriately located in relation to key public transport infrastructure (**Section 7.6**)
  - the impact of the proposed development on the amenity of surrounding properties would be acceptable (**Section 7.3**)
  - the proposed concept plan building heights appropriately emphasise the Herring Road and Epping Road frontages whilst incorporating appropriate setbacks (**Section 7.2.4**)
  - the concept proposal will achieve a high-quality public domain and landscape outcome, including an enhanced interface to Shrimptons Creek through provision of a larger buffer area than required by Council's DCP. The concept plan includes deep soil areas over 22.2% of the site, significantly in excess of the ADG recommendation of 7%. This enhances the landscape setting of the site and surrounds whilst limiting the footprint of the building envelopes.
3. Has the consent authority considered a written request that demonstrates compliance with the development standard is unreasonable or unnecessary in the circumstances of the case and they are satisfied that the matters required to be demonstrated have adequately been addressed



The Applicant demonstrates that compliance with the development standard is unreasonable or unnecessary in the circumstances of the case, having regard to the five tests outlined in *Wehbe v Pittwater Council* [2007] NSWLEC 827. It establishes that compliance with the development standard is unreasonable or unnecessary in the circumstances, as the proposed development achieves the objectives of the standard and accordingly justifies the variation to the height control, meeting the first test outlined in *Wehbe*.

The Department supports the Applicant's conclusions that the proposed development achieves the objectives of the standard. Compliance with the development standard is unnecessary in this case as the objectives of the height standard are still achieved and unreasonable as no purpose is served by requiring strict compliance.

Having considered the Applicant's written request, the Department is satisfied that the Applicant has adequately addressed that compliance with the development standard is unreasonable or unnecessary in the circumstances of the case.

**4. Has the consent authority considered a written request that demonstrates there are sufficient environmental planning grounds to justify contravening the development standard and with the Court the matters required to be demonstrated have adequately been addressed.**

The Applicant's written request justifies contravention of the development standard on the following environmental planning grounds:

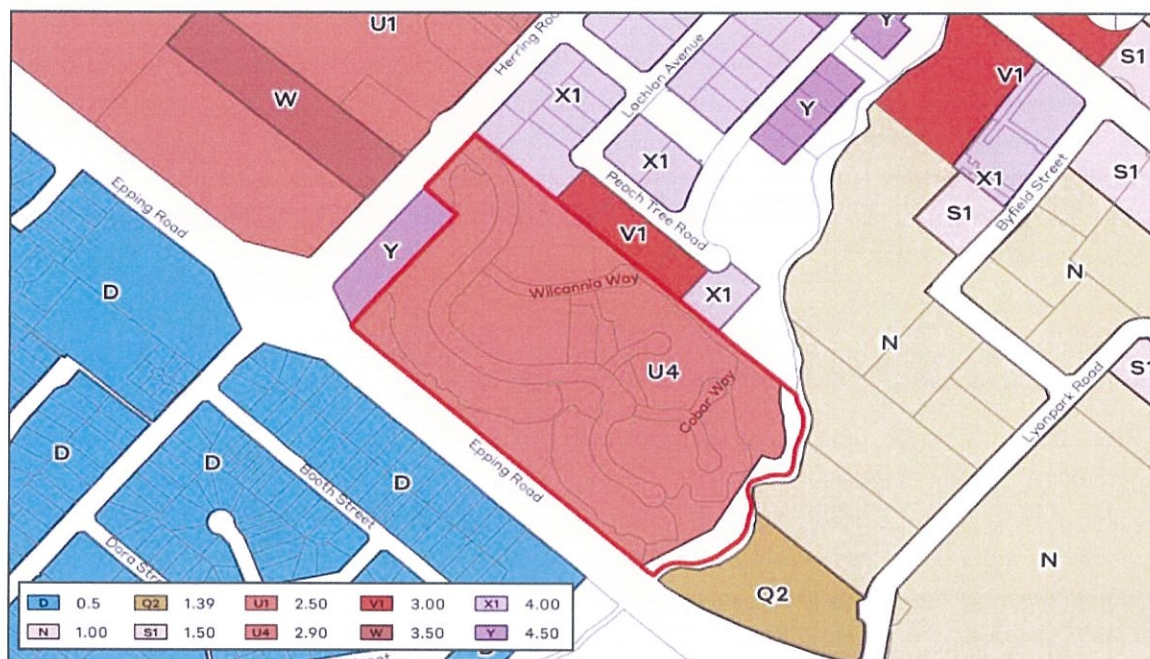
- noting the original exhibited concept proposal fully complied with the height controls, the proposed variations are a direct response to submissions made during exhibition to minimise the impact of the development on the amenity of surrounding properties and to enhance amenity within the site
- the total additional volume created by the additional building height is 64,573 m<sup>3</sup>. However, the volume removed by not extending Buildings A2, A3, B1.1, C2 and C3 to their full permissible height envelope is 131,441 m<sup>3</sup>; a net volume reduction of 66,868 m<sup>3</sup>
- 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
- 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
- repositioning of height towards Shrimptons Creek where the additional height will not result in undue environmental impact to nearby residential properties represents a better environmental planning outcome
- the height exceedance will not cause additional shadowing to be cast over Shrimptons Creek or any nearby residential properties when compared to a compliant development
- the visual impact of the height exceedance would be acceptable, particularly from viewpoints along Epping Road
- 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.

Having considered the Applicant's written request and further to the Department's assessment of height in **Section 7.2.2**, the Department is satisfied the Applicant has adequately addressed there are sufficient environmental planning grounds to justify the contravention of the development standard and the matters required to be demonstrated have adequately been addressed. The Department therefore concludes that the Applicant's written request adequately addresses the matters required to be demonstrated under clause 4.6 of the RLEP 2014 and the proposed development will be in the public interest because it is consistent with the objectives of the building height standard and the objectives for development within the zone.



## Appendix D – Clause 4.6 Variation: Floor Space Ratio

The concept proposal seeks a variation to the maximum floor space ratio (FSR) as prescribed by clause 4.4 of the Ryde Local Environmental Plan 2014 (RLEP 2014). Clause 4.4 of the RLEP 2014 requires the FSR for a building on any land is not to exceed the maximum FSR shown for the land on the Floor Space Ratio Map (**Figure 2**). For the purposes of FSR, the site area is calculated as 78,680 m<sup>2</sup> which is the B4 portion of the site.



**Figure 2** | Floor space ratio extracted from the RLEP 2014. Site shown outlined in red (Source: Applicant's EIS)

Under clause 4.4 of the RLEP 2014, an FSR of 2.9:1 applies to the B4 zone (**Figure 20**). This equates to a maximum GFA of 228,172 m<sup>2</sup>.

The concept proposal however benefits from an automatic FSR bonus under the Affordable Rental Housing SEPP (ARH SEPP). The proposal includes 72,999 m<sup>2</sup> of affordable housing. Based on the formula contained in the ARH SEPP, this generates an automatic FSR bonus of 0.38:1 (an additional GFA of 29,898 m<sup>2</sup>). The applicable FSR for the site is therefore 3.28:1 (GFA of 261,217 m<sup>2</sup>) (**Table 2**).

The Applicant is seeking a further 9,930 m<sup>2</sup> (3.8%) of GFA (total of 268,000 m<sup>2</sup>) which equates to an FSR of 3.4:1. A breakdown of the proposed GFA/FSR is provided in **Table 10** in **Section 7.2.3**.

**Table 2** | Permissible and proposed FSR

Location	FSR	Site Area (m <sup>2</sup> )	GFA (m <sup>2</sup> )
B4 zoned land	2.9:1	78,680	228,172
ARH SEPP bonus	0.42:1	78,680	29,898
<b>Total Permissible</b>	<b>3.28:1</b>	-	<b>258,070</b>
<b>Total Proposed</b>	<b>3.4:1</b>	-	<b>268,000</b>

Clause 4.6(2) of the RLEP 2014 permits the consent authority to consider a variation to a development standard imposed by an environmental planning instrument. The aim of clause 4.6 is to provide an appropriate degree of flexibility in applying development standards to achieve better development outcomes. In consideration of the proposed variation, clause 4.6 requires the following:



- (3) *Development consent must not be granted for development that contravenes a development standard unless the consent authority has considered a written request from the applicant that seeks to justify the contravention of the development standard by demonstrating:*
- (a) *that compliance with the development standard is unreasonable or unnecessary in the circumstances of the case, and*
  - (b) *that there are sufficient environmental planning grounds to justify contravening the development standard.*

In accordance with clause 4.6(3), the Applicant has prepared a written request to vary the FSR development standard (**Appendix B**).

Clause 4.6(4)(a) requires the consent authority to be satisfied that:

- (i) *the applicant's written request has adequately addressed the matters required to be demonstrated by subclause (3), and*
- (ii) *the proposed development will be in the public interest because it is consistent with the objectives of the particular standard and the objectives for development within the zone in which the development is proposed to be carried out, and*

The Department has considered the proposed exception to the FSR development standard under clause 4.6, applying the tests arising from *Randwick City Council v Micaul Holdings Pty Ltd* [2016] NSWLEC 7 (as summarised by *Gabriel Stefanidis v Randwick City Council* [2017] NSWLEC 1307) and *Initial Action Pty Ltd v Woollahra Municipal Council* [2018] NSWLEC 118.

**1. Is the consent authority satisfied that the proposed development will be consistent with the objectives of the zone,**

The objectives of the B4 Mixed Use zone are as follows:

- to provide a mixture of compatible land uses
- to integrate suitable business, office, residential, retail and other development in accessible locations so as to maximise public transport patronage and encourage walking and cycling
- to ensure employment and educational activities within the Macquarie University campus are integrated with other business and activities
- to promote strong links between Macquarie University and research institutions and businesses within the Macquarie Park corridor.

The Department is satisfied that the proposed development is consistent with the relevant objectives of the B4 Mixed Use zone in RLEP 2014, as:

- the proposed concept development includes a mixture of compatible land uses comprising residential, education, community and retail
- the site is well located in close proximity to existing pedestrian and cycle links, bus stops and Macquarie University Railway Station.

**2. Is the consent authority satisfied the proposed development will be consistent with the objectives of the standard,**

The objectives of the FSR standard are:

- (a) to provide effective control over the bulk of future development
- (b) to allow appropriate levels of development for specific areas
- (c) in relation to land identified as a Centre on the Centres Map – to consolidate development and encourage sustainable development patterns around key public transport infrastructure.

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

- the proposed master plan building envelopes and Design Guidelines (**Section 7.2.7**) would ensure the development of the Ivanhoe Estate will 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 FSRs that apply to adjoining sites, which include 4:1 and 4.5:1 and therefore will not produce a built form that is out of character with surrounding development
- at street level, buildings will be proposed at a 2 to 4 storey scale using townhouse typologies to provide an active streetscape and provide a human scale for pedestrians
- the proposed FSR variation will not prevent the achievement of appropriate levels of solar access to future dwellings, will not result in greater overshadowing of nearby residential properties compared to a compliant development and would have acceptable visual impacts
- the concept proposal is consistent with the desired outcomes derived from the strategic planning framework for Macquarie Park and the Herring Road Priority Precinct
- 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 further 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 7.8**.

**(d) Has the consent authority considered a written request that demonstrates compliance with the development standard is unreasonable or unnecessary in the circumstances of the case and they are satisfied that the matters required to be demonstrated have adequately been addressed**

The Applicant demonstrates that compliance with the development standard is unreasonable or unnecessary in the circumstances of the case, having regard to the five tests outlined in *Wehbe v Pittwater Council* [2007] NSWLEC 827. It establishes that compliance with the development standard is unreasonable or unnecessary in the circumstances, as the proposed development achieves the objectives of the standard and accordingly justifies the variation to the height control, meeting the first test outlined in *Wehbe*.

The Department supports the Applicant's conclusions that the proposed development achieves the objectives of the standard. Compliance with the development standard is unnecessary in this case as the objectives of the FSR standard are still achieved and unreasonable as no purpose is served by requiring strict compliance.

Having considered the Applicant's written request, the Department is satisfied that the Applicant has adequately addressed that compliance with the development standard is unreasonable or unnecessary in the circumstances of the case.

**(e) Has the consent authority considered a written request that demonstrates there are sufficient environmental planning grounds to justify contravening the development standard and with the Court the matters required to be demonstrated have adequately been addressed.**

The Applicant's written request justifies contravention of the development standard on the following environmental planning grounds:

- the concept proposal contains 6,751 m<sup>2</sup> of community benefit land uses, including a new school, childcare centres, Mission Australia offices and community centres. 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 m<sup>2</sup> 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 m<sup>2</sup> of seniors housing is nevertheless proposed within Buildings B1.1 and B1.2 (50% equals 4,892 m<sup>2</sup>). A further 43 of the 259 social dwellings within Building C1 would be occupied by seniors or people with a disability
- the concept proposal includes rehabilitation of the Shrimptons Creek riparian corridor, a 4,150 m<sup>2</sup> area of RE1 Public recreation zoned land (adjacent to Shrimptons Creek) and a 99 m<sup>2</sup> area of B7 zoned land (**Figure 23**). 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 that the land would 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 2.9:1 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 also considers the numerical justification provided by the Applicant to be well founded, noting the concept proposal includes:

- 9,785 m<sup>2</sup> of desirable seniors housing which would benefit from a 0.5:1 FSR bonus (plus 1,200 m<sup>2</sup> of GFA for on-site support services) if proposed as part of a standalone development application
- includes significant rehabilitation works to the 4,150 m<sup>2</sup> area of RE1 Public recreation zoned land adjacent to Shrimptons Creek which will be dedicated to Council
- 5,458 m<sup>2</sup> of community benefit land uses.

Having considered the Applicant's written request and further to the Department's assessment of FSR in **Section 7.2.3**, the Department is satisfied the Applicant has adequately addressed there are sufficient environmental planning grounds to justify the contravention of the development standard and the matters required to be demonstrated have adequately been addressed. The Department therefore concludes that the Applicant's written request adequately addresses the matters required to be demonstrated under clause 4.6 of the RLEP 2014, and the proposed development will be in the public interest because it is consistent with the objectives of the FSR standard and the objectives for development within the zone.

## Appendix E – Statutory Considerations

In line with the requirements of section 4.15 of the EP&A Act, the Department's assessment of the project has provided a detailed consideration to a number of statutory requirements. These include:

- the objects found in section 1.3 of the EP&A Act; and
- the matters listed under section 4.15(1) of the EP&A Act, including applicable environmental planning instruments and regulations.

The Department has considered all of these matters in its assessment of the project and has provided a summary of this assessment in **Table 3** below.

**Table 3** | Objects of the EP&A Act

Objects of the EP&A Act	Summary
(a) to promote the social and economic welfare of the community and a better environment by the proper management, development and conservation of the State's natural and other resources	<p>The proposed redevelopment of the Ivanhoe Estate would promote the social and economic welfare of the community through the delivery of increased affordable, social and private housing. In addition, there would be improved community facilities, through-site links/accessibility and public domain outcomes. Environmental impacts would be balanced by ecologically sensitive design, replacement tree planting and landscaping works.</p>
(b) to facilitate ecologically sustainable development by integrating relevant economic, environmental and social considerations in decision-making about environmental planning and assessment	<p>The concept proposal seeks to achieve the following three key sustainability targets:</p> <ul style="list-style-type: none"> <li>• 5 Star Green Star Design and As Built v1.1</li> <li>• 6 Star Green Star Communities v1</li> <li>• deliver a private embedded electrical and hot water network.</li> </ul> <p>These commitments would be achieved across the staging and delivery of the development, including initiatives to address the management and maintenance of buildings, selection of construction materials, demand for resources, use of sustainable modes of transport, impacts on the local ecosystem, emissions and general community wellbeing.</p> <p>The Department has considered the concept proposal in relation to the ESD principles. The Precautionary and Inter-generational Equity Principles have been applied in the decision-making process by a thorough assessment of the environmental impacts of the project. Overall, the concept proposal is generally consistent with ESD principles and the Department is satisfied the proposed sustainability initiatives will encourage ESD, in accordance with the objects of the EP&amp;A Act.</p> <p>The proposed Stage 1 buildings (A1 and C1) have been designed to achieve a 5-Star Green Star rating and include the following ESD initiatives and sustainability measures:</p> <ul style="list-style-type: none"> <li>• roof top solar panels</li> </ul>



	<ul style="list-style-type: none"> <li>• high efficiency centralised hot water</li> <li>• smart metering technology</li> <li>• the provision and use of gas to be minimised.</li> </ul>
(c) to promote the orderly and economic use and development of land	The proposed land uses are permissible ( <b>Section 4.2</b> ). The merits of the proposal are considered in <b>Section 7</b> of this report.
(d) to promote the delivery and maintenance of affordable housing	The concept proposal would provide a minimum of 128 affordable housing dwellings in addition to approximately 950 social housing dwellings. The Stage 1 application includes 259 social housing dwellings.
(e) to protect the environment, including the conservation of threatened and other species of native animals and plants, ecological communities and their habitats	<p>The concept proposal involves redevelopment of an existing residential estate. The Applicant contended the proposal seeks to protect and maintain native vegetation where possible, but would unavoidably involve the removal of 343 trees, including 0.02 hectares of Sydney Turpentine-Ironbark Forest (STIF) (<b>Section 7.7</b>). This is in addition to 510 trees and 0.03 hectares of STIF approved to be removed under Part 5 of the EP&amp;A Act. The Stage 1 application seeks approval for the physical removal of the trees.</p> <p>The Department considers the redevelopment of the site, consistent with the applicable planning controls, would unavoidably result in the loss of a large number of trees. The Department considers the revised concept proposal has minimised tree loss and biodiversity impacts where viable. Suitable offsets, including the planting of 950 trees are proposed and the purchase and retirement of 16 ecosystem credits in accordance with the applicable environmental offsets policy.</p>
(f) to promote the sustainable management of built and cultural heritage (including Aboriginal cultural heritage)	The concept and Stage 1 proposals would not have an adverse impact on any built heritage items or conservation areas. There is also negligible to low potential for Aboriginal archaeological sites or historical relics to be present on site ( <b>Section 7.9</b> ).
(g) to promote good design and amenity of the built environment	<p>The likely design and amenity impacts of the proposed concept plan estate layout and building envelopes on the surrounding environment are considered in <b>Section 7.2</b>.</p> <p>The proposed Stage 1 buildings would achieve good design and amenity outcomes (<b>Section 7.2</b>).</p>
(h) to promote the proper construction and maintenance of buildings, including the protection of the health and safety of their occupants	Consideration of construction impacts is provided in <b>Section 7.9</b> .

- (i) to promote the sharing of the responsibility for environmental planning and assessment between the different levels of government in the State
- The proposals are SSD and therefore the Minister is the consent authority. The Department consulted with Council and other relevant agencies on the concept and Stage 1 proposals.
- (j) to provide increased opportunity for community participation in environmental planning and assessment.
- Sections 5 and 6** of this report sets out details of the Department's public exhibition of the concept and Stage 1 proposals.

**Table 4** | Section 4.15(1) Matters for consideration

Section 4.15(1) Evaluation	Summary
(a)(i) any environmental planning instrument	The proposed development is permissible under the provisions of RLEP 2014 ( <b>Section 4.2</b> ). The Department's consideration of other relevant EPIs is provided below.
(a)(ii) any proposed instrument	Not applicable.
(a)(iii) any development control plan	Under clause 11 of the SRD SEPP, development control plans (DCPs) do not apply to SSD. Notwithstanding, consideration has been given to the Ryde Development Control Plan 2014 (RDCP 2014) where relevant.
(a)(iia) any planning agreement	Not applicable.
(a)(iv) the regulations <i>Refer Division 8 of the EP&amp;A Regulation</i>	The application satisfactorily meets the relevant requirements of the <i>Environmental Planning and Assessment Regulation 2000</i> (EP&A Regulation), including the procedures relating to applications (Part 6), public participation procedures for SSD and Schedule 2 of the EP&A Regulation relating to EIS.
(a)(v) any coastal zone management plan	Not applicable.
(b) the likely impacts of that development including environmental impacts on both the natural and built environments, and social and economic impacts in the locality,	Appropriately mitigated or conditioned - refer to <b>Section 7</b> of this report.
(c) the suitability of the site for the development	The site is suitable for the development as addressed in <b>Sections 4 and 7</b> of this report.
(d) any submissions	Consideration has been given to the submissions received during the EIS and RTS exhibition periods for both applications. See <b>Sections 5 and 6</b> and <b>Appendix F</b> of this report.
(e) the public interest	Refer to <b>Section 7</b> of this report.
Biodiversity values exempt if:	Refer to <b>Section 7.7</b> of this report.
(a) On biodiversity certified land	
(b) Biobanking Statement exists	



### **Biodiversity Conservation Act 2016 (BC Act)**

The site contains 1.64 hectares of Sydney Turpentine-Ironbark Forest (STIF) which is a critically endangered ecological community (CEEC) under the BC Act. The concept proposal involves the removal of 0.02 hectares of STIF while the Part 5 demolition approval involves the removal of 0.03 hectares of STIF (**Section 7.7**).

The BC Act replaced the *Threatened Species Conservation Act 1995* (TSCA) and related parts of the EP&A Act in regard to impact assessment of listed threatened species and communities and details the scheme that replaces Biobanking.

However, as substantial and detailed environmental assessment had been undertaken in accordance with the TSCA prior to commencement of the BC Act in August 2017, the concept proposal constitutes an interim planning application under, and in accordance with, the savings and transitional provisions set out in the *Biodiversity Conservation (Savings and Transitional) Regulation 2017*. The concept proposal has therefore been assessed against the TSCA and associated NSW Biodiversity Offsets Policy for Major Projects and the Framework for Biodiversity Assessment. The Stage 1 application proposes the physical removal of the trees consistent with the concept proposal.

### **Threatened Species Conservation Act 1995 (TSCA)**

The TSCA protects and encourages the recovery of threatened species, populations and communities listed under the Act. The STIF is identified as a threatened ecological community under the TSCA.

EESG have confirmed the proposed removal of 0.05 hectares of STIF (which includes 0.03 hectares to be removed as part of the Part 5 demolition approval) under the TSCA and associated Biodiversity Offsets Policy for Major Projects and the Framework for Biodiversity Assessment, is acceptable subject to preparation of a Biodiversity Management Plan, Vegetation Management Plan, Weed Management Plan, Construction Environment Management Plan and Biodiversity Offsets Plan (**Sections 5.7, 6.5 and 7.7**).

The Department considers the concept proposal satisfies the provisions of the TSCA, subject to the conditions recommended by EESG and Council.

### **Environment Protection and Biodiversity Conservation Act 1999 (Commonwealth) (EPBC Act)**

The 1.64 hectares of STIF on the site is a CEEC under the EPBC Act. The Applicant accordingly referred the proposed concept redevelopment to the Commonwealth. The Commonwealth have confirmed the proposed works do not constitute a Matter of National Environmental Significance. The issue of tree removal and ecological impact is considered in **Section 7.7**.

### **Environmental Planning Instruments (EPIs)**

#### **State Environmental Planning Policy (State and Regional Development) 2011 (SRD SEPP)**

The concept proposal is State significant development under clause 10 of Schedule 2 of the SRD SEPP as it comprises development of an identified LAHC site (the Ivanhoe Estate), by or on behalf of LAHC, and has a CIV in excess of \$30 million.

#### **State Environmental Planning Policy (Infrastructure) 2007**

The Infrastructure SEPP (ISEPP) aims to facilitate the effective delivery of infrastructure across the State by improving regulatory certainty and efficiency, identifying matters to be considered in the assessment of development adjacent to particular types of infrastructure development, and providing for consultation with relevant public authorities about certain development during the assessment process.

The proposed development has a frontage to a classified road (Epping Road) and is subject to assessment under Clause 101 and 102 of the ISEPP. The proposed vehicle access, upgrade works, and the safety, efficiency and

ongoing operation of the classified road is considered appropriate within the context of the site. The Department also considers the proposed concept development has appropriately considered potential traffic noise and vehicle emission impacts.

Under Clause 104 and Schedule 3 of the ISEPP, the proposed concept development constitutes a traffic generating development and requires referral to RMS for comment.

The proposals were referred to Transport for NSW (TfNSW) and TfNSW (RMS) and their comments are summarised in **Sections 5** and **6** of this report. The Department considers the proposed concept and Stage 1 developments to be consistent with the ISEPP given the consultation and consideration of the issues raised by TfNSW and TfNSW (RMS) have been undertaken in the Department's assessment in **Section 7.6** of this report and recommended conditions of consent (**Appendix I**).

### **State Environmental Planning Policy No. 55 - Remediation of Land**

SEPP 55 aims to ensure potential contamination issues are considered in the determination of a development application. SEPP 55 requires the consent authority to consider whether the land is contaminated, and if so, whether the land is suitable for the purposes of the proposed development.

Numerous site investigations have been undertaken for the Ivanhoe Estate, including a Detailed Site investigation (DSI) in 2016 and a Supplementary Site Investigation (SSI) in 2018. The investigations found limited evidence of historic contaminating activities across the site. Contaminants of potential concern were reported at levels less than the relevant assessment criteria, with the exception of petroleum hydrocarbons which exceeded the health and ecological screening levels in one sample location towards the centre of the site (borehole 8).

The DSI concludes the area in the vicinity of borehole 8 is not currently suitable for the proposed redevelopment but can be made suitable with further assessment and implementation of an appropriate remediation strategy. This would include:

- preparation of a Remedial Action Plan (RAP) for the site
- remediation of the site, including excavation and appropriate off-site disposal of contaminated soils
- preparation of a Site Validation Report.

Council and the Environment Protection Authority (EPA) have raised no concerns in relation to contamination subject to future detailed applications including a DSI. The EPA have also recommended specific conditions in relation to the Stage 1 application, including provision of a Section A Site Audit Statement following completion of remediation and validation work, certifying suitability of the site for the proposed use.

The Department is satisfied the site is suitable with regard to the provisions of SEPP 55 for the proposed concept redevelopment, subject to a condition requiring all future detailed applications include a specific DSI demonstrating the site is suitable for the proposed use, or that the site can be remediated to the extent necessary for the proposed use. The Department is further satisfied the Stage 1 site is suitable for the proposed development subject to conditions as recommended by the EPA. Contamination is considered in **Section 7.9** of this report.

#### Draft Remediation of Land State Environmental Planning Policy

The Department is reviewing all State Environmental Planning Policies to ensure they remain effective and relevant and SEPP 55 has been reviewed as part of that program. The Department recently published the draft Remediation of Land State Environmental Planning Policy (Remediation SEPP), which was exhibited until April 2018.

Once adopted, the Remediation SEPP will retain elements of SEPP 55, and add the following provisions to establish a modern approach to the management of contaminated land:

- require all remediation work that is to be carried out without development consent, to be reviewed and certified by a certified contaminated land consultant
- categorise remediation work based on the scale, risk and complexity of the work



- require environmental management plans relating to post-remediation management or ongoing management of on-site to be provided to Council.

The new SEPP will not include any strategic planning objectives or provisions. Strategic planning matters will instead be dealt with through a direction under section 117 of the EP&A Act.

The Department considers the proposed concept and Stage 1 development are consistent with the draft Remediation SEPP subject to the recommended conditions discussed above.

### State Environmental Planning Policy No. 65 – Design Quality of Residential Apartment Development (SEPP 65)

SEPP 65 seeks to improve the design quality of residential developments and encourage innovative design. The Apartment Design Guide (ADG) is closely linked to the principles of SEPP 65 and sets out best practice design principles for residential developments. The Department has assessed the proposals against the design quality principles of SEPP 65 in **Table 5** below:

**Table 5** | Department's consideration of the design quality principles of SEPP 65

SEPP 65 – Design Quality Principles	Department's Response
1. Context and Neighbourhood Character	<p>The concept and Stage 1 proposals are consistent with the existing and desired future character of the area as discussed in <b>Section 7.2</b>.</p> <p>The proposals would result in increased density as provided for by the planning controls for the site and would have acceptable impacts on the amenity of existing and future neighbouring development.</p>
2. Built form and scale	<p>The concept proposal seeks to vary the maximum height and FSR controls under RLEP 2014. However, the Department considers the height and scale of the proposed building envelopes are appropriate within the context of the site and the desired future character for the Herring Road Priority Precinct (<b>Section 7.2</b>). The future built form is considered in <b>Section 7.3</b>.</p> <p>The Stage 1 buildings comply with the RLEP height controls and would achieve an acceptable built form, scale and design outcome as discussed in <b>Section 7.2</b>.</p>
3. Density	The concept and Stage 1 proposals would be of an appropriate density for the site ( <b>Section 7.2</b> ).
4. Sustainability	A Sustainability Strategy was submitted with the concept plan EIS and Stage 1 EIS. ESD is considered in <b>Table 1</b> above.
5. Landscape	The proposed redevelopment would provide significant landscaped areas, including 22,138 m <sup>2</sup> (26.7% of the site area) of deep soil planting ( <b>Sections 7.2.5</b> and <b>7.5</b> ).
6. Amenity	The Department considers the concept and Stage 1 proposals satisfy the principles of SEPP 65 and the intent of the ADG in terms of potentially achieving a high level of residential amenity for future residents ( <b>Section 7.4</b> and <b>Table 6</b> below).

## 7. Safety

The concept and Stage 1 proposals have incorporated the following Crime Prevention Through Environmental Design (CPTED) principles (**Section 7.9**). A condition requires future detailed development stages to incorporate CPTED principles in their design.

## 8. Housing diversity and social interaction

The concept proposal includes 950 social housing and 128 affordable housing dwellings which would provide a home for people in need. These would be combined with over 2,200 market dwellings to provide a diverse and integrated range of dwelling types and sizes. The Stage 1 application includes 259 social housing dwellings.

Measures to facilitate social interaction and inclusion among future residents are considered in **Section 7.9**.

## 9. Aesthetics

The concept proposal seeks approval for building envelopes only (**Section 7.2**). The aesthetics of the future buildings will be considered at the future detailed development stages.

The Department considers the proposed Stage 1 buildings achieve a high standard of architectural design and include an effective palette of materials and finishes that appropriately articulate the form of each building (**Section 7.2.7**).

Consideration of the concept proposal against the relevant best practice design principles of the ADG has been provided in **Sections 7.3** and **7.8** and in **Table 6** below. Future residential stages will be subject to a detailed assessment against the ADG best practice design principles.

**Table 6** | Department's consideration of ADG best practice design principles

ADG – Relevant Criteria	Proposal
	<u>Concept</u>
<b>3A Site Analysis</b>	<ul style="list-style-type: none"><li>The concept proposal is informed by an urban design report which identifies the likely visual impacts of the future development and the appropriateness of the future built form with respect to the evolving character of the area (<b>Section 7.2</b>).</li></ul>
<ul style="list-style-type: none"><li>Site analysis illustrates design decisions have been based on opportunities and constraints of the site conditions and their relationship to the surrounding context.</li></ul>	<u>Stage 1</u>
	<ul style="list-style-type: none"><li>The Stage 1 application is informed by an urban design report which includes an analysis of each building within the context of the proposed concept plan.</li></ul>
	<u>Concept</u>
<b>3B Orientation</b>	<ul style="list-style-type: none"><li>The concept proposal incorporates an appropriate building envelope layout which would allow future buildings to address the new</li></ul>



- Building types and layouts respond to the streetscape and site while optimising solar access within the development.
- Overshadowing of neighbouring properties is minimised during mid-winter.

street network, optimise solar access and minimise overshadowing of neighbouring properties (**Sections 7.2 and 7.3**).

#### Stage 1

- Buildings A1 and C1 are appropriately orientated to respond to the streetscape, optimise solar access and minimise overshadowing of neighbouring properties (**Sections 7.2 and 7.3**).

#### Concept

- The proposed building envelope layouts and distribution of uses have been designed to provide future active frontages at street level and to facilitate pedestrian movements in and around the estate.
- The public domain would be significantly enhanced through the proposed redevelopment (**Sections 7.2 and 7.5**).

### **3C Public Domain Interface**

- Transition between public/private domain is achieved without compromising safety and security.
- Amenity of the public domain is retained and enhanced.

#### Stage 1

- Each of the proposed buildings include an acceptable transition between the public and private domains. Building A1 includes a large forecourt/public area adjacent to the main lobby fronting Main Street while Building C1 includes public open space on the north-western side between the communal open space and Main Street.
- Passive surveillance of the public domain would be available from balconies, windows and communal open space.

### **3D Communal and Public Open Space**

- Communal open space has a minimum area equal to 25% of the site.
- Minimum 50% direct sunlight to principal usable part of the communal open space for a minimum of two hours in mid-winter.
- Communal open space is designed to allow for a range of activities and to maximise safety.
- Public open space should be well connected with nearby parks and other landscape elements.

#### Concept

- The Design Guidelines require each lot to provide a mix of public and communal open space with a minimum combined area equal to 25% of the area of each lot (except Building A1 if it provides a ground level childcare centre). In addition to this requirement, 27,627 m<sup>2</sup> (33.4% of the site) would be provided as public open space within the estate, separate from the individual lots (**Section 7.2.5**).
- The location of the future building envelopes has been considered in relation to maximising solar access to proposed communal and public open

space areas. The RRTS Solar Access and Shadow Analysis demonstrates 85% of the 5,551 m<sup>2</sup> Village Green public open space would receive a minimum of two hours solar access in midwinter. In addition, 66% of the 1,009 m<sup>2</sup> Forest Playground would also receive over two hours of solar access in midwinter (**Section 7.5.1**).

- The quantum of communal open space and associated solar access for each building will be considered as part of the assessment of future detailed applications.

#### Stage 1

- No communal open space is proposed within Building A1. The Department considers this acceptable as it is consistent with the Concept Plan and the Design Guidelines (**Section 7.2.5**).
- Building C1 includes 15.6% (864 m<sup>2</sup>) of communal open space which would receive over two hours solar access in midwinter. 852 m<sup>2</sup> of public open space is also proposed within the C1 site, providing 31% of the site as open space (**Section 7.4.2**).

#### Concept

- The concept proposal provides 22.2% (18,288 m<sup>2</sup>) of the site area (82,789 m<sup>2</sup>) as deep soil zones (**Section 7.2.5**). Including a further 3,800 m<sup>2</sup> of deep soil located within the RE1 zone adjacent to Shrimptons Creek, this increases to 22,138 m<sup>2</sup> (26.7%).
- The proposed Design Guidelines include a minimum requirement of 20% of the overall site area to be areas of deep soil, excluding the RE1 zoned land.
- The quantum of deep soil zones for each individual building will be considered as part of the assessment of future detailed applications.

#### Stage 1

- As basement parking fully occupies both site areas and consistent with the concept plan, Buildings A1 and C1 do not contain deep soil zones (**Sections 7.2.5 and 7.6**).

### **3E Deep Soil Zones**

- For sites greater than 1,500 m<sup>2</sup>, a minimum of 7% of the site with a minimum dimension of 6 m should provide for deep soil zone(s).



### 3F Visual Privacy

- Minimum separation distance from building to side and rear boundaries:

Height	Habitable rooms and balconies	Non-habitable rooms
Up to 12m (4 storeys)	6m	3m
Up to 25m (5-8 storeys)	9m	4.5m
Over 25m (9+ storeys)	12m	6m

### 3G Pedestrian Access to Entries

- Building entries and pedestrian access connects to and addresses the public domain.
- Access, entries and pathways are accessible and easy to identify.
- Large sites provide pedestrian links for access to streets and connection to destinations.

### Concept

- The proposed future building envelope for Building A1 does not comply fully with ADG setback recommendations to the approved apartment buildings at 137-143 Herring Road. The issue of building separation/visual privacy to neighbouring sites is considered in **Section 7.2.4**.
- The proposed future building envelopes also do not fully comply with the ADG setback recommendations between Buildings A1 and A2 and between Buildings A2 and A3. The issue of building separation/visual privacy within the proposed estate is considered in **Section 7.4.1**.

### Stage 1

- Building A1 complies with the ADG building separation recommendations with the exception of the setback to the future Building A2 (**Section 7.4.2**).
- The roof of the Building A1 carpark extends to the boundary with 137-143 Herring Road and forms the outdoor area of the proposed childcare centre. The ground level of the play area is 6 m below the ground level of 137-143 Herring Road. Appropriate landscaping can be provided on the boundary to further ensure privacy between the two buildings (**Section 7.2.4**).
- Building C1 satisfies all ADG building separation recommendations.

### Concept

- Indicative drawings illustrate the proposed future buildings would be able to incorporate entries that address the public domain and connect easily with the proposed pedestrian network.
- The concept proposal includes new and improved pedestrian links (**Section 7.2**).

### Stage 1

- Building A1 has entries from Herring Road on the western side and from the new Main Street on the northern side.

- Building C1 has entries from Main Street, the communal open space fronting Main Street, and from the neighbourhood street on the eastern side of the building.
- The entries to both buildings address the public domain, are accessible and easy to identify.

### 3H Vehicle Access

- Vehicle access points are to be designed to achieve safety, minimise conflicts between pedestrians and vehicles and create high-quality streetscapes.

#### Concept

- All residential blocks would be provided with basement car parking. The majority of blocks would also be serviced from below ground loading areas, accessed from the proposed new estate road network.

#### Stage 1

- Both Buildings A1 and C1 would have single vehicle access points onto Neighbourhood Street No.2. These access points would minimise conflicts between pedestrians and vehicles and would allow for the creation of a high-quality streetscape.

### 3J Bicycle and Car Parking

- Car parking is provided based on proximity to public transport in metropolitan Sydney and centres in regional areas.
  - For development in the following locations:
    - on sites that are within 800 metres of a railway station or light rail stop in the Sydney Metropolitan Area or
    - on land zoned, and sites within 400 metres of land zoned, B3 Commercial Core, B4 Mixed Use or equivalent in a nominated regional centre
  - the minimum car parking requirement for residents and visitors is set out in the Guide to Traffic Generating Developments, or the car parking requirement prescribed by the relevant council, whichever is less

#### Concept

- With the exception of visitor parking, the concept proposal includes future car parking and bicycle parking rates consistent with the RDCP 2014 rates (**Section 7.6**).

#### Stage 1

- The Stage 1 proposal includes car parking and bicycle parking rates consistent with the RDCP 2014 rates.
- All car parking is proposed off-street within basement car parks.
- The Department is satisfied the visual and environmental impacts of the proposed basement car parking have been minimised.



- o the car parking needs for a development must be provided off street.
- Parking and facilities are provided for other modes of transport.
- Car park design and access is safe and secure.
- Visual and environmental impacts of underground car parking are minimised.
- Visual and environmental impacts of above ground enclosed car parking are minimised.

#### 4A Solar and Daylight Access

- To optimise the number of apartments receiving sunlight to habitable rooms, primary windows and private open space.
- Minimum of 70% of apartments' living rooms and private open spaces receive 2hrs direct sunlight between 9 am -3 pm in mid-winter in the Sydney Metropolitan Area.
- Maximum of 15% of apartments have no direct sunlight between 9 am - 3 pm in mid-winter.
- Daylight access is maximised where sunlight is limited.
- Design incorporates shading and glare control, particularly for warmer months.

#### Concept

- Indicative drawings show a minimum of 70% of future apartments' living areas and private open spaces would be capable of achieving a minimum of two hours direct sunlight between 9 am and 3 pm in mid-winter.
- The level of solar access for each building, including the number of apartments with no solar access in midwinter, will be considered as part of the assessment of future detailed applications.
- See **Section 7.4**.

#### Stage 1

- Both buildings achieve a minimum of 70% of apartments' living areas and private open spaces receiving a minimum of two hours direct sunlight between 9am and 3pm in mid-winter.
- In Building A1, 8% of apartments would receive no solar access between 9 am and 3 pm.
- In Building C1, 21% of apartments would receive no solar access between 9 am and 3 pm (**Section 7.4**).

#### 4B Natural Ventilation

- At least 60% of apartments are cross ventilated in the first nine storeys (apartments 10 storeys or greater are deemed to be cross ventilated).
- Overall depth of a cross-over or cross-through apartment does not exceed 18m.

#### Concept

- Indicative drawings indicate 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 will be considered as part of the assessment of future detailed applications.

#### Stage 1

- Both buildings achieve 60% cross ventilation for apartments' in the first nine storeys.
- Where apartments in Building A1 are identified as being potentially impacted by road noise from Herring Road, acoustic trickle ventilators are proposed on the northern and western facades of the building to provide acoustic protection to apartments as well as enabling natural air flow when doors and windows are closed.

#### 4C Ceiling Heights

- Measured from finished floor level to finished ceiling level, minimum ceiling heights are:
  - Habitable rooms 2.7 m
  - Non-habitable rooms 2.4 m.

##### Stage 1

- Ceiling heights meet or exceed the recommended minimums within both buildings.

#### 4D Apartment Size and Layout

- Minimum apartment sizes
  - o Studio 35 m<sup>2</sup>
  - o 1 bedroom 50 m<sup>2</sup>
  - o 2 bedroom 70 m<sup>2</sup>
  - o 3 bedroom 90 m<sup>2</sup>
  - o 4 bedroom 102 m<sup>2</sup>.
- Every habitable room must have a window in an external wall with a total glass area of not less than 10% of the floor area. Daylight and air may not be borrowed from other rooms.
- Habitable room depths are limited to 2.5 x the ceiling height.
- In open plan layouts the maximum habitable room depth is 8m from a window.
- Master bedroom have a minimum area of 10 m<sup>2</sup> and other bedrooms have 9 m<sup>2</sup>.
- Bedrooms have a minimum dimension of 3m (excluding wardrobes).
- Living rooms have a minimum width of:
  - o 3.6 m for studio and one bed
  - o 4 m for 2 and 3 bed.

##### Stage 1

- All apartments within both buildings meet the minimum size recommendations
- All habitable rooms within both buildings are provided with a window in an external wall.
- All habitable room depth/width recommendations are satisfied within both buildings.



- The width of cross-over or cross-through apartments are at least 4m internally.

#### 4E Private Open Space and Balconies

- Primary balconies are provided to all apartments providing for:
  - Studios apartments min area 4 m<sup>2</sup>
  - 1-bedroom min area 8 m<sup>2</sup> min depth 2m
  - 2-bedroom min area 10 m<sup>2</sup> min depth 2m
  - 3-bedroom min area 12 m<sup>2</sup> min depth 2.5m.
- For apartments at ground floor level or similar, private open space must have a minimum area of 15 m<sup>2</sup> and depth of 3 m.
- Private open space and primary balconies are integrated into and contribute to the architectural form and detail of the building.
- Primary open space and balconies maximises safety.

##### Stage 1

- All apartments in Buildings A1 and C1 include a balcony that satisfies the meet the minimum size and depth recommendations.
- Building C1 includes some balconies that have an irregular shape and include portions that vary the recommended minimum balcony depth. However, the Department considers the variations to be minor and the Applicant has demonstrated the balconies would be functional.
- The proposed balconies within both buildings are integrated into, and contribute to, the architectural form and detail of the building.

#### 4F Common Circulation and Spaces

- Maximum number of apartments off a circulation core is eight – where this cannot be achieved, no more than 12 apartments should be provided off a single circulation core.
- For buildings 10 storeys and over, the maximum number of apartments sharing a single lift is 40.
- Natural ventilation is provided to all common circulation spaces where possible.
- Common circulation spaces provide for interaction between residents.
- Longer corridors are articulated.

##### Stage 1

- Three lifts (within one circulation core) are proposed within Building A1 and would serve 269 apartments (one lift per 90 apartments). Up to 13 apartments are proposed on each level. A separate lift would service the proposed childcare centre.
- Eight lifts (two within four circulation cores) are proposed within Building C1 and would serve 471 apartments (one lift per 59 apartments). Up to 10 apartments are proposed on each level within the two 45 m high portions of the building (using one circulation core each) and up to five apartments are proposed on each level within the two 65 m high portions of the building (using one circulation core each).
- While the ADG nominates the tipping point from one to two passenger lifts (40 apartments), it does not nominate the minimum lift requirements for lifts in groups of two or more.

- The Applicant has submitted Vertical Transportation Advice in relation to the proposed lift provision for each building.
- Based on more applicable industry accepted criteria for vertical transportation design, the analysis concludes that the proposed lift arrangements would satisfy international performance criteria and the quantity of lifts recommended by the ADG would be an overprovision.
- The Department considers the Applicant has provided sufficient information to demonstrate the proposed number of lifts would adequately service the buildings.
- The residential lobby and circulation spaces provide opportunities for interaction in each building. Windows at the end of each lift corridor in Building A1 and at one end of the corridors in Building C1 would provide natural daylight to the corridors.

#### 4G Storage

##### Stage 1

- The following storage is required (with at least 50% located within the apartment):
  - Studio apartments 4 m<sup>3</sup>
  - 1-bedroom apartments 6 m<sup>3</sup>
  - 2-bedroom apartments 8 m<sup>3</sup>
  - 3-bedroom apartments 10 m<sup>3</sup>
- Residential storage within both buildings is located within the apartments and within individual storage cages within the basement.
- The proposed volume of storage for each apartment is provided in accordance with the minimum rates recommended in the ADG, including the provision of at least 50% of the required storage within the apartments.

#### 4H Acoustic Privacy

##### Stage 1

- Noise transfer is minimised through the siting of buildings and building layout and minimises external noise and pollution.
- Noise impacts within apartments are mitigated through layout and acoustic treatments.
- Noise transfer would be minimised through the appropriate layout of the buildings.
- Apartments are appropriately stacked and laid out to prevent noise transfer between apartments.

#### 4J Noise and Pollution

##### Stage 1

- In noisy or hostile environments, the impacts of external noise and pollution are minimised through the careful siting and layout of buildings.
- Appropriate noise shielding or attenuation techniques for the building design, construction
- In accordance with the recommendations of the acoustic report, apartments would be appropriately insulated to ensure compliance from external noise sources (**Section 7.4**).



and choice of materials are used to mitigate noise transmission.

#### 4K Apartment Mix

- Provision of a range of apartment types and sizes
- Apartment mix is distributed to suitable locations within the building.

#### Stage 1

- A variety of apartment types and sizes would be provided and logically located within each building.

#### 4M Facades

- Building facades provide visual interest along the street while respecting the character of the local area
- Building functions are expressed by the facade

#### Stage 1

- The proposed facades have been designed to break down the scale of the proposed buildings and would offer a positive contribution to the character of the estate and wider area (**Section 7.2.7**).
- The design for each building provides visual interest at street level.

#### 4N Roof Design

- Roof treatments are integrated into the building design and positively respond to the street.
- Opportunities to use roof space for accommodation and open space is maximised
- Roof design includes sustainability features.

#### Stage 1

- Both buildings incorporate flat roofs with areas utilised for solar panels.

#### 4O Landscape Design and 4P Planting on Structures

- Landscape design is viable and sustainable.
- Landscape design contributes to streetscape and amenity.
- Appropriate soil profiles are provided and plant growth is maximised (selection/maintenance).
- Plant growth is optimised with appropriate selection and maintenance.
- Building design includes opportunity for planting on structure.

#### Stage 1

- A detailed landscape plan has been provided for the public domain and both buildings, including the ground level communal and public open space at Building C1. Proposed landscaping includes 476 trees, shrubs and grasses.
- Adequate soil depth, consistent with ADG recommendations, is proposed.

#### 4Q Universal Design

- Universal design features are included in apartment design to promote flexible housing for all community members. Developments should achieve a benchmark of 20% of the apartments incorporating the Liveable Housing Guideline's silver level universal design features.
- A variety of apartments with adaptable designs are provided.

#### Stage 1

- The proposed development provides a total of 37 adaptable dwellings (5%).
- 20% of apartments would achieve a silver level performance rating (Liveable Housing Guidelines).
- All apartments are of a size and layout that allows for flexible use and design and therefore can accommodate a range of lifestyle needs.

- Apartment layouts are flexible and accommodate a range of lifestyle needs.

#### 4T Awning and Signage

- Awnings are well located and complement and integrate with the building.
- Signage responds to the context and design streetscape character.

#### Stage 1

- Entrance lobbies for both buildings are covered by awnings or the building structure above.

#### 4U Energy Efficiency

- Development incorporates passive environmental and solar design.
- Adequate natural ventilation minimises the need for mechanical ventilation.

#### Stage 1

- The proposed development would meet BASIX water, thermal and energy efficiency targets.
- The buildings have been designed to maximise solar access and natural ventilation (**Section 7.4**).

#### 4V Water Management and Conservation

- Potable water use is minimised.
- Urban stormwater is treated on site before being discharged to receiving waters.
- Flood management systems are integrated into the site design.

#### Stage 1

- Water efficient fittings and appliances would be installed.
- Urban stormwater would be treated on site (**Section 7.9**).
- Flooding is considered in **Section 7.9**. The proposed Stage 1 buildings are not impacted by flooding.

#### 4W Waste Management

- Waste storage facilities are designed to minimise impacts on streetscape, building entry and residential amenity.
- Domestic waste is minimised by providing safe and convenient source separation and recycling.

#### Stage 1

- Both buildings include dedicated residential waste holding areas within their respective basements. Waste would be transported to the holding areas via two chutes adjacent to each lift core.
- The building manager/waste contractor would transfer the bins to the collection area within the basement of each building.
- Separate waste and recycling containers would be provided.
- See **Section 7.9**.

#### 4X Building Maintenance

- Building design detail provides protection from weathering.
- Systems and access enable ease of maintenance.
- Material selection reduced ongoing maintenance cost.

#### Stage 1

- The buildings have been appropriately designed to allow ease of maintenance.
- The proposed materials are robust.



## Planning Circular 'Using the Apartment Design Guide'

On 29 June 2017, the Planning Circular 'Using the Apartment Design Guide' was issued by the Department. The Circular emphasised the ADG is not intended to be applied as a set of strict development standards and where it is not possible to satisfy the design criteria, the consent authority is to consider how, through good design, the objective can be achieved.

The Circular supports the Department's approach to assessing the residential amenity of the proposed buildings in that all proposed 269 apartments within Buildings A1 and 471 apartments within Building C1 cannot reasonably achieve every amenity design criteria in the ADG and that this is not the intention of the ADG. As demonstrated in the analysis above and in **Section 7.4**, the Department considers the proposed development achieves an acceptable level of amenity with many apartments receiving a good to high level of amenity. As such, the Department concludes the concept proposal and Stage 1 buildings satisfy the intent of the ADG and are acceptable in relation to residential amenity.

## State Environmental Planning Policy (Affordable Rental Housing) 2009 (ARH SEPP)

The concept proposal includes the provision of 950 affordable housing dwellings. The ARH SEPP aims to provide a consistent planning regime for the provision of affordable rental housing and boarding houses.

The Department has considered the concept proposal against the ARH SEPP development standards within **Table 7** below.

**Table 7** | Department's consideration of the ARH SEPP.

Section	Control	Department's consideration
<b>Clause 13</b> <b>Floor space ratios</b>	<p>If the percentage of the gross floor area of the development is at least 20% and the permissible FRS is greater than 2.5:1, the maximum FSR of the development may be increased by the following formula:</p> $Z = AH / 2.5$ <p>(Z = per cent of the existing maximum FSR; (AH = the percentage of the GFA of the development that is used for affordable housing)</p>	<p>The concept proposal comprises 72,999 m<sup>2</sup> of affordable housing which equates to 33% of the proposed residential floorspace (220,443 m<sup>2</sup>). The permissible FSR is 2.9:1 which enables the development to achieve an FSR bonus of 0.38 (3.28:1) (<b>Section 7.2.3</b>).</p>
<b>Clause 14</b> <b>Standards that cannot be used to refuse consent</b>	<p>(1) (b) <b>Site area</b></p> <p>The site must be at least 450 m<sup>2</sup>.</p> <p>(c) <b>Landscaped area</b></p> <p>30% of the site area is to be landscaped.</p> <p>(d) <b>Deep soil zones</b></p> <p>In relation to the area of the site not built on, paved or otherwise sealed:</p> <p>(i) there is soil of sufficient depth to support the growth of trees and shrubs on not less than</p>	<p>The site area is 8.2 hectares.</p> <p>At least 30% of the site would be landscaped open space (27,627 m<sup>2</sup> of active and passive open space proposed = 33.4%) (<b>Section 7.2.5</b>).</p> <p>Including the RE1 zoned land, at least 26% of the site would be provided as a deep soil zone with a minimum dimension of 3 m, distributed evenly throughout the site (<b>Section 7.2.5</b>).</p>

- 15% of the site area (the deep soil zone)
- (ii) each area forming part of the deep soil zone has a minimum dimension of 3 m
- (iii) if practicable, at least two-thirds of the deep soil zone is located at the rear of the site area

(d) **Solar access**

If living rooms and private open space for a minimum of 70% of the dwellings receive a minimum of 3 hours direct sunlight between 9am and 3pm mid-winter.

The RRTS solar access analysis demonstrates the concept proposal would be capable of achieving a minimum of 70% solar access for two hours in midwinter, consistent with the Design Criteria in the ADG (**Section 7.4** and **Table 6** above).

Solar access to individual buildings would be subject to consideration at the detailed design stages.

(2) (a) **Parking**

At least 0.4 parking spaces for each one-bedroom dwelling, 0.5 spaces for each two-bedroom dwelling, and 1 parking space for each three-bedroom dwelling.

The proposed car parking rate exceeds the minimum rate (**Section 7.6**).

(b) **Dwelling size**

Each dwelling to have a GFA of at least:

- (iv) 35 m<sup>2</sup> for studios
- (v) 50 m<sup>2</sup> for one-bedroom dwelling
- (vi) 70 m<sup>2</sup> for two-bedroom dwelling
- (vii) 95 m<sup>2</sup> for three-bedroom dwelling.

Indicative drawings indicate future dwellings would be capable of achieving these minimum sizes which are consistent with the Design Criteria of the ADG (**Section 7.4** and **Table 6** above).

Dwelling sizes within each individual building would be subject to consideration at the detailed design stages.



<b>Clause 16</b>	Continued application of SEPP 65.	Consideration of the concept proposal against SEPP 65 is provided in <b>Sections 7.3</b> and <b>7.8</b> and in <b>Table 5</b> above.
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<b>Clause 16A</b> <b>Character of local area</b>	The consent authority must take into consideration whether the design of the development is compatible with the character of the local area.	The existing Ivanhoe Estate site has been used as social and affordable housing for approximately 30 years. The proposed affordable housing dwellings would be located throughout the proposed estate. The design of the estate would be compatible with the desired future character of the local area ( <b>Section 7.2</b> ).
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In light of the assessment detailed in **Section 7** of this report and **Table 7** above, the Department considers the concept proposal displays an acceptable level of consistency with the development standards within the ARH SEPP.

### State Environmental Planning Policy (Housing for Seniors or People with a Disability) 2004 (Seniors SEPP)

The proposed concept development includes seniors housing in the form of independent living apartments and a 120-bed residential aged care facility (RACF) within Buildings B1.1 and B1.2. These seniors housing elements are however not made pursuant to the Seniors SEPP as the concept proposal relates to a mixed-use development, not a standalone seniors housing development.

The Department nevertheless considers it appropriate to consider the seniors housing elements against the applicable provisions of the Seniors SEPP (**Table 8** below).

**Table 8** | Department's consideration of the Seniors SEPP.

Section	Control	Department's consideration
<b>Clause 26</b> <b>Location and access to facilities</b>	<p>The site must be located not more than 400 m from a public transport service, accessible by a suitable access pathway.</p> <p>The public transport service must be available both to and from the proposed development at least once between 8 am and 12 pm per day and at least once between 12 pm and 6 pm each day (Monday to Friday).</p>	<p>The proposed seniors housing is located within 400 m of regular bus services on Herring Road and Epping Road.</p> <p>Compliant accessible pathways would be provided as part of the future development.</p>
<b>Clause 33</b> <b>Neighbourhood amenity and streetscape</b>	<p>Recognise the desirable elements of the location's current character (or in the case of precincts undergoing transition, the desired future character).</p> <p>Maintain reasonable neighbourhood amenity and appropriate residential character by:</p>	<p>The proposed seniors housing is located within the new master planned Ivanhoe Estate and, subject to detailed design, would be compatible with the desired future character of the area.</p> <p>Building B1.1 would be setback a minimum of 10 m from the north-eastern boundary while the proposed RACF within Building B1.2</p>

- providing building setbacks to reduce bulk and overshadowing
  - using building form and siting that relates to the site's landform
  - adopting building heights at the street frontage that are compatible in scale with adjacent development.
- would be setback a minimum of 6 m from this boundary. The buildings would not overshadow any neighbouring properties. Building form and siting would be subject to future detailed assessment.
- Tree removal is considered in **Section 7.7**.
- The proposed seniors housing buildings are not located within a riparian zone.

Retain, wherever reasonable, major existing trees.

Be designed so that no building is in a riparian zone.

<b>Clause 40 Development standards</b>	Minimum site size 1,000 m <sup>2</sup> .	Complies.
	Minimum site frontage 20 m.	Complies.
<b>Clause 45 Vertical villages</b>	Granting of consent with floorspace bonus of 0.5:1.	Refer to <b>Appendix D</b> .

Compliance with all other Seniors SEPP controls, including detailed setbacks, visual and acoustic privacy, accessibility, waste management, crime prevention, stormwater, solar access, private open space and car parking, would be subject to consideration at the detailed design stage.

### State Environmental Planning Policy (Educational Establishments and Child Care Centres) 2017 (Education SEPP)

Future development applications for the primary school and childcare centres will be required to be consistent with the provisions of the Education SEPP. The proposed envelopes would be capable of accommodating the space requirements and other design criteria required under the SEPP. The Department of Education have raised no objection to the proposed school (**Section 5**).

The Stage 1 application includes a 75-place childcare centre within the ground floor of Building A1. The centre has been configured to allow for five different internal areas to cater for different age groups. The primary outdoor area is located on the south-western of the building, 4.5 m below the level of Herring Road allowing the planting of landscaping for privacy. A second outdoor area is located on the north-western side of the building, 3 m above the ground level. Lifts and stairs would connect the centre to the ground level entry and basement car park.

The centre has been designed in consideration of the Education SEPP and the Stage 1 EIS includes a preliminary assessment against the relevant parts of the Education SEPP, including the design quality principles and matters for consideration. The assessment confirms the centre is capable of complying with all applicable regulations, including unencumbered indoor and outdoor space, ventilation and natural light, shade, visual and acoustic privacy, air quality, and administration space.

A separate detailed development application will be submitted to Council for the fitout and operation of the centre once an operator has been engaged. The detailed application will need to demonstrate compliance with the Education SEPP provisions.



### **Sydney Regional Environmental Plan (Sydney Harbour Catchment) 2005 (SREP 2005)**

SREP 2005 provides planning principles for development within the Sydney Harbour catchment. The site is located within the designated hydrological catchment of Sydney Harbour and is therefore subject to the provisions of SREP 2005.

However, as the site is not located on the foreshore or adjacent to the waterway, with the exception of the objective of improved water quality, the objectives of the planning instrument are not applicable to the proposed concept proposal.

The objective of improved water quality is satisfied through compliance with the recommended stormwater conditions.

### **State Environmental Planning Policy (Building Sustainability Index: BASIX) 2004 (BASIX SEPP)**

The BASIX SEPP encourages sustainable residential development by setting targets that measure efficiency of buildings in relation to water and energy use and thermal comfort. It requires all new dwellings meet sustainability targets of a 20% reduction in energy use (building size dependent) and a 40% reduction in potable water.

The Stage 1 application includes a BASIX Certificate for Buildings A1 and C1. Conditions recommending compliance with each BASIX Certificate requirements are recommended.

### **Other Policies**

#### **City of Ryde Development Control Plan 2014 (RDCP 2014)**

In accordance with clause 11 of the SRD SEPP, DCPs do not apply to SSD. In addition, while the Department notes Council prepared an Urban Design Guide for the redevelopment of the estate in August 2016, it was not publicly exhibited and does not have any statutory planning status.

However, the Department considers the proposed concept plan and Design Guidelines have the same effect and purpose as a specific DCP for the Ivanhoe Estate redevelopment as they consider the same key controls, including future building envelopes, minimum setbacks and building separation distances, deep soil areas, design principles for future buildings, and car parking rates. These matters are considered in **Section 7**.

#### **City of Section 94 Development Contributions Plan 2007 (Interim Update 2014)**

The Applicant will pay development contributions in accordance with Council's Contribution Plan or provide material public benefits/works-in-kind that meet or exceed the value of the contributions otherwise payable (**Section 7.8**).

## Appendix F – Community Views for Draft Notice of Decision

A summary of the Department's consideration of the issues raised in submissions is provided at **Table 9**.

**Table 9** | Department's consideration of key issues raised in submissions.

Issue	Consideration
<ul style="list-style-type: none"> <li>Extent of tree removal/biodiversity impacts</li> </ul>	<ul style="list-style-type: none"> <li><b>Section 7.7</b> considers issues of tree removal and biodiversity impacts.</li> <li>The proposed concept redevelopment has been significantly modified to increase setbacks to Epping Road and Shrimptons Creek, allowing the retention of 222 additional trees. The revised proposal includes retaining 94% of the Sydney Turpentine Ironbark Forest (STIF) on the site, a critically endangered ecological community (CEEC).</li> <li>The development will however unavoidably involve the removal of 343 trees, including 0.02 hectares of STIF. This is in addition to 510 trees and 0.03 hectares of STIF approved to be removed under Part 5 of the EP&amp;A Act.</li> <li>The proposal includes planting 950 replacement trees across the site (an increase of 97 trees on the existing site). Although there would be short to medium term impacts from tree removal, this would be spread over a construction period of 10 to 15 years and the longer-term outcome would be satisfactory with more, higher quality trees appropriately located throughout the estate.</li> <li>The proposal also includes the purchase and retirement of 16 ecosystem credits to offset the unavoidable impacts of the project in accordance with the applicable environmental offsets policy.</li> <li>The Environment, Energy and Science Group have raised no concerns with the revised proposal.</li> <li>The Department considers it is inevitable there would be a loss of trees from the redevelopment of the estate, noting a large number of low-quality trees are located throughout the existing estate.</li> <li>The Department considers the revised concept proposal attains an acceptable balance between achieving the high-density rezoning outcomes of the site and minimising tree loss and biodiversity impacts where viable.</li> </ul>
<ul style="list-style-type: none"> <li>The overall size and scale of the development</li> <li>Non-compliance with the controls</li> </ul>	<ul style="list-style-type: none"> <li><b>Section 7.2</b> considers issues relating to the size and scale of the development, including height and floor space ratio (FSR).</li> <li>Although five buildings would exceed the RLEP 2014 height controls, the Department considers these buildings are located in areas of the site that would not increase any impacts or overshadowing of neighbouring residential properties beyond a fully complying form.</li> <li>Furthermore, the Department considers the extent of overshadowing from the redevelopment would be consistent with the impacts anticipated by the planning controls for the high-density estate and desired character of the area.</li> <li>The Applicant is also seeking an additional 9,930 m<sup>2</sup> (3.8%) of GFA (total of 268,000 m<sup>2</sup>) which results in an overall FSR of 3.4:1 compared to the RLEP2014 FSR control of 3.28:1.</li> </ul>



- 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 7.8** and in the Department's consideration of the clause 4.6 variation in **Appendix C** and **D**. Overall, the Department considers the concept proposal is acceptable in relation to these key issues.
- The Department is therefore satisfied the proposed concept development is consistent with the objectives of the B4 zone and building height and floor space ratio (FSR) development standards and would enable appropriate floor area and building envelopes to facilitate the future high-density redevelopment of the estate.
- Furthermore, the development would provide a high level of amenity for future residents without unreasonably compromising the amenity of neighbouring sites.
- The Department therefore considers it unnecessary for the concept proposal to comply fully with the maximum height and FSR development standards and the respective clause 4.6 variation requests are supported.
- Proposed building separation distances to future building envelopes and Stage 1 buildings within the proposed estate are also generally consistent with ADG recommendations and would result in acceptable outcomes regarding overshadowing, privacy and wind.
- The Department's assessment of the proposed concept redevelopment of the estate concludes the revised masterplan is of an appropriate density and scale that is consistent with the evolving character of the area. In addition, the future design and built form would be compatible with the broader Herring Road Priority Precinct which is transitioning to high density, tower development, consistent with the strategic objectives for the area.

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- Increased traffic

- **Section 7.6** considers issues relating to traffic.
- The concept proposal includes a number of road and intersection upgrades to ensure the site is accessible and to minimise traffic impacts through ensuring the local road network has sufficient capacity to accommodate the additional traffic movements generated by the development.
- These upgrades include paying contributions for the replacement of the existing roundabout at the intersection of Herring Road and Ivanhoe Place with a new signalised intersection and constructing a new bridge over Shrimptons Creek to enable a new vehicle and pedestrian connection to Lyonpark Road from Main Street/Herring Road.
- The Department has sought independent expert traffic advice and is satisfied the redevelopment would not result in any unacceptable traffic impacts as due to the proposed intersection upgrades and the new road link between Herring Road and Lyonpark Road. In addition, car parking rates have generally been adopted in accordance with the relevant controls and guidelines and would encourage use of public/alternative transport and reduce dependency on cars.

- The Department further considers the proposed connected estate road network would ensure that the accessibility of existing and future residents to developments on the western and eastern sides of Herring Road would not be adversely affected by the replacement of the existing roundabout at the intersection of Herring Road and Ivanhoe Place.
  - 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.
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- Insufficient setbacks
  - **Section 7.2** considers the issues of setbacks between the proposed building envelopes and the site boundaries.
  - The proposed concept plan has been significantly revised to provide increased setbacks to Epping Road, Shrimptons Creek and neighbouring development.
  - The Department considers the proposed setbacks of residential buildings to the estate boundaries are consistent with the evolving character of the area and would satisfy ADG recommendations. The setbacks are also considered acceptable regarding privacy, visual impact, views and overshadowing and are sufficient to enable retention of trees where required and planting of new landscaping.
  - In addition, the setbacks of the proposed RACF and school would be sufficient to minimise potential amenity impacts.
  - All buildings would be subject to future detailed applications which would include specific privacy mitigation measures if required to ensure an appropriate amenity outcome to neighbouring properties.



## Appendix G – Visual Impact Images



**Figure 3** | Existing view from intersection of Herring Road and Epping Road (viewpoint 1) (Source: Applicant's RRTS)



**Figure 4** | Proposed concept building envelopes viewed from intersection of Herring Road and Epping Road (viewpoint 1) (Source: Applicant's RRTS)





**Figure 5** | Existing view from Shrimptons Creek north-east of Cobar Way (viewpoint 3) (Source: Applicant's RRTS)



**Figure 6** | Proposed concept building envelopes viewed from Shrimptons Creek north-east of Cobar Way (viewpoint 3) (Source: Applicant's RRTS)





**Figure 7** | Existing view from Epping Road near Booth Reserve bus stop (viewpoint 10) (Source: Applicant's RRTS)



**Figure 8** | Proposed concept building envelopes viewed from Epping Road near Booth Reserve bus stop (viewpoint 10) (Source: Applicant's RRTS)





**Figure 9** | Existing view from 198 Epping Road (viewpoint 11) (Source: Applicant's RRTS)



**Figure 10** | Proposed concept building envelopes viewed from 198 Epping Road (viewpoint 11) (Source: Applicant's RRTS)



## Appendix H – Subdivision Details

**Table 10** | Summary of proposed lots and staging (Source: Applicant's Stage 1 EIS)

Stage	Lot	Size (m <sup>2</sup> )	Purpose	Easement
<b>Stage 1</b>	100	-	Lot for the Lyonpark Road extension	Easement for Drainage
	101	-	Lot for the remaining LGS site	N/A
<b>Stage 2</b>	11	3,145	Lot for Building A1	An existing easement over the A1 lot that permits the neighbouring site to the north west to drain water through the Estate, and a new easement corresponding to the overland flow path
	12	6,230	Lot for Building C1	N/A
	13	-	Residue lot to be subdivided in a subsequent stage	N/A
	14	3,990	Lot for part of Main Street	An easement over the proposed road lot enabling services within the lot, and temporary public access before the lot is dedicated to Council.
	15	2,585	Lot for part of a neighbourhood street	An easement over the proposed road lot enabling services within the lot, and temporary public access before the lot is dedicated to Council.
<b>Stage 3</b>	21	5,610	Lot for the Village Green	An easement for public access and a public park relating to the Village Green.
	22	1,845	Lot for Building C3	N/A
	23	3,370	Lot for Building B1	An easement for right of carriageway and an easement for the drainage of water through the site and along the eastern boundary.
	24	3,170	Lot for Building B2 (the future school)	An easement for a right of carriageway along the northern boundary of the lot, an easement to drain water along the eastern boundary, and an easement for public access over the southern boundary of the lot.
	25	6,960	Lot for Building C4	An easement for a right of carriageway
	26	-	Residue lot to be subdivided in a subsequent stage	Easement for a public park relating to Forest Playground.
	27		Lot for the remaining part of Main Street	An easement over the proposed road lot enabling services within the lot, and temporary public access.
	28	2,795	Lot for part of a neighbourhood street	An easement over the proposed road lot enabling services within the lot, and temporary public access before the lot is dedicated to Council.
	29	-	Lot for Shrimptons Creek corridor	Lot to be dedicated as a public reserve at a later date.
<b>Stage 4</b>	31	2,935	Lot for Building B3	An easement to drain water.

Stage	Lot	Size (m <sup>2</sup> )	Purpose	Easement
	32	-	Lot for new public reserve	-
	33	-	Residue lot to be subdivided in a subsequent stage	Easement for a public park relating to Forest Playground and right of carriageway.
Stage 5	41	7,220	Lot for Building D1	An easement for public access, carriageway, and services relating to the neighbourhood mew that is being delivered as part of a future application, and an easement for public access along the western boundary.
	42	3,620	Lot for Building D2	An easement for public access and public park.
	43	-	Residue lot to be subdivided in a subsequent stage	An easement for services, right of carriageway and public park.
Stage 6	51	5,050	Lot for Building D3	An easement for public access and public park relating to the Forest Playground being delivered as part of a future application and temporary easement for public access
	52	1,695	Lot for Building A2	-
	53	-	Residue lot to be subdivided in a subsequent stage	-
Stage 7	61	7,000	Lot for building D4	An easement for public access along the western boundary, easement for services and right of carriageway.
	62	-	Residue lot to be subdivided in a subsequent stage	An easement for public access, services and right of carriageway.
	63	-	Lot for new public reserve along Shrimptons Creek	-
Stage 8	71	3,850	Lot for Building A3	An easement for public access, carriageway, and services relating to the neighbourhood mew that is being delivered as part of a future application, and an easement for public access along the western boundary.
	72	1,965	Lot for Building B1	Easement for right of carriageway along the southern boundary.





**Figure 11** | Proposed plan of subdivision. Top: North-western portion of site. Bottom: South-eastern portion of site (Source: Applicant's Stage 1 Additional Information)

## Appendix I – Recommended Conditions of Consent

The recommended conditions of consent can be found on the Department's website at:

Concept: <https://www.planningportal.nsw.gov.au/major-projects/project/10141>

Stage 1: <https://www.planningportal.nsw.gov.au/major-projects/project/10146>