

Secretary's Environmental Assessment Requirements

Section 78A(8A) of the *Environmental Planning and Assessment Act*
 Schedule 2 of the *Environmental Planning and Assessment Regulation 2000*

Application Number	SSD 8903
Proposal Name	Ivanhoe Estate Redevelopment – Stage 1
Location	Ivanhoe Estate (Ivanhoe Place, Wilcannia Way, Nyngan Way and Narromine Way) and part of 2-4 Lyon Park Road, Macquarie Park
Applicant	NSW Land and Housing Corporation
Date of Issue	12 December 2017
General Requirements	<p>The Environmental Impact Statement (EIS) must address the <i>Environmental Planning and Assessment Act 1979</i> and meet the minimum form and content requirements in clauses 6 and 7 of Schedule 2 of the <i>Environmental Planning and Assessment Regulation 2000</i>.</p> <p>Notwithstanding the key issues specified below, the EIS must include an environmental risk assessment to identify the potential environmental impacts associated with the development.</p> <p>Where relevant, the assessment of the key issues below, and any other significant issues identified in the risk assessment, must include:</p> <ul style="list-style-type: none"> • Adequate baseline data. • Justification of impacts. • Consideration of potential cumulative impacts due to other development in the vicinity. • Measures to avoid, minimise and if necessary, offset the predicted impacts, including detailed contingency plans for managing any significant risks to the environment. • The EIS must also be accompanied by a report from a qualified quantity surveyor providing: <ul style="list-style-type: none"> ▪ a detailed calculation of the capital investment value (CIV) of the development (as defined in clause 3 of the <i>Environmental Planning and Assessment Regulation 2000</i>), including details of all assumptions and components from which the CIV calculation is derived ▪ a close estimate of the jobs that will be created by the development during construction and operation ▪ verification that the CIV was accurate on the date that it was prepared.
Key issues	<p>The EIS must address the following specific matters:</p> <p>1. Environmental Planning Instruments, Policies and Guidelines</p> <ul style="list-style-type: none"> • Address the relevant statutory provisions applying to the site contained in the relevant EPIs, including: <ul style="list-style-type: none"> ○ State Environmental Planning Policy (State & Regional Development) 2011 ○ State Environmental Planning Policy (Infrastructure) 2007 ○ State Environmental Planning Policy (Affordable Rental Housing) 2009 ○ State Environmental Planning Policy No. 55 – Remediation of Land (SEPP 55) ○ State Environmental Planning Policy No. 65 – Design Quality of Residential Flat Development and accompanying Apartment Design Guide (SEPP 65) ○ State Environmental Planning Policy (Building Sustainability Index: BASIX) 2004

- State Environmental Planning Policy (Vegetation in Non-Rural Areas) 2017
- State Environmental Planning Policy (Educational Establishments and Child Care Facilities) 2017
- Draft State Environmental Planning Policy - Environment
- Ryde Local Environmental Plan 2014.

- Address the relevant provisions, goals and objectives in the following:

- *NSW State Priorities*
- *A Plan for Growing Sydney*
- *Towards our Greater Sydney 2056*
- *Draft North District Plan*
- *NSW Apartment Design Guide*
- *Development Near Rail Corridors and Busy Roads- Interim Guideline*
- *Guide to Traffic Generating Developments (RMS)*
- *Sydney's Bus Future 2013*
- *Sydney's Walking Future 2013*
- *Sydney's Cycling Future 2013*
- *NSW Planning Guidelines for Walking and Cycling*
- *NSW Long Term Transport Master Plan*
- *EIS Guidelines – Road and Related Facilities*
- *Guide to Traffic Management – Part 12: Traffic Impacts of Development (AUSTRROADS)*
- *Future Directions for Social Housing in NSW*
- *City of Ryde Development Control Plan 2014*
- *City of Ryde Section 94 Development Contributions Plan 2007 (Interim Update 2014)*
- *Ryde 2025 Community Strategic Plan.*

2. Ivanhoe Concept Development Application

- Demonstrate how the proposal is consistent with the Concept Development Application (SSD 8707).

3. Land Use, Gross Floor Area and Floor Space Ratio

- The EIS shall:
 - include a detailed description, analysis and justification of all proposed land uses
 - include a detailed gross floor area (GFA)/floor space ratio (FSR) schedule and calculations.

4. Built Form and Urban Design

- The EIS shall:
 - provide a design excellence strategy to ensure the buildings are provided with a high level of design quality. This shall include details of an independent design review process.
 - provide detailed design and analysis of the works including architectural design and materials
 - assess visual impacts
 - demonstrate consistency with the concept development application
 - demonstrate how the proposal will achieve an optimal design and amenity outcome
 - outline potential design considerations aimed at mitigating any impacts identified.

5. Public Domain

- Detail and outline the interface between the proposed development, the Ivanhoe Concept Development Application area, surrounding development and the public domain.
- Outline specific design features (as applicable):
 - footpaths and pavements, roads and/or rights of carriageways

- outdoor seating
- materials and finishes
- public art
- furniture and fixtures
- street lighting, pedestrian lighting and feature lighting
- edges, screens and fences
- walls, embankments and mounds
- steps, ramps, vehicle crossings, decks and pathways
- services where affected, utility poles, and service pits
- civil and stormwater infrastructure
- tree planting
- mass planting beds, planter boxes and individual plantings
- bicycle parking.

6. Visual and View Impacts

- Identify important sight lines and visual connectivity to and through the site.
- A visual impact assessment is to be provided to identify the visual changes and impacts on the site and its surrounds when viewed from key vantage points (see plans and documents section).

7. Amenity

- The EIS shall:
 - include a detailed assessment demonstrating how the proposal will achieve a high level of environmental amenity for future residents consistent with the provisions of SEPP 65 and the recommendations of the Apartment Design Guide including building separation/ visual privacy, solar access, and communal and public open space
 - include a solar access analysis and shadow diagrams outlining impacts on adjoining developments
 - include a wind impact report
 - demonstrate how the proposal maintains the amenity of surrounding residential development including potential overshadowing, privacy and view impacts
 - consider impacts from servicing requirements including waste management, mechanical plant and child care centre activity.

8. Transport, Traffic, Parking and Access (Construction and Operation)

- Demonstrate consistency with the Concept Development Application (SSD 8707) Transport and Traffic Impact Assessment.
- Provide detailed plans, including civil engineering plans, of the proposed road network including the proposed Shrimptons Creek bridge.
- The EIS must include a Transport and Traffic Impact Assessment that provides, but is not limited to, the following:
 - accurate details of the current daily and peak hour vehicle, public transport, pedestrian and bicycle movements and existing traffic and transport facilities provided on the road network located adjacent to the proposed development
 - estimated total daily and peak hour trips likely to be generated by the proposed development including vehicle, public transport, pedestrian and bicycle trips
 - detailed assessment of the existing and future safety and performance of key intersections providing access to the site and/or otherwise nominated by Roads and Maritime Services, and any road/intersection upgrades or new roads/intersections required as a result of the development. The assessment of the existing and future road network operations needs to consider the cumulative impacts of traffic volumes from other developments in the locality. The assessment needs to be supported by appropriate modelling and analysis to the satisfaction of Roads and Maritime Services

- details of measures to mitigate any associated traffic impacts including any upgrading or road improvement works required to accommodate the proposed development
- design and operation of the proposed road network in consultation with Roads and Maritime Services and City of Ryde Council
- a staging plan for all proposed civil infrastructure works
- an assessment of traffic impacts in the event external transport infrastructure to be delivered by third parties is not delivered
- details of the proposed number of car parking spaces and compliance with appropriate parking codes and Australian Standards. It should demonstrate a minimalist approach to the provision of on-site parking and how traffic generation (number of vehicles and time of access) will be managed in response to capacity limitations on the road network
- the adequacy of public transport, pedestrian and bicycle networks and infrastructure to meet the likely future demand of the proposed development and details of measures to mitigate potential impacts including required upgrades to pedestrian/cycle connections
- connections to existing and planned public transport networks and services and opportunities for greater usage for residents, visitors, and child care centre users and workers
- details of existing and proposed vehicular access for residents, visitors, child care centre users and workers, and emergency vehicles
- opportunities to provide safe and efficient loading and servicing for the development
- a Green Travel Plan containing details of sustainable travel initiatives for residents, visitors and child care centre users and workers.
- In relation to construction traffic:
 - assessment of cumulative impacts associated with other construction activities in the area
 - details of anticipated truck movements to and from the site
 - details of access arrangements for workers to/from the site, emergency vehicles and service vehicle movements
 - details of temporary cycling and pedestrian access during construction
 - details of proposed construction vehicle access arrangements at all stages of construction
 - assessment of traffic and transport impacts during construction and how these impacts will be mitigated for any associated traffic, pedestrian, cyclist and public transport, including the preparation of a draft Construction Pedestrian and Traffic Management Plan to demonstrate the proposed management of impact. This Plan needs to include vehicle routes, number of trucks, hours of operation, access arrangements and traffic control measures for all demolition/construction activities.

9. Social Housing

- Provide a description of the intended operation of the community housing provider/s operating the social housing and the mix of housing (private and social) to be provided.

10. Ecologically Sustainable Development (ESD)

- Identify how ESD principles (as defined in clause 7(4) Schedule 2 of the EP&A Regulation 2000) will be incorporated in the design, construction and operation of the development.
- Outline resource, energy and water efficiency initiatives, including the use of sustainable technologies and or/renewable energy and demonstrate compliance with BASIX requirements.
- Provide an Integrated Water Management Plan detailing stormwater and wastewater management, including re-use and disposal requirements, demonstration of water sensitive urban design and water conservation measures.

11. Safety

- Outline design and operational measures to ensure the safety of residents, visitors, and child care centre users and workers within the development and in the surrounding public domain.
- Provide a Crime Prevention Through Environmental Design Report.

12. Flora and Fauna Assessment

- Provide a detailed assessment of all vegetation clearing on the site including the removal of trees, and any impact on threatened species populations, endangered ecological communities or their habitat and potential for offset requirements.
- In accordance with the transitional provisions of the *Biodiversity Conservation (Savings and Transitional) Regulation 2017*, biodiversity impacts are to be assessed and documented in accordance with the *NSW Biodiversity Offsets Policy for Major Projects (2014)* and the *Framework for Biodiversity Assessment*, by a person accredited in accordance with section 142B(1)(c) of the *Threatened Species Conservation Act 1995*.

13. Water, Drainage, Stormwater and Groundwater

- Prepare a Stormwater, Groundwater and Drainage Assessment including modelling, contour maps and methodologies, to assess the impacts of the proposal on surface and groundwater hydrology and quality.
- Detail erosion, sediment and stormwater management controls during construction and management and mitigation measures for the prevention of potential water quality impacts during construction.
- Detail surface and groundwater monitoring activities and methodologies.
- Assess impacts from the development, including the new road crossing, on adjacent licensed water users, basic landowner rights, watercourses including Shrimptons Creek, and groundwater dependent systems located in the vicinity of the site and Shrimptons Creek. Measures proposed to reduce and mitigate these impacts must be in accordance with the *Guidelines for Controlled Activities on Waterfront Land 2012*.
- Identify any water licensing requirements or other approvals required under the *Water Act 1912* or *Water Management Act 2000*.
- Prepare an Integrated Water Management Plan /drainage concept. This should include stormwater and wastewater management, including any re-use and disposal requirements, demonstration of water sensitive urban design and any water conservation measures.
- Provide details of adequate and secure water supply for the life of the development including cumulative impacts on water resources, consideration of alternative water supply arrangements, water sensitive urban design and water conservation measures.

14. Flooding

- The EIS shall include a Flood Impact Assessment which shall address:
 - potential flood impacts of the proposal
 - consistency with Council's floodplain risk management studies and plans
 - compatibility with the flood hazard of the land
 - impact on the flood affectation of other development or properties
 - impacts on erosion, siltation, riparian land including riparian vegetation, and bank stability
 - impacts on existing emergency management measures
 - impacts in terms of social and economic costs to the community as a consequence of flooding.

15. Subdivision

- The EIS shall:
 - outline subdivision, access and driveway locations
 - outline consistency with the concept development application

- The application must include a Plan of Subdivision which:
 - identifies all lots proposed to be created across the site
 - identifies the location of all servicing infrastructure across the site
 - details any covenants, easements or notations proposed to ensure appropriate access is provided to each service provider to enable the on-going maintenance of their assets
 - details any covenants, easements or notations proposed to enable public access to the public domain areas.

16. Earthworks

- Provide a detailed survey showing existing and proposed levels, maximum depth of excavation, and proposed quantities of cut and fill necessary for the proposed works.
- Provide details of the fill, including types and materials and their source.
- Provide details of the location for the disposal of excess cut and the methodology of transportation to this location.
- Provide a geotechnical report.

17. Heritage and Archaeology

- Provide an assessment that documents and addresses the impacts of the proposal on any heritage significance of the site and adjacent areas, including heritage items, places or relics significant to Aboriginal or European culture or history. The EIS must demonstrate attempts to avoid impact upon the heritage significance or cultural heritage values of the site, identify any conservation outcomes and outline proposed mitigation measures where impacts are unavoidable.
- Where Aboriginal cultural heritage values are identified, consultation with Aboriginal people must be undertaken and documented. The significance of cultural heritage values for Aboriginal people who have a cultural association with the land must be documented in the EIS.
- Provide a Heritage Interpretation Plan that reflects and interprets the history of the site.

18. Contamination

- Demonstrate compliance with the requirements of SEPP 55.
- Provide a detailed assessment of site contamination including information about groundwater and a detailed assessment of the footprint and surrounds of existing buildings and roads following demolition.
- If remediation works are required for the first stage of development, the EIS must include a Remedial Action Plan (RAP). The RAP must be accompanied by a Site B audit statement prepared by an EPA accredited site auditor and the RAP must be prepared in accordance with the contaminated land planning guidelines under section 145C of the *Environmental Planning and Assessment Act 1979* and relevant guidelines produced or approved under section 105 of the *Contaminated Land Management Act 1997*.

19. Utilities

- Address the existing capacity of the site to service the development proposed and any augmentation requirements for utilities.

20. Child Care Centre

- The EIS shall include an assessment of the proposed child care centre demonstrating compliance with State Environmental Planning Policy (Educational Establishments and Child Care Facilities) 2017.

21. Noise and Vibration

- The EIS shall include a Noise and Vibration Assessment of construction, operation, traffic and cumulative noise impacts prepared in accordance with the relevant EPA guidelines. This assessment must consider any potential

	<p>noise impacts on nearby noise sensitive receivers and outline proposed noise mitigation and monitoring issues.</p> <p>22. Air Quality and Odour</p> <ul style="list-style-type: none"> • The EIS shall include an Air Quality Impact Assessment. The assessment must be prepared in accordance with the Approved Methods for the Modelling and Assessment of Air Pollutants in NSW 2005 and must consider the requirements of the <i>Protection of the Environment Operations (Clean Air) Regulation 2010</i>. The key air quality issues that must be covered in the assessment include, where applicable: <ul style="list-style-type: none"> ○ the identification of the pollutants of concern including dust and odours ○ the identification and assessment of all relevant fugitive and point source emissions ○ proposed air quality management and monitoring procedures during the works. <p>23. Sediment, Erosion and Dust Controls</p> <ul style="list-style-type: none"> • The EIS shall identify measures and procedures to minimise and manage the generation and off-site transmission of sediment, dust and particles. <p>24. Waste</p> <ul style="list-style-type: none"> • The EIS shall assess the waste impacts and their management during construction including construction waste classification, transportation and management methods in accordance with DECCW's Know Your Responsibilities: Managing Waste from Construction Sites Guideline. Consideration should also be given to the assessment and management of any acid sulfate soil and potential acid sulfate soil. <p>25. Building Code of Australia (BCA)</p> <ul style="list-style-type: none"> • The EIS shall include a BCA report, access report and fire safety assessment demonstrating the development would be capable of complying with the BCA. <p>26. Staging</p> <ul style="list-style-type: none"> • Details of staging of the proposed development including the proposed road network. <p>27. Contributions</p> <p>The EIS shall address:</p> <ul style="list-style-type: none"> • The proposed method of calculating developer contributions payable pursuant to the <i>City of Ryde Section 94 Development Contributions Plan 2007 (Interim Update 2014)</i>. • Any additional contributions proposed or material public benefits associated with any proposed floor space above existing planning controls. • Any proposed Voluntary Planning Agreement with Council, including staging details if applicable. <p>28. Consultation</p> <ul style="list-style-type: none"> • Undertake an appropriate level of consultation with Council and State Government agencies. • Provide details of the consultation activities undertaken in preparation of the application consistent with the Concept Development Application Consultation and Community Engagement Strategy.
	<p>During the preparation of the EIS, you must consult with the relevant local, State or Commonwealth Government authorities, service providers, community groups and affected landowners. In particular, you must consult with:</p> <ul style="list-style-type: none"> • City of Ryde Council. • Roads and Maritime Services. • Sydney Coordination Office within Transport for NSW.

	<ul style="list-style-type: none"> • NSW Office of Environment and Heritage. • NSW Environment Protection Authority. • NSW Department of Primary Industries – Office of Water. • NSW Police. • Sydney Water. • Ausgrid. • Macquarie Connect. • Appropriate social service organisations. • Neighbouring residents and the local community. <p>The EIS must describe the consultation process and the issues raised, and identify where the design of the development has been amended in response to these issues. Where amendments have not been made to address an issue, a short explanation should be provided.</p>
<p>Further consultation after 2 years</p>	<p>If you do not lodge a development application and EIS for the development within 2 years of the issue date of these SEARs, you must consult further with the Secretary in relation to the preparation of the EIS.</p>

Plans & Documents

Plans and Documents

The EIS must include all relevant plans, architectural drawings, diagrams and relevant documentation required under Schedule 1 of the *Environmental Planning and Assessment Regulation 2000*. Provide these as part of the EIS rather than as separate documents.

In addition, the EIS must include the following:

1. An existing site survey plan drawn at an appropriate scale illustrating:
 - The location of the land, boundary measurements, area (sq.m) and north point.
 - The existing levels of the land in relation to buildings and roads.
 - Location and height of existing structures on the site.
 - Location and height of adjacent buildings.
 - All levels to be to Australian Height Datum (AHD).
2. A locality/context plan drawn at an appropriate scale should be submitted indicating:
 - Significant local features such as parks, community facilities, open space, watercourses, riparian land and heritage items.
 - The location and uses of existing buildings, shopping and employment areas.
 - Traffic and road patterns, pedestrian routes and public transport nodes.
3. Drawings at an appropriate scale illustrating:
 - The location of any existing buildings or structures on the land in relation to the boundaries of the land and any development on adjoining land.
 - Detailed plans, sections and elevations including all road and landscape works.
 - The height (AHD) of the proposed development in relation to the land and any changes that will be made to the level of the land by excavation, filling or otherwise.
4. **Landscape plans** illustrating treatment of open space areas of the site.
5. **Shadow diagrams** showing solar access to the site and surrounding areas at summer solstice (Dec 21), winter solstice (June 21) and the equinox (March 21 and September 21) at 9.00 am, 12.00 midday and 3.00 pm.

6. **Visual Impact Assessment**

The visual impact assessment, including focal lengths, must be done in accordance with Land and Environment Court requirements.

Visual assessment methodology

- The consultant's methodology should be explicit. This may include a flow-chart indicating how the analysis is to be undertaken, or a narrative description of the proposed sequence of activities.
- As part of the methodology, the consultant should provide, and explain, criteria for assessment relevant to the site, local context and proposed built form and public domain outcomes. A rationale should be provided for the choice of criteria. Criteria must include reference to the planning framework.
- Visual catchment should be defined and explained (see below).
- An assessment matrix should be produced including number of viewers, period of view, distance of view, location of viewer to determine potential visual impact - i.e. high, medium or low.

Visual catchment

- Potential visual catchments and view locations, including contours (areas from which the development is visible) should be identified. This must include, but is not limited to Epping Road, Herring Road and Peach Tree Road.
- Categories of views (e.g. from public open space, from key streets, from main buildings and from key heritage items) should be defined.

	<ul style="list-style-type: none"> • Photos are required for representative view categories, plotted on a map. <p><u>Visual material</u></p> <ul style="list-style-type: none"> • Reference to be made to site analysis. • Provide key plan indicating where viewpoints are located and narrative explaining why these have been selected. • The built form should be illustrated in the context of the visual catchment to enable assessment of the visual impact. • The location of cross-sections should be clearly shown on a key plan and the choice of positions explained. The cross sections should be shown in the context of the visual catchment. • Vertical exaggeration should provide an accurate rather than 'flattened' impression of buildings in the context of the visual catchment. • A key plan must be provided for photomontages. In addition, the choice of locations should be explained. Photomontages should be provided for close as well as distant views. • Assessment must benchmark against the existing situation with the proposed plans. • Photomontages to be provided for key viewpoints from all directions, and from several positions within the visual catchment. • As above, support visual evidence such as cross sections to be drawn to realistic scales and shown in context. <p>A comparison of 'before' and 'proposed' is fundamental to a visual impact assessment, therefore the visual impact assessment (A3 in size) should be undertaken using human eye focal lengths (50mm at 35mm FX format and 46° angle of view) from long range, medium range and short range positions so that they can be assessed with respect to visibility, visual absorption capacity and visual impact rating.</p>
Documents to be submitted	<ul style="list-style-type: none"> • 1 hard copy and 1 electronic copy of all the documents and plans for review prior to exhibition. • 5 hard copies and 12 electronic copies (USB) of the documents and plans (once the application is considered acceptable).